

**SPATIAL PLANNING FRAMEWORK FOR URBAN  
DEVELOPMENT AND MANAGEMENT IN JOS  
METROPOLIS NIGERIA**

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## **ABSTRACT**

Effective urban and regional planning has the potential to contribute to achieving the United Nations Millennium Development Goals, particularly in countries where land is readily available for development. Jos Metropolis has been chosen as a focus of study as it exemplifies the problem of urban sprawl in Nigerian cities.

This research seeks to evaluate the need for spatial planning and to develop a framework and guidance for addressing physical planning problems with particular reference to Jos Metropolis, Nigeria. The epistemological position of the study leans towards interpretivism while the ontological and axiological standpoints are towards constructivist and value laden respectively. The research methodological strategy employed is mixed methods involving multiple case studies of the planning authorities from Jos metropolis, Nigeria, that have used the urban master plan as a development control measure. Questionnaires, interviews (face-to-face interview) and documents reviews were the data collection methods.

This research revealed that; urbanisation and its related problems can be controlled effectively using appropriate planning approaches in regions of both developed and developing countries. Statistically, the results showed that the components of institutional framework, specifically, tiers of government (institutions), planning legislation and the administrations were not significantly affected by the culture, physical, political, institutions, financial, knowledge, analytical and legal constraints whilst the planning authorities were significantly constrained. The urban planning system in the Jos metropolis is not effective in ensuring controlled urban development and management. Hence, based on these outcomes, a spatial planning framework and guidance is developed for effective urban development and management in Jos Metropolis Nigeria.

Finally, this study recommended further research opportunities as the frameworks and guidance document developed are used in urban and regional planning and the activities of development plan /control process in the other 36 States of the Nigerian Federation including Abuja.

## Table of Content

ABSTRACT .....	i
Table of Content .....	ii
Table of figures.....	xiii
Table of Tables .....	xiv
ACKNOWLEDGEMENTS.....	xvii
DEDICATION.....	xviii
DECLARATION .....	xix
LIST DEFINITIONS USED IN THE THESIS .....	xxii
<b>CHAPTER 1. INTRODUCTION.....</b>	<b>1</b>
1.1. BACKGROUND TO THE RESEARCH .....	1
1.1.1. Statement of Problem .....	5
1.2. RESEARCH OUTLINE .....	8
1.2.1. Research Hypothesis .....	8
1.2.2. Research Questions .....	9
1.2.3. Aim of the Research.....	9
1.2.4. Objectives of the Research.....	9
1.3. UNIT OF STUDY .....	9
1.4. THE PhD RESEARCH STAGES .....	11
1.5. RESEARCH NOVELTY, UNIQUENESS & EXPECTED CONTRIBUTION TO KNOWLEDGE.....	13
1.5.1. Research Novelty .....	13
1.5.2. Research Uniqueness .....	13
1.5.3. Expected Contribution to Knowledge .....	15
1.6. RESEARCH METHODOLOGY .....	16
1.7. STRUCTURE OF THE RESEARCH AND METHODOLOGY .....	18
1.8. SUMMARY.....	21
<b>CHAPTER 2. URBANISATION, URBAN SPRAWL, GOVERNANCE AND MANAGEMENT AND SPATIAL PLANNING .....</b>	<b>22</b>

2.1. INTRODUCTION .....	22
2.2. THE NATURE OF URBANISATION AND ASSOCIATED PROBLEMS IN DEVELOPED COUNTRIES .....	23
2.2.1. Introduction .....	23
2.3. THE CURRENT INSTITUTIONAL FRAMEWORK IN TERMS OF CONSTRAINTS IN THE URBAN AND REGIONAL PLANNING SYSTEM .....	35
2.3.1. The institutions of Governance .....	37
2.3.2. Organisations (Planning Authorities).....	39
2.3.3. Planning Legislation (PLs).....	41
2.3.4. Administrative system.....	43
2.4. THE EFFECTIVENESS OF THE URBAN PLANNING SYSTEM IN TERMS OF URBAN DEVELOPMENT AND MANAGEMENT .....	44
2.4.1. Introduction .....	44
2.4.2. Effectiveness of Urban Governance (Institutions).....	45
2.4.3. Effectiveness of Urban Management (Technical).....	46
2.4.4. Effectiveness of the Administration (Operation) .....	48
2.4.5. Effectiveness of Laws and ordinances (Legal) .....	49
2.5. THE APPLICATION OF SPATIAL PLANNING AS A STRATEGIC PLANNING TOOL IN URBAN METROPOLITAN REGIONS .....	54
2.5.1. Introduction .....	54
2.5.2. Spatial and Master Planning.....	57
2.5.3. Characteristics of Spatial Planning .....	58
2.5.4. Characteristics of Master Planning .....	59
2.5.5. Comparison of ideal type Master Planning & Spatial Planning .....	60
2.5.6. The need for the adoption of Spatial Planning as a strategic planning tool .	62
2.5.7. Implication of Spatial Planning to the research .....	66
2.6. SUMMARY.....	66

<b>CHAPTER 3. URBANISATION, URBAN SPRAWL, GOVERNANCE, MANAGEMENT &amp; MASTER PLANNING IN NIGERIA.....</b>	<b>68</b>
3.1. INTRODUCTION .....	68
3.2. THEORETICAL CLARIFICATION .....	68
3.3. THE NATURE OF URBANISATION AND ASSOCIATED PROBLEMS IN NIGERIAN CITIES.....	69
3.4. THE CURRENT INSTITUTIONAL FRAMEWORK IN TERMS OF CONSTRAINTS OF THE URBAN PLANNING SYSTEM IN JOS METROPOLIS, NIGERIA	77
3.4.1. Causes of Constraints .....	78
3.4.2. Lack of Hierarchy .....	78
3.4.3. Conflict and Compromise .....	78
3.4.4. Forms of constraints .....	80
3.4.4.1. Political constraints.....	80
3.4.4.2. Cultural Constraints .....	82
3.4.4.3. Institutional constraints.....	83
3.4.4.4. Financial Constraint.....	84
3.4.4.5. Legal Constraints .....	85
3.4.4.6. Knowledge Constraints.....	86
3.4.4.7. Analytical constraints .....	87
3.4.4.8. Physical Constraints.....	87
3.5. THE EFFECTIVENESS OF THE URBAN PLANNING SYSTEM IN TERMS OF URBAN DEVELOPMENT AND MANAGEMENT IN JOS METROPOLIS, NIGERIA....	88
3.5.1. Introduction .....	88
3.5.2. Effectiveness of urban governance (Institutions).....	88
3.5.3. Effectiveness of Urban management (Technical) .....	89
3.5.4. Effectiveness of the laws and ordinances used by Planning Authorities in Nigeria (Legal) .....	90

3.5.4.1. The 1992 URP Law .....	91
3.5.4.2. Land Use Act 1978 and the provision of infrastructure in Nigeria .....	92
3.5.4.3. Greater Jos Urban Master Plan .....	95
3.5.5. Effectiveness of the administrative component (Operational).....	95
3.5.5.1. The Commission system.....	96
3.5.5.2. The Council (Lands section) Local Government and Manager System for Administration (JMDB) .....	96
3.5.5.3. The manager system of administration for Boards.....	97
3.6. THE APPLICATION OF MASTER PLANNING A STRATEGIC PLANNING TOOL IN JOS METROPOLIS.....	98
3.6.1. Introduction .....	98
3.6.2. Land use planning in Nigeria .....	98
3.6.3. Application of Master Planning in Nigeria .....	102
3.6.4. Planning for the Millennium .....	109
3.7. SUMMARY.....	110
<b>CHAPTER 4. RESEARCH METHODOLOGY.....</b>	<b>112</b>
4.1. INTRODUCTION .....	112
4.2. METHODOLOGICAL FRAMEWORK.....	112
4.3. RESEARCH PHILOSOPHY.....	114
4.3.1. Ontology.....	115
4.3.2. Epistemology.....	117
4.3.3. Axiology.....	119
4.4. RESEARCH APPROACH .....	120
4.4.1. Qualitative research approach .....	121
4.4.2. Quantitative research approach .....	122
4.4.3. Deductive and Inductive .....	123
4.4.4. Deductive and Inductive Reasoning.....	124

4.5. RESEARCH STRATEGY .....	126
4.5.1. Case study .....	128
4.5.2. Mixed method designs .....	129
4.5.3. Research design.....	133
4.6. RESEARCH METHODS .....	136
4.6.1. Sampling technique .....	137
4.6.2. Data collection Methods .....	138
4.6.2.1. Interviews (Face to Face).....	140
4.6.2.2. Review of documents (Archival).....	141
4.6.2.3. Questionnaire and its development.....	142
4.6.3. Data analysis .....	148
4.6.3.1. Introduction.....	148
4.6.3.2. Developing the Analysis for Qualitative data.....	148
4.6.3.3. Coding and the Categorisation of Information .....	149
4.6.3.4. Analysis of the Interviews (Face-to-Face).....	149
4.6.3.5. The analysis of the document reviews and case study .....	151
4.6.3.6. Developing the Analysis for Quantitative data.....	153
4.6.3.7. Analysis of the Questionnaire.....	153
4.6.3.8. The commonly accepted rule for describing internal consistency using Cronbach's Alpha is as shown in Statistical Techniques and Measures used in this Study .....	154
4.6.3.9. Cronbach's Alpha of the Survey Data .....	157
4.6.3.10. Mean Value Comparison .....	158
4.6.3.11. Analysis of variance (ANOVA, F-ratio) and Spearman ranks correlation coefficient (rho) .....	158
4.7. ETHICAL CONSIDERATIONS.....	159
4.7.1. Right of Privacy .....	159

4.7.2. Informed Consent .....	159
4.7.3. Research Validation .....	160
4.7.4. Construct validity .....	161
4.7.5. Internal validity .....	161
4.7.6. External validity .....	162
4.7.7. Reliability .....	162
4.8. SUMMARY .....	163
<b>CHAPTER 5. INSTITUTIONAL FRAMEWORK AND CONSTRAINTS IN THE URBAN AND REGIONAL PLANNING SYSTEM.....</b>	<b>164</b>
5.1. INTRODUCTION .....	164
5.1.1. Interpretation of output from mixed between-within Anova .....	165
5.2. THE INSTITUTIONS WITHIN THE TWO TIERS OF GOVERNMENT AND THE RELATED CONSTRAINTS .....	166
5.2.1. Data Presentation for institutions .....	166
5.2.2. Data Analysis for Institutions and Constraints identified .....	167
5.2.3. Discussion of the findings from analysis of institutions and identified constraints .....	167
5.3. THE ORGANISATION (PLANNING AUTHORITIES) AND THE RELATED CONSTRAINTS .....	172
5.3.1. Data presentation for organisations (Planning Authorities) .....	172
5.3.2. Data analysis for organisations (Planning Authorities) and constraints identified .....	173
5.3.3. Discussion of the findings from the organisations (PAs) .....	174
5.4. THE PLANNING LEGISLATION AND THE IDENTIFIED CONSTRAINTS .....	181
5.4.1. Data Presentation for Planning Legislation (PL) and the identified constraints .....	181
5.4.2. Data analysis for PL and constraints identified .....	182
5.4.3. Discussion of the findings on PL and constraints identified .....	183



5.4.3.1. The 1992 URP Law .....	185
5.4.3.2. The Proposed GJUMP (2008-2025) and other Master Plans .....	187
5.4.3.3. Land Use Act 1978 (LFN, CAP L5, 2004).....	189
5.4.3.4. Sustainable Urban Development .....	191
5.4.3.5. National Housing Policy .....	194
5.4.3.6. Climate Change .....	196
5.5. THE ADMINISTRATION STRUCTURE AND THE IDENTIFIED CONSTRAINTS.....	202
5.5.1. Data Presentation for Administrative structure and the identified constraints .....	202
5.5.2. Data Analysis for administrative structure and constraints identified .....	203
5.5.3. Discussion of the findings on administrative structures and constraints identified. ....	203
5.5.3.1. The Commission system for MLSTP & MHUD .....	204
5.5.3.2. The Council-Manager system for Lands Sections and JMDB .....	205
5.6. SUMMARY.....	207
<b>CHAPTER 6. EFFECTIVENESS OF THE URBAN AND REGIONAL PLANNING SYSTEM IN JOS METROPOLIS .....</b>	<b>209</b>
6.1. INTRODUCTION .....	209
6.1.1. Interpretation of output from Spearman Rank Order Correlation ( $\rho$ ) of the components of the Urban planning system .....	210
6.2. EFFECTIVENESS OF THE URBAN GOVERNANCE (INSTITUTION) .....	211
6.2.1. Data Presentation for Urban Governance (Institutions).....	212
6.2.2. Data Analysis for the components of urban governance (institution).....	213
6.2.3. Discussion of the findings from analysis of the components for urban governance (institutions) .....	213
6.3. EFFECTIVENESS OF THE URBAN MANAGEMENT (TECHNICAL); DEVELOPMENT CONTROL GOALS AND MEASURES.....	215

6.3.1. Data presentation for Urban Management (technical); development control goals and measures.....	216
6.3.2. Data analysis for the components for urban management (development control goals and measures) technical.....	217
6.3.3. Discussion of the findings from analysis of the components of urban management (Technical).....	217
6.3.4. Development Control by Planning Authorities.....	223
6.4. EFFECTIVENESS OF ADMINISTRATIVE (OPERATIONAL) COMPONENT OF THE URBAN PLANNING SYSTEM .....	225
6.4.1. Data Presentation for Administrative (operational) Component of the Urban Planning System.....	226
6.4.2. Data Analysis for the components administrative (operational) component of the urban planning system.....	227
6.4.3. Discussion of the findings from the analysis of the administrative (operational) component of the Urban Planning System .....	227
6.4.3.1. The Commission system.....	228
6.4.3.2. The Council - Manager System of Administration (Lands section) of Local Government Planning Authorities .....	231
6.4.3.3. The manager system of administration for JMDB .....	232
6.5. EFFECTIVENESS OF THE LEGAL (LAWS AND ORDINANCES) COMPONENT OF THE URBAN PLANNING SYSTEM .....	233
6.5.1. Data Presentation for Legal (laws and ordinances) component of the Urban Planning System.....	234
6.5.2. Data analysis for the effectiveness of legal (laws and ordinances) component of the Urban Planning System.....	235
6.5.3. Discussion of the findings from analysis of the effectiveness of legal component (laws and ordinances) .....	235
6.6. SUMMARY.....	239

<b>CHAPTER 7. APPLICATION OF SPATIAL PLANNING AS A STRATEGIC PLANNING TOOL IN JOS METROPOLIS, NIGERIA .....</b>	<b>241</b>
7.1. INTRODUCTION .....	241
7.2. IMPLICATION OF THE URBAN PLANNING SYSTEM: FAILURE OF THE MASTER PLANNING APPROACH .....	242
7.2.1. Data analysis of the outcomes of previous Master Plan implementation ..	243
7.2.2. Data analysis of the impact of the proposed GJUMP implementation .....	244
7.3. COMPARISON OF IDEAL TYPES OF MASTER PLANNING AND SPATIAL PLANNING	245
7.3.1. Data Analysis of the appropriateness of applying Master Planning as a strategic tool .....	247
7.3.1.1. Appropriateness of applying Master Planning .....	247
7.3.2. Data Analysis of the appropriateness of applying Spatial Planning as a strategic tool .....	248
7.3.2.1. Appropriateness of applying Spatial Planning .....	248
7.3.3. Testing the hypothesis and adoption of Spatial Planning as an appropriate management tool in Jos Metropolis .....	250
7.3.4. Urban Management factors controlling Urban Sprawl & the related patterns/determinants of correlation between Master Planning & Spatial Planning with Urban Sprawl patterns.....	251
7.3.4.1. Decision .....	251
7.3.4.2. Conclusion .....	252
7.4. A CASE FOR THE APPLICATION OF SPATIAL PLANNING: THE 3 <sup>RD</sup> WAY & THE OTHER PATH.....	252
7.4.1. Transformation of planning services in Great Britain: Consideration of ‘ <i>The Third Way</i> ’ .....	255
7.4.2. Reforming the PS .....	257
7.4.3. Direction of the reformed PS .....	258
7.4.4. Issues identified for consideration .....	259

7.4.5. Transformation of planning in Nigeria: Consideration of ‘ <i>The spatial planning</i> ’ .....	260
7.4.6. Trends in the development of planning in Nigeria.....	263
7.5. THE SPATIAL PLANNING AS A STRATEGIC TOOL .....	264
7.5.1. Application of Spatial Plan strategy by the planners .....	268
7.5.2. Application and integration of spatial planning as a strategy by Planning Authorities.....	269
7.6. SUMMARY.....	272
<b>CHAPTER 8. SPATIAL PLANNING FRAMEWORK DEVELOPMENT, VALIDATION AND ITS GUIDANCE DOCUMENT .....</b>	<b>274</b>
8.1. INTRODUCTION .....	274
8.1.1. The Development of the Spatial Planning Framework (Spatial Planning Framework ).....	275
8.1.2. The Overview of the Development Process of the Framework .....	277
8.1.2.1. Stage I: Development of Frameworks for Urban Planning Systems... ..	279
8.1.3. Stage II: Modification of Frameworks for Urban Planning Systems using data .....	286
8.1.4. Stage III: Presentation of Frameworks for Urban Planning Systems to practicing Planners .....	288
8.1.4.1. Framework Validation .....	288
8.1.4.2. Results of the Validation .....	290
8.1.5. Spatial planning framework implementation .....	293
8.2. DEVELOPMENT OF A GUIDANCE DOCUMENT FOR THE SPATIAL PLANNING FRAMEWORK.....	295
8.2.1. Introduction .....	295
8.2.2. Background to the guidance.....	295
8.2.3. Structure of a good guidance document.....	300
8.2.4. Scope and Contents of the Guidance document.....	303

8.2.5. The Guidance document for implementing the Spatial Planning Framework .....	304
8.2.6. Questions and Answers to Developing the Spatial Planning Guidance Document .....	306
8.2.7. Guidance of implementation for spatial planning in Jos Metropolis Nigeria .....	307
8.3. SUMMARY .....	320
<b>CHAPTER 9. CONCLUSIONS, RECOMMENDATIONS AND NEED FOR FUTURE RESEARCH .....</b>	<b>322</b>
9.1. INTRODUCTION .....	322
9.2. RESEARCH OVERVIEW AND OBJECTIVES .....	322
9.3. ORIGINALITY AND GENERALISABILITY OF THE RESEARCH .....	328
9.4. CONCLUSIONS .....	330
9.5. RECOMMENDATIONS .....	335
9.6. REFLECTIONS ON THE PROBLEMS ENCOUNTERED IN CONDUCTING THE RESEARCH .....	339
9.7. RESEARCH LIMITATIONS .....	341
9.8. AREAS OF FURTHER RESEARCH EMERGING FROM THIS STUDY .....	341
9.9. BENEFIT OF THE RESEARCH .....	342
9.9.1. Planners .....	343
9.9.2. Policy Makers .....	344
9.9.3. Academics .....	344
9.9.4. The researcher .....	344
9.9.5. Capacity Building .....	345
REFERENCES .....	347
APPENDICES .....	393

## Table of figures

<b>Figure 1-1: Research Stages.....</b>	<b>12</b>
<b>Figure 1-2: Structure of the Thesis .....</b>	<b>18</b>
<b>Figure 3-1 : Urban Growth rate in Africa.....</b>	<b>70</b>
<b>Figure 3-2: Chronology of Town and country Planning Law Administration in Nigeria.....</b>	<b>105</b>
<b>Figure 4-1: Nested mixed method research methodology framework.....</b>	<b>113</b>
<b>Figure 4-2: Research Design .....</b>	<b>134</b>
<b>Figure 4-3: Show the steps taken by the Researcher to develop and administer the final questionnaire within the sampled Planning Authorities .....</b>	<b>146</b>
<b>Figure 4-4: Responses from questionnaire .....</b>	<b>147</b>
<b>Figure 4-5: Coding of face-to-face interview transcript.....</b>	<b>150</b>
<b>Figure 4-6: Reliability and consistency of data using SPSS.....</b>	<b>157</b>
<b>Figure 5-1: Responses for within-subjects factors (Institutions &amp; constraints). ..</b>	<b>167</b>
<b>Figure 5-2: Response for between -subject factors for Planning Authorities .....</b>	<b>173</b>
<b>Figure 5-3: Responses for Within-subjects factors for PL &amp; Constraints .....</b>	<b>182</b>
<b>Figure 5-4: Tudun Wada along the Bauchi Ring Road.....</b>	<b>183</b>
<b>Figure 5-5: Mado Village on the Tudun Wada Ring Road.....</b>	<b>184</b>
<b>Figure 5-6: Imagery showing changes in the morphology of the Jos Metropolis before and after 2010.....</b>	<b>199</b>
<b>Figure 5-7: Responses for within-subject factors for administration structure &amp; constraints .....</b>	<b>202</b>
<b>Figure 6-1: Marking the structure ‘X’ with red for demolition.....</b>	<b>219</b>
<b>Figure 6-2: Marking the structure ‘X’ with red for stop work .....</b>	<b>220</b>
<b>Figure 6-3: High Tension cables Passing over a Plot.....</b>	<b>224</b>
<b>Figure 7-1: Responses to between-subject factors in the previous Master Plan...</b>	<b>243</b>
<b>Figure 7-2: Response between-subject factors for GJUMP.....</b>	<b>244</b>
<b>Figure 7-3: Responses for Appropriateness of Applying Master Planning.....</b>	<b>247</b>
<b>Figure 7-4: Responses for Appropriateness of applying Spatial Planning.....</b>	<b>248</b>
<b>Figure 7-5: Physical Planning &amp; Urban sprawl Patterns .....</b>	<b>250</b>
<b>Figure 7-6: Sources for the creation of the Spatial Planning framework .....</b>	<b>254</b>
<b>Figure 7-7: Transition of the planning services in Great Britain: Consideration of the ‘Third Way’ .....</b>	<b>257</b>

<b>Figure 7-8: Chronology of planning events, 1920-1960+period .....</b>	<b>261</b>
<b>Figure 7-9: Trends &amp; Planning Phases .....</b>	<b>263</b>
<b>Figure 7-10: Application of Spatial Planning by Planning Authorities .....</b>	<b>271</b>
<b>Figure 8-1: Generic physical planning framework.....</b>	<b>281</b>
<b>Figure 8-2: The Master Planning Framework .....</b>	<b>282</b>
<b>Figure 8-3: Spatial Planning Framework (Spatial Planning Framework ) DRAFT I .....</b>	<b>283</b>
<b>Figure 8-4: Spatial Planning Framework (Spatial Planning Framework ) Draft II .....</b>	<b>287</b>
<b>Figure 8-5: Results of Validation.....</b>	<b>291</b>
<b>Figure 8-6: Spatial Planning Framework (Spatial Planning Framework ) Draft III .....</b>	<b>294</b>

## Table of Tables

<b>Table 2-1 Factors Encouraging Urban Sprawl .....</b>	<b>31</b>
<b>Table 2-2: Influences on the causes of the urban sprawl .....</b>	<b>34</b>
<b>Table 2-3 : Characteristics of Spatial Planning .....</b>	<b>58</b>
<b>Table 2-4: Characteristics of Master Planning .....</b>	<b>59</b>
<b>Table 2-5: Comparism between Master Planning &amp; Spatial Planning .....</b>	<b>60</b>
<b>Table 2-6: Concepts Linking to Theories .....</b>	<b>65</b>
<b>Table 3-1: 10 cultural components to consider when implementing change .....</b>	<b>83</b>
<b>Table 3-2 : Questionable Conclusions about Master Planning .....</b>	<b>107</b>
<b>Table 3-3: Chronology of planning development. ....</b>	<b>107</b>
<b>Table 4-1 Nested-Nested mixed method research methodology framework.....</b>	<b>114</b>
<b>Table 4-2: Reasons for leaning more towards a position of interpretivism .....</b>	<b>119</b>
<b>Table 4-3: Research approaches - deductive and inductive.....</b>	<b>125</b>
<b>Table 4-4: Strategic research processes adopted for the study .....</b>	<b>127</b>
<b>Table 4-5: Summary of research strategy adopted for the study.....</b>	<b>128</b>
<b>Table 4-6 Prototypical characteristics of the major mixed methods types of design (Embedded) .....</b>	<b>131</b>
<b>Table 4-7: Reasons for adopting mixed method approach .....</b>	<b>132</b>

<b>Table 4-8: Relationship between objectives research questions, methodology &amp; data collection methods and linkage to chapters. ....</b>	<b>134</b>
<b>Table 4-9: Multiple sampling techniques employed for the multiple research methods.....</b>	<b>138</b>
<b>Table 4-10: Interview guide sections and questions .....</b>	<b>140</b>
<b>Table 4-11: Research Hypothesis, Objectives &amp; Quantitative data Analysis and Tools Used.....</b>	<b>155</b>
<b>Table 4-12: Summary of Data sources and method of analysis employed for the study .....</b>	<b>156</b>
<b>Table 4-13: Cronbach's Alpha Consistency .....</b>	<b>157</b>
<b>Table 4-14: Reliability Statistics.....</b>	<b>157</b>
<b>Table 5-1: Stakeholders' meeting.....</b>	<b>171</b>
<b>Table 5-2: The challenges of the Planning Authorities .....</b>	<b>180</b>
<b>Table 5-3: Pressure on different aspects in Jos Metropolis .....</b>	<b>196</b>
<b>Table 5-4: characteristics of the rural areas in Jos Metropolis.....</b>	<b>197</b>
<b>Table 5-5: Conclusions about the physical morphology of Jos Metropolis .....</b>	<b>197</b>
<b>Table 5-6: Planning Authorities and type of structure used.....</b>	<b>204</b>
<b>Table 6-1: Data presentation for the components of institutions.....</b>	<b>212</b>
<b>Table 6-2: Data presentation for the Components of urban management (technical) Spearman's rho Correlation Coefficient for urban management (technical) .....</b>	<b>216</b>
<b>Table 6-3: Professional Bodies.....</b>	<b>222</b>
<b>Table 6-4: Data presentation for the components of administrative (operational) .....</b>	<b>226</b>
<b>Table 6-5: Verification of the theory.....</b>	<b>231</b>
<b>Table 6-6: Data presentation for the legal components (laws and ordinances) Spearman's Rank Correlation Coefficient (rho) for the legal (laws and ordinances) components.....</b>	<b>234</b>
<b>Table 7-1: Comparism of Ideal Types of Master Planning &amp; Spatial Planning ..</b>	<b>246</b>
<b>Table 7-2: Correlation Coefficient Spatial Planning.....</b>	<b>251</b>
<b>Table 7-3: Correlation Coefficient Master Planning.....</b>	<b>251</b>
<b>Table 7-4: Strategic Schools of thought .....</b>	<b>265</b>
<b>Table 8-1: Characteristics of the components of Urban Planning System.....</b>	<b>284</b>



<b>Table 8-2: Framework Validation Form .....</b>	<b>290</b>
<b>Table 8-3: Duplicate Identifiers.....</b>	<b>290</b>
<b>Table 8-4: Principles for developing a guidance document for a spatial Planning framework .....</b>	<b>298</b>
<b>Table 8-5: Principles of best practice in spatial planning frameworks .....</b>	<b>299</b>
<b>Table 8-6: Summaries of the components of a good guidance.....</b>	<b>302</b>
<b>Table 8-7: Main Pillars of the Framework.....</b>	<b>304</b>

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## **DEDICATION**

I dedicate this work to God almighty, the Father of my Lord and Saviour Jesus Christ. Also to my beloved wife Victoria Samuel Wapwera ‘Vickie’, my parents and siblings for their relentless prayers, encouragement, support and demonstration of love towards the success of this study.

## **DECLARATION**

This thesis is submitted under the University of Salford rules and regulations for the award of a PhD degree by Research. During the research process, some findings were published in refereed journals and conferences papers prior to the submission (refer to Appendix A)

I declare that this work or any part has not previously been presented in any form to the University or any other body whether for the purpose of assessment for the award of any degree or certificate. I confirm that the intellectual contents of the work are the results of my efforts and no other person.

Signature ----- Date -----

**Samuel Danjuma Wapwera**

## **LIST OF ABBREVIATIONS**

<b>CAP</b>	Commonwealth Association of Planners
<b>CBO's</b>	Community based Organisation
<b>DC</b>	Development Control
<b>DCP</b>	Development control process
<b>DPP</b>	Development plan process
<b>FAO</b>	Food and Agriculture Organisation of the United Nations
<b>FW</b>	Framework
<b>GJUMP</b>	Greater Jos Urban Master Plan
<b>GLA</b>	Greater London Authority
<b>IF</b>	Institutional Framework
<b>IPF</b>	Institutional planning framework.
<b>JMDB</b>	Jos Metropolis Development Board
<b>JM</b>	Jos Metropolis
<b>JMN</b>	Jos Metropolis Nigeria
<b>LUA</b>	Land Use Act, 1978
<b>LS</b>	Lands Section
<b>LDF</b>	Local Development Framework
<b>MLSTP</b>	Ministry of Lands Survey & Town Planning
<b>MHUD</b>	Ministry of Housing & Urban Development
<b>MPG</b>	Master Planning
<b>MP</b>	Master Plan
<b>MPs</b>	Master Plans
<b>MDGs</b>	Millennium Development Goals
<b>NGO</b>	Non-Governmental Organisation
<b>PAs</b>	Planning Authorities

**PA** Planning Authority

**PS** Planning System

**PL** Planning Legislation

**PLW** Planning Law

**PPG** Physical Planning

**PP** Planning Practice

**RP** Regional Planning

**SPSS** Statistical Package for Social Sciences

**SP** Spatial Plan

**SPs** Spatial Plans

**SP** Spatial Planning

**SPF** Spatial Planning Framework

**SPT** Strategic Planning Tool

**TPL** Town Planner

**TPG** Town Planning

**UD** Urban Development

**UDM** Urban Development & Management

**UG** Urban Governance

**UM** Urban Management

**US** Urban Sprawl

**USG** Urban sprawling

**UPS** Urban Planning System

**URP** Urban and Regional Planning

**URP, 1992** Urban and Regional Planning Law, 1992

**UMP** Urban Master Planning

## LIST DEFINITIONS USED IN THE THESIS

For this study, **Urbanisation** is defined as a form of response to bewildering sets of economic, social, demographic, cultural and environmental processes as well as political forces to the physical geography in proportion to population and resource consumption in towns and cities within urban settlements.

**Urban and Regional Planning** is defined in this study as a special case of general planning, which does include the plan-making, component (physical or geographical) with a general objective to provide for a spatial structure of activities (or of land uses) which in some way is better than the pattern that would exist without planning. Such planning is also known as 'physical planning' or 'Land use planning' or 'Master Planning' or 'Development Planning'.

**Urban planning system** is a gamut of all institutions (planning authorities), legal using (regulations development control standards, Building codes, policy, rules and norms etc), operational (administrative structures that ensure the processes) and the technical subsystem that utilises the master plans and the zoning ordinances to realize goals set by city general plans.

**Urban sprawl** is defined in this study as an unplanned outgrowth, little planning control of land subdivision of urban centres along the periphery (a run-down area of dispersed development) that is physically expanding with a pattern of low-density expansion of large urban areas, along highways, along the road connecting a city, mainly into the surrounding agricultural areas, around the fringes of cities, towns and urban areas.

**Urban Management** the process of designing and maintaining an environment in which individuals, working together in groups, efficiently to accomplish and to achieve goals It also involves administration through laid down procedures (although procedures or rules which should not be seen as an ends in themselves) for the execution, control, communication, delegation and crisis management in the Jos metropolis, Nigeria.

**Urban governance** it could be the nation, state or local government, but it transcends to the private sector and civil society, this creates a conducive political and legal

environment (UNDP forum, 2011). Governance involves interaction between these formal institutions and those of civil society. It includes formal institutions (Planning Authorities) and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest.

**Urban growth** is defined in this study as population increase of a city, which results from people moving to urban areas en mass, from suburban and rural areas. Urban growth is the common ground that brings urbanisation and urban sprawl together.

**Planning** is defined in this study as a deliberate effort towards achieving stated objective, and it proceeds by assembling actions into some orderly sequence and basic management functions involving formulation of one or more detailed plans to achieve optimum balance of needs or demands with the available resources or the act or the process of making or carrying out physical development plans; specifically: the establishment of goals, policies and procedures towards triggering social, economic, environmental and political benefits.

**Plan** means ‘a physical representation of something’

**Institutional framework** is defined in this study as the systems of formal laws, regulations, procedures, informal conventions, customs, and norms, which shape the social, economic and political activities and behaviour of an organisation and in this case the planning authorities (Board, Ministries and Departments). The institutional framework is a channel through which the system circulates information either from top to bottom or from bottom up. Policy makers at all levels (National, State and Local Government) are involved in providing advisory roles to the planning authorities to address the spatial problems and to link with community strategic planning which is intended to be a central integrating devised in ensuring the goals were achieved if the planners play their roles.

The **spatial framework** is a comprehensive and detailed consideration of a number of variables such as sustainability, climate change and other variables that need urgent attention in an urban system. It considers account for urban variables such as economic,



social, environmental and basic infrastructure which will trigger economic and social growth for urban sustainable development.

**Institutional Structure** is defined in this study as an instrument used to achieve better governance because it has the potential to bring about a change in outcomes. For the purpose of this study the structure include: the three tiers of government, but with emphasis on state and local government (inter-government) and the PA's within this tiers of government concerned with the planning of the Jos Metropolis.

**Managers/ Town planners** is defined in this study as those saddled with the responsibilities of managing and planning the urban, cities and metropolitan regions. They are specially train and having valuable skill of being able to design a workable solution to the problem in the light of the realities they face.

**Planning Authorities (PA)** is defined in this study as organisations established by law and saddled with the responsibilities of planning and managing the urban, city areas and in this instance Jos Metropolis, Nigeria.

A **theory** is a system of inter-related definitions and hypotheses' which is assumed to possess the properties of universal validity and capability of being empirically verified. These theories form the middle range axioms of this study as they meet the task of efficient formulation and used as building blocks for the wider scope, evidence which supports and conveniently delineating the research problem (Schwirian and Prehn, 1962 Pp813).

A **constraint** is defined in this study as anything that is preventing the Planning Authorities from achieving their sets goals (Qualified man power, correct documentation, revenue from rates paid and equipment's). Every organization has many ways that its constraints appear; it could be internally or externally. An internal constraint is evidence when the service /goods of the organization are not available to a large body of the population. Internal constraints could be from equipment: The way equipment is currently used limits the ability of the system to produce more salable goods/services (planning services). The People: Lack of skilled (professionals) people limits the organizations from achieving their stated goals. Limited knowledge held by people can cause behavior that becomes a constraint (Bureaucrats). And Plan and

Policy: A written or unwritten policy prevents the system from making progress towards achieving their aims (Bureaucracies). External constraints could be the forms of political, cultural, institutional, legal, knowledge, and analytical, financial and physical constraints amongst others.

**Effectiveness** is defined in this study as the measure of the performance of a person, organization or an institution in achieving the outcomes the organization intends to achieve.

Planning Authorities generate funds and receive budgets from the government which is used in their daily operations (Cohen, 1988). Organizational effectiveness is an abstract concept and is basically impossible to measure. Instead of measuring organizational effectiveness, the organization determines proxy measures which will be used to represent effectiveness. Proxy measures used may include such things as number of people served, types and sizes of population segments served, and the demand within those segments for the services the organization supplies.

It captures organizational performance plus the plethora of internal performance outcomes normally associated with more efficient or effective operations and other external measures that relate to considerations that are broader than those simply associated with only economic valuation (either by shareholders, managers, or customers), such as corporate social responsibility.

The effectiveness of the planning system is measured on the basis of the PS being practiced in the area to bring about homogenous development in the urban environment under the Jurisdiction of the Planning Authorities.

A **Master Plan** is defined in this study as a comprehensive long range plan intended to guide the growth and development of a community or region. Master Plan's are usually referred to as Physical Master Plan's which are imaginary constructs, which represent physical objects and both their external and internal relationships in space: the emphasis is restricted to analysis of the spatial structure, urban form and land use patterns. And in this instance the Master Plan under review is the GJUMP.

**Spatial** is defined in this study as the flow of products, people, services, or information among places, in response to localized supply and demand pertaining to or involving or

having the nature of space and 'the where of things', whether static or in movement; the protection of special 'places' and sites; the interrelations between different activities and networks in an area; and significant intersections and nodes within an area which are physically co-located (Healey, 2004).

**Spatial planning** is defined in this study as a strategic activity that is concerned with the allocation and management of natural and human resources across space (competing uses for space of various scales), bringing about competition for space at various scales, creating value by making places and distributing the activities (social, economic, political and environmental), bringing to bear the interaction of different policies and practice for future development of any delineated geographical area and in this case the Jos Metropolis Nigeria.

**Spatial Planning Strategies** It is a self-conscious collective effort to re-imagine an urban /city area or urban region or a wider territory and to translate the result into priorities for area investment in the areas of conservation measures where there is need, strategic infrastructure investments to trigger socio economic activities and principles of land use regulation for sustainable development.

**Urban Development and Management** It is the construction of structures (buildings, roads, factories, industries) rebuilding, engineering, mining, or other operations on land or the making of any substantial change in its existing use within an urban area which is monitored and maintained by planning authority(s) using development control measures within a given jurisdiction to bring about sustainability.

# **CHAPTER 1. INTRODUCTION**

## **1.1. BACKGROUND TO THE RESEARCH**

Urbanization is a world phenomenon that is common to both developed and developing nations. It is defined as a key process, a complex set of socio-economic, political, cultural, demographic and environmental development that have resulted into an increase in the proportion and density of population and resource consumption in towns and cities within urban settlements (Kempe,1986; Vernon,2005; Knox, 2009; Reinhard and Yasin, 2011). Urbanization trend will intensify over the next decades, and would be higher in Africa within countries such as South Africa, Egypt, and Nigeria (UNDESA, 2009). The impact of urbanization on urban areas the world over is usually felt as it affects urban structures; areas, density, mobility and transport, infrastructure, the city-related production, human behaviour as well as private households at different dimension and extent (Reinhard and Yasin, 2011).

Urban centres in developing countries have shown development and distribution of new settlements at the fringe of the urban areas as a result of this process. The United Nations Population Fund Projects (UNPF) has shown that sub-Saharan Africa's urban population will double between 2000 and 2030 (CIA World Factbook, 2007; UNDESA, 2009). The urban problems observed are a range of poor housing, infrastructure, environmental quality and urban poverty, which brings about changes in the original landscape of the urban area, urban systems, urban ecology and urban political economy amongst other (Knox, 2009).

In the context of physical planning (PPG) the transformation processes involving key aspects of urban management through the planning practice (PP) by planning authorities (Planning Authorities) using their policy guide have failed to adequately address the numerous Physical Planning problems (urban sprawl, slums, poverty and environmental degradation) observed in most developing countries especially Nigeria and many African countries (Mabogunji, 2002; Obateru, 2004; Oyesiku, 2004; Jiriko, 2008).

Policies in developing countries tend to be urban bias, this is so because the urban areas are close to the government; they get developed faster, and this affect their economic efficiency, formation, sizes and quality of life (Lipton, 1977). Investment in urban infrastructure and services affects the shape of the urban system and the urban agglomerations in developed countries within the European union for instance countries such as United Kingdom, Germany, France, Sweden and Netherlands amongst others, where spatial planning (Spatial Planning) strategies were employed and have improved the health and safety of the inhabitants of the fringes or suburbs and bring about a reduction in commuting and congestion costs in most metropolitan cities. Whilst this is the case in developed countries it is a far cry for the developing countries (Roberts, 1996; Jiriko, 2008).

Metropolitan areas are products of either geographic or demographic processes bringing about merging of areas (urban and rural). The term can describe a condition at a specific time, namely the proportion of total population or area in urban localities or areas (cities and towns), or the increase of this proportion over time (Batten, 1995). Migration (rural-urban) increases the pressure on land and on basic infrastructure within the urban area and hence the population is moved to the fringe (urban sprawl, slums). Settlements usually emerge and are termed informal, because provisions are not readily made for them. Settlements also sometimes emerge as a result of the provision of an infrastructure (e.g. roads), availability of land and space, accessibility and convenience amongst others. The challenges that follow are multi-faceted, multidimensional and multidisciplinary, that needs to be addressed by spatial planning strategy (Theobald, 2001; Healey, 2007; UN-HABITAT report, 2008; Parsa *et al.*, 2010).

Spatial planning is a strategic activity that considers what can and should happen in making decisions relating to the location around the distribution of land use activities. It investigates the interaction of planning policies and practice across regional space strategically, and sets the role of places in a wider context. It goes well beyond traditional land use planning and sets out a strategic framework to guide future development and policy interventions, whether or not these relate to formal land use planning control (National Assembly for Wales, 2004). It is now adopted in developed countries to address the issues that have come up as a result of urbanisation problems as

most urban environments are decaying at a rapid pace, hence it plays a lead role in addressing the issues at various levels.

The role of Spatial Planning as enumerated by NEPA (2011) are; firstly create the condition for an enhanced quality of life, secondly fulfil the aims of efficiency and democracy through public participation and thirdly to meet the challenge of sustainable development. The rationale for adopting Spatial Planning is to ensure utilisation and implementation to meet the need of the present and future generation. Beautiful as the role of Spatial Planning could be it has its own aspects of challenges, because it is determined to some extent by capacity and resources in terms of staffing, expertise, experience and funding (Local Government Association, 2001).

Spatial Planning is employed by European countries such as the United Kingdom, the Netherlands and Germany, in Asian, countries such as Bangladesh, Sri Lanka, and Part of India and in Africa, South Africa is leading. Other African countries such as Senegal, Algeria, Chad, Libya, Congo, Malawi, Ethiopia, Mali, Sierra Léon, Morocco, Ghana and Kenya amongst others are all using the master planning approach (EAPP & EAC, 2011). In Nigeria, the master planning (MGP) approach is still been employed with its urban and regional planning law (1992) (URP) still awaiting implementation after winning the case of its adoption in the Supreme Court.

Olatubara (2007) observed that urban management (Urban Management) is the responsibility of planners towards improving the life of mankind by implementing policies made. To ensure maximum satisfaction from the usage of land which is a scarce resource and to ensure future sustainable spatial development at any level, a strategy needs to be adopted or be put in place. These are factors that have not been adequately addressed at various levels owing to the fact that planning system (PSs) have been unable to cope with the dynamic nature of socio-economic and political changes in both developed and developing countries and in this case Jos Metropolis, Nigeria (Jos Metropolis Nigeria) (Oyesiku, 2004; DungGwom, 2008).

Jos is the capital of Plateau state Nigeria, West Africa, Africa. Jos Metropolis is carved out of six local government areas of Plateau state, Nigeria; it plays a vital role in the state as well as the geo political region in the country. It is one of the fastest growing regions in the sub Saharan Africa. This is enhanced by its good weather, commerce,

agricultural, industrial, mining potentials, its cultural diversities and tourism potentials as well as its beautiful scenery, which attract local and foreign investors. In recent years, Jos Metropolis has experienced poor housing, poor transportation, inadequate social services, poor environmental quality, extreme poverty and physical dereliction of basic infrastructure amongst others, in and around its fringes urban sprawl (Urban Sprawl) due to natural population growth and migration (DungGwom, Hirse and Pwat, 2006). With no definite policy at the federal, state and local government levels, each government tends to employ ad-hoc measures to respond to the physical development problems (Oyesiku, 2004).

The required institutional framework (IF) (legal or political) is not in place, to be referred to as planning legislature (PL) in the country. The plans are articulated poorly as the processes involved are not properly followed due to existence of many planning boards, ministries and departments. The governments' lack of concern and understanding of the importance of town planning functions at both state and local government areas, has brought about frequent shifting of responsibilities from one ministry to another and from one ad-hoc metropolitan board to another (urban management) (Oyesiku, 2004 and Fadare, 2004).

The method of PP adopted by Federal, State and Local governments is another problem in Physical Planning administration in Nigeria. The planning authorities have few qualified town planners (TP) leading to little impact in controlling urban development and management in most urban areas in Nigeria and many developing countries (Oyesiku, 2004; DungGwom, Hirse and Pwat, 2008). It is undoubtedly clear that the practice of urban and regional planning in Nigeria has not succeeded in the amelioration of the physical planning problems of the metropolitan areas. This could be seen in most cities in Nigeria where the tools employed to manage the regions are highly inadequate. The master planning (MP) approach is still the craze among planners at all tier of government in Nigeria (urban planning) (Mabogunji, 2002b; Oyesiku, 2004; Jiriko, 2008). It is obvious that this approach is obsolete, static as well as an expensive method of planning. The preparation of master plans are awarded as contracts to individuals, companies or consulting firms and are usually very expensive projects. Hence, one motivation for adopting master planning may be personal financial gain rather than its effectiveness in controlling urban development and management. There is therefore the

urgent need to adopt a more flexible and less expensive method of planning (Oyesiku, 2004; Giddings and Hopwood, 2006). The failure or inadequacies of the present day urban planning system and the activities of the Planning Authorities have led to uncontrolled urban development and management at the fringes of the metropolis, it calls for the need for Spatial Planning and its framework to address the physical planning problem in Jos Metropolis Nigeria.

#### **1.1.1. Statement of Problem**

The professional planning institutes of Nigeria amongst others in Africa belong to the membership of the Commonwealth Association of Planners (CAP). Hence, there is a commission for Africa which is poised to contribute towards providing solutions to Africa's problems (CAP, 2009).

Nyambo (2010) observed that the inability to bring about urban sustainable development has always been associated with the lack of sustainable urbanisation and planning approach which is not appropriately implemented. The major problems have always been rapid urbanisation, growth of slums, urbanization of poverty and poor conservation of natural environment. Nigeria (Abuja) has the highest level of urbanisation in Africa, hence due to proximity of Jos metropolis to Abuja gets the spill over effect, which has a direct bearing on the socio-economic and demographic as well as cultural characteristics.

The master planning approach in Nigeria and Jos, metropolis to be specific cannot adequately address the urban problem of urbanisation and its physical characteristics (Oyesiku, 2004; Agbola, 2004). This is necessitated by the social, economic, environmental and political constraints in the urban planning procedures in the metropolis. Hence, an effective urban planning approach is required to address the urban development and management (sprawling) and its characteristics in the metropolis. It is against this back drop that Spatial Planning is proposed to be applied as a strategic planning tool (SPT) to the Jos metropolis (JM).

Urban population continues to increase due to migration and natural increase over space and time (UN-HABITAT, 2010/2011). This has marked the growth of major cities in Nigeria, the task of designing and implementing a master plan in any urban area is a normal procedure embarked by any consulting planning firm, whether local or



indigenous. Most of these plans end up on shelves with dust settling on them because they are not implemented. Therefore, it is a wasted effort and the Physical Planning problem remains because the Planning Authorities required to use them are unable to do so. The process of the preparation of these plans should not be left to the planning consulting firms and government alone, other stake holders such as planners in the built environment, representatives of communities; Non-Governmental Organisation (NGOs)' Community Based Organisation (CBOs)', interest groups and ward heads, amongst others, should be involved (Oyesiku, 2004;512).

In the Federal Republic of Nigeria, the Abuja Master Plan (1978); was designed and was to be implemented in three phases. The first phase was not finished when it was over-taken by events (Sudden relocation of the Federal Capital of Nigeria to Abuja in 1991, movement of the seat of government from Lagos to Abuja, movement of other federal ministries and parastatals as well as the creation of new states and local government areas). The Enugu Urban Master Plan was designed and implemented without success (Jiriko, 2008). The Structure Plan for Onitsha and Satellite Towns in Nigeria (2009) was prepared by the United Nations for Human Settlement Programmes (UN-HABITAT). All these plans were meant to cover many issues which include issues relating to physical planning problems and management of urban and rural centres, as efforts to alleviate the problems occurring in most urban centres in Nigeria.

Spatial Planning as an approach is geared towards identifying and targeting development, conservation priorities, risk and opportunities in both the urban and rural areas. It is not a static blueprint plan, as it attempts to coordinate the social, economic and environmental resources within different jurisdictions. It also provides linkages within and between urban and regional areas and provides infrastructure to bridge the dichotomy that exists between the rural and urban areas (Healey, 2007; Jiriko, 2008).

Local Government Association (2001:2) and Nadin, (2006) observed that for a planning approach to make any effective contribution in any system it must have the following characteristics;

- a more dynamic and timely plan and decision making process that enables planning to positively modify rather than report on consequences

- a more inclusive and effective process of participation and consultation that lends confidence to plans and decisions
- a more effective collaboration with other policies in other sections that leads to integrated objectives and joined-up policy
- a more positive, evidence-based reasoning in the formulation of strategies and policies, and in managing change and
- a focus on the delivery of wider priority outcomes defined at federal, state and local levels, so as to make a difference

Based on the aforementioned, it would be good to highlight that based on different perspectives, these are some differences between Master Planning and Spatial Planning and these are some of the characteristics of Spatial Planning based on government perspective (ODPM, 2005: paragraph 30).

A strong planning system, based on up to date plans, emerging from current information is needed to address the situation in most African countries because of its dynamic nature. Hence, sprawling conditions characterised by fast growing slums aggravates the problem (Amanda, 2009). A plan that identifies and brings forth adequate quantities of land for development into the safe and accessible location is most appreciated.

The era of and the legacy of, failed master plans that are rigid and fixed have left cities, urban areas, residents and the surrounding environment poorly equipped to cope with the exploding urbanisation levels (Jiriko, 2008; Todes, et al, 2010). These cities are important to African growth and development, but due to poor provision of the needed infrastructure such as sophisticated management and effective leadership, it has been robbed of standard and effective plan-led modernisation and growth (CAP, 2005; Litman, 2011).

Furthermore the government ensuring participation by all and sundry is most needed, working with the less privileged and marginalised groups such the women and children especially the urban poor. The conscious involvement of the public sector with much emphasis placed on traditions, legislation and methods of URP to bring about a reduction in the dichotomy of the distribution of resources across regions.

Good governance makes a difference in good planning because it's key to the design and implementation of any plan as the market forces usually are not to be relied on,

however, the solution is always in effective public sector action as the government plays a vital role in stabilising the economy (Cohen, 1988). Spatial Planning has a great tendency to contribute to African development, because it possess the technical capacity to deliver pro-poor planning from Local, State and National as well as the Regional level bringing about sustainable development in Jos, Nigeria and west Africa and Africa in general.

The used of master planning as an approach in Nigeria has not addressed the physical planning problems of most urban and rural areas, due to its rigidity and long range nature of development for cities and regions (Oyesiku, 2004; 517).

There is a need to have proportional distribution of infrastructure in most urban areas in Nigeria and to ensure controlled urban development and management in Jos Metropolis to be specific has identified two main problems:

- ✚ The absence of a coordinated institutional framework from federal, state and local government. It requires the presence of a coordinated framework within which the Jos metropolis exists in order to control urban development and management.
- ✚ The existing urban planning system is highly ineffective due to the planning approach used, as it is unable to address the physical planning problems. It requires an appropriate planning approach to ensure effective control of urban development and management.

Accordingly, this research seeks to evaluate the need for spatial planning and to develop a framework and a guidance document for addressing physical planning problems due to the inadequacy of the previous and proposed Greater Jos Urban Master Plan (GJUMP) in Jos metropolis Nigeria to achieve effective urban development and management (Urban Development and Management) in the urban centres.

## **1.2. RESEARCH OUTLINE**

### **1.2.1. Research Hypothesis**

**H<sub>0</sub>:** If spatial planning is applied as an urban management strategic tool, then the urban sprawling condition in the Jos Metropolis can be controlled (See sections 4.5.3. for

research design, 4.6.3.7. for data analysis and methods and 7.3.3. for testing the hypothesis and adopting spatial planning after analysis; decision and conclusion).






### **1.2.2. Research Questions**

1. What are the key indicators in social, economic, cultural and demographic characteristics of Jos metropolis?
2. What is the operational institutional framework of urban and regional planning system in terms of the current constraints experienced in Jos Metropolis Nigeria?
3. How effective is spatial planning as a strategic urban planning tool in addressing urban sprawl in Jos Metropolis?

### **1.2.3. Aim of the Research**

The aim of this research is to evaluate the need for spatial planning and develop a framework and guidance for addressing physical planning problem in Jos metropolis Nigeria.

### **1.2.4. Objectives of the Research**

-  To analyse the nature of urbanisation and associated problems in Nigerian cities.
-  To critically analyse the current institutional framework by identifying the constraints on the urban and regional planning system in Jos Metropolis Nigeria.
-  To examine the effectiveness of the urban planning system in Jos Metropolis Nigeria, especially in terms of urban development and management.
-  To assess the applicability of spatial planning as a strategic planning tool in Jos Metropolis.
-  To develop a framework and a guide for spatial planning in Jos Metropolis Nigeria.

## **1.3. UNIT OF STUDY**

The scope of this research is limited to the exploration and development of spatial planning framework for Jos Metropolis Nigeria and its urban planning system. The

formulated framework derived from this research should enhance the understanding of Spatial Planning between and within the three tiers of government in Nigeria and Nigerian urban and regional planning authorities. Such a framework could help to improve the degree of understanding, awareness and the effectiveness of URP strategies and practices in Jos Metropolis and many urban areas in Nigeria, considering the factors that impact on the implementation of the master plan as strategies and practices.

It should be noted here that this research to evaluate the need for spatial planning and develop a framework and guidance for addressing physical planning problem in Jos metropolis as a strategic tool between and within the planning authority. In this study, the unit of study are the town planners (TPL) in the Planning Authorities, who are within the Jos Metropolis Nigeria actively involved in URP activities and have been using the master plan as a tool for regulating development in Jos Metropolis Nigeria. The decision was made to only solicit responses from the many Planning Authorities with varying departments saddled with different but related responsibilities in Jos Metropolis Nigeria, since the research is concerned with the development of a spatial planning framework which the experts in the Nigerian urban and regional planning (NURP) system are not conversant with even when the Master Planning system has failed in most urban areas in Nigeria.

These Planning Authorities; JMDB, MLSTP, MHUD, sections of Lands in the Six Local Government Areas (Jos North, Jos South, Jos East, Bassa, Barakin Ladi and Riyom) are the focus of this study, the embedded unit of study is drawn from planning officers that have been involved in the preparation, design and implementation of the GJUMP and are working in the nine Planning Authorities in Jos Metropolis Nigeria. This is necessitated by the fact that these town planners has been found to be an important component in enacting the goals and enhancing the performance of the Master Plan which is a key document used by the Planning Authorities for development control. This argument was also supported by Maxwell (2008), who argues that practice makes permanent.

#### **1.4. THE PhD RESEARCH STAGES**

This present research consisted of five stages as shown in Figure 1-1 details of these stages are elaborated further in Chapter 4 and the findings presented in subsequent chapters (Chapters 5, 6, 7 and 8).

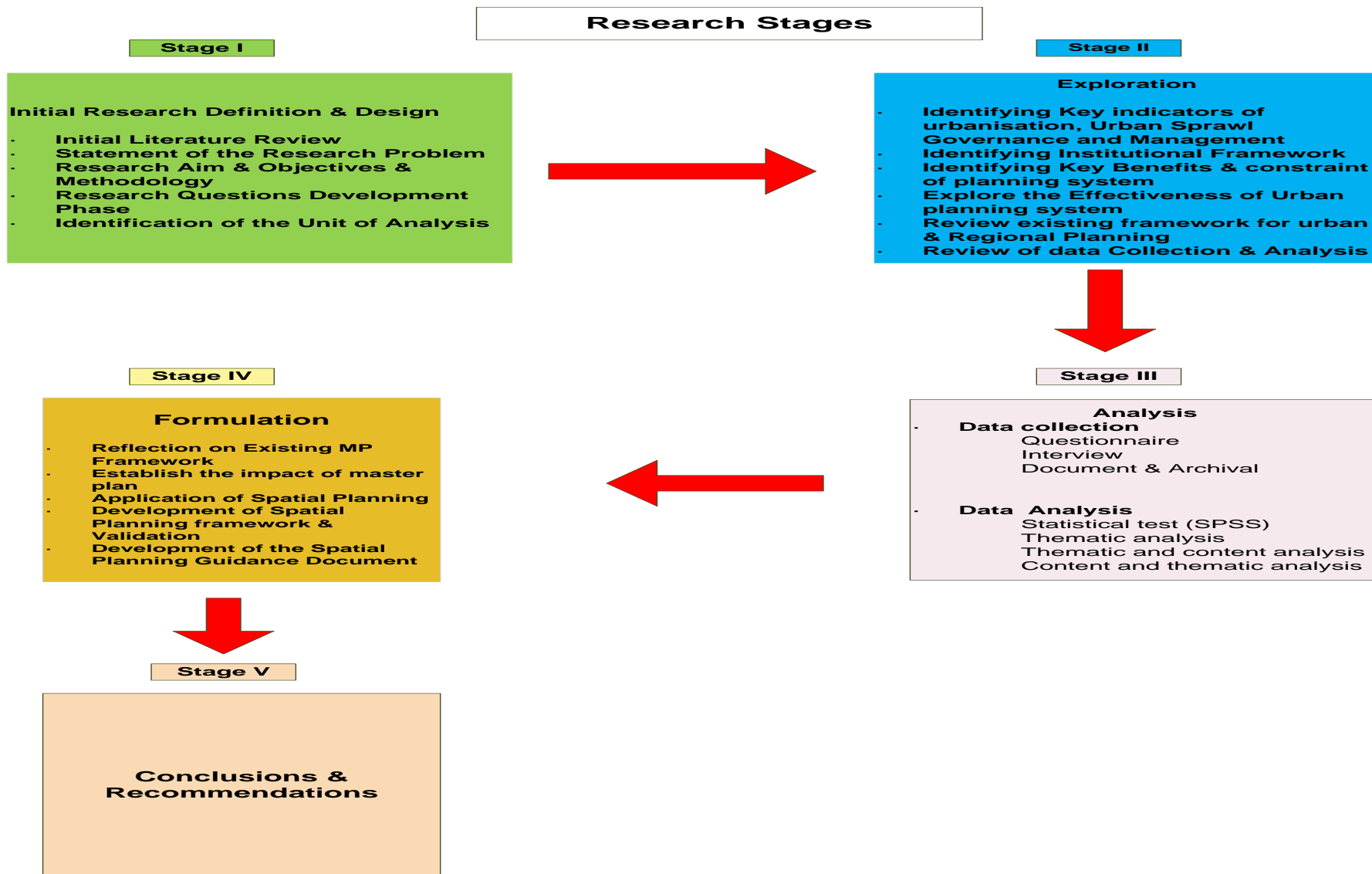


Figure 1-1: Research Stages

## **1.5. RESEARCH NOVELTY, UNIQUENESS & EXPECTED CONTRIBUTION TO KNOWLEDGE**

### **1.5.1. Research Novelty**

To the researcher's knowledge, this study is the first academic scholarship to be carried out in Nigeria relating to the need for spatial planning Spatial Planning in Jos Metropolis Nigeria. It is a new body of knowledge which could be termed 'Hybrid' where the knowledge of master planning approach and spatial planning approach are fused into one using the developing country's perspective; it brings about new knowledge in the area of URP. It is also a new tool enabling the professional Town Planners to perform their work better. And a new channel of addressing the physical planning problems using an improved planning approach which is introducing spatial planning creating better alternatives for planners (Third way by Giddens (2000) and the other path by De soto, (2001).

It is a new creation of a better and comprehensive tool for best practice for planners by widening their roles and responsibilities at different levels of operation (Federal, State and Local Government Area) in Nigeria.

### **1.5.2. Research Uniqueness**

The originality of the research is in the area of spatial planning in Jos metropolis as a Physical Planning method. Spatial planning is not the planning method adopted in Jos Metropolis Nigeria presently. Hence, the study calls for an in depth understanding of the process of spatial planning in Jos metropolis Nigeria. Being the first empirical study of its kind in Nigeria this effort could lead to the subsequent adoption of spatial planning as a tool/method of addressing Physical Planning problems in Nigeria considering its peculiarity.

The choice of Jos Metropolis Nigeria, Nigeria is informed by the fact that Jos (Tin City as it is called) is one of the colonial cities inhabited by the British colonial masters as a result of the tin mining activities that started in 1904. This old city was planned with layers of grid-system in 1920 and it became a provincial headquarters in 1923. This interaction changed the prospects of the city. In 1914, it was rated one of the old



township and under the 1917 Town Planning ordinance it was recognised as a planned town (Bingel, 1978).

Plateau state Jos Metropolis Nigeria has Planning Authorities at the three tiers of Government (which would be used as cases), Just like any other state in the country and using these Planning Authorities will mirror the exact activities of development plan process and development control (DC) process in other 36 States of the Federation including Abuja, the Federal capital territory. These PA's use the same documents and professionals at the Federal, State and Local governments as there exist the same professional training by the Town Planners Registration Council of Nigeria (TOPREC) and the Nigerian Institute of Town Planners (NITP). Furthermore, the researchers experience; teaching and participation in the preparation of the master plans; Greater of urban Master Plan and Angware Master Plan (Jos East) has also informed the need for the study.

Numerous studies such as that by Mabogunje (2002), Oyesiku (2004) and Jiriko (2008) have shown that Master Planning approach has failed in addressing the problem of urban development and management of urban and rural areas due to non-implementation and its inability to co-ordinate the horizontal and vertical of planning activities in Nigeria. There is a clarion call for an appropriate Physical Planning approach to address the problem in Nigeria using Jos Metropolis to have an in-depth understanding of the problem. Spatial planning is characterised by dynamic, timely policy and decision making, inclusion and effective community engagement, collaboration, integration and joining-up, positive, evidence-based reasoning, outcomes and delivery, urban sustainable development and climate change amongst others. It is altogether very flexible and the complete opposite of the Master Planning approach. This is very important and timely considering the dynamic nature of the Nigeria urban and regional population.

If based on new values, this mode of planning has the potential for addressing the fundamental causes of uneven development. Redistributing infrastructure in space, which the spatial plan does, can effectively address the cause of the Physical Planning problems identified in most Nigerian cities and urban areas.

### **1.5.3. Expected Contribution to Knowledge**

This research will provide foundational knowledge on the subject of Spatial Planning in the context of a developing country like Nigeria where urban Master Planning has failed as observed by Mabogunji (2002), Oyesiku (2004;517-520), Jiriko (2008;129). Nigeria has a high rapid rate of urbanisation which has made the urban Master Plan's inapplicable since they were not originally meant for application in dynamic environments. Planning is an evolving process concerned with constantly changing societal and environmental problems. This singular reason has made a case for the consideration of concepts and paradigms to change for planning to be relevant in most cities of developing countries (Mabogunji, 2002; Falade, 2002; Oyesiku, 2004; Jiriko, 2008).

Professional Town planners in Nigeria are supposed to be dynamic and adaptive in their approach to be relevant. Being dogmatic about a specific planning system on which the success of the urban planning practice virtually hinges should not be thought of. They tend to be enthusiastic about urban master planning which after being prepared are kept on shelves to gather dust, which is rather unfortunate just to end it there (Falade, 2002; Jiriko, 2008).

The purpose of this research is to evaluate the need for Spatial Planning in addressing the Urban Development and Management in Jos Metropolis Nigeria by analysing the current institutional framework, examining the effectiveness of the Urban Planning System in Jos Metropolis which could give a clue why the failure of the GJUMPs and to determine how Spatial Planning can be applied to meet the stated aim of the plans. There is a lack of empirical studies on Spatial Planning in Nigerian urban areas. Hence, this research will add knowledge to this area. It will also contribute to the literature of URP by identifying the key factors affecting the policy and implementation of urban plans in most urban areas in Nigeria. Based on this study the researcher will provide a framework and its guidance to show case the factors identified and use the spatial planning framework as a remedy to be adopted to address the physical planning problems in most urban areas in Nigeria.

This present research would contribute to knowledge, practice and policy. Knowledge is created in the area of spatial planning in Jos metropolis Nigeria. Spatial planning will

contribute towards the issues that addressed the problem of physical planning problems in URP. There would be an increase and widening of the URP curriculum in the area of Spatial Planning where there is a marked difference between the Master Planning system and the Spatial Planning system where the urban sustainability and the climate change aspects are considered and adopted due to its nature over time. Town planners practicing now have other alternatives to adopt as a new paradigm in their planning profession, making adjustment in the pattern and tradition of administering the planning services to the urban areas. Policy makers would have new ideas about the changing issues as it relates to URP problems. The outcome of this research will be relevant and applicable to cities in other developing countries in Africa.

## **1.6. RESEARCH METHODOLOGY**

The main aim of the research is to evaluate the need for Spatial Planning and develop a framework and guidance for addressing physical planning problem in Jos metropolis Nigeria. It is focused on identifying the major factors that interplay to ensure the application of Spatial Planning.

It utilises the nested approach by identifying the research philosophy, approach, strategy and method. Interpretivism, constructivism and valued laden are established as the philosophical stance for the study. The unit of analysis are Town Planners in the Planning Authorities within the Jos Metropolis Nigeria.

The approaches are both deductive and inductive point of views. Deductive approach is a research strategy where testing of a hypothesis is employed using specifically designed techniques for the purpose of developing a theory and the deductive approach involves the testing of a theoretical proposition by using research strategies specifically design for the purpose of testing (Collis and Hussey, 2003; Saunders, Lewis and Adrian, 2009). The strategy used was mixed method involving the case studies. The Planning Authorities (JMDB, MLSTP, MHUD, lands sections in the six local government areas that were introduced into the Metropolis) were used as case studies.

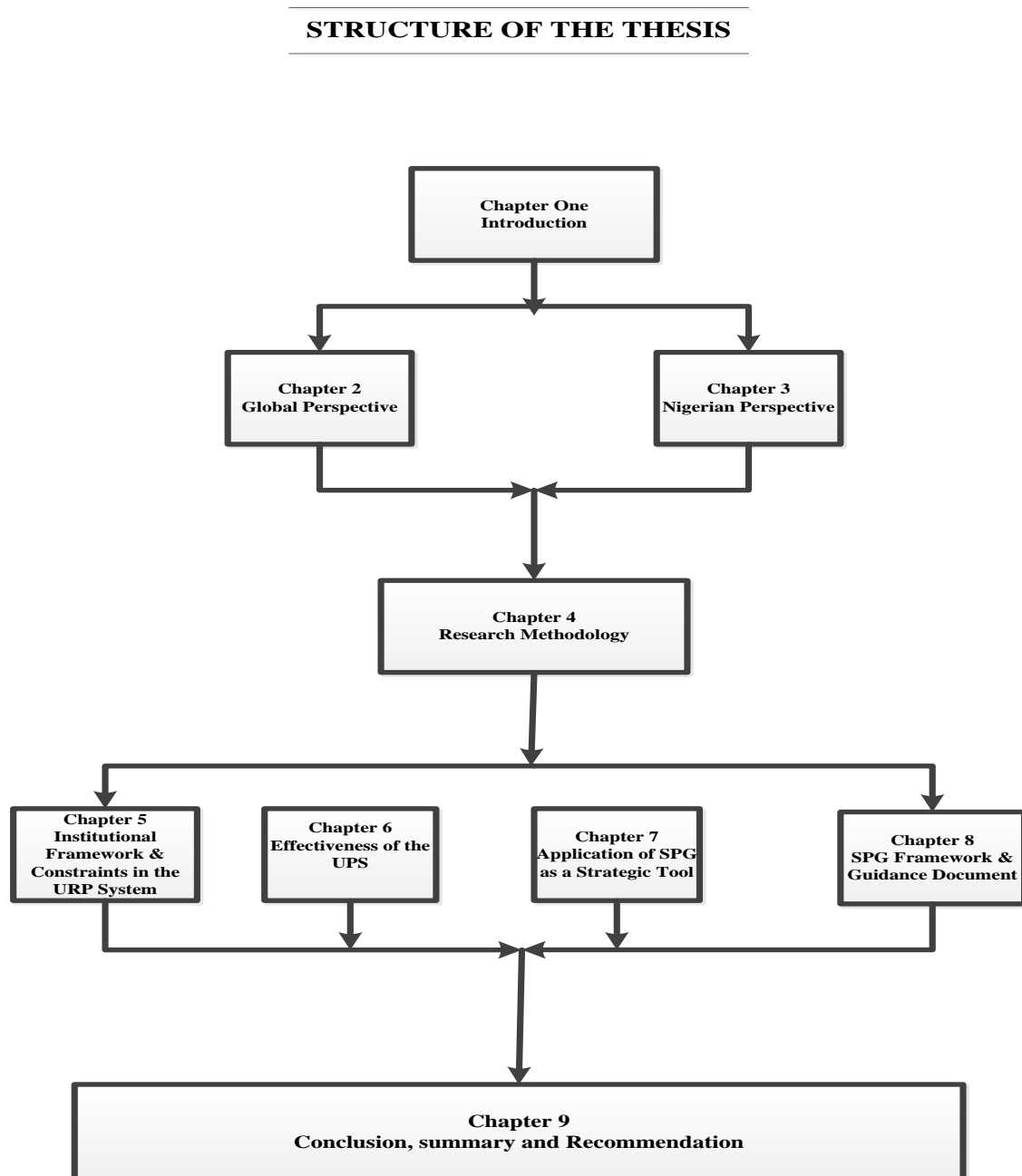
The study used semi-structure interviews (face-to-face), documents and questionnaires to gather the views and opinions of planners regarding the phenomenon under consideration. The data from the questionnaire was analysed using the SPSS. While the

data from the face to face interview and document were analysed using thematic and content analysis respectively using NVivo. Hypothesis stated to be tested, states that...‘Spatial Planning has a significant relationship to Urban Management and Urban Sprawl in the study area’

For more details on research methodology see chapter 4.

## 1.7. STRUCTURE OF THE RESEARCH AND METHODOLOGY

The research will be structured into nine (9) chapters with the following breakdown see Figure 1-2.



**Figure 1-2: Structure of the Thesis**

**Chapter 1** is the introduction, it has background to the study, statement of the problem, statements of the hypothesis conceptualization of the research, aim and objectives,

research questions, unit of study, justification of the research study, organisation of the research study structure of the research and definition of terms.

**Chapter (2) and (3)** are literature review chapters. Chapter 2 has introduction to review of related literature, definition of terms, conceptual clarification/ conceptual frame work and the socioeconomic, cultural and demographic characteristics of the metropolis. Urbanisation, Urban Governance and management as well as Spatial Planning would be considered which reflects the global perspective. Chapter 3 includes the review of the current and institutional framework of URP Nigeria, constraints in the urban planning procedures, the effectiveness of the Urban Planning System, and the applicability of Spatial Planning as a strategic planning tool in Jos Metropolis. The structure/organisation of the literature search starts from the global perspective, continental perspective, national perspective, state level and summary of major findings of literature search.

**Chapter (4)** is the methodology section expressing the general introduction, philosophy, approaches, strategy and methods. It also contains ethical considerations and a summary of the methodology.

**Chapter (5) Institutional Framework** and constraints in the URP system; This chapter present the data on the institutional framework and the constraints identified in URP procedures with particular emphasis on how the Jos Metropolis N has been structured to bring about the implementation of the propose GJUMP. It seeks to analyse critically the current institutional framework of URP in Nigeria within which the Jos Metropolis lies. It uses the identified constraints as a framework to analyse the current institutional framework within which the Planning Authorities exist in Jos Metropolis and how it has affected the implementation of the GJUMP.

These components include; Institutions (3 tiers of Government), Organisations (Planning Authorities); MHUD, MLSTP and six sections of lands under Works departments of the LGAs' carved into the metropolis. The PLs (Master Plans, URP 1992, Law, Land Use Act, 1978 (LUA, 1978), National Housing Policy (NHP), National Urban Sustainable Development (USD), Climate Change and the Administration structures (commission system and council manager system) employed to control development. This chapter will also provide the findings for the research.

**Chapter (6)** the chapter seeks to examine the effectiveness of the Urban Planning System system and assess the applicability of spatial planning based on the state of the URP in Jos Metropolis in terms of Urban Development and Management. The effectiveness of the Urban Planning System was considered based on Urban Governance (institutional), Urban Management (Development control goals and measures) which the technical aspect is. The administrative structure operates using the legal (laws and ordinances) which is generally an embodiment of regulations to achieve the stated goal of the planning system.

The Urban Development and Management is considered in this chapter under the following namely; urban governance (Institution), urban management (development control goals and measures) technical, Administrative (operational) and legal which include (laws and ordinances). The effectiveness of the urban system would be considered under each of these headlines considering the nine cases studies which include; JMDB, MLSTP, MHUD, sections of Lands in the six local government areas (Jos North, Jos South, Jos East, Bassa, Barakin Ladi and Riyom) that were carved into the Metropolis, dwelling on their functions, roles and responsibilities in determining the development of the urban morphology in Jos.

**Chapter (7)** this chapter seeks to assess the applicability of Spatial Planning as a strategic tool in Jos metropolis. It utilised the findings from chapter 5 and 6 (The Constraints identified & the Effectiveness of the urban planning system) to make a case for the application of Spatial Planning in Jos Metropolis and many urban cities in Nigeria. It is structured as follows: implication of the constraints and effectiveness of the Urban Planning System on Urban Development and Management in Jos Metropolis (Failure of the Urban Master Planning approach in Jos and many Cities in Nigeria), A need for and comparism between Master Planning and Spatial Planning, testing of the hypothesis and adoption of the Spatial Planning as an appropriate management tool in Jos Metropolis Nigeria, a case for the application of Spatial Planning; The 3rd Way & the Other Path and the strategic SPT.

**Chapter (8)** this chapter seeks to develop a Spatial Planning Framework , validate and develop a guidance document implementation of Urban Development and Management in Jos Metropolis Nigeria. Accordingly, the chapter is structured as follows: the Spatial

Planning framework, the framework development process, the Urban Planning System and framework analysis, draft of the framework, framework Validation, the Spatial Planning Framework , preparation of a guidance, definition of guidance, scope and contents of the guidance document, structure and characteristics of a good guidance document, implementation of the guidance document, questions & answers and the final guidance document and implementation of the Spatial Planning Framework

**Chapter (9)** this chapter presents the conclusion and recommendations for the research. It is structured as follows: research overview and objectives, stating how the research has met its objectives through six stages, research overview and objectives, originality and generalisability of the research, findings of the research and recommendations of the study. The problems encounter during the research, limitations and scope of the research, suggestions for further research and benefits of the research.

## **1.8. SUMMARY**

This chapter laid a foundation and served as a general introduction to the thesis. It considers the research background; statement of problem, research outline; research hypothesis, research questions, aim and objectives, the Phd research stages, research novelty, uniqueness and expected contributions, research methodology and structure of the research. This now links the discussion to the next two chapters (2 and 3) of extensive literature review.








## **CHAPTER 2. URBANISATION, URBAN SPRAWL, GOVERNANCE AND MANAGEMENT AND SPATIAL PLANNING**

### **2.1. INTRODUCTION**

This chapter seeks to review relevant and related literature about the spatial planning framework (Spatial Planning Framework) for urban development and management (Urban Development and Management) from a global perspective.

The introduction chapter gave the background of the research observing that the present master planning approach (Master Planning) in Jos, Nigeria does not seem to be adequate; hence there is a need to evaluate the implementation of spatial planning (Spatial Planning) to the study area to effectively address the cause of the problem in Jos, Metropolis, Nigeria (Jos Metropolis Nigeria).

Consequently, this chapter is structured as follows;

-  The nature of urbanisation and associated problems in developed countries
-  The current institutional framework by identifying the constraints of urban and regional planning (URP) systems
-  The effectiveness of the urban planning system (Urban Planning System) in terms of Urban Development and Management
-  Application of Spatial Planning as a strategic tool in metropolitan regions and
-  Summary of the findings from the literature review from a global perspective.

This leads the discussion into the nature of urbanisation and associated problems in developed countries.

## **2.2. THE NATURE OF URBANISATION AND ASSOCIATED PROBLEMS IN DEVELOPED COUNTRIES**

### **2.2.1. Introduction**

This section considers the definition, causes and nature of urbanisation as well as the problems associated with this issue which include; urban developments such as Urban Sprawl, its form and causes, slums and what causes slums, environmental degradation and poverty, amongst others.

Urbanisation is a form of response to a bewildering set of economic, social, demographic, cultural and environmental processes as well as the political forces on the physical geography in proportion to population and resource consumption in towns and cities within urban settlements (Kempe, 1986; Vernon, 2005; UN, 2007; Knox, 2009; Reinhard & Yasin, 2011). It was also considered demographically or sociologically as a process of rationalisation and is closely related to liquidisation, industrialisation, localisation, modernisation and globalisation as observed by the World Bank (2009) and UN (2010).

The followings have been advanced as possible cause of global urbanisation; (i) natural increase in population, which accounts for about 60% of the growth in urban population (ii) net migration to urban areas, which accounts for about 20% of the escalation, (iii) reclassification of settlements as towns or declassification as a result of changes in the nature of economic activities and acquisition of urban characteristics and (iv) the extension of boundaries to cities and towns accounts for about 20% of the increase (Preston and Green, 1985; Kasarda and Crenshaw, 1991; Brockerhoff 1999; Bhagat and Mohanty, 2009; Knox, 2009). People migration when they are in search of social and economic opportunities which abound in other areas. The rate tends to be higher in developing countries and amounts to less than 20%, as observed by Cohen (2006), in countries in Africa such as Burundi, Ethiopia, Malawi, Burkina Faso, Uganda and South Africa, with a 60% rate of industrialisation, but the scale of urbanisation would be higher in Africa in countries such as South Africa, Egypt, and Nigeria, and in Asian

countries such as, Malaysia, Bangladesh, India, China and Hong Kong. This trend affects the urban structures of these areas (Reinhard & Yasin, 2011).

Furthermore, certain factors have resulted in people and businesses moving out of the inner city into the suburbs. Kasarda & Crenshaw (1991) observed that the determinants of urban growth can be grouped under three headings; natural increase in urban population, migration, both intra-national (rural –urban and urban- urban) and international, and boundary redefinition through annexation of the surrounding areas. This alone brings about 20% changes in developing countries which mean that more factors could be responsible for urbanisation (Alterman, 2002).

The failure of countries to make provisions in the areas of basic infrastructure proportionally that will accommodate the high rate of urbanisation and ensure sustainability has brought about developments in different areas that have become a source of concern to both experts and government in both developed and developing countries (UN-Habitat, 2009). The absence of the needed infrastructure in urban areas leads to developments such as suburbs or sprawl, slums and environmental problems such as flood, subsidence/ collapse of bridges, landslides, and fire disaster etc., as observed by UN-Habitat, (2009) and Nyambod (2010).

Urbanisation is characterised by the nature of its dimensions which include; level of urbanisation, excessive urbanisation, urban primacy, migration and natural increase, job creation and the urban informal housing sector and its informal spatial form as observed by Kasarda and Crenshaw (1991), Galster et al, (2001) and Chris and Jay (2006). The nature of urbanisation includes; a rapid and accelerated development rates taking different shapes and forms. The shapes could be; a balloon which expands without boundaries, mushroom, frog and leap etc. It also takes different forms ranging from sub-urbanisation harbouring and affecting some sections of the urban fringe, counter-urbanisation which is a situation where two or more urban areas converge forming a bigger or enlarged area and as well as ex-urbanisation explaining the character of rural housing which reflects transition and rural based development and compares distributional ‘haves’ and ‘have nots’.

The consequences and problems of rapid urbanisation includes; high level of unemployment, increase urban poverty, urban housing problems, poor governance and

management, inadequate infrastructure, industrialisation, environmental degradation and urban depletion etc. As deduced from the summaries, urbanisation in developing countries gives rise to a huge task to manage the inherent problems that emerge from the urbanisation processes manifested in urban sprawl/suburban developments (UNDESA, 2005; UN, 2007; Chris, Gerhard and Lila, 2007).

Though for Urban Sprawl economy, patterns of infrastructure initiatives like the construction of roads and the provision of infrastructure using public money encouraging development are the immediate causes of its occurrence. Based on these causes the direct implication of these phenomena is the change in land use and land cover of any region (Douglas, 1994; UNDESA, 2005; UN, 2007; Chris, Gerhard and Lila, 2007; Gyabaah, 2011). From the CIA World Factbook, (2007) report shows that ten countries from the African continent and ten countries from the Asian continent are the twenty most populated countries in the world. The implication of this is that more urbanisation would take place in Africa and Asia in the future; including one or two from similar developed countries which have areas where development is expected to be achieved by 2050.

Well-managed urbanisation has the potential to improve the living standards of the world's population. The transition into an urbanised world has enormous implications for world economy, social conditions, physical conditions, as well as the environmental state of the world. An increasing number of cities have taken on significant roles in the globalisation of the economy, particularly with regard to financial services, commerce, transport and telecommunication, amongst others as observed by UNO (1995), Alterman, (2002) and Cohen, (2004).

The global population increase is expected to occur in urban areas in developing/transitional countries as a result of natural increase and migration (rural – urban). At the beginning of the 20th century, there were only 16 cities in the world, the vast majority in advanced industrialised countries and inhabited by a million or more people. Presently, over 1000 cities each contain a million or more people, and about eighty (80%) percent of them are found in developing countries. By 2007, for the first time in human history, more people, worldwide, lived in cities than in rural areas, and by 2017 developing countries are likely to have become more urban in character than

rural (UN, 2004). If well managed, cities offer important opportunities for economic and social development.

Some argue that industrialisation causes urbanisation as industries are often located in major cities attracting rural migrants for employment opportunities. The consequences of urbanisation include; high levels of unemployment, graduate under-employment, under-employment, poverty, housing problems, urban management and governance problems, shortage of urban facilities, utilities and services as well as environmental problems etc. (UNCHS, 1986; UNCHS, 1987; Davies and Rakodi, 1993; Lasserre, 1995; UNCHS, 2000; Taylor, 2001; UNFPA, 2007; UNDESA, 2009 and UN-HABITAT, 2007). The interaction and translation of the processes of the urban systems gives a scenario better known as sprawl characterised by slums; substandard housing, densely populated buildings, high rates of diseases, high urban fringe population, increase in social ties, distressed housing, abandoned buildings and vacant lots. This has manifested itself in the number of illegal settlements, late provision of services, inappropriate settlement sites for instance, on hills and mountain slopes where facilities and utilities cannot be adequately constructed as a result of self-help housing. The inhabitants are forced to build temporary accommodation in spontaneous settlements. These are called shanty towns or urban slums but are also known as; Favelas (Brazil), Barriadas in Latin America, Bidonvilles in Africa, Gecekondur in Turkey and Bustees in Calcutta (India). All these are now familiar appellations given to such spatially distinct urban blights with large environmental implications as about 40% of the city dwellers live on the urban periphery and in poverty (Drakakis-Smith, 2000; UN-Habitat, 2007; Nyambod, 2010).

The major problems of urbanisation, from the Physical Planning perspective, are Urban Sprawl and slums which are generally characterised by scattered developments that increase traffic, sap local resources and destroy open spaces; as well as being responsible for changes in the physical environment in the form of spatial organisation of cities, towns and urban areas.

In developed countries the growth of urban populations is closely monitored because their population growth rates are low and because over 80% of their population live in urban areas and with appropriate data about the rates of population growth. This is not

as easy in developing countries as urban population growth rates are high and inaccurate data hampers determination of the correct growth rates (UNDESA, 2005).

Urban sprawl is common to both developed and developing countries, but its development and management vary. This is so because in developed countries it is monitored and controlled whilst the situation in the developing countries is not. Hence, the situation is prevalent in developing countries. Mechanisms are put in place to control development in developed countries, using physical planning approaches that are helps to manage the situation in addition to government support towards implementation of an appropriate planning approach.

Furthermore, Urban Sprawl, leads to a considerable land consumption (about 1.5 times faster) between 1970-2000 in Mexico City, Beijing, Antananarivo (the capital of Madagascar), Johannesburg, Israel, the eastern parts of South Africa, South Africa's largest commercial hub and the capitals of Egypt and Cairo (Alterman, 2002; UN-HABITAT, 2010/2011).

Consequently, urban sprawl has led to the increase in the size of the non-agricultural population exceeding the increase in meaningful non-agricultural employment opportunities. Based on this varying forms of urbanisations are observed; 'over-urbanisation' 'hyper-urbanisation' 'ex-urbanisation' 'peri-urbanisation' and 'full urbanisation' which shapes the different forms and nature of urbanisation in the developing/developed countries (Kempe, 1986; Mercado,2002; Aguilar, 2008).

The transition to full urbanisation has already taken place in Europe, North and most parts of South America. This means that most global population growth will emerge in cities of developing countries which are expected to double in size by 2030 (UN-HABITAT, 2007 and Reinhard & Yasin, 2011). This condition is manifested in the emergence of slums over time.

The United Nation's goal of "Cities without Slums" is not unattainable, according to the report, which calls for the vigorous implementation of urban planning and management policies designed to prevent the emergence of slums, along with slum-upgrading and a commitment on the part of governments to reduce poverty (HABITAT, 2003; Rakodi, 2004).

Based on physical planning, urbanisation is encouraged by the transformation processes involving key aspects of urban management by planning authorities using policy guide. Policies are generally urban biased as the required infrastructure is provided at locations where the government has received the greatest pressure, and therefore, urban areas develop much faster. While there was truth in this idea when the economist Lipton introduced it in the late 1970s, Kessides, an economist at the World Bank, says it no longer applies to the reality of poverty in sub-Saharan Africa. That notwithstanding, the idea of urban bias “still reigns,” says David Satterthwaite (2001). Investment in urban infrastructure and services affects urban systems and urban agglomerations which improve health and safety as well as reducing commuting and congestion costs. The theory of urban bias explains how the provision of infrastructure affects the economic efficiency, formation, length and quality of life in urban areas.

For the purposes of this study the implication of this development will be further pursued in the physical planning dimension.

Based on the developments (provision of infrastructure) the problems of physical planning dimension are categorised under four headings namely; sprawl, slums, environmental degradation and conflict in the settlements emerging. Settlements in urban areas of both developing and developed countries can affect how urban areas look and accommodate the population. These are considered to the associated problems of urbanisation because of their physical dimension.

Historically, slums are traditionally referred to housing areas that were once relatively affluent but which deteriorated as the original dwellers moved on to newer and better parts of the city. However, these definitions have come to include the vast informal settlements found in cities in developing countries (UN-HABITAT, 2007; Parsa *et al.*, 2010). It can also refer to a group of houses, blocks of flats, streets etc., where the conditions are dirty and overcrowded and the building(s) are often in a poor state. As a Physical Planning issue it is caused by the transformation processes involving key aspects of urban management by the Planning Authorities using their policy guide.

Slums areas are seen as wild run-down areas considered to be developments inside towns and city centres and characterised by substandard housing and squalor and lacking tenure security (Rakodi, 2004; UN HABITAT, 2008).

Urban sprawl is a multi-faceted phenomenon, because its root causes come from different sources. It is a process that is time limited and characterised by poor housing, infrastructure, and environmental quality, amongst others. This has made it the biggest challenge for different disciplines to measure the type, extent and nature of urban sprawl as well as the driver responsible for the growth taking place in numerous regions (Stoll, 2005; EEA, 2006; Katz, et al 2009; Amanda, 2009; Kneebone, 2009). This knowledge would help developers and Town Planners to project growth patterns of sprawl conditions and facilitate various infrastructure facilities in monitoring and controlling urban development and management. Efforts should be made to identify the patterns of urban sprawl and quantify them across regions for proper inclusion in growth numbers. This phenomenon was observed in urban areas where there was an expansion of urban sprawl between 1970-1990 in some cities of countries such as Germany (Frankfurt, Hamburg, Zurich, Brussels, Belgium, Copenhagen, Denmark) and in the United States (Boston, San Diego, New Jersey, San Francisco). It was also observed in some Asian countries like India, Japan, China, Saudi Arabia, and in African countries such as South Africa, Nigeria, Ghana, Sao Tome, Principe, and Senegal. (Kenworthy and Laube, 1999; EEA, 2006).

However, the dimensions experienced were different, while the cases are haphazard and uncontrolled, and characterised by problems of slums, deterioration of water quality in streams, increased potential for harbouring disease vectors, offsite land cover changes, poverty, inadequate basic infrastructure, and social facilities, etc. It did not have a specific direction in developing countries and was controlled and channelled appropriately in a known direction in developed countries (Douglas, 1994). All these attempts are in order to identify the sprawl pattern (type, extent and nature) and quantify it across a given geographical region (UN-HABITAT, 2003; EEA, 2004; 2006; Amanda, 2009; Kneebone, 2009).

The manifestation of urban sprawl as a development is characterised by several land use patterns which usually show poor housing, poor transportation, inadequate social services, poor environmental quality, extreme poverty and physical dereliction of basic infrastructure amongst others, around the fringes of cities, towns and urban areas. In a bid to understand urban sprawl, examples could be drawn globally to give the perspectives within which these concepts are considered. According to the National Resources Inventory (NRI), urban land has increased over a decade ago, from 8,900-



100,000 square kilometers (2.2- 40,000 million acres) of land in the United States which was developed between 1992 and 2002. The difference in the NRI classification is that it includes rural development, which by definition cannot be considered as "urban" sprawl. According to the census in 2000, approximately 2.6% of the U.S. land area was urban (Lubowski, et al 2006), this situation has changed and has increased as more of the rural areas become urbanised; but through sprawling of most urban areas.

This is reflected in the fact that urban sprawl creates fiscal problems for cities, as it takes place outside of urban administrative boundaries and its encouragement of new developments causes significant loss of prime agricultural farmland (UN-HABITAT (2010/2011)).

Urban sprawl and its associated characteristics have been observed in most cities in Latin America where sizeable damage has been caused to the areas. The areas include Panama City (Panama) and its surrounding canal zone, Caracas (Venezuela) and its adjacent coastline, San José (Costa Rica) and its mountainous area and São Paulo (Brazil) and its water basins (UN-HABITAT 2010/2011).

This development (upsurge) is usually not captured even during government surveys (such as a national population census), as they cannot be easily grouped under either urban or rural centres. Subsequently, from the urban and regional planning point of view, investigation of these kinds and patterns of growth have become vital for the provision of basic infrastructure facilities (water, electricity, sanitation and roads etc) in these regions of towns and cities as well as urban areas (Turnbull and Navarro, 2008).

Curbing urban sprawl in any given area is always a difficult task, because it is multi-faceted, multi-dimensional nature (Dauny, Elizabeth and Jeff, 2000; Chris & Jay, 2006; Chris, Gerhard & Lila, 2007). Amanda (2009) presented ten geographic facts which included the direct urban focus on high-rise residential and mixed-use development as opposed to urban sprawl in Vancouver. Furthermore, Stoll (2005) coined the term job sprawl and the concept was measured according to the year 2000 census data in U.S. Job sprawl was considered because the availability of jobs within a location that is accessible by inhabitants based on the percentage of income spend on transporting due to distance from their residential location.

It is a fact that informal settlements have been emerging since the 1980s, though estimations of their number vary from time to time. Studies have shown that there are

informal settlements emerging due to varying factors and are characterized by very poor conditions due to inadequate infrastructure availability in these areas (Dauny, Elizabeth and Jeff, 2000; Rakodi, 2004; Lall, Lundberg & Shalizi, 2008; Parsa et al, 2010; UNDESA, 2010). In 2001 a total of 709 informal settlements were reported with a total of 64,676 dwellings covering a total of 3,457.72 ha in Mexico, Lima Peru, Dar salam etc (see Hernando De Soto, 2000; Schteingart and Salazar, 2005, pp. 110– 111; Aguilar, 2008; Parsa et al, 2010).

However, urban sprawl is comprised of buildings that vary from the simplest shack to permanent and sometimes surprisingly well-maintained structures. It is the leading edge of urban growth and implies little planning control of land subdivision (Dauny, Elizabeth and Jeff, 2000; EEA, 2006; Lall, Lundberg and Shalizi, 2008; Parsa *et al.*, 2010).

**Table 2-1 Factors Encouraging Urban Sprawl**

<b>Causes of Urban sprawl</b>
1. Sectoral composition and transformation of the economy.
2. Shift in the location of economic activity.
3. Changes in land prices and housing costs.
4. Changes in incomes, the distribution of incomes and spending patterns.
5. Infrastructure investment, especially transport and over-dependence on the automobile as a means of transportation (Chris and Jay, 2008).
6. Labour market structure.
7. Demographic and household change.
8. Lifestyle and behaviour (consumer preference for large houses and large lawns)
9. Migration, segregation and filtering.
10. Public regulations: taxation and subsidies.
11. Public regulations: land use planning and housing policies (giving developers too much freedom to do as they please), inadequate expenditure on infrastructure (Chris and Jay, 2008).
12. Other agencies or managers (allowing commercial strip development along major roads, instead of requiring a concentration of retail uses at crucial intersections).
13. Quality of the inner city environment.
14. Quality of landscape and townscape.
15. Lack of understanding of or ignoring the consequences of unplanned growth of metropolitan areas, smaller cities, and towns.

Source: Compiled by Author from UNCHS/HABITAT (1994); Chris and Jay (2006).

Chris, Gerhard and Lila (2007) and other related studies on urban sprawl have observed that certain factors leading to these conditions determine the nature and dynamics of urban sprawl.

Drawing from the arguments in related studies four (4) different perspectives would be considered;

a. Infrastructure-related urban sprawl. Here the sprawl is encouraged by the presence of facilities, utilities and services (infrastructure) available in urban areas. These are made available at the outer edges of the urban area and the inhabitants take advantage by relocating to such places. It could also be that the infrastructure makes it easier for the population as it offers them the mobility to relocate to the outer parts of the urban area. For instance, good roads linking the work place and the home as well as recreation points could be the immediate causes of sprawl; this has been observed in places such as Greece (Athens), UK (Liverpool) and in a number of developing countries (Chris, Gerhard and Lila, 2007). In developing countries such as South Africa, Egypt, Nigeria, India etc, there is an unprecedented population growth which potentially threatens the available infrastructure, and, owing to fact that the infrastructure is not equally distributed, urban sprawl can be triggered.

The availability of infrastructure in a specific location pulls the population from the area without, or with a limited, infrastructure. The non-availability of the infrastructure may push the population out of the area. These movements (migration) have varying consequences such as formal and informal settlements emerging. In developed countries a balance is created by ensuring that the infrastructure is proportionally distributed as observed by EEA (2006) and Litman (2011). From this explanation the theory that has emerged is the urban bias/ distributive coalitions (Kasarda and Crenshaw, 1991; Theobald, 2001), which typify both urbanisation and urban sprawl.

b. Urban sprawl in the post-socialist city. This perspective of urban sprawl occurs as a result of the particular psychological effect on the inhabitants, for instance; Warsaw, Leipzig and Ljubljana are settlements that emerge as a result of this situation. For instance post war-cities tend to sprawl in the direction of the most secure sectors of urban areas, such as military barracks that were located outside the central urban area and were regarded as places of safety. After the war developments tended to sprawl towards such places, as they were considered to be safer (Chris, Gerhard and Lila,

2007). This has evolved the theory of dependency/ world-systems which explains why the urban system relies on these factors, interacts with them arrives with the solution (Kasarda & Crenshaw, 1991; Theobald, 2001; EEA, 2006). This situation has been well managed in most developed countries to control the number of these emerging settlements on the bases of the post-socialist city

c. Decline and urban sprawl, best explains the situations where sprawl occurs at any given opportunity in a city or urban area. This is because in most cities the opportunity for development in phases is possible, as well as a change in land use and land use cover. Sometimes the emphasis (being at the peak, for instance, after recession, what happens?) at that specific time calls for sprawling. The urban inhabitants find it difficult to pay their bills, maintain and sustain their households and accommodation, and such urban fall into decline. Such illustrations were observed and a comparative analysis of Liverpool (its conurbation) and Leipzig shows that sprawl is not confined to expanding cities as observed by Moore, Adrain & Henderson, (1998); Couch,(2003); Munck,(2003); EEA, (2006) and Chris & Jay, (2006). The modernisation/ecological perspective explains the decline and urban sprawl, which goes to explain how the social, economic aspects of environmental interaction with one another to bring about a change that will reach a climax and begin to wane. Old ways of doing things are no more being absorbed as the features of modernisation and the natural/ecological succession are considered (Kasarda & Crenshaw, 1991; EEA, 2006).

Further explanation about this theory will be considered in the next section.

d. Urban sprawl, based on the development of second homes, has been observed in many cities where the inhabitants of central or urban areas leave their homes and offer them for rent to generate income citing their central location as an advantage. Rents tend to be higher in the city centre while land tends to be cheaper at the edge of urban areas. Building houses at the outer edge of urban areas could be attributed to a lot of factors, but in the long run all cities and urban areas have sprawl and this can be supported by examples that can be found in Sweden, Austria, Chicago, Los Angeles, and elsewhere (Chris, Gerhard and Lila, 2007).

For the purpose of this study a careful consideration of the influences of the causes of urban sprawl has been captured in Table 2-2.

**Table 2-2: Influences on the causes of the urban sprawl**

1. Structural economic change might lead to changes in population size and socio-economic structure. Populations of different socio-economic composition may have different location preferences.
2. Changes in the location of employment could have knock-on effects on the location preferences of households.
3. Changes in the relative cost of dwellings in different locations may lead to changes in the location of housing demand.
4. Rising or falling household incomes may lead to changes in housing demand. Changes in spending patterns may shift household expenditure towards or away from housing, transport or other goods and thus affect location preferences.
5. Investment that brings down the cost of transport to one location relative to another may affect the location preferences of households.
7. Changes in the age structure, social structure of the population and changes in household type and structure may all affect the location preferences of households.
8. Changes in lifestyle, for example increases in leisure time or preferences for particular activities, may affect the location preferences of households.
9. Inward migrants may have different location preferences from indigenous households. Some social groups may choose or be pressured into certain specific location choices. Filtering processes may encourage households to take certain geographical paths up the housing ladder.
10. Spatially specific supply side taxes or subsidies may encourage housing developers to build in certain locations. Spatially specific demand side taxes or subsidies may encourage certain location preferences amongst households.
11. Land use planning may direct, prohibit or reduce the amount and density of housing development at any given location. Housing policies may have a direct influence on the location of housing development, for example in the location of public sector housing, or an indirect effect on the location of all housing through taxation, subsidy or regulation.
12. For example, the lending policies of banks or building societies could influence the location of housing supply or demand.
13. Good or bad social, economic or environmental conditions in existing urban areas may encourage or discourage changes in the location of housing demand.
14. Physical environments that are perceived to be good or bad may attract or repel housing demand
15. Lack of understanding of or ignoring the consequences of unplanned growth of metropolitan areas, smaller cities, and towns by planning authorities in different areas.

Source: Compiled by Author from UNCHS/HABITAT (1994); Chris and Jay (2006).

Table 2-2 enumerates the general influences on the causes of the urban sprawl in both developed and developing countries. Furthermore, the causes and manifestation of the urban sprawl differ in forms and dimension in both developed and developing countries. The differences could be in the areas of unlimited outwards extension of development, dominance of transportation by private automobiles, fragmentation of land use and the fiscal disparities among individual communities. In USA, California (San Diego) and Massachusetts (Boston) (developed country), smart growth is adopted to control the numerous forms and dimensions of urban sprawling. Furthermore, in UK (Liverpool) efforts are put in place to address the problem as observed by Chris and Jay (2006).

Whilst, this is the case in developed countries, the absence or non-compliance to the control of urban sprawl measure is made manifest in the unlimited outwards extension of development, dominance of transportation by private automobiles, fragmentation of land use and the fiscal disparities amongst communities, this is reflected in section 3.3 as a result of rapid urbanisation.

The analysis of urban sprawl in the developing country, in this case Jos metropolis in Nigeria would be considered in terms of the usage of both the master planning and spatial planning approach and their relationship and appropriateness in the control of urban development and management in sections 7.3.3. 7.3.4. 7.3.4.2.

Finally, it is pertinent to mention that, different dimensions of urban sprawl happen in both developed and developing countries, though having different scenarios and factors determining the situations. These forms of sprawl are considered as elements in the hypothesis stated in section 1.3.

## **2.3. THE CURRENT INSTITUTIONAL FRAMEWORK IN TERMS OF CONSTRAINTS IN THE URBAN AND REGIONAL PLANNING SYSTEM**

The aim of this section is to critically examine and analyse the current institutional framework for urban development and management using the constraints identified (political, physical, financial, cultural, institutional, legal, knowledge and analytical). These constraints would be considered in detail in section 3.4.

The institutional framework is the arrangements through which the planning system circulates laws, processes or customs; serving to structure political, social, cultural or economic transactions and relationships either from top to bottom or from bottom up in the urban and regional planning system. The components to be considered include; existing at multiple scales of institutions (National, State and Local Government) and organisation (planning authorities), Planning Legislations and Administrative framework (World Bank Report, 2003; Ackerman, 2004).

The critical analysis of the current institutional framework draws on international literature from Europe, Asia and other African countries and begins the process by offering a better understanding of how the institutional frameworks operate to ensure effective flow of information from one subsection to another and to achieve the stated objective of the plans at the relevant level.

Goldratt (2004) and Vidal (2008) observed that constraints affect the goal of any programme whether internal or external. There are different types of internal constraints (Equipment, people, plans and policy) and external constraints this is true for the planning system under scrutiny. Goldratt (2004) observed that constraints generally limit the output of a solution and in this case the urban master plan. The following are eight forms of constraints; political, physical, financial, cultural, institutional, legal, knowledge and analytical constraints experienced by many countries, organisations and authorities amongst others in trying to implement their policies (Gupta, 2001; Goldratt, 2004). For more discussions about these constraints see section 3.4. and 3.4.4.

The major components of the institutional framework include; the tiers of government under consideration i.e., federal, State or Local government. The organisations or planning authorities at the international level i.e., Great Britain (London Boroughs of Planning), India (Kolkata Metropolitan Development Authority (KMDA)) and South Africa (Johannesburg Development authority (Juburg)), these planning authorities were derived from Europe, Asia and Africa.

The planning legislation such as; the 74th Constitutional Amendment Act, 1992, constituted on 19th October, 2001, under the Metropolitan Planning Committee Act, 1994. Considering issues such as; sustainability, housing and climate change that have been passed into law and are used as guides to implement the planning policies. And the administrative structure identified in these planning authorities include; the Weak

Mayor-Council Structure, the Strong Mayor-Council Structure, the Commission System and Council-Manager System. For more details about this read the work of Nallathiga, (2008).

### **2.3.1. The institutions of Governance**

The institutions of governance are usually the channel through which information flows from one subsection of the jurisdiction of governance, for instance, National, State or Local Government. Institutional governance can be defined as the exercise of political, economic and administrative authority in the management of a country's affairs at all levels (federal, state and local government) (UNDP forum, 2011).

Governments, international aid agencies, and NGOs amongst others have to be involved in addressing the challenges faced by slum dwellers. Prior to this are vital questions such as; what slums really are, why they exist, and why the number of people living in such places (UN-HABITAT, 2007). This is because projections by the World Bank Research, UN-HABITAT (2003) show that urban slums will double by 2030. Practical /formidable reality exists in Nairobi, Kenya, where 60 per cent of the population subsists in slums and squatter settlements, where 60 per cent is crowded into only 5 per cent of the land – without adequate shelter, clean water or decent sanitation. Hence much can and must be done to improve the lives of the nearly one billion slum dwellers alive today. This can best be done through appropriate planning methods and implementation, within an appropriate institutional framework, even though the UN-HABITAT, 2007 has suggested that the slums can be transformed by taking into consideration their potential in struggling to survive by their development of innovative solutions.

It also has to do with participation, transparency and accountability, effectiveness and equity which promote the rule of law (UNDP forum, 2011). Good urban governance assures that political, social and economic priorities are based on the broad consensus of society and that the voices of the poorest and the most vulnerable are heard in decision-making over the allocation of development resources (The Commission on Global Governance, 2011). It could be the national, state or local government, but it transcends to the private sector and civil society and creates a conducive, political and legal environment (UNDP Forum, 2011).



Good urban governance occurs when societal norms and practices empower and encourage people to take increasingly greater control over their own development in a manner that does not impinge upon the accepted rights of others (UNDP, 2002, p.2). Governance involves interaction between formal institutions and those of civil society. It includes formal institutions (Planning Authorities) and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest see section 3.4.4.3. in chapter 3.

Governance can be written and unwritten policies, procedures and decision making units that control resource allocation within and among institutions (Planning Authorities). New forms of governance allow individual organisations to contribute their strengths and talents, to discharge their collective responsibilities and to preserve and enhance the distinctiveness of the progress of a country at the national, state or at the local government level, which depends in no small measure on the quality of its governance. While a democratic government may lay the foundations for good governance, a vigilant and active citizenry is essential to its sustenance. "Governance" is the art of public leadership. There are three distinct dimensions of governance: a) the form of political regime; b) the process by which authority is exercised in the management of a country's economic and social resources; and c) the capacity of governments to design, formulate, and implement policies and discharge functions for the successful implementation of the policies for growth and development (Stren and White, 1989; Mabogunje, 1989; Mattingly, 1995 as cited in Corubolo, 1998).

There is a need for the standardisation of the provision of urban services, based on modernist Master Planning principles which was through the city government operating mainly by appointing government representatives and only in a smaller proportion by delegated powers of local government authorities which was identified at the central level and also social services and facilities delivery is a demonstration of the various solutions to the problem of satisfying collective social needs which include; education, health, housing, transport, water, electricity, energy supply and telecommunication amongst others (Stren and White, 1989; Mabogunje, 1989; Mattingly, 1995; Healey, 1995 and Werna, 1995 as cited in Corubolo, 1998; Rydin, 2011).

Emphasis should be on the provision of public modes of transport (component of transportation planning and infrastructure management), typical of developed countries

that also rely on public transport which is well organised (McCartney et al, 1995; Mattingly, 1995; Rydin, 2011). The inadequacies of these can be seen in the prevailing social and economic problems in most developing countries. It is evident in the uncontrolled and unguided sprawl of towns and cities without commensurate provision of infrastructure and services (Anderson, 2000; Agbola, 2004; Yasin, 2004; Rydin, 2011). Institutional structures for Urban Governance, obtained from literature, explains, the recent changes in inter-government structure and its analysis, as well as the principles of existing models are worth looking at before suggesting institutional structure(s) for urban, city and metropolitan governance (UNCHS 2000; Salet, Thornley and Kreukels, 2003; Savage and Dasgupta 2006; Nallathiga, 2008).

Institutional structures are instruments used to achieve better governance because they have the potential to bring about changes in outcomes. Pinto (2000), observed that the best institutional structures for urban governance have always been those with Aristotelian ideas which have values embedded in the basic purposes of society. This was adopted in most American systems long ago in their 'home rule' which gave them autonomy, and as such, they are tied to administration without loss of efficiency. This goes to explain why in any study of local government, normatively, it should be concerned with values, and the government institution which seeks to promote those values (Nallathiga, 2008).

Most of these are enshrined in accepted ideologies and have to meet the socio-economic needs of the community so that the response will conform to the institutional structures of urban governance. All these will, in the long run, favour the performance of local bodies or authorities/ agencies (Phatak and Patel 2005; Nallathiga, 2008). For the effective conduct of activities of these authorities, an 'x-ray' of the structures, administrative, governance and management of urban systems will go a long way in providing clearance in an organised institutional framework.

### **2.3.2. Organisations (Planning Authorities)**

Urban management carried out by organisations (planning authorities) is there to help prevent uneven development (disparity), which is exacerbated by the operation of market forces, with emphasis on the provision of services for the whole of society (Davey, 1994 and Healey, 1995). In a bid to solve the problem of distribution of space, which is the task of planning departments, the departments have not effectively address

the cause of the problem (Corubolo, 1998; Aluko, 2004). Industrial development planning is lacking because domestic policies are not favourable and are determined and influenced by events in the international market place. A programme employed by development professionals and practitioners to address the problem of building infrastructure has not been that effective because consideration of fundamental components does not take place and the scale of need is immense (Mitlin, 2003). World Bank (1999) observed that there will be 495 million 'urban poor' among low and middle-income nations by the year 2000. However, this is likely to be a considerable under-estimate of the scale of urban poverty. The income level at which the poverty line is set may be unrealistically low in relation to the cost of basic necessities in many cities, and the measure of income levels does not consider other aspects of poverty even though poverty is recognised as being multi-faceted (Hardoy, Mitlin and Satterthwaite, 2001).

For planning authorities and planners to be able to address the problem of poverty in urban and rural areas in both developed and developing countries varying level of skills are required. Conceptual skill is the ability to perceive the "big picture". It is also about recognising significant elements in a situation and understanding the relationship between the elements; and design skills display the ability to solve problems in ways that will benefit the enterprise. To be effective, particularly at upper organisational levels, planners must be able to do more than see a problem. In addition, they must have the skill of a good design engineer to work out a practical solution to a problem. Managers/ planners must also have that valuable skill of being able to design a workable solution to a problem in the light of the realities they face. It has, however, got to be mentioned that the relative importance of these skills may differ at various levels in organisational hierarchy (Yasin, 1998; van Dijk *et al.*, 2002; Rydin, 2011).

For purposes of elaboration, technical skills are of the greatest importance at supervisory level but less so at middle-management level, human resource skills in the frequent interactions with subordinates are essential at all levels. Conceptual skills are not critical for lower-level supervisors but gain in importance at middle-management level. At the top level of management, conceptual and design abilities and human resource skills are especially valuable, but there is relatively little need for technical abilities. The assumption, especially in large companies, is that chief executives can

utilise the technical abilities of their subordinates. In smaller firms, however, technical experience may still be quite important. Planning Authorities in urban areas are involved in the management of urban centres creating problems that most cities/urban areas find very difficult to disengage from, especially those in the developing countries.

The research question asked was: What is the current operational institutional framework of URP internationally, using illustrations from Europe, Asia and Africa?

This is demonstrated through careful consideration of the models drawn from developing and developed countries (as observed under section 2.3.2. ; to give a wider understanding of their nature and the ways in which these models of governance operate at various levels. It explains how the system operates, the introduction to each authority, its structure, and the constitution or Act backing its establishment, its organisational chart and the type of administrative system adopted. The profile of the planning authority, the organisational principles and framework adopted, followed by the structure of strategic funding, the functions and responsibilities and the jurisdictional mandate etc., all determined how the system controls and management the urban planning system (Healey, 1997; 2004; 2007; Pinto, 2000; Nallathiga, 2008). For constraints affecting the institutions see section 3.4.4.

The authorities include; Greater London Authority, Kolkata Metropolitan Development Authority and The City of Johannesburg, from Europe, Asia and Africa respectively. Further explanation can be found in the work of Hayes and Chang (1990) Pinto (2000) and Nallathiga (2008) and Rydin, (2011), Hull, (2011), Pinto, 2000; Salet, Thornley and Kreukels (2003), Savage and Dasgupta (2006) Edwards III, et al., (2006).

### **2.3.3. Planning Legislation (PLs)**

This section considers the regulatory and pro-active interventions employed by most developed countries to ensure adequate planning procedure are followed. It explains the position of the legal framework and the interventions employed to address the various planning problems.

Planning legislation is a guide which local Planning Authorities use in consideration of applications and is sometimes considered to be a consolidated procedure order. Good governance requires an effective legal framework which is enforced impartially at all times and at all levels. It requires the full protection of human rights, particularly those

for minorities. The impartial enforcement of laws requires an independent judiciary and an impartial and incorruptible police force. Examples of planning legislation used by Planning Authorities to enforce planning applications include; Town and country planning law, 1947, in Scotland it is the Town and Country Planning Act 1997 (UNCHS, 1986; Healey, 2004; 2006; 2007 Anderson, 2000; World Bank, 2001; Harris, Hooper and Bishop, 2002; Jackson, 2006; ODPM, 2005; 2006; Davoudi, 2009; PTI, 2011; Litman, 2009; 2010; 2011; Albrechts, 2010; Rydin, 2006; 2011 and U.N documents). The planning legislations are guides as well to infrastructure provision and investment e.g. transportation and public regulations which include land use and housing policy provision amongst others. Public regulation can be defined as administrative legislation that constitutes or constrains rights and allocates responsibilities to citizens/people in the public domain. However, public regulation can take many forms: legal restrictions promulgated by a government authority, self-regulation, social regulation (e.g. norms), co-regulation and market regulation by an industry, such as, through a trade association etc. One can consider regulation to be actions of conduct imposing sanctions, such as a fine, to the extent permitted by the law of the land (Levi-Faur, 2010). This action of administrative law, or implementing regulatory law, may be contrasted with statutory or case law. It can be distinguished from primary legislation (by Parliament or elected legislative body) on the one hand and judicial decisions on the other hand.

Planning legislation is a mandate by federal, state or local authorities which attempts to produce outcomes which might not otherwise occur, produce or prevent outcomes in different places to what might otherwise occur, or produce or prevent outcomes in different timescales than would otherwise occur. In this way, regulations can be seen as implementation artefacts of policy statements. For instance PLs includes control of land market prices, development approvals, pollution effects, employment for certain people in certain organisations, building code standards, standard organisational quality checking of production for certain goods, e.g., military forces and services. The economics of imposing or removing regulations is related to development analyses using regulatory policy measures (Walker, 2010; Levi-Faur, 2010).

Regulations can either be responsive or non-responsive, which explains why outcomes are not always obtained for a plan (Levi-Faur, 2010; Rydin, 2011). Responsive regulation, as an approach, is used for describing and prescribing how regulatory

enforcement action best promotes compliance through the Planning Authorities (Ayres and Braithwaite 1992; Braithwaite 2002). It proposes that in order to be effective, efficient and legitimate, regulatory policy should take neither a solely deterrent nor a solely cooperative approach (Grasmick and Bursik 1990; Simpson 2002; Shover and Hochstetler 2006; Walker, 2010; Levi-Faur, 2010). Responsive regulation proposes a principled way in which to combine the insights from plural theories of compliance and enforcement (using Planning Authorities), including those that propose people comply only when they perceive it to be for their benefit (Simpson 2002; Shover and Hochstetler 2006), and those that see people complying for normative or social reasons (Tyler 2006). For constraints affecting the planning legislation see section 3.4.4.

#### **2.3.4. Administrative system**

In the governance of any given area a good structure of administration is required for development and growth to be observed. Hence, it is found from literature that four basic types of administrative structure could be available depending on the region and with respect to the delegation of responsibilities (Pinto, 2000 as cited in Nallathiga, 2008). These include: The Weak Mayor-Council Structure, The Strong Mayor-Council Structure, The Commission System and the Council – Manager System. Further explanation can be found in the work of Hayes and Chang (1990) Pinto (2000) and Salet, Thornley and Kreukels (2003) Savage and Dasgupta (2006) Edwards III, et al., (2006), Rosenbaum (2008), Nallathiga (2008), Rydin, (2011), Hull,(2011).

These studies explain the major form of Urban Governance that ensures the growth and development of urban centres in both developed and developing economies. The explanation articulates the institutional framework adopted by different economies to bring about the implementation of the plans designed by the government to ensure growth and development. The next section discusses the associated constraints associated with the institutional framework at international level which is extremely critical to Nigeria and will be discussed in detail in 3.4.

Finally the underlying theory for this section is directly related to constraints is the theory of constraint and it would be considered under section 3.4.1. & 3.4.4. of chapter 3.

## **2.4. THE EFFECTIVENESS OF THE URBAN PLANNING SYSTEM IN TERMS OF URBAN DEVELOPMENT AND MANAGEMENT**

### **2.4.1. Introduction**

Most urban environments are developing haphazardly, due to poor performance by the government and the Planning Authorities burdened with the responsibilities of ensuring controlled development that is eventually managed using an Urban Planning System that is appropriate, hence, this section seeks to examine the effectiveness of the URP system to address urban planning problems, and their implication on the urban environment.

Effectiveness is defined in this study as the measure of the performance of a person, organisation or institution to achieve the outcomes an organisation intends to produce (Planning Authorities). Development control (DC) is one of the powers exercised by Planning Authorities over developments within their jurisdiction. Only Planning Authorities are vested with this power under a country's existing planning laws. It is the process of ensuring that developments are carried out in accordance with approved planning standards. The components to consider include; Institutions (urban governance), technical (urban management), operational (administrative) and (legal) laws and ordinances.

Effectiveness in these components is dependent on the following key areas: overall planning component, staffing process, development planning, career development planning, planning for and management replacement and restaffing, job assignment, process of supervision, training, needs of the organisation, organisational activities, legislation, conflicting internal priorities, master plan, quality improvement in the design and implementation of the policies (Baker and Branch, 2002; Morris and Ward, 2005; Egbu, 2007; Elbana, 2009). Selection of the appropriate basis for assessing organizational effectiveness presents a challenging problem for planners and researchers. There are no generally accepted conceptualisations prescribing the best criteria. Different organisational situations – those pertaining to the performance of an organisation's structure, the performance of the organisation's human resources and the impact of the organisation's activities -require different criteria. Cunningham (1993) after reviewing the relevant literature, concluded that seven major ways for evaluating organisational effectiveness existed: rational goal model, system resource model,

managerial process model, organisational development model, the bargaining model, the structural functional model, and the functional model' (Cunningham,1993).

For the purpose of this research the following are components to be considered; institutional, technical, operations and the laws and ordinances. These components would be considered in terms performance towards ensuring a controlled urban development and management in the metropolitan areas.

#### **2.4.2. Effectiveness of Urban Governance (Institutions)**

Urban governance can be defined as the exercise of political, economic and administrative authority in the management of a country's affairs at all levels (federal, state and local government) (UNDP forum, 2011). Governance can be used in several contexts such as corporate, international, national, metropolitan, urban, central and local governance amongst others (UN-ESCAP, 2011). In the case of this research the urban context is emphasised to address Urban Sprawl problems identified in the previous study. It is characterised by mixed use proximity leading to complexity and chaos, infrastructure investment e.g., transport (dependence on the automobile), public regulations, land use planning and housing policies, other agencies or managers and a general lack of understanding of the consequences of ignoring unplanned growth of cities and urban areas.

Sustaining urban/city centres and growth in both developed and developing countries depends upon the ability of government (federal, state or local government) to deliver basic services to citizens and to strengthen their administration, planning, and management capacities. Urban/cities areas need systems, human resource capacity, and short and medium-term policy vision to meet the demands of citizens for growth (population), job creation, services provision, and improved living standards in a fiscally responsible manner (WBI, 2008). The World Bank's support for developing countries such as Latin American, Asia, Africa and the Caribbean region, for improving the management of cities includes technical assistance for preparing short to medium term poverty reduction and growth strategies (e.g. City Development Strategies, Sustainable Cities Programme etc.), systematic work with local and central governments in building mechanisms for the sustainable financing of capital investment, and direct support to local governments for investment and reform to



improve the provision of decentralised services(World Bank, 1972; U.N, 1988; Davies and Rakodi, 1993 ; WBI, 2008).

Urban Governance takes place in an urban planning system (Urban Planning System) hence, it is best described as the gamut of all institutions (Planning Authorities), legal (regulations, DC standards, building codes, policies, rules and norms etc), operational (administrative structures that ensure the processes) and the technical sub-system that utilises the Master Plans and zoning ordinances to realise goals set by general city plans.

Urban governance is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action can be taken. It includes formal institutions as well as informal arrangements and the social capital of the citizens (UNDP, 1997; World Bank, 2000; Morris & Ward, 2005; Rydin, 2011). For further explanation on the effectiveness of institutions see section 3.5.2.

#### **2.4.3. Effectiveness of Urban Management (Technical)**

First and foremost, management is about solving problems that continually arise in the course of an organisation struggle to achieve its goals. It is also geared towards problem solving which should have started with problem identification, analysis and the implementation of remedies to manage problems (Yasin, 2004).

It also involves administration, by way of laid down procedures, (although procedures or rules which should not be seen as an end in themselves) for execution, control, communication, delegation and crisis management. It is also the management of natural, social, economic and human resources which are based on strategic integration of human resources, assessment of workers, and exchange of ideas between shareholders and workers. It is also an organisational way of leadership developed along the lines of interpersonal relationship, teamwork, self-motivation to perform, emotional strength and maturity to handle situations, personal integrity, and general management skills (Yasin, 2004). Governance assures that political, social and economic priorities are based on the broad consensus of society and that the voices of the poorest and the most vulnerable are heard in decision-making about the allocation of development resources (UNDP forum, 2011).

From the above definitions and for the purpose of this study the issue of governance and management is considered under the Physical Planning discussion on the urban

environment. The basic objective of management in any organisation is ensuring goals and targets are met – at least cost with minimum waste whilst also looking after the health, welfare, and safety of staff that are expected to protect the machinery and resources of the organisation (Yasin, 2004). This is necessitated by the fact that there is an agitation to manage/solve the problem of Urban Sprawl which creates or increases the cost of managing/ maintaining the urban environment.

Spatial Planning can also be considered from the government perspective hence, the Office of the Deputy Prime Minister, ODPM (2006) argued that it goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes which influence the nature of places and how they can function. This also includes policies which can impact on land use, for example, by controlling the demand or need for developments, which are not capable of being delivered solely or mainly because of the refusal of Planning Authorities and which may be executed by other means.

Urban Management is very fundamental to these studies because it gives the perspective or angle from which Urban Planning System address problems which has been identified (Corubolo, 1998: Yasin, 2004). Drawing on the nature of preservation /conservation and urban DC in the Canadian and Portuguese planning systems have shown that the prospect of innovative future plans at lower levels can prevent additional pressure on natural areas as observed in the analysis of three different documents: National Sustainable Development, National Policy Programme for Spatial Planning (MacDonald, 2008).

Natura (2000), revealed that the features of planning systems and proposal guidelines have presented the potential for exploring whether they bring a new impetus to the role of urban and regional planning (land use planning). The strengthening of the planning guidance has to be formulated within an accepted institutional framework (Fidelis and Sumares, 2008).

Urban Management in the European countries using case studies of Santiago de Compostela (Spain) and Konstanz (Germany), aimed to discover whether European cities converge in the way in which they manage their urban development in the framework of the European urban agenda. With the objective of finding out if the content of the urban agenda, management of the urban development process which has

been neglected, distinguish the levels of convergence, discourse and implementation (Medina, 2009).

The factors that have made the management of urban/ metropolis areas very difficult is a lack of understanding of the consolidation policy that is based on sustainable development which creates a field for UD, and with a view to understanding the methods and processes involved in its components (Knill, 2003; Medina, 2009). The analysis of the explanatory factors, based on institutional structures as well as other actors and agencies, defined the behaviour of the actors (Giddens, 1984). Urban Governance and organisational capabilities (management), amongst others, were explained and added to the value and uniqueness of the urban studies with the region of Europe. The case study method was adopted to collect basic data and the results show that convergence was as a result of formal discourse and was the type of process or planning tool for promoting future UD, the differences related to the style of implementation which depended on specific local factors such as policies, plans and programmes within an institutional framework.

Urban Management works hand in hand for the formal and informal sectors and it is a development of bureaucracy that derives its power from the use of strategic planning, coordination, directing and controlling large and complex decision making processes for effectiveness and efficiency (Medina, 2009). It is also used to evaluate the performance and efficiency in the use of resources, technical competence, financial and viability of the planning agencies. Its success is dependent on development planning using basic requirements such as appropriate technology, human understanding, conceptualisation of ideas, and the design of the ideas. For further explanation on the effectiveness of the technical see section 3.5.3.

#### **2.4.4. Effectiveness of the Administration (Operation)**

The process of developing a plan seems to be dependent on experience even though the it lies in the process of developing the plans. In order to move beyond the traditional methodology to prepare and ensure effectiveness in Urban Planning System through strategic planning must consist of a clear process for planning that involves all the used of tools by adequate skill using all the technical potentials in the Planning Authorities, personnel, instruments, rules and regulations such as the DC (Goggin, et al 1990).

The Planning Authorities consider their current situation and all the stakeholders in the plan design and consider what has been accomplished over the past year and any problems that they encountered. Essentially, it is good to set the stage for understanding the past in order to overcome any obstacles that might prevent the Planning Authorities from achieving the stated goal (Cohen, 1988).

An effective administrative structure is required as it is the coordination centre, it shows the appropriate documents to be employed and strategies required to tackle the Physical Planning problem hence collecting of feedback from customers, staff and benchmark research results, becomes very important. This first step is best undertaken before the strategic planning session begins because it requires historical review and input from all levels of staff as well as customers. It is a comprehensive review of strengths, weaknesses, emergent opportunities and threats to businesses.

A careful consideration of the creation of effective operational objectives is very important as this is the time to be very specific about goals, prioritising them, and quantifying the revenues and assumptions and associated costs. This could be used to develop an action plan and measurements to meet the problem identified in the urban system to make it very effective. Unless the objectives identified in operational effectiveness are translated into Action Plans, it is unlikely they will ever be achieved. The documentation of the said plan is very important which will go a long way in ensuring that the correct plan is used for the specific area, remembering to define how to measure success. Hence, for further explanation on the effectiveness of the administrative components of the Urban Planning System see section 3.5.5.

The performance of the organisation is dependent on the data showing where, when and how to achieve an objective which is the focus of the organisation under scrutiny (Cohen, 1988). Instructions being passed from the top management officials to lower officials and ensure the development control measures and goals are strictly followed.

#### **2.4.5. Effectiveness of Laws and ordinances (Legal)**

The usage of regulations and laws to address the physical planning problems identified in the urban areas brings about effectiveness of the legal documents towards a controlled urban development and management. These documents include; Development control standards, constitution of the country under consideration, national building line regulation building code, development plans, DC measures;

zoning regulations, density control, height control act (Goggin et al, 1990; Cullingworth, 1998).

Cullingworth (1998) observed that the constitution at both federal and state level made provision which is binding on municipalities and other adjoining regions in United States of America. For instance the protection of property right as was not document in the fifth amendments to the constitution, it states that 'nor shall private property be taken for public use without just compensation as observed by De Soto (2000) in Lima Peru.

Furthermore, the power of sovereign government under the law provides the legislation on; health, welfare and safety of the community which has not been adequately addressed. Powers are confining in the state and delegated to the local government. These powers have been delegated to allow for zoning (Cohen, 1988; Cullingworth, 1998).

The Town and Country Planning (TCPL) for British colonies such as India, Nigeria West Indies, Australia and New Zealand amongst others were modelled on the United Kingdom Town and country Act of 1932 (Rydin, 1983; Cullingworth, 1998).

Effective planners learn to anticipate changes in policy direction and build agile organisations capable of managing rapid changes in direction. For any Planning authority to be effective the following should be considered; rejecting the negative image, to be proactive towards constraints, Not allowing caution to become inertia, avoiding contradiction, making people relevant through that the Urban Planning System can be effectively managed (Ripley & Franklin, 1982; Cohen, 1988; Cullingworth, 1998). The key to this is an aggressive effort to overcome constraints and obstacles. To a large extent effective Urban Management is a product of positive, can-do attitude. Once this attitude is out it becomes very difficult to make headway or achieve any form of the stated objectives for a program as it is challenged-based.

It is easy to be frustrated by the roadblocks place in the path of public organisations, easy to give up, take a conservative course, and wait to be told what to do. Effective management in any public domain is all about trying to make things happen; the pursuit of programmatic goals and objectives by thinking and acting strategically to making a headway. Effective management is an attempt to understand why things are happening and how things can be changed.

Effective entrepreneurship is characterised by willingness to take on big policy problems and to think from bottom up or otherwise. It may be ascertained that spatial planning is very effective, based on the peculiarities that have been observed, hence, consideration of spatial planning would help to address the question of how can spatial planning can be applied as a strategic tool. The answer to this question would meet the needs of the objective; to assess the applicability of spatial planning as a strategic planning tool in Jos, Metropolis in section 7.5. (Koontz and Weihrich 1990; van Dijk *et al.*, 2002; Yasin, 2004; UNDP forum, 2011).

According to the Weberian school of thought the characteristics of Weber's theory (classical school of management) have bureaucracy to function to its highest potential. If one object in the drawer does not fit properly, the entire drawer becomes untidy, which is exactly the case in Weber's theory; if one characteristic is not fulfilled the rest of them are unable to work in unison, leaving the organisation performing below its full potential.

Organisations (Planning Authorities) follow a hierarchy and orders or superiors, from top to bottom, but have right of appeal. This is a characteristic that was meant to improve workplace conditions; in other words, everyone in a company or any sort of working environment has the opportunity and right to disagree or to speak up if they are unhappy with something rather than not voice their opinion for fear of losing their job.

Freedom of expression is a very important part of Weber's bureaucracy, and is practiced today. Because of the expressing one's opinion it is not the most efficient, but Weber would argue that improved human conditions are more important than efficiency. This is required if the effectiveness of any organisation is to be achieved. Bureaucracies are merely a set of guidelines that make up bureaucracy, which today many believe is the best way to run organisations in all aspects.

The following are the main tenets of the Weberian ideology;

1. Official Jurisdiction on all areas are ordered by rules or laws already implemented.
2. There is an office hierarchy; a system of super- and subordination in which there is supervision of lower office by higher ones.
3. The management of the modern office is based upon written rule, which are preserved in original form.

4. Office management requires that of training or specialization
5. When the office is developed/established it requires the full working capacity of individuals.
6. Rules are stable and can be learned. Knowledge of these rules can be viewed as expertise within the bureaucracy (these allow for the management of society).

When a bureaucracy is implemented, it can provide accountability, responsibility, control, and consistency. This is what is expected if the urban planning system is to function accordingly and effectively meeting its set goals.

The hiring of employees (experts in the required professions) will be an impersonal and equal system. Although the classical perspective encourages efficiency, it is often criticized as ignoring human needs. Also, it rarely takes into consideration human error or the variability of work performances (each worker is different), but the collective efforts of all makes a difference (Howard, 2012).

Public policy decision is often difficult and involves tough trade-offs as politicians devote a great deal of time to avoid these decisions and pretend that imperfect programs result from bureaucratic incompetence rather than deliberate program choices (Ripley & Franklin, 1982; Howard, 2012).

A negative bureaucratic image has a more realistic basis. Public bureaucracies are excessively formal and overly reliant on written communication. This extreme formality, sometimes called red tape, it is due both to the need for public accountability and to well-ingrained habit.

Red tape in some routine bureaucratic process can lead to ineffective and costly management practices. Because of bureaucratic red tape, new governmental organisations often must wait months for office alterations, desks and phones. The bureaucrats also avoid decisions 'passing the buck' and hiding decisions behind vague, convoluted language. Bureaucrats cannot control their elected board directors, and their interest served allowing public authorities to perform effectively as observed by Ripley & Franklin, (1982); Cohen (1988) and Howard, (2012).

The administrative structure operates using the legal documents (laws and ordinances) which is generally an embodiment of regulations to achieve the stated goal of the planning system. Public sector failure cannot be hidden especially if it has to do with all

the sectors and the government is investing a good proportion of its budget in such a program. The procedures are ignored and the media takes undue advantage of the situation and assume that fraud has taken place Cohen (1988).

If incompetence, mismanagement or bad luck is added to normal procurement procedures, massive delays are likely. Given the fishbowl atmosphere surrounding government projects, it is easy to see why the image of the public managers (Planners) is tainted with failure as observed by Cohen (1988) and Cullingworth & Cave (2003).

The Urban Governance has the involvement of multiple actors such as planners and the Planning Authorities from territorial levels of government (Federal, State and Local government) as well as from all branches of government associations. To this, it could be seen that different actors have influence on the outcome of the policy and plans. Implementation is a continuous process, with no clear-cut endpoint.

However, administrative regulations and guidelines are being written, but these policies and programs are supported by parties that supported the original policy proposal. There are serious tendencies to twist the policies at the implementation phase to suit purposes never contemplated or desired by others who formed part of the original coalition. They too seek a role in the administrative processes. It takes place through bureaucrats using bureaucracies (Ripley & Franklin, 1982; Cullingworth & Cave 2003; Hall, 2002; Riegel, 2012).

The action of bureaucrats especially local civil servants (planners) is the most important in implementation. The role of private and nongovernmental actors is also prominent. One major challenge of implementation is the context in which the plans are set. Diffuse, multiple and competing goal statements are normal condition, a deliberate product of the conflict, compromise and negotiation that characterised the design and legitimization processes necessary to produce legislation. Usually goals are vague to accommodate multiple points of view and translating the vagueness into specific concrete implementation actions renewing the potential conflict and compromise (Garrett, *et al.*, 2006; Devin, 2009). For further explanations on the effectiveness of the laws and ordinances to be used in Planning Authorities in the control of urban development and management in Jos Metropolis Nigeria see section 3.5.4.

Finally, interventions have place-shaping (developmental and regulatory) roles, which can be practiced in three interrelated ways: a) pro-active interventions in the way places



are developed; b) regulatory interventions on how others undertake their own activities; and c) strategic coordination which enables participation and policy integration. These have helped in the implementation of the policies observed (in this case climate change) adaptation which can be delivered at national and local to community levels as responses to climate change and its mitigation (Jackson, 2006; ODPM, 2006; Davoudi, 2009; Litman, 2011; Rydin, 2011).

The underlying theories under Urban Governance and Urban Management are; structuration, institutional theory, urban regime and contingency theory, Regulatory theory and Systems theory amongst others.

## **2.5. THE APPLICATION OF SPATIAL PLANNING AS A STRATEGIC PLANNING TOOL IN URBAN METROPOLITAN REGIONS**

### **2.5.1. Introduction**

These sections consider Spatial Planning and its characteristics, the need for the adoption of Spatial Planning as a strategic planning tool, the Spatial Plan design and implementation as well as the implication of Spatial Planning to the research.

The National Assembly for Wales (2004:5) defines spatial planning as the consideration of what can and should happen and investigates the interaction of different policies and practices across regional space, and sets the role of places in a wider context. The concept of spatial planning goes beyond traditional land use planning as it combines and integrates policies for the development (infrastructure) and use of land with other policies (land use and housing) and programmes which influence the nature of places and how they function (ODPM, 2005; pg 30; Nadin, 2006).

Rydin (2011) also observed that the planning system would work out how much development will be needed for social and economic reasons. And that spatial planning does not only emphasise stakeholders' engagement but also based the idea of integrating policies across different tiers of government and different policy sectors through such engagements. In practice this means that the development process is different from the local plan as asserted by Marshall (2008) who said that 'Plans are nothing. Planning is everything'. It provides Planning Authorities with an opportunity to take a fresh look at their areas, develop strategic approaches to planning that will deliver

sustainable development and reflect the local uniqueness of the area and the aspirations of the people and in their living environment.

While spatial simply means the flow of products, people, services, or information among places, in response to localized supply and demand pertaining to or involving or having the nature of space. The term 'spatial' brings into focus 'the where of things', whether static or in movement; the protection of special 'places' and sites; the interrelations between different activities and networks in an area; and significant intersections and nodes within an area which are physically co-located (Dhakal, 2004; Healey, 2004).

Based on the above explanation Spatial Planning becomes a management function involving the formulation of plans to meet the demand and supply need with the available resources in space. The studies on urban governance and management perspective have given rise to models and structures that could be adopted for regional development in the urban centre as pointed out stating the need for the adoption of spatial planning (CEMAT, 1983; Healey, 1997; Vigar *et al*, 2000; Owens and Cowell, 2002;24; Local Government Association, 2001; Yasin, 2004; Wyatt, 2009; RTPI, 2011).

The application of Spatial Planning to the metropolitan /urban areas and cities is with a view to achieve reduction in disparity of urban infrastructure distribution through adequate and timely planning. Planning is essentially spatial; it is concerned with the spatial impact of many different kinds of problem and with the co-ordination of many different policies. For instance housing, regeneration, industries, employment, income (tax) and the flow of goods amongst others are all occupying space or have spatial dimensions. Furthermore, social planning addresses housing and movement, services delivery such as health, education and amenity / recreation opportunities (Obateru, 2001; Rydin, 2011).

It is the planning that gives geographical expression to the economic, social, cultural and ecological policies of society and at the same time a scientific discipline, an administrative technique and a policy developed as an interdisciplinary and comprehensive approach directed towards a balanced regional development and the physical organization of space according to an overall strategy (Hickling, 1974; Robert, 1996; CEMAT, 2003). Wyatt (2009) observed that Spatial Planning is activity led and involves twin activities hence it is the management of the competing uses for space; and

the making of places that are valued and have identity. It also refers to the methods that are used by the public sector to influence the distribution of people and activities in spaces of various scales.

Based on this definition Spatial Planning encompasses discrete professional disciplines such as; Land use, economic, community, urban, regional, transport and environmental planning amongst others. It is the combination of these activities over space and time as well as the concerns that characterise and justify the term 'Spatial Planning'. The use of this term also emphasises that planning is as much concerned with the spatial requirements for, and impacts of, policies - even where it does not require a 'land-use' plan - as it is with land use zonings (CEMAT, 2003; National Assembly for Wales, 2004; ODPM, 2006; RTPI, 2011; Rydin, 2011; NEPA, 2011).

The term Spatial Planning has mostly been considered from the strategic point of view. Hence, it is defined as self-conscious collective efforts to re-imagine an urban /city area or urban region or a wider territory and to translate the result into priorities for area investment in the areas of conservation measures where there is need, strategic infrastructure investments to trigger socio economic activities and principles of land use regulation for sustainable development (Fischler, 1995; Healey, 2002; Carter, 2007).

The meaning of 'Spatial Planning' has created many European regions because it cannot be easily translated between languages (Williams, 1996; Faludi, 2002; Faludi and Waterhout, 2002 as cited in Healey, 2004). It can be considered under a regulatory dimension, which goes to say it is used as a land use regulatory tool. In this instance it can best be described as a regulatory plan that is characterised by normal regulations given within a spatially restricted jurisdiction (country, state or local government) level and where a city or company consults the regulations to see where a particular plan is allowed (Hoekstra, Winkels and Hupkes, 2010).

The perspectives observed from the numerous literatures explain its multi-dimensional, multi-faceted and multi-disciplinary nature. This is demonstrated in the characteristics of coverage at the regional, national, metropolitan and local levels. At each of these levels some basic issues are considered or emphasis for instance; sustainable development, climate change and biodiversity, coastal/maritime or mountain, health and food, space and energy, economic, social, sustainable transport, infrastructure (facilities, utilities and services), land management and administration, prevention of disaster,

quality and distribution of resources amongst others all in relation to spatial planning as observed by Robert, (1996), EOP/IOPTF (2006); Jackson (2006), Gee *et al.*, (2006) Healey (2007), Wyatt (2009), Davoudi (2009), Litman (2011) and Rydin (2011).

This leads us to the next section on the consideration of Spatial Planning and Master Planning.

### **2.5.2. Spatial and Master Planning**

The role of Spatial Planning is in the investment and provision of basic infrastructure required for growth and development of urban areas in different regions of both developed and developing countries, which is achieved by the adoption of Spatial Planning principles. The experience of most developing countries about planning is different, as the Master Planning system approach is widely adopted or utilised.

The Master Planning system over the years has proven to be highly insufficient to guide physical development in Nigeria (Oyesiku, 2001; Anderson, 2001; Agbola, 2004; Aluko, 2004; Olatubara et al 2004; Stewart, 2006 ; World Bank, 2009; United Nations, 2010). Master Planning has imparted very little on whose growth and Town Planners had become very unpopular and stressed out (frustrated) as the Master Plans have failed and were unable to identify the immediate causes. A careful consideration of the constraints that have affected the PS would go a long way in bringing about the effectiveness of the system over time and the factors that have placed the study area under an undue disadvantage.

There are requirements for the evaluation of different aspects of effectiveness. For the purpose of this study the emphasis would be on systems resource, (Human and natural resources), managerial process (expertise, experience, staffing and funding) and structural functional (Planning authorities in Jos Metropolis, Nigeria). The strong hold on the traditional Master Planning system to achieve growth and development is common to most Nigerian cities such as Lagos, Enugu, Kaduna and even Abuja the capital city of the nation (Mabogunji, 2002; Oyesiku, 2004; Jiriko, 2007). So therefore to address the physical planning problem that is dynamic and complex in nature, identified in most Nigerian urban centres, there is a need for the adoption of a planning system that is dynamic and complex in nature. This planning system should employ

appropriate or adequate plans or policies to address the dynamic problems in the dynamic environment to bring about an efficient, effective and a well-structured (adequate vertical and horizontal coordination of planning activities) administrative framework for urban and regional planning development in Nigeria (Giddens 1979; DiMaggio, 1988; Mabogunji, 2002; Oyesiku, 2004; Wong, 2006; Ekop, 2007; Jiriko, 2007; Healey, 2007; Martin, 2008; Rydin, 2011).

Furthermore to give the distinction between Master Planning and Spatial Planning, ten (10) measures were considered to illustrate the difference between these Physical Planning approaches, so as to make a case for the consideration of an appropriate planning approach see section 7.3.

### 2.5.3. Characteristics of Spatial Planning

This section seeks to examine the characteristics of spatial planning and also considers its differences with master planning which would be considered in chapter 3 of this present research.

Spatial planning is characterized by the following see Table 2-3

**Table 2-3 : Characteristics of Spatial Planning**

SN	Characteristics	Authors
1	Dynamic and timely policy and decision making	Jackson, 2006; Wong, 2006; Davoudi, 2009; Desmet and Rossi-Hanberg, 2011; Litman, 2006; 2011; Rydin, 2011).
2	Collaboration, integration and joining-up	(Cowell and Martin, 2003; POS, 2005; Healey, 2006 ; Hillier and Healey, 2008; Litman, 2011; Rydin, 2011).
3	Climate change,	Davoudi, 2009; Litman, 2011; Rydin, 2011; Desmet and Rossi-Hanberg, 2011 )
4	Outcomes and delivery	(Healey, 2001; Local Government Association , 2001; Tewdwr-Jones, 2004; Wong, 2006)
5	Urban sustainable development	(ODPM 2004; ODPM 2005; 2006 ;Adams, 2006; Will Allen. 2007; Hasna, 2007; Jackson, 2006; Davoudi, 2009; Litman, 2011; Rydin, 2009; 2011)
6	Inclusive as well as effective community engagement	(Rydin, 1993; Healey, 1997; Hillier and Healey, 2008).
7	Positive, evidence-based reasoning	(Town and Country Planning Association, 2000; Healey, 2001; Christie, Southgate and Warburton, 2002; Harris, Hooper and Bishop, 2002; Harris and Hooper, 2004; Oldfield, 2005; Healey, 2006

For more details about these attributes of spatial planning see the report of the Office of the Deputy Prime Minister (ODMP), 2006, The 2004 Planning and Compulsory Purchase Act (the 2004 Act), ELF-Environment, Local people, Future and Brundtland, (1987) report. UN, 1987 and UN-Habitat (2009) reports.

#### **2.5.4. Characteristics of Master Planning**

A Master Plan is a comprehensive long range plan intended to guide growth and development of a community or region, emphasizing its included analysis, recommendations, and proposals about the population, economy, housing and basic infrastructure as well as land use. It is based on public input, surveys, planning initiatives, existing development, physical characteristics, and social and economic conditions (Mabogunji, 2001; Encyclopædia Britannica, 2011). See Table 2-4.

**Table 2-4: Characteristics of Master Planning**

1. For the restoration of human dignity through order to the city and to ensure planned present and future growth.
2. The creation of total physical environment which is functional, efficient, healthful and aesthetically pleasant for human activities.
3. It helps in policy effectuation at all levels of its application.
4. Though it has always been long- range, with the appropriate phasing, the plan is said to provide a task for each period within its implementation period.
5. It serves as practical working guide to the legislators in making everyday decision (Black, 1975:13).
6. That through it politicians can know the articulated priorities of the communities on that basis.
7. Master plan has been associated with proposal for restructuring existing urban areas and cities.

Source; Compiled by Author from Local government Association, 2001; Mabogunji, 2001; ODPM, 2005; Jiriko, 2007.

According to Suleiman, (1986) the advantage of the Master Plan lies in its physical components, land use; circulation, housing, provision of facilities, utilities and services; open spaces and urban design. Furthermore, History has that the period 1920 and 1960 were eras of 'Blueprint' comprehensive planning which has an advantage of the Master

Plans were the rule (Agwu, 1998; Jiriko, 2007). The comprehensive Master Plans were prepared for cities such as Washington D.C and many others in USA. These planning approaches was imported to Nigeria and some other developing countries and used as planning strategy (Agwu, 1998; Jiriko, 2007).

But this were not appropriate planning approaches to address the physical planning problems in these developing countries due partly to the dynamic nature of the populations in such areas, absence of institutional frameworks, the urban planning systems on ground that is characterised by inadequate man power, inadequate funding and inconsistency in government amongst others.

#### **2.5.5. Comparison of ideal type Master Planning & Spatial Planning**

Nadin (2006) observed that Master Planning is land use planning, this is necessitated by the fact that it is more of the traditional land use subdivision. See Table 2-5.

**Table 2-5: Comparism between Master Planning & Spatial Planning**

	Master Planning	Spatial Planning
<b>Purpose</b>	Regulating land use and development through designation of areas of development and protection, and application of performance criteria.	Shaping spatial development through the coordination of the spatial impacts of sector policy and decisions.
<b>Form</b>	Schedule of policies and decision rules to regulate land use for the administrative area.  Mapping of designation of areas and sites for development purposes and protection.	Strategy identifying critical spatial development issues and defining clear desired outcomes across functional areas. Visualisation of spatial goals, and key areas of change. Principles and objectives that will guide coordinated action.
<b>Process</b>	Discrete process leading to adoption of final blueprint plan. Confrontational process, instigated through consultation on draft plans and political negotiation. Stakeholders using the process to protect and promote their interests.	Continuous process of plan review and adjustment. Mutual learning and information sharing, driven by debate on alternatives in collaborative political process. Stakeholders using the process to achieve their own and mutual goals.
<b>Ownership and policy community</b>	A document of the planning authority providing guidance to other professional planners promoting and regulating development.	A corporate document of the local authority in shared ownership with communities and other stakeholders, partnerships and NGOs.
<b>Procedural safeguards</b>	Final plan determined through adversarial inquiry on parts of plan subject to objections.	Final plan determined by inquisitorial examination of the soundness and coherence of the whole plan.
<b>Methods</b>	Mapping of constraints and collection of sectoral policy demands. Bargaining and negotiation with objectors and other stakeholders, informed by broad planning principles. Checking of proposals through sustainability appraisal/strategic environmental assessment.	Building understanding of critical spatial development trends and drivers, market demands and needs, and the social, economic and environmental impacts of development. Analysis of options through visioning and strategic choice approaches. Generation of alternatives and options assisted by sustainability appraisal/strategic environmental assessment.
<b>Delivery and implementation</b>	Seeks to direct change and control investment activity in land use through prescriptive regulation, whilst mitigating local externalities through conditions and planning agreements.	Seeks to influence decisions in other sectors by building joint ownership of the strategy and a range of incentives and other mechanisms including land use regulation and planning agreements.
<b>Monitoring and review</b>	Measures conformance of the plan's, policies and proposals with planning control outcomes. Data provides portrait of plan area as general context for implementation of proposals and periodic but infrequent review of whole plan.	Measures performance of the plan in influencing sector policy and decision making. Data informs understanding of spatial development and the application of the strategy and Regular adjustment of components of plan around consistent vision.



**Source:** Nadin, 2006 ; ODPM, 2005; Jiriko, 2007

The difference between master plan and spatial planning can be viewed from varying dimensions depending on the focus. But for the purpose of this present studies the consideration as considered by Nadin, (2006;18 &19) it is considered according to purpose, form, process, ownership and community policy, procedural safeguards, methods, delivery and implementation as well as monitoring and review. These were the bases used to compare the two planning approaches for further details see section 7.3.

#### **2.5.6. The need for the adoption of Spatial Planning as a strategic planning tool**

Albrechts (2001, pp1) sees Spatial Planning as: *'not a single concept, procedure or tool. It is a set of concepts, procedures and tools that must be tailored to whatever situation is at hand if desirable outcomes are to be achieved'*. It is very important at this juncture to state the main rationale for adopting Spatial Planning. It is to ensure utilisation and implementation to meet the need of present and future generations. It is now adopted in countries to address the issues that have arisen as a result of urbanisation problems as most urban environments are decaying at a rapid rate, and it plays a lead role in addressing issues at various levels. The role of Spatial Planning, as enumerated by NEPA, 2011 are; firstly, to create the conditions for an enhanced quality of life, secondly, to fulfil the aims of efficiency and democracy through public participation and thirdly, to meet the challenge of sustainable development (Local Government Association, 2001; Yasin, 2003).

Spatial Planning can be considered as many different things, depending on the purposed for which it is been considered. For instance, it could be considered an intervention, a framework, a tool, a method and a strategy amongst others. Its functions are very vital as it has the ability to create the condition for an enhanced quality of life, fulfil the aims of efficiency and democracy through public participation which meets the challenges of sustainable development as the issues arising from climate change are closely considered (CEMAT, 1983; National Assembly for Wales, 2004; RTPI, 2011). Albrechts (2001, pp1) and Wyatt, (2009) observe that Spatial Planning is a discrete professional disciplines which involve land use , urban , regional , economic, transport, community and environmental planning. Hence, based on this diversity it is not devoid

of the challenges of institutional capacity and resources in terms of staffing, expertise, funding and experience amongst others as observed by Healey (1997), Vigar et al, (2000), Local Government Association (2001) and Yasin (2003) Werner & Bemmelein-Lux, (2009).

The issue to be addressed here is how can Spatial Planning be applied as a strategic tool? Strategic tool in this study is defined as an instrument use by the Planning Authorities in Jos Metropolis to address problems that are concerned with the allocation of resource to achieve the adoption, assimilation and improvement of space and place, location and quality, social, economic and environmental changes often as a result of the creation of spatial plans to the more localised design and organisation of towns, villages and neighbourhoods. It is against this backdrop that the following will be observed as ways in which it will be applied as a strategic tool see section 7.5. and 7.5.1.

It may be helpful to consider spatial planning in relation to Mintzberg, Ahlstrand & Lampel's (2008) ten strategic schools of thought. These strategic schools include; planning, cognitive, environmental, power, enterprise, positioning, cultural, configuration, design and learning schools. All these schools are characterised by a deliberate approach to planning, whereby there are pre-determined objectives to be achieved. The plans are aligned with the activities to be involved in and need to be realised in the objectives for each of the approaches.

Each one of these (school of thought) approaches is related to Spatial Planning in its unique way. By placing them in the context of their background, the design school sees strategic management as a process of attaining a fit between the internal capabilities and external possibilities of Planning Authorities. It is different from the planning school, which extols the virtues of formal strategic planning and arms itself with SWOT analysis and checklists because even though there are possibilities for the Planning Authorities there is an analysis of strengths and weakness to be able to strategise (Ricardian concept). The positioning school is very important because the three tiers of government with the Planning Authorities and having different roles, functions and responsibilities found at every level helps in addressing the problems at every level as well as specific issues. The enterprise school helps the Planning Authorities to play their roles of design and implementing the physical development plans.

The cognitive school helps in considering the minds of those who put forth strategies for implementation and try to see the rationale behind the decision taken. The learning school, which sees strategy as an emergent process, ensures that strategies emerge as the Planning Authorities come to learn about the physical planning problems as well as their strength dealing with it. The power school, which views strategy emerging out of power games within the organisation and outside it. By virtue of the law establishing it no single PA exist without powers and authority no matter the level within which it operates.

The cultural school, views strategy formation as a process rooted in the social force of culture, i.e the way of life of the people involved in the planning system considering their norms and values. The environmental school believes that a planning authority's strategy depends on activities in the environment and the Planning Authorities reaction to these activities. Planning is activity-led process, hence it is related to this research. Finally, the configuration school, views strategy as a process of transforming the organisation it describes the relative stability of strategy, interrupted by occasional and dramatic leaps to new ones. Drawing from all the various threads together, every strategic process has to combine various aspects of the different schools. Especially when every planning authority should be having its strategic plan in its jurisdiction to address the 'wicked and dangerous problems' Rittle & Webber (1966) observed.

Some of those plans or activities are at organisational level, variously known as strategic plans; some of these activities are at operational level. Most organisational strategies following the strategic planning school, with the approach describe above. The examples typically found in most government national, state or local organisations follow the strategic plans, for instance; the master plan, Spatial Plan and development plan amongst others.

Elbanna (2008, p. 786), define strategic PP as "the extent to which an organisation uses strategic planning tools". And that the use of strategic planning tools as an indicator of the practice of strategic planning provides more objective evidence of this practice. Although this is not enough in itself to completely measure strategic PP. Planners work with a mission and/or vision, long-term objectives and strategies. Hence, strategic planning practice becomes their watch worth; the intent is to convey that a PA strategic

planning process involves some strategic tools which are explicitly used to put the strategic planning concept into action. See section 7.5.1. and 7.5.2.

For the purpose of this study the following were considered as theories of Spatial Plan; spatial theory of dynamic development, contemporary quality, social societal development, planning practice and urban complexity theory see Table 2-6.

**Table 2-6: Concepts Linking to Theories**

<b>Concepts</b>	<b>Theories</b>	<b>Authors</b>
<b>Urbanisation,</b>	Modernisation-ecology Dependency theory Distributive coalitions Urban Bias theory	<u>Lenski</u> and <u>Nolan</u> 1984, <u>Nolan</u> and <u>Lenski</u> 1985 <u>Armstrong</u> and <u>McGee</u> , 1985; <u>Bradshaw</u> , 1987; <u>Douglas</u> , 1988; <u>Kasarda</u> and <u>Crenshaw</u> , 1991) <u>Mabogunji</u> , 2002; <u>Onibokun</u> , 1990
<b>Urban sprawl</b>	Land use theory (Urban Bias theory)	( <u>Meyer</u> and <u>Rowan</u> , 1977; <u>Lipton</u> , 1977; 1987; <u>Alonso</u> , 1980; <u>Cohen</u> , 1981; <u>Olson</u> , 1982). 1984;2004;2006)
<b>Urban Governance and Management</b>	Structuration Institutional theory Urban regime Contingency theory Regulatory theory Systems theory <u>Neoinstitutional-institutional</u> deficiency theory.	( <u>Giddens</u> , ( <u>Jessop</u> 1990; <u>Castells</u> 1991). ( <u>Powell</u> and <u>Dimaggio</u> , 1991; <u>Scott</u> , 1995; 2001;2004; ( <u>Ayres</u> and <u>Braithwaite</u> , 1992; <u>Lauria</u> 1997, <u>Painter</u> 1995). <u>Greif</u> ,2005; <u>Allen</u> , 2006; <u>Giddens</u> , 2006; <u>Litman</u> , 2011). ( <u>JMDB</u> , 2006; <u>Davoudi</u> , 2009; <u>Nielson</u> and <u>Parker</u> , 2009; <u>Litman</u> ,2009; 2011; <u>Rydin</u> , 2011) and
<b>Spatial planning</b>	Contemporary quality, Spatial theory of dynamic development, Social societal development, The theory of planning practice, Spatial complexity theory	<u>Mahalingam</u> and <u>Levitt</u> , 2007; <u>Martinsons</u> , 1998; 2008; <u>Vigar</u> et al. 2000; <u>Martin</u> , 2000; <u>Scott</u> , 2001). ( <u>Bertalanffy</u> , 1962 <u>Faludi</u> , 1973;1976; <u>Miliband</u> 1983) ( <u>Hajer</u> and <u>Zonneveld</u> ,2000; <u>Rij</u> , 2007; <u>Spencer</u> , <u>Schutte</u> and <u>Simmering</u> , 2008). ( <u>Harper</u> , 1993; ( <u>Healey</u> , 1997; 2003;2004;2007).
<b>Master planning</b>	Contemporary quality, Spatial theory of dynamic development, Social societal development, The theory of planning practice, Urban complexity theory, Theory of Constraint,	<u>Mahalingam</u> and <u>Levitt</u> , 2007; <u>Saunders</u> 1984; <u>Suchman</u> , 1995; <u>Deephouse</u> , 1996; <u>Dacin</u> , 1997; <u>Oyesiku</u> , 2004; <u>Jiriko</u> , 2007. <u>Martinsons</u> , 1998; 2008; <u>Vigar</u> et al. 2000; <u>Martin</u> , 2000; <u>Scott</u> , 2001). ( <u>Bertalanffy</u> , 1962 <u>Faludi</u> , 1973;1976; <u>Miliband</u> 1983) ( <u>Hajer</u> and <u>Zonneveld</u> ,2000; <u>Rij</u> , 2007; <u>Spencer</u> , <u>Schutte</u> and <u>Simmering</u> , 2008).( <u>Harper</u> , 1993;( <u>Healey</u> , 1997; 2003;2004;2007; <u>UN</u> , 2011).

### **2.5.7. Implication of Spatial Planning to the research**

The implications of Spatial Planning to the study stems from the problem of urban sprawl, poverty, slums and the environment which is characterised by many factors ranging from economic, social, demographic, political and environmental concerns and the inability of the master planning system to address these problems which has generally resulted in decaying infrastructure in need of development, provision and investment. Spatial planning is characterised by dynamic and timely policy and decision making, inclusive and effective community engagement and collaboration, integration and joining-up as well as positive, evidence-based reasoning, sustainable urban development and climate change (ODPM, 2006). If spatial planning is employed it would go a long way to addressing the problem raised concerning infrastructure (facilities, utilities and services) development, provision and investment.

Hence, the implication is that there is inadequacy in the provision and investment of facilities, utilities and services necessary to trigger any economic, social and political development in other areas creating disparity in the distribution of infrastructure. Spatial planning is an approach that is broad and robust enough to accommodate as well as address the problem of the inadequacies observed in urban environments. The case for adoption of spatial planning will be considered in-depth in Chapter seven (7) following the analysis of data from the empirical study of Jos Metropolis, Nigeria.

## **2.6. SUMMARY**

This chapter sought to review, relevant and related literature about the spatial planning framework (Spatial Planning Framework) for urban development and management (Urban Development and Management) at the global perspective and the following were achieved:

- ✚ Theoretical clarification yielded the following theories; Urbanisation; modernisation-ecology, dependency theory, distributive coalitions and urban bias theory. Urban sprawl; land use theory, urban governance and management; structuration, institutional theory, urban regime and contingency theory, regulatory theory and systems theory and Spatial planning; spatial theory of dynamic development, contemporary quality, social societal development, planning practice and urban complexity theory.

- ✚ The institutional framework demonstrates that it has the following as its basic components institutions (Governance), Organisations (planning authorities), planning legislation (laws and ordinances) and administrative (structure).
- ✚ The level of effectiveness is measured by the performance of each components of the urban planning system in operation to achieved controlled urban development and management that is expected to trigger economic, social, political and environmental activities that is sustained.
- ✚ The assessment of the application of spatial planning shows that it could be applied in some of the following ways; the allocation of resource to achieve the adoption, assimilation and improvement of space and place, location and quality, social, economic and environmental changes often as a result of the creation of spatial plans which is characterised by the following; Dynamic and timely policy and decision making inclusive and effective community engagement and collaboration, integration and joining-up, positive, evidence-based reasoning, urban sustainable development and climate change and the numerous interventions to address the menace.
- ✚ The implication of spatial planning to this research is in the investment and provision of basic infrastructure required for urban development and management of urban areas in different regions of both developed and developing countries, which is achieved by the adoption of spatial planning.

Spatial planning as a planning approach is absent in most developing countries due to their strong hold on the traditional master planning system to achieved growth and development, this situation is common to most Nigeria cities such as Lagos, Enugu, Kaduna, Onitsha and Abuja the capital city of Nigeria.

This leads us to the discussion on urbanisation, urban sprawl, governance and management and master planning in most Nigerian cities with emphasis on Jos, Nigeria West Africa.

## **CHAPTER 3. URBANISATION, URBAN SPRAWL, GOVERNANCE, MANAGEMENT & MASTER PLANNING IN NIGERIA**

### **3.1. INTRODUCTION**

This chapter will present a review of the literature pertaining to physical planning and urban development and management; reflecting the Nigerian perspective in the context of the research.

The previous chapter reviewed related, and relevant, literature at international level taking into consideration the theories and the objectives of the research leading to the effective implementation of a physical planning strategy to address the problem in Jos Metropolis, Nigeria.

Consequently, this chapter is structured as follows;

- ✚ Theoretical clarification; urbanisation, urban sprawl, governance and management and master planning
- ✚ The nature of urbanisation and associated problems in Nigerian cities
- ✚ The current institutional framework by identifying the constraints of urban and regional planning systems
- ✚ The effectiveness of the urban planning system in terms of urban development and management
- ✚ Application of master planning as a strategic tool in metropolitan regions and
- ✚ Summaries of the findings from the literature review from the Nigerian perspective.

### **3.2. THEORETICAL CLARIFICATION**

This section clarifies the theories of urbanisation, urban sprawl, governance and management and master planning, which include the theory of urban governance and management which is applicable to Nigeria. The neo-institutional/institutional deficiencies theory was considered due to its relevance and applicability to the Nigerian system of governance and management of urban areas. The protagonists of this theory were Martinsons (1998; 2008) DiMaggio (1988), Oliver (1991), Martin (2000), Wong

(2006), Giddens (1984) Scott (2005), Greif (2005) Mahalingam and Levitt (2007), Barley and Tolbert (1997) and Hoffman (1999). For more details about this and other theories see Table 2-6.

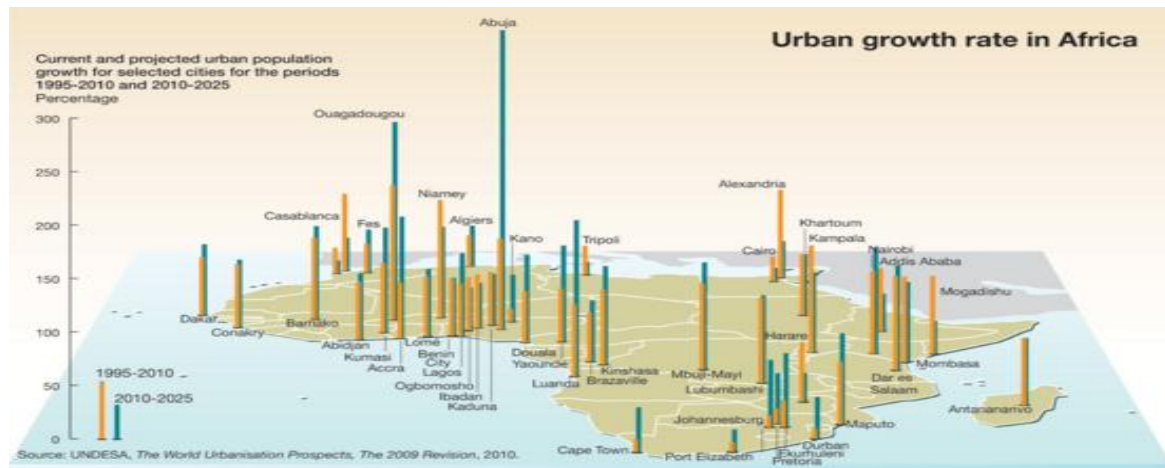
### **3.3. THE NATURE OF URBANISATION AND ASSOCIATED PROBLEMS IN NIGERIAN CITIES**

Urbanisation trends will intensify over the coming decades and will be more extreme in Africa within countries such as South Africa, Egypt and Nigeria, amongst others, and even more importantly, in Asian countries such as Malaysia, Bangladesh, India, China and Hong Kong (Internetgeography, 2008; Association Press, 2008; Abbott, 2003; Nyambod, 2010; Bharat and Chalwa, 2009; Zhang, 2008 ).

Jiriko, (2008) observed that urbanisation and the pace of urban growth rates, urban size and urban spread are all related to the rise in the growth of urban populations at continental and regional level in African and sub-Saharan African level. It was estimated that at global level the urban growth rate for developed countries, as observed by Jiriko (2008), was less than 1% and 3.79% per annum for developing countries,(U.N,1993), (Associated Press, 2008). Urban agglomeration, in 2010, rose to 26 urban areas with 10 million or more inhabitants and 21 of them were in the developing countries with Asia housing approximately 14 very large cities; 5 in Latin America and two in Africa (Badshah, 1996: UNFPA, 2007; UNDESA, 2007; Jiriko, 2008; U.N. 2008). The story for Africa changed with a forecast of over 50% of the population living in urban conurbations of over one million people.

The urban growth rate in Africa, for most urban centres, is currently growing at an annual rate that is faster compared to other regions of the World. The urban expansion is expected to continue, with cities like Abuja and Ouagadougou expecting very high growth in the next decade, while Cairo, Africa's largest city, is projected to see a comparatively lower growth rate.





**Figure 3-1 : Urban Growth rate in Africa**

Source: UNDESA, the African urbanisation prediction of 2008 and the 2009 revision.

The proximity of Jos to Abuja, in addition to the favourable weather conditions and tourism, reveals Jos to have the high rate of urbanisation experienced in Abuja; which is the most highly urbanised area in Africa and Nigeria (UNDESA, 2010). The over-spill effect can be observed with the rapid population growth resulting from migration and natural increase which is evidenced globally. It can also be encouraged by the extension of boundaries in cities and towns as well as reclassification or declassification of settlements and towns (EEA, 2006; Jiriko, 2007; Bhagat and Mohanty, 2009; UN-HABITAT, 2010/2011).

In Nigeria the rate of urbanisation is about 8-10%, which is high and has cause to be considered. Urban areas are expanding at rates of approximately 10-11%, (national average) in urban areas such as Kaduna, Port Harcourt, Warri, Kano, Lagos and Abuja as observed in NPC, (2006).

However, there are other, potent, factors that need to be taken into consideration including the neglect of the rural areas, otherwise expressed as urban bias (this is a major cause of rural–urban migration and the increase in the population of slum dwellers). Typical causes of urbanisation in developing countries/regions include government resource allocation policies, as supported by numerous studies, have fuelled urbanisation in past years in Nigeria. The creation of regions, states and local government areas have also created a large number of urban settlements thereby adding to the problem of urbanisation in Nigeria (Mabogunji, 1968; 1978; 1998; Jiriko, 2008).

Agglomeration economies (urbanisation and localisation economies), and industrial districts can play a vital role in bringing urbanisation and economic development to an area.

The causes of urbanisation are the presence and activities of central political and religious authorities in pre-colonial, colonial and post independent eras in the life of the country, negligence and lack of development in rural areas and rural-urban migration and natural population increases. Urban bias in the allocation of government resource policies at national, state and local government levels and creation activities are all potential factors of urbanisation. The proliferation of states and local governments in the country, as well as the change in the country's capital from Lagos to Abuja, have all contributed to the increase and change in the status of urban areas (Mabogunje, 1998; Jiriko, 2008).

The consequences and problems of rapid urbanisation in Nigeria, as a developing country, include; high levels of unemployment, graduate under-employment, general under-employment, poverty, housing problems, urban management and governance problems, shortage of urban services and facilities, industrialisation and environmental problems etc., (Onibokun, 1985; UNCHS, 1986; 1987; Davies and Rakodi, 1993; Lasserre, 1995; Abumere et al, 1996; Mabogunje, 1996; Jiriko, 1997; UNDP, 1997; Agbola, 1998; UNCHS, 2000; Taylor, 2001; UNFPA, 2007; UNDESA, 2007 ; UN-HABITAT, 2007).

Bhagat & Mohanty, (2009) and (Nyambod, 2010) considered the implication for adult counselling as it relates to urbanisation and observed that one of the causes of rural-urban migration was a lack of counselling to mitigate the urban drift of adults/youths from rural settings seeking better living conditions in urban areas and leaving an aging population to manage farms and other activities. The issues of poverty and shortages of food, in both rural and urban areas, and the need for expansion and alternatives to such dilemmas were not addressed.

The visualisation of a rapidly expanding city experiencing significant rural exodus (migration) (Nyambod, 2010), with an exacerbated, inappropriate system of land

administration, poverty, anarchy and high levels of ignorance in the handling of environmental issues, with an overall deteriorating environment is similar to that affecting Jos Metropolis. The study reveals similarities in the area of study but differences relating to the aim and objectives of the studies where the extent of urban development planning is provoking and prone to the occurrence of environmental hazards and the peoples' perception about urban management. The statement of the problem is similar as there was a case for the reconsideration of the adoption of an appropriate environmental management plan that meets long and short term goals for the present state of the area of study.

These conditions constitute health hazards leading to higher rates of morbidity and mortality. This growing problem creates a unique challenge for policymakers and public health practitioners. While the Millennium Development Goals (MDGs) aim to address the conditions and standards for water and sanitation as well as pertinent health outcomes, little evidence of intervention exists to guide policymakers (Abbott, 2002; Ooi and Phua, 2007; UN-HABITAT, 2007; Internet geography, 2008; Association Press, 2008; Butala, Vanrooyen and Patel 2010; Nyambod, 2010).

Over the coming decades, cities, towns and urban centres, especially newly emerging mega-cities in developing countries, will play a vital role in the development and distribution of new settlements at the fringe of urban areas. The United Nations Population Fund projects that sub-Saharan Africa's urban population will double between 2000 and 2030. There is a similar relationship between developed and developing countries as well as within the group of developing countries. Knox (2009), observed that the determinants of the urbanisation processes are migration and natural population growth. This brings about change manifested in the spread of the original landscape, and in the attributes urban area, urban systems, urban ecology, and urban political economy amongst others.

Urbanisation is considered to be the degree of, or increase in, urban character or nature. It may refer to a geographical area combining urban and rural parts, or to the transformation of a locality, from less to more urban. The term can describe a condition at a specific time namely; the proportion of total population or area in urban localities or

areas (cities and towns), or the increase of this proportion over time. It can thus represent a level of urban growth relative to total population or area, or the rate at which the proportion of urban growth is increasing. Both can be expressed in percentage terms, the rate of change as a percentage per year, decade or period between censuses or estimates (Batten, 1995). For instance, the United States and United Kingdom have a far higher level of urbanisation than China, India or Nigeria, but a far slower annual urbanisation rate, because far fewer of the population are rural dwellers in the process of moving to towns/cities. Onibokun, in 1992, stated that it is believed that the level of urbanisation in Nigeria in the early nineties was between 38-42% and about 50% in 2000. This was justified by Oyesiku, (2004) who observed the phenomenal rate of urbanisation in Nigeria which he considered to be one of the highest in the world (Agbola et al., 2004).

This means that most new population growth has been absorbed by the cities of developing countries which will double in size by 2030 and that, recently, little or no planning is put in place to accommodate the new migrants and provide them with facilities, utilities and services (Obateru, 2003; UN-HABITAT, 2007 and Reinhard 2010).

According to UN-HABITAT, (2007), slums can be divided into two types: “slums of hope” and “slums of despair”. The first type are settlement is on an upward trend, largely made up of newer, usually self-built structures, and the second type of settlement is made up of those that are in, or have recently been through, a process of development, consolidation and improvement. The second group comprises “declining” neighbourhoods in which environmental conditions and services are in a process of seemingly inevitable state of decay.

Urban sprawl has been a major physical planning problem in Nigeria. In a related study by Ujoh et al, (2010) on understanding urban sprawl in the (capital city of Abuja, Nigeria), Port Harcourt and other cities in the country are presently experiencing land distortions. In Akure growth is partly due to migration from rural areas, but most growth occurs due to the natural increase in the urban population as well as the reclassification of rural areas into urban areas. Nor will growth be concentrated in

mega-cities like Lagos (with a population of roughly 10.9 million, according to the UN Population Division); instead, the bulk of urban dwellers will reside in cities of less than two hundred thousand people (Owei et al, 2008; Ujoh et al, 2010; Abimbola, 2008; UNDESA, 2010). The real causes of the problem amongst others are the non-adoption of appropriate planning measures to address the problem. The next section considers the problems associated with the urbanisation in Nigeria.

The causes of urban sprawl which are peculiar to developing countries include; planning and administrative lapses, invasions by illegal occupants, creation and counter creation of regions for political, social and economic reasons. Effects such as; substandard housing, densely populated buildings, high rates of diseases, densely populated urban fringes, amalgamation of individual elements, increase in social ties, distressed housing, abandoned buildings and vacant lots (Okoafor, 2001; Agbola, 2004; Dung-Gwom, 2007; Jiriko, 2008; Mallo and Anigbogu, 2009). This has been manifested in the number of illegal settlements, late provision of services, inappropriate sites of settlements, for instance, on hills and mountain slopes where facilities and utilities cannot be adequately provided and construction of self-help dwellings etc., (Parsa *et al.*, 2010; Wapwera *et al.*, 2011). This situation calls for an appropriate urban management system in order to avert the escalation of the situation.

Due to its many inadequacies the master planning approach gives rise to long lasting, physical planning (PPG) problems. This has caused developed countries to discard it long ago in preference to better planning systems such as spatial planning (Spatial Planning). The Master Planning approach is still being used for planning cities in developing countries, including Nigeria, where Abuja recorded the highest level of urbanisation in Africa and with Jos Metropolis being in close proximity to Abuja it is bearing the ripple effect of urbanisation (ODMP, 2004; 2005; Jiriko, 2008; UNDESA, 2010).

According to the UNDESA, (2010) report the adoption of a specific planning alternative is the best option for better planned urban areas. This means that if the system of planning is not adequate to address the problem, with peculiarities in a specific area, the system should be changed to address the problem in the given location. For instance

upgrades in slum housing water and sanitation systems have not yet been rigorously evaluated to demonstrate whether there is a direct link to improved health outcomes in developing countries; but in developed countries this has been considered, planned and provision made for implementation in both rural and urban areas.

Urban development (UD) and sprawl in most developing countries is characterised by seriously bad slum conditions owing to the fact that urban sprawl problem is not adequately managed. This usually results in degenerate slum conditions, and this adds to the number of slums in cities. UN HABITAT (2003) observed that ‘slums, semi-slums and super slums’ form the evolution of cities. This explains why many developing countries have a large number of the slums as they form the basis for the emergences of cities. Other problems associated with UD are the high levels of poverty alongside high levels of ignorance that fuel crises leading to environmental problems.

This results in the Government and most Planning Authorities with the task of addressing the multiple problems which, in turn, creates more problems (Webber, 1978, Roberts, 1978). In a recent exercise to upgrade slum housing the likelihood of waterborne illness was reduced from 32% to 14% and from 25% to 10% excluding mosquito-related illnesses (Butala, Vanrooyen and Patel, 2010). From the same exercise it was observed that upgrading the infrastructure in slum housing can lead to improved health outcomes and help to achieve the MDGs. It also provides guidance on how upgrading, in this context using microfinance and public-private partnership, can provide an avenue to effect positive change.

This present study intends to provide information about the process of the preparation of plans that will address the problems to upgrading the Physical Planning strategy so as to bring about improvements in the health of the inhabitants. This leads on to the socio-economic and demographic characteristics of the people. The aim of this research is to make a case for the need for Spatial Planning and to develop a framework and guidance to control haphazard urban development in the Jos Metropolis, Nigeria. The consideration of this approach is intended to address slum housing issues related to upgrading, as observed in Ahmedabad, India, (for 2001-2008) where a significant decline in waterborne illness incidence was achieved by improving slum housing, which

could be achievable in Nigeria within a short period of time if a similar approach was to be adopted.

Studies have shown that many residents of urban areas in developing countries live in inadequate housing and in neighbourhoods that lack the basic requirements for a liveable environment (Rojas 2000; McLeod, 2001, 2003; Dung-Gwom 2007, 2008).

Ooi and Phua (2007) observed that most cities in the developing world have become centres where vast numbers of people compete for the most basic social services and infrastructural facilities: for a room, within reach of employment at an affordable rent, or vacant land on which a shelter can be erected without fear of eviction, for places in schools, for medical treatment for health problems or injuries, or a bed in a hospital, for access to clean drinking water, for a corner on a pavement or square to sell goods, quite apart from the enormous competition for jobs.

A study by Dung-Gwom (2007) showed that inequalities exist in the provision of basic facilities across residential neighbourhoods in Jos Metropolis. Dung-Gwom and Oladosu (2008) and Mallo and Anigbogu (2009) also observed that urban poverty is also affecting the living conditions of urban residents in Jos. Jiriko, (2007) argued in his study on Abuja and Enugu that Physical Planning activities in Nigeria have concentrated on DC to the neglect of both integrated plan and policy formulation. Be that as it may, there has been no impact seen or felt about addressing the problem of urban sprawl as observed by Agbola and Olatubara (2004) and UN Commission for Sustainable Development (2004). In a related study, Mallo and Anigbogu, (2009) examined housing quality of comparable residential neighbourhoods in Jos Metropolis and observed that the physical, economic and social characteristics of residents was different depending on the density of neighbourhoods within the study area.

Dung-Gwom (2007) in his study has preferred solutions towards addressing the problems generated by the rate of urbanisation in most countries and has tried to present policies that bring about various forms of transformation. According to the UN-HABITAT, 2007 report problems solving is not only conceivable, but highly achievable, given the right policies (spatial plan), so that slums were considered to be

‘slums of hope rather than despair’. The method adopted for this study, was basically to obtain, first hand, primary sources of the data which were dependable and could be relied upon to produce accurate decisions by both policy makers and researchers alike in an area.

Finally, this section has reviewed issues around urbanisation, its causes, consequences and related problems which include urban sprawl, slums, poverty and ignorance which can fuel crises and environmental problems. Based on the review in chapters 2 and 3 and considering the objective nature of urbanisation and its associated problems, it could be concluded that the objective set out in this study has been met.

### **3.4. THE CURRENT INSTITUTIONAL FRAMEWORK IN TERMS OF CONSTRAINTS OF THE URBAN PLANNING SYSTEM IN JOS METROPOLIS, NIGERIA**

This section seeks to answer the research question ‘what is the current operational institutional framework of urban and regional planning in terms of the constraints experienced in Jos Metropolis in Nigeria? The question is answered by identifying the institutional framework and the constraints.

The components of the institutional framework (IF) include; institutions, organisations, administration and the planning legislation (PL) which has been discussed in detail in 2.3.1. 2.3.2. 2.3.3. 2.3.4. Chapter 2. Next is a consideration of the constraints as they relate to the institutional framework in the Urban Planning System in Nigeria.

The section addresses the causes of constraints, conflict and compromise, lack of hierarchy, current institutional framework, structures in the urban planning system and the constraints associated with the institutional framework and the urban planning system.

Gupta, (2001) observed that constraints are basically a restriction to planning based on limited resources, laws and regulations and the need to avoid harming a system. A good plan will avoid the undesirable consequences of any actions. A constraint is defined as any resource that is unable to cope with the demand placed on it. For the purpose of this study constraint is defined as anything that prevents Planning Authorities from achieving their sets goals (e.g. planning approach and system, catchment area, qualified man-power, correct documents, revenue from rates paid and equipment).



The following are examples of constraints to be considered in this section; political, cultural, institutional, legal, knowledge, physical and analytical constraints.

In a bid to identify the constraints in any system, the major question has always been; what are the causes of the constraint? Identifying the source of the problem has to be the first step although, on occasions, constraints can be considered as a whole (Garner, 1962). The optimal organisation, leadership, or decision making style depends upon various internal and external constraints (factors).

#### **3.4.1. Causes of Constraints**

Hambleton (1978), Ripley & Franklin (1982), Schragenheim and Dettmer, (2000), Ebohon, Field & Mbuga, (2002) and Goldratt (2004) have observed that constraints are basically caused by limited provision of one form of support or another, depending on the nature of the constraints. The lack of hierarchy, conflicts and compromises are the main causes of constraints. The next section discusses the lack of hierarchy.

#### **3.4.2. Lack of Hierarchy**

The mode of interaction (constraints and components of institutional framework) is one of bargaining and compromise, not one of order and obedience. Even in those cases in which actors, involved in the implementation, are formally set in a hierarchical relationship an individual in a superior position often finds his or her will is frustrated by the response and behaviour of subordinates. Bargaining and compromise are still present to an important degree (Ripley & Franklin (1982). Commanders don't command, they bargain with the troops. The personal values and preferences of individuals be they commanders or in the ranks, have an important influence on the progress of implementation. The channels through which instructions are passed can for instance be bottom-up or top-down and could be a major cause of constraints leading to non-achievement of the stated goals of the PA. Stratification in management hierarchy is present but not functional, this creates friction between the different levels or organisations.

#### **3.4.3. Conflict and Compromise**

This is usually based on differing sets of values, interest and beliefs on the part of the different actors and it is resolved or at least reduced through a series of compromises in order to allow legislation to result, as observed by Ripley & Franklin (1982). But

Cullingworth (1997) observed that compromise on issues of policy or planning means that changes could have been made; but lack of compromise means lack of legislation.

In the context of compromise there are individuals and groups who perceive themselves to be winners or losers – at least some specific points. It also goes to say that losers do not have to abandon hope and that winners cannot relax after their formulation and legitimisation victories.

Policy process is continuous as it offers continuous opportunities for raising both old and new issues. Hence, Bardach (1977) observed that....

*‘The bargaining and manoeuvring, the pulling and hauling, of the policy-adoption process carries over into the policy-implementation process as die-hard opponents of the policy, who lost out at the adoption stage, seek and find means to continue their opposition when, say, administrative regulations and guidelines are being written. Many who supported the original policy proposal did so only because they expected to be able to twist it in the implementation phase to suit purposes never contemplated or desired by others who formed part of the original coalition. They too seek a role in the administrative processes’.*

Based on this, it can be seen that a number of actors have influence over the outcome of the policy of planning. Implementation is a continuous process, with no clear-cut endpoint. It involves multiple actors, such as individuals and organisations, from territorial levels of government (federal, state and local Government) as well as from all branches of government associations. The action of bureaucrats, especially local civil servants, is most important in implementation. The role of private and non-governmental actors is also prominent. One major challenge of implementation is the context in which the plans are set. Plans are made by the state and are expected to be implemented by local government. Both the state and local Government get their subvention from the federal government.

Goals and expectations for the plans and policies are nowhere authoritatively defined, nor are they agreed upon by the actors involved in implementation. Diffuse, multiple and competing goal statements are a normal condition, a deliberate product of the conflict, compromise and negotiation that characterised the design and legitimisation processes necessary to produce legislation. Usually, goals are vague to accommodate

multiple points of view and to translation of vague statements into specific concrete implementation actions renewing the potential for conflict and compromise.

The next section addresses the major players involved in the modification of urban areas to bring about plan design and implementation by Planning Authorities and planners (bureaucrats). This section intends to examine the effectiveness of Urban Planning System with a view to ascertaining how effective Urban Planning System can be and to make a case for its consideration for developing economies, which is the basis for the case study.

#### **3.4.4. Forms of constraints**

For the purpose of this study eight categories of constraints have been identified and they include; institutional, financial, cultural, political, physical, knowledge, legal and analytical constraints. These could be internal or externally induced to constrain the urban planning system (Hambleton, 1978; Gupta, 2001; Ebohon, Field & Mbuga, 2002; Goldratt, 2004; DungGwom, 2008). This section has demonstrated how the constraints are caused, the form of the constraints and how they have affected the design and implementation of the Master Plan.

##### **3.4.4.1. Political constraints**

The practicality of making policy issues work is not always seen when meeting with politicians. Policy implications are always considered to be economic strategy – expanding government spending, even beyond government revenues, because in times of recession, expenditure is drastically reduced (Vidal, 2008). There are always lessons to be learned; it is not any easier to raise levels of expenditure than to reduce them. Every time policy makers create a government programme, the programme creates its own constituents. As a result, even when its usefulness is in question, closing it down often becomes nearly impossible. This has always been the major constraint experienced by many countries in trying to implement their policies (Gupta, 2001; Ebohon, Field & Mbuga, 2002; Goldratt, 2004).

This situation is a direct result of a number of policies that conspired powerfully to encourage urban dispersal, (Duany et al, 2000). Jos Metropolitan Development Board (JMDB) was established in 1975 to address the issue of non-availability of land for government use, at the same time a number of Planning Authorities were established

such as Jos Metropolitan Development Board (JMDB), and given the responsibility of controlling development in urban areas and their periphery (JMDB, 2006). In local government areas a number of ministries such as Lands Survey and Town Planning (MLSTP), Ministry of Urban Development (MUD) and the Departments of Lands were instituted in the metropolis. For the Planning Authorities to be functional they should demonstrate the good indicators for governance. The World Bank Report (2006) considers; voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and the control of corruption to be good indicators of controlled urban development and management.

Stewart, (2006) in his work considered the fact that for good urban governance to be achieved citizen participation has to be considered, this has become very important to allowing Planning Authorities to carry out and implement the plans for the given area, because the plan that is to be implemented is their contribution and opinion. However, some citizens perceived that they were discriminated against permanently, or almost permanently, by being excluded from participating in their own local governments. This concern ties in with the issue of the plan preparation and implementation by Planning Authorities. It results in the plan not being implemented because the plans are created for the people, instead of with the people, by prohibiting the contribution of residents. The concept of persistent defeat illustrates that the failure of plans is due to implementation not being achieved.

This study is similar to current studies in respect of the serious consideration which should be placed on inhabitants( citizens) being totally involved in all stages in the planning process to ensure that plans are developed with the people and not for the people. When comparing the institutional deficiency theory to persistent losing theory, it shows that there is a failure in the system. A case can be made for the adoption of other planning methods to address the problem. Good governance can be indicated by such things as citizen participation etc., and if the new planning method can demonstrate good governance then it is considered to be appropriate for adoption and implementation of a plan. Some of the other indicators are effectiveness, equity, participation accountability and security (Hambleton, 1978; Stewart, 2006). This is synonymous to urban management as governance is achieved through a system that

relates to different sub-systems for the benefit of the entire system. This now links us to consideration of the effectiveness of PA; ministries, boards and sections to achieving their goals and ensuring the implementation of plans for urban governance and management and the next section will provide an explanation to make it explicit.

#### **3.4.4.2. Cultural Constraints**

Culture is that invisible and often complex system of beliefs and practices that determines how people act in organisations and which is often fraught with difficulty. Gupta, (2001) observed that just like political constraints, the cultural context influences the public process. Public policies must conform to the cultural norms of the community, from design to adoption and successful implementation. Cultural context is perplexing because it varies from one country to another. The acceptance of a policy by members of a community will go a long way to ensuring the implementation of a policy e.g., (birth control). Members of the community might also question those who oppose international abortion and birth control initiatives, even as the United Nations population control programmes in poor, less developed countries buckle under unsustainable growth (Ebohon, Field & Mbuga, 2002; Goldratt, 2004; Vidal, 2008). Without cultural acceptance, even a perfectly reasonable public policy may not be considered appropriate for a community or country.

In a related study Timothy Galpin (1996), proffered 10 cultural components to be considered when implementing change:

**Table 3-1: 10 cultural components to consider when implementing change**

	<b>Components</b>	<b>Descriptions</b>
<b>1</b>	<b>Rules and Policies</b>	Eliminate rules and policies that hinder the change and create new ones that reinforce the desired way of operating. Develop and document new SOP's.
<b>2</b>	<b>Goals and Measurement</b>	Develop goals and measurements that reinforce the desired changes
<b>3</b>	<b>Customs and Norms</b>	Replace old ways of doing things that reinforce the old ways with new customs and norms. E.g. replace written reports with face-to-face meetings.
<b>4</b>	<b>Training</b>	Again replace training that reinforces the old way of doing things with new training. Develop experiential training that provides real time, hands on experiences with new processes and procedures.
<b>5</b>	<b>Ceremonies and Events</b>	Put in place ceremonies and events that reinforce the new ways. Recognise individual and team contributions to making the changes work.
<b>6</b>	<b>Management Behaviours</b>	Publicly recognise and reward managers who change, by linking promotion and pay to the desired behaviours. Do not promote or pay increases to managers who do not come on board.
<b>7</b>	<b>Rewards and Recognition</b>	Make rewards specific to the change goals that have been set. Ensure that the performance management system recognises and rewards the desired ways of operating and does not simply reinforce the old ways. For example, a performance management system that measures only individual behaviour will undermine any attempts to inculcate a culture of teamwork.
<b>8</b>	<b>Communications</b>	Deliver communications in new ways to show commitment to change. Use multiple channels to deliver consistent messages at all stages during the transition, before, during and after.
<b>9</b>	<b>Physical Environment</b>	Make sure the physical environment reflects the change. If knowledge and information sharing is your goal, get people out of offices and into open, shared areas. If you want them to talk to their customers, create 'virtual' offices so that your people are encouraged to work outside the office with customers.
<b>10</b>	<b>Organizational Structure</b>	Make sure that structure reinforces the operational changes. Combine overlapping divisions; re-organize around customers as opposed to functions.

Source : Compiled by Author from Hambleton, 1978; Galpin, 1997 & Gupta, 2001.

#### **3.4.4.3. Institutional constraints**

Public policy depends on bureaucratic institutions for its formulation and implementation. An organisation, like any other entity –collective or individual –

develops its own cultural ethos, goals and mythology as observed by Ripley and Franklin, (1982); Gupta, (2001); and Ebohon, Field & Mbuga, (2002). Policies are only promoted by the social services division of a city who come into direct conflict with the mandates of law enforcement branch. These conflicts, often seen as ‘turf battles’, can render a policy ineffective. Gupta, (2001) and Ebohon, Field & Mbuga, (2002), observed that commerce departments promote international trade and seek to maximise the export of goods from their country. The goals might be different to those of the state department, which manages the country’s foreign policy and for many reasons, such as politics the state department may affect companies from selling their wares, such as weapons or high-speed computers. This institutional restriction becomes a constraint by not supporting and facilitating the infrastructure delivery to promote sustainable urban development as observed by Ebohon, Field & Mbuga, (2002).

Most metropolis in Nigeria are just like any other municipal area councils in a developing country which has not benefited from the contributions made by regional development plans because management is via Planning Authorities, using policies made for them, to achieve different goals that relate to Physical Planning. Master Planning, as a policy tool and technique, to solve physical planning problems in a regional arena has failed. The absence of Master Planning frameworks to address various issues has not been considered, in addition, the approval of a plan proposed by government, may have to go through lengthy procedures and could then be incorporated into the relevant section of a plan, (Premus, 2004; SCP\_ and NHP, 2006). This is to promote sustainable, spatial development for a region, state and the country at large; this cannot be over emphasised for the survival of a nation, (Chalwa, 2001; Ebohon, Field & Mbuga, 2002). Jos Metropolis is one of the fastest growing cosmopolitan regions in sub Saharan Africa; it lacks a framework for the implementation of any plans to control urban development and management.

#### **3.4.4.4. Financial Constraint**

Ebohon, Field & Mbuga, (2002) observed that the role of effective financial institutions in economic development has been the subject of considerable debate because it remains crucial to any form of growth and development, if mobilised for “immense

works” it plays a critical role in igniting industrialisation and other forms of advancement; thus, the lack of effective financial institutions becomes a constraint.

A plan that is expected to trigger further but fails to include details of funding will struggle to be successful. A plan should clearly show or indicate all sources of funding, cash flow analysis and income generation capacity and management. The Government must explain how a plan will be financed if the plan is to be implemented. The implementation of plans is an intensive project and requires funding from the Government or institution that initiated its preparation (Hambleton, 1978; 266; Gupta, 2001; Goldratt, 2004).

Furthermore, the Government has to adequately fund the PA responsible for the implementation. Lack of funding is a major constraint that has impeded the implementation of the Master Plan and URP system as a whole. The inability of the Government to fully fund the implementation of plans has resulted in the stated goals of the numerous plans being unachievable. This is manifested in the non-provision of equipment, qualified personnel or lack of funding in form of grants or scholarships to train the workforce.

#### **3.4.4.5. Legal Constraints**

Public policies (plans) must be formulated and implemented within a nation’s legal framework. Generally speaking, in the U.S., law originate from six sources that govern the daily running of the country and encompass: constitutional laws, laws prompted by legislature, executive orders, interpretations of law by the judiciary, agency or organisations rules and public referenda. In our democratic system of checks and balances, laws passed by legislature, executive orders, referenda and agency rules can all be declared null and void by the courts. In certain cases the legislative division may contest with the executive division for control of the national agenda. For instance, the U.S., Congress passed the war powers resolution in 1973 which curtailed the president’s entitlement to send U.Ss troops into combat with other countries (Ripley and Franklin, 1982). A hugely popular referendum may face court challenges that block its execution (Gupta, 2001; Ebohon, Field & Mbuga, 2002; Goldratt, 2004). This legal restriction becomes a constraint when a recently designed plan/policy has been sent to Congress for adoption and is delayed.



In the design and implementation of any plan or policy, it is very important that potential constraints should be identified; constraint is the element, factor or sub-system that works as a bottleneck. It restricts an entity, project or system (such as a manufacturing or decision making process) from achieving the full potential (or higher level of output) in relation to the set goals (Hambleton, 1978:266; Schragenheim and Dettmer, 2000; Goldratt, 2004). Constraints are basically a restriction on planning based on; limiting resources, laws and regulations and the need to avoid harming a system. A good plan will avoid the undesirable consequences of any actions.

In the context of Nigeria, cities operate under the 1992 urban and regional planning procedures that apportion the state the power to prepare a master plan for urban cities in state capitals, hence, the issues raised in Nigeria (urban, cities) are all common to the Jos Metropolis, issues linked to the explosion of spatial coverage due to the urbanisation processes that allow encroachment onto nearby agricultural land, where land use control is grossly ineffective (Olatubara et. al., 2004), and poor urban management practices abound. The need for implementation of spatial planning to address such issues will be given due consideration in this thesis (Alokan, 2004; Olokesusi, 2004; Olufemi, 2004).

#### **3.4.4.6. Knowledge Constraints**

Hambleton, 1978:281; Gupta, (2001) observed that public policies are, ultimately, constrained by peoples' existing knowledge, because if people are made aware of the failings of past policies the more such errors can, globally, be eliminated. A good illustration is the problem of malaria abatement in many countries around the world. Malaria was once the biggest cause of death in the world's tropical regions. However, as soon as scientists learned that the disease was spread by mosquitoes, a huge international campaign was launched to eradicate the stagnant, swampy areas thereby removing insect breeding grounds. Spraying massive doses of the insecticide DDT, freed many less-developed countries from malaria's scourge, but within decades people began to notice the chemical's devastating effects on the ecology of marshland, which is essential for the survival of many species of flora and fauna. Again, policies had to be developed to eradicate not the diseases, but the effects of past policy. As these devastated habitats were restored the disease returned, often with a vengeance. This illustration has shown how limited knowledge of the eradication of insects brought about a heavier penalty and more constraints into addressing the problem.

#### **3.4.4.7. Analytical constraints**

Analytical techniques use numbers for public policy/ plan analysis, either at the design stage or at the implementation stage. Numbers have a magical quality, they give the impression of being totally objective, as observed by Hambleton (1978); Gupta (2001), however, there are many opportunities for subjectivity to creep into analysis because there is always the qualitative dimension of analysis. The statistical methods or the various techniques researchers use for analysis could exclude the impartiality of scientific reasoning. Objectivity, in other words, relates solely to deriving the conclusion once the problem becomes apparent. At each stage of the design, researchers and analysts are always confronted with confusion and enormous pressure to make quick decisions, which are often rendered for the convenience of the analyst or to suit the particular quantitative technique chosen for the analysis. These analytical constraints may creep into the analysis from a number of sources, hence, affecting or restraining a number of issues relating to the plans either at the design or implementation stage (Hambleton, 1978; Schragenheim and Dettmer, 2000; Gupta, 2001; Goldratt, 2004). The question that arises in the research is what constraint is posed by the analysis at the design and implementation stage of the master plan?

Constraints regulate the output of the whole process. First, one needs to understand “demand”. Demand is not what the researcher wants, although often it feels as if the researcher does not understand constraint management. Demand is the rate at which one needs to run the process to meet set targets in a planning process. In spatial planning design and implementation it is very important that the potential constraints should be identified at the initial stage of the design before implementation.

#### **3.4.4.8. Physical Constraints**

The physical characteristics of different locations determine, to a large extent, the planning of developments within the chosen area, for instance, rocky outcrops, mounds, streams and mining ponds can significantly influence physical developments in a city and its environs, which tend to leap-frog cross areas that are difficult to build upon.

This remains a problem because of the use of poor quality technology, which is unable to cope with the difficult topography of some areas. Dungwom, (2008) observed that physical constraints (rocky outcrops, mounds, streams and mining ponds), have

significantly influenced physical developments in cities and in peri-urban areas that have been avoided because of the difficulties of building in problematic areas.

The weather and climate is another factor that can be considered to be a major constraint to the development process. However, for the purpose of this research aim, which is related to the Institutional Framework and has associations that range from institutions, organisations and legal and administration mechanism, the level is limited but very important to the area under consideration in this study.

Finally, these constraints have affected the components of the institutional framework and would be considered in sections 5.2. 5.3. 5.4. 5.5.

### **3.5. THE EFFECTIVENESS OF THE URBAN PLANNING SYSTEM IN TERMS OF URBAN DEVELOPMENT AND MANAGEMENT IN JOS METROPOLIS, NIGERIA**

#### **3.5.1. Introduction**

This section seeks to examine the effectiveness of the Urban Planning System in terms of Urban Development and Management. The components to be considered necessary to meet this objective include; effectiveness of laws and ordinances used by Planning Authorities in Nigeria (Legal), effectiveness of urban management (technical), effectiveness of urban governance (institutions) and the effectiveness of administration (operational).

#### **3.5.2. Effectiveness of urban governance (Institutions)**

In Nigeria, there are three tiers of government; federal, state and local government. Consideration of the effectiveness of the Urban Planning System in terms of Urban Development and Management is based on the specific tier of government that has responsibility for planning within their jurisdiction. For the purpose of this study, the state and local governments are considered to be institutions of urban governance.

The success of Nigerian development planning will be dependent upon how the Government can coordinate, finance and provide a framework to achieve the goals offset in their plans (Alokan, 2004). Olokesusi, (2004) described planning for leisure and recreation in Nigeria as ‘perfunctory’ meaning that though there are many actors involved in this type of planning, it is a frustrating fact that national policy at federal,

state and local government levels is not always implemented at local levels. Foreign investors are convinced that there are abundant resources available for tourism developments in Nigeria. For instance, temperate weather in Jos, the Mambila Plateau and the Obudu areas of Cross River State can attract tourists who enjoy dry, hot environments, and the warm, wet climate in the southern part of the country attracts like-minded groups of people.

If this potential can be properly harnessed and showcased to the international tourism markets this will bring about an increase in the country's economy. Olufemi, (2004) argued that preservation or conservation of distinct and important aspects of physical developments are affected by disturbances to structures or sites of historic buildings (master pieces of architecture). Though this has happened in a similar way a number of times but with separate patterns of institutional development, there is need to acquire technical, legal and Institutional Framework as well as information. These and many more are issues of concern in Nigeria (Alokan, 2004; Olokesusi, 2004).

The need for good urban governance is not debatable due to the complexity of the urban system and organisational diversities. Like any other complex system the urban centre is subject to human intervention which is geared towards accurate functionality and effectiveness (Baker and Branch, 2002; Yasin, 2004; Healey, 2006). This produces the urban complexity theory, which will be considered under the theories of development. For the governance response to the city depends upon what one's notion of the 'good city' is, how the unevenness and openness of the city are to be negotiated, and how it should be managed and regulated. This requires an understanding that cities are comprised of different forms of order which clash, and that power relations exist and are portrayed in urban environments and spatial relations which react and produce those underlying social relations (Mooney *et al.*, 1999). For detailed discussions on effective urban governance (institutions) see sections 6.2. and 6.2.3. in chapter 6.

### **3.5.3. Effectiveness of Urban management (Technical)**

The effectiveness of the urban management which is ensured carried out DC, monitoring development and ensuring maintenances of development within different jurisdictions using appropriate plans and by ensuring implementation. The question is; has this been achieved in the study area under scrutiny? What are the weaknesses, what

is lacking and what is needed etc. This goes to show that adequate data was used in the analysis of the stated objectives; this has actually confirmed that the planning guidance needs to be developed (see section 8.6 in chapter 8). Land-use planning has not fully incorporated environmental values or safe guarded protected areas from the negative impacts of developments seen in the prevailing social and economic problems in the country (Aluko, 2004). It is evident in the uncontrolled and unguided sprawl of towns and cities where commensurate provision of community facilities and infrastructure services have been neglected (Agbola, 2004, Oyesiku, 2001, Anderson, 2001 and Aluko, 2004; Fidelis, 2005).

Jos Metropolis operates in the context of Nigeria under the 1992 URP, that apportions the state the power to prepare the Master Plan for urban cities in state capitals, hence, the issues raised in Nigeria (urban, cities) are all replicated in Jos Metropolis. The issues in question are linked to the explosion in the spatial coverage due urbanisation processes that encroach on nearby agricultural land in areas where land use control is grossly ineffective (Olatubara et al., 2004), and poor urban management practices abound leading to the need for a spatial planning framework and the development of a guide to address the hap-hazard development in Jos Metropolis which is given consideration in this thesis (Uyanga, 1982; Alokun, 2004; Olokesusi, 2004; Olufemi, 2004; Jiriko, 2007).

The effectiveness of Urban Management, which makes up the technical section of this thesis, is involved with consideration of the consequences of long standing neglect, wrong and poor performance by stakeholders and planners in Planning Authorities being responsible for the rise in chaotic and disorganised urban settings, in order to deliver cost effective maintenance in any economy. More details on the discussion on urban management (Technical) see 6.3. and 6.3.3. in chapter 6.

#### **3.5.4. Effectiveness of the laws and ordinances used by Planning Authorities in Nigeria (Legal)**

The planning laws and ordinances used by Planning Authorities are inadequate and not appropriate enough to bring about controlled Urban Development and Management. It is as a result of the character and usage of the laws and ordinances. Others factors are mainly due to poor governance and management strategies using inappropriate means.

The urban and regional planning laws and ordinances under considered include; 1992 URP law, LUA, 1978 and GJUMP (master plans) amongst others to ensure the controlled urban development and management. A detailed discussion on effectiveness of the legal (laws and ordinances) sees sections 6.5. in chapter 6.

#### **3.5.4.1. The 1992 URP Law**

This law is popularly known as the Nigerian URP Law, 1992. Established by Decree No.3 of 1988, the law has suffered rejection and non-acceptance by the Government since its conception by the Nigerian Institute of Town planners (NITP). Up to the present day the law has not been adopted for use following a Supreme Court Judgement in favour of the Town Planners (NITP) in 2003. The non-adoption of this law has constrained the government (institutions) and management (Planning Authorities) from guiding and controlling orderly urban development and management in the metropolis. For further explanation see section 5.4.3.1.

It is anticipated (town planners) that this law will be used with the correct documentation being employed for regulation at all tiers of government. It is the first ever post-independent planning law and stipulates that there should be a national planning commission at the federal level, state planning boards at state level and local Planning Authorities at local government level (Agbola, 2004; pg 497).

This is necessitated by the fact that almost every form of physical planning and other planning legislature derives its structure and direction from a law which has a structure and forms the basis for the institutional framework for development of various disciplines in the built environment in Nigeria.

The non-adoption leading to non-implementation of the 1992 URP Law as a planning legislation to be used by planning authorities and the planners, has led to uncontrolled urban development and management in the most metropolitan cities in Nigeria. For further discussions on the findings about the effectiveness of the laws and ordinances see sections 6.6.1, 6.6.2, 6.6.3, in chapter 6.

The next section considers the Land Use Act, 1978 and the provision of infrastructure in Nigeria.

#### **3.5.4.2. Land Use Act 1978 and the provision of infrastructure in Nigeria**

Prior to the promulgation of the Land Use Act of 1978, the tenure system provided socio-economic groups with access to land but in many instances security of tenure has always been unstable. This has resulted in the land market being put under undue pressure and created the consequence that transactions in land have resulted in dual titles which has been encouraged by too much bureaucracy and red tape thereby making the process of land acquisition for public use very difficult and unreasonably priced (Matawal, 1998; Vilo, 2011).

The main aim of the 1978 Land Use Act was to ensure that everyone had equal access to land in urban areas for the purpose of house building. But the Government is unable to address the problems that arise, clear land and reform the inherent tenure system that has been prevalent in the country and that has left problems unresolved. The community system vested power of title of land on the families, communities and the village headman amongst others. More details about land availability for urban development and management can be found in the Land Use Act, 1978 and the work of Vilo, (2011) on the processes of land documentation in Nasarawa State, Nigeria.

Olugbenga & Jacob, (2007), Mulder & Lauster, (2010) and Vilo, (2011; pgs14-15) observed that the 1978 Land Use Act has reversed the situation of vesting the title of land throughout the entire country to the Governors of each state. This also has a lot of short comings as land has been allocated to only the rich and powerful in the society. Each regime of government tends to favour its loyal supporters and is usually highly politicised, causing delays in the processing of land title certificates of ownership and right of occupancy (C of O and R of O) (NHP, 2006; Aribigbola, 2008; Vilo, 2011; pgs 14-15).

This best explains the continuing cases of corruption and fraudulent practices observed in the housing market. The implementation of the land use decree has always been faulted, due processes have not been observed, citizen participation and has been disregarded and it has always militated against fast and easy acquisition of land for development, making the price of land and housing very expensive in most urban areas in Nigeria (Olugbenga & Jacob, 2007; Ibem and Amole, 2010; Ibem, Anosike & Azuh, 2011; Vilo, 2011; pgs14-15).

Land for housing is in very short supply, the barriers posed by the topography at certain locations in the metropolis makes it very expensive and beyond the reach of the poor and low income earners as well as the economically weak as observed by Wapwera, Ali & Egbu, (2012).

Investment in infrastructure can lead to a number of breakthroughs and enormous developments would be seen to take place in any given area, be it in developed or developing countries (Mabogunje, 1974; Anderson, 2000; Rylander 2000; Hall, 2002; Obateru, 2004; LSMWI, 2009; Rydin, 2011; PTI, 2011; Litman, 2011). Infrastructure provision is necessary for the economic growth and the development of any region, as well as for competitiveness in international markets. A fundamental prerequisite to the delivery of infrastructure is the availability and provision of land. Land, as a factor of production, is characteristically fixed and limited in supply and this sometimes poses a constraint to development processes (LSMWI, 2009; Omar and Ismail, 2009; Mendie, Atser and Ofem, 2010).

Suitable land for specific projects may not be available, or where such land exists it may be in private hands and because the Government have not paid adequate compensation to landowners it has become very difficult to obtain land to provide the required infrastructure. While an individual may prefer to utilise a piece of land to the utmost, the community would prefer that such be used for public interest namely; for the provision and investment of roads, drains, water, electricity, schools, hospitals and industries etc., to serve the needs of the community as a whole (LSMWI, 2009; Mendie, Atser and Ofem, 2010).

For Nigeria to become one of the top economies in the world by 2020 it needs infrastructure to boost the economy and to stabilise the current issues of security which forms part of the infrastructure (Olatunbosun, 1975 as cited in Adeleye & Olayiwola, 2005; Obateru, 2004; Adebayo, 2006; LSMWI, 2009; Famuyiwa et al, 2010).

According to the 1978 Land Use Act, taking land compulsorily for public projects, such as roads, is understood and accepted as the proper use of powers of acquisition. It is a consensus that taking land compulsorily for 'public purposes' is acceptable but that there should be prompt and adequate payment of compensation. Denyer-Green, (2005) and Nuhu (2006) argue that when lands are compulsorily acquired for a just purpose,



there should be prompt and adequate payment of compensation that will better the lot of the claimant (s) in order to enhance their livelihood and their contribution to the economic and social activities of the society (Odame, 2008; Kakulu, Bryne and Vittanen, 2009).

In Nigeria, the Land Use Act of 1978 provides for, and sets out guidelines, by which private and public lands may be compulsorily acquired from land owners. The constitution of the Federal Republic of Nigeria (1999) also alludes to revocation of rights and interests in land. It stipulates that 'no moveable property or any interest in an immovable property shall be taken possession of compulsorily and no right over the interest in any such property shall be acquired compulsorily in any part of Nigeria except in the manner and for the purpose prescribed by law' that, among others. What is required is a prompt payment of compensation which, therefore, gives any person claiming such compensation the right of access for the determination of his interest". Other policies that had dealt with the compulsory acquisition of land in Nigeria include; the Public Lands Acquisition Ordinance, later known as the Public Lands Acquisition Act, Chapter 167 of 1917 which replaced the ordinance, and The State Lands Act (Chapter 45) which invested the power of land administration with the director of lands and the federal ministry of works and housing to administer state lands. The former was a derivation of the English Land Clauses Consolidation Act of 1845 and the latter came from the Town and Country Law of 1932.

The National Constitutional Provision of 1999 describes the major framework from which the Government derives the powers to acquire land compulsorily for public use (Ogedengbe, 2007). One common element of most policies is the fact that compensation should be made to land owners whose land has been taken over for public purposes. Omar and Ismail, (2009) also supported the proposal that in acquiring land for real estate development compensation must be paid to the affected landowners. Within the Nigerian system, payment of compensation has always been inadequate and this has generated dissatisfaction in those who have been affected (Ogedengbe, 2007; Larbi, 2008; Nuhu, 2008; LSMWI, 2009; Omar and Ismail, 2009; Alias et al, 2010).

### **3.5.4.3. Greater Jos Urban Master Plan**

Master plans are evolving long term planning documents that establish realistic plans for implementation including subsequent approvals by public agencies. A master plan with the organization of large scale sites, designs principles and the ecological techniques that will shape land use. It will identify funding sources and the strategies needed to build the various projects under consideration and will make recommendations via a management plan adopted to maintain it.

Furthermore, it will describe the development schedule, highlighting the order in which elements and decisions will be made. It would also establish guidelines for the many designers who will be employed to draw up specific plans for the sites. Master plans may also include images of different land uses to demonstrate the character and key features of each site.

Once a master plan is in place it should give way to local plans which will provide a more detailed basis for development control. Most parts of urban areas are occupied by slums that are in need of urban renewal. In Nigeria, a number of known master plans which include; the Abuja Master Plan (1978), Enugu Master Plan, Structure Plan and satellite towns for Onitsha amongst others, are born out of the need for urban renewal.

Similarly, the master plans for major urban areas (Greater Jos Master Plan, Riyom Urban Master Plan and Angware Urban Master Plan) have either not been reviewed or have not been implemented. Presently, the Government is making efforts to consider the formulation and review of a number of policies to bring about controlled urban development and management.

The impact of Planning Authorities in terms of development control should be examined by observing proportional and controlled urban development and management within any giving jurisdiction. Many factors militate against this ranging from economic, social, political, cultural and physical etc.

### **3.5.5. Effectiveness of the administrative component (Operational)**

The effectiveness of the administrative (operational) component of the Urban Planning System, in Jos Metropolis, in ensuring effective urban development can be measured by undertaking an evaluation of the performance of all the constituent parts of the

administrative system (operational) in the urban planning system. The proper implementation of a master plan, to ensure appropriate DC by Planning Authorities (JMDB, MLSTP, MHUD & LS) within the metropolis, is judged by the effectiveness of the administrative structure, which is in effect the operational conduct of the Planning Authorities to achieve controlled Urban Development and Management.

The next section seeks to examine the effectiveness of the administrative (operational) system which includes; The Commission System and The Council - Manager System.

#### **3.5.5.1. The Commission system**

The commission system is the administrative structure identified in the two ministries, MLSTP and MHUD, which have been used as case studies in this research. More information about MLSTP and MHUD can be found in section 4.5 in chapter 4.

The MLSTP is divided into 5 major departments comprising two general service departments and 3 professional departments, each headed by a director who is a career civil servant and who must be registered with the relevant professional bodies. The professional departments include; Lands, Survey and TP departments, which are headed by directors answerable to the Permanent Secretary and the Commissioner. This also applies to the MHUD ministry. The Administration/Personnel Department controls the secret and open registries and also supervises the records registry of the Lands Department. The General Service Department includes: Administration/Personnel Secretary (Admin & Finance) as well as the Supplies Department. The Personnel Department is concerned with the day to day administration of the ministry and is headed by the Secretary for administration and finance and supervised by the Permanent Secretary. The department controls the secret and open registries and also supervises the records registry of the Lands Department. For a further discussion on the commission system see section 6.4.3.1.

#### **3.5.5.2. The Council (Lands section) Local Government and Manager System for Administration (JMDB)**

Hambleton (1978;27) observed that the central government has set down a number of planning processes which control and influence the work of the local authorities. But in Nigeria, the 1992 URP law, that is yet to be enforced, stipulates that each local

government authority should have a URP department or section to carry out the functions of urban and town planning in their local area. As it stands, a department of Town planning exists only in Lagos state and only in one local government authority as observed in section 5.6.5 and 6.4.3.1 in chapters 5 and 6 respectively. In Plateau state, the Local Government has established the following departments to oversee effective administration during both military and civilian regimes; Social Welfare, Works, Agriculture and Natural Resources, Health, Finance, Administration and Education Departments. The Local Government has an Executive Chairman and is assisted by a deputy and two arms of government known as the Legislative and Traditional Councils and the Secretary to the Local Government is the chief scribe. Refer to section 5.6.4.1, chapter 5 for more information.

### **3.5.5.3. The manager system of administration for Boards**

The JMDB has established the following departments to manage effective administration both during military and civilian regimes; TP, Public (Environmental) health, Health, Engineering, Estates and Building, Administration, Accounts, Auditors. It is structured as follows; it has a Board of Directors that oversees the operation of the General Manager and Secretary who is also a legal adviser. Each of the departments performs specific functions to meet the main goal of the board. Refer to section 5.6.5, in Chapter 5 for more information.

The Development Board has six (6) departments each with a Head of Department responsible for the daily running and implementation of the policies and decisions specific to each department and is answerable to the General Manager.

The Administrative Department provides services to meet and ensure the basic function of the Board's administration, personnel management, security, public relations and transport. The Administrative Department is subdivided into two additional bodies: Accounts and Audit. The director in charge of the department acts as the secretary to the entire board and has the responsibility for overseeing the day to day activities and coordination of the departments.

The Accounts Department is responsible for the collection and disbursement of revenue accrued by the board and has the Stores Department as a unit under it. The Audit Department is involved with carrying out pre-auditing/checks on all expenditure by the

board to ensure payments conform to those laid down in the financial policies of the board. The TP Department is charged with the responsibility for development control, enforcement of PLW and standards, plan processing, activities, property rating, maintenance of parks and gardens and city beautification. The Director of TP oversees the day to day running of the activities of the department.

This could be seen to have increased the level of bureaucracy, extending the duration of the processing and procedures of the board that need urgent attention, taking into consideration the dynamic nature of the population in the area and the rigid Master Planning approach currently in operation.

For further discussions on findings of the effectiveness of laws and ordinances in addressing Urban Development and Management in Jos Metropolis see in sections 6.4.3.2. in chapter 6.

### **3.6. THE APPLICATION OF MASTER PLANNING A STRATEGIC PLANNING TOOL IN JOS METROPOLIS**

#### **3.6.1. Introduction**

Dhakal, (2004) defined planning as a process of performing an orderly, managed sequence of actions to achieve the targeted goal or goals. It is generally oriented for both the present and the future. Planning can be applied in any field, but it's generally focused on resource allocation, over a set time period, for sustainable development. This is undertaken for social welfare and is supported by politics as well as resources. This section covers; land use planning, characteristics of Master Planning, application of Master Planning and planning for the millennium in Nigeria.

#### **3.6.2. Land use planning in Nigeria**

Land use planning could be referred to as the scientific, aesthetic and orderly disposition of land resources and the provision of basic infrastructure with the intention of securing physical, economic and social efficiency as well as the health and well-being of urban and rural communities creating convenient, equitable, healthful, efficient and attractive environments for present and future generations (Anderson, 2000; Obateru, 2004; Agbola and Olatubara, 2004).

Rydin (2011) observed that ‘planning implies having a plan’; in the case of land use (master plan), it means having a plan for land use. From this explanation it can be deduced that land use planning is a process of ordering and ensuring the provision of infrastructure to meet the needs of people within their living environment (live, work and play) to improve their lives; all captured in a plan. Planning is the means by which society, collectively, decides how physical change should look like at every scale or level and making the effort to achieve the vision by a combination of means (Agbola and Olatubara, 2004).

The Government uses the Planning Authorities to manage the urban environment by formulating policies/Master Plan and ensuring land use planning for the development of land within their jurisdiction. In doing so, governmental agencies (Planning Authorities) can plan for the needs of the community while safeguarding natural resources. To this end, it is the systematic assessment of land and water potential, alternatives uses for land and economic and social conditions in order to select and adopt the best land-use option, for instance master plans (Young, 2003; Litman, 2004; 2005; 2006). One fundamental element of a comprehensive plan is that it provides a vision for the future possibilities of development in neighbourhoods, districts, cities or any defined planning area. The terms land use planning, regional , urban, rural as well as urban design are often used interchangeably, depending on the level of consideration; national, state or local. Despite the array of terms, the basic function of land use planning remains the same whatever term is applied (Jiriko, 2007).

Land use planning is required to regulate the use of land through designation of areas for development, protection and application of performance criteria. It is in the form of a schedule of policies and decision rules to regulate land use for an administrative area (Oyesiku, 2004). The mapping of these designated areas and sites for development purposes is enhanced by confrontational processes, consultation , negotiations and protection, the process discretely leads to the adoption of a final blueprint plan draft, it is politically instigated to be adopted (LGA, 2001; Obateru, 2004; Oyesiku, 2004; ODPM, 2006; Litman, 2007; Jiriko, 2007; Levi-Faur , 2010; Walker, 2010).

The land use plans are usually a community owned policy (a document issued by the planning authority providing guidance to other professional planners promoting and

regulating development). The final plan (Master Plan) is usually determined by adversarial inquiry of the sections of the plan that are subject to objections, usually procedural safeguards by the local planning authority. Land use planning adopts the methodology of mapping constraints and collection of sectoral policy demands. Bargaining and negotiation with objectors and other stakeholders, informed by broad planning principles, helps to validate the scrutiny of proposals carried out by experts in the field of the built environment regarding sustainability appraisal/strategic environmental assessment (Litman, 2007; Rydin, 2011).

The delivery and implementation procedures employed in land use planning seeks to direct change and control investment activity of land use by prescriptive regulation, whilst mitigating the interest of the locals using conditions and planning agreements (TCPA, 2000; Obateru, 2004). It is monitored and reviewed by means of measures that conform to the plan's policies and proposals within the planning control outcomes. Data provides a portrait of the plan area offering a general context for implementation of proposals within a given period of time (Brian and Carnes, 2011).

The earth's surface, called the landscape, is a unique and valuable resource. Land Use (also called Land Development and Spatial Development) refers to how the landscape is treated, including the location and design of buildings, transportation facilities, parks and farms etc, (Adeniji, 2004; Litman, 2006; 2011).

Each piece of land can have a variety of uses that determines the social, economic values from which the public sector and the private sector derive benefit. Implementation of proposals for infrastructure development, which can include housing and transport in urban centres, has been the target of the government and private sector, however, it has been very difficult to meet the set targets because of the interest involved in the implementation of the master plan (Litman, 2004; 2007; Walker, 2010). Planning activities are normally presented as a plan, report or document with illustrations in form of charts, pictures, diagrams and maps. For a detailed plan, the report is likely to consist of a relatively short executive summary or abstract; the main transcript, with maps, describes the changes proposed; and one or more volume of appendixes gives supporting data (existing situation). An outline of what a report is likely to contain (land-uses plan), indicates the steps that have contributed to each

section, and demonstrates the different land uses presented in the plan. This would give a detailed breakdown of what is required for the plan in question. The plans usually enumerate the different land uses (commercial, residential, educational, infrastructural and industrial etc.,) available in the urban area and their various distributions. The proposed development, its direction as well as the expected out come at every stage or level is manifested at the time of implementation (Obateru, 2004).

This discussion links into consideration of physical planning (land use) and spatial planning; making a case for adoption in view of the dynamic and changing situation in urban areas. Refer to chapter 2 for a comparison between master planning and spatial planning.

The purpose of land use planning is concentrated on the regulatory process which safeguards the proposal by checking the performance. This is achieved using controls set out in the schedule of policies and leads to adoption of final blueprint plan and the consultation process. Ownership and policy is a community based document. It has procedures to safeguard the final plan and is equipped with a method for mapping constraints and collecting sectoral policies which are delivered and implemented by always seeking to direct and control changes. The monitoring and review leads to the measurement of plans. It is clear that this approach is out-dated, rigid and is an expensive method of planning. It would benefit most urban areas in Nigeria to adopt a more flexible and less expensive method of planning such as spatial planning. Chapter 7 offers more details of spatial planning methods and the characteristics of master planning can be found in chapter 2.

Furthermore, Nigeria has a rapid rate of urbanisation which has made urban Master Plans inapplicable because they were not originally meant for application in dynamic environments. Agbola & Oladoja, (2004) observed that planning is an evolving process concerned with constantly changing societal and environmental problems. This singular reason has made a case for the consideration of concepts and paradigms to change for planning to be relevant in the cities of most developing countries.

Town Planners in Nigeria are supposed to be dynamic and adaptive in their approach to be relevant. Being dogmatic about a specific planning system on which the success of the UPG practice hinges should not be thought of. Planners tend to be unenthusiastic



about urban Master Planning which, after being prepared, remains on shelves to gather dust, which is a rather unfortunate end (Falade, 2002; Jiriko, 2007).

Agwu, (1998) considered the pros and cons of urban Master Planning and judging past experiences concluded that it is inappropriate to encourage Planning Authorities in Nigeria to enter into master planning. It was further justified by the fact that despite the ostensible 'innovations' drafted onto the Master Plan approach the main tenets of the conventional urban master plan approach remains unchanged (MBA, 1992; Local Government Association, 2001; Falade, 2002; Jiriko, 2007). Furthermore, Okeke, (2002) argues that changing socio-economic conditions in the country has encouraged the review of University Master Plans, as the National University Commission has recommended strategic planning as an alternative planning approach to restructuring the university system to match the prevailing circumstances.

Based on observation, Master Plan has its limitations but it has been a working tool for planners at different levels in Nigeria, thereby facilitating development as a whole. It is the planning system used to ensure that some form of planning is incorporated into the system to bring about growth and development.

The main aim of the next section is to determine the types of planning system in operation within the study area. In addition the next section will examine the application of Master Planning in metropolitan /urban cities in Nigeria with a view to assessing the effectiveness of this planning system over time; and to determine the most suitable theories for planning and applying them to real life situations.

### **3.6.3. Application of Master Planning in Nigeria**

UN policy advises that master planning systems could be used to address the problems of housing, urban development and planning in various cities in the developing countries such as Singapore, Malaysia and Nigeria. The situation in Nigeria reveals that cities in developing countries (Asia and Africa included) were growing and changing faster than European cities during the industrial revolution. However, the Master Planning approach is insufficient to lead urban development and management in such countries due to their dynamic population growth and migration patterns. Master planning has very little impact to urban growth in general (Awogbemi, 1997). Awogbemi (1997) also observed that Town Planners had become very unpopular and

stressed because the master plans have failed and they were unable to identify the immediate causes. Koenigsberger, (1982) observed that the planning system was inappropriate for the tropical countries (dynamic population) because it was developed for a different type of society and that there was considerable demand for other alternatives.

Devas and Rakodi, (1993) point out that during and after the colonial era many ideas and concepts were applied to increase development in developing countries, including Nigeria, that were derived from the practice of Town Planning in Britain. Many of these practices were transferred wholesale. McNeil, (1983) observed that the Physical Planning approach was found to be increasing unpopular in developed countries, but was exported to many less developed countries during the 1950s and early 1960s where, to date, it is being used. Based on the above, cities in developing countries such as; Delhi, Madras, Karachi and Dhaka etc., have declared that Master Plans that incorporate elements of spatial strategy have been almost useless. They usually involve wildly inaccurate population projections, and land use zoning that deviates dramatically from reality. It also has inflexible conditions that do not adjust as the conditions change. Also, it has been observed that it is almost static in nature, attuned to a scenario of slow urban growth in which investment in infrastructure such as roads, services and other public investment could be carefully planned in the context of a finite long term plan. Rapid population growth, lack of infrastructure and services, shortage of funds and staff in typical developing country cities requires a more dynamic planning process in which priorities have to be continually assessed and reassessed in the light of the available resources (Jiriko, 2008; Litman, 2009).

Farvacque and McAuslan, (1992) argue that Master Plans take an unnecessarily long time to prepared and seldom offer guidance on the phasing and techniques of implementation; they seldom evaluate the cost of proposed development or try to determine how they could be financed. Little or no attention is paid to resource allocation and the financial feasibility of policies and programmes. Both criticisms show that Master Plans are seldom based on realistic appraisals of a city's economic potential or likely population growth; that communities, community leaders and implementation planning authorities are seldom, meaningfully, involved in the master

planning process. That the plans are constantly been updated and their static nature cannot keep pace with the dynamic process of city growth in developing countries.

Branch, 1974 argues that the failure of master planning in America is attributed to the fact that there is a defect in the concept (Master Planning) and that the process of URP, as practised for many years in the United States, is faulty. Nigeria, has, for so long been attuned to the flaws of the end-state master plan in vogue. With regard to the factual performance of master plan city plans, Stolper, (1966) on Nigeria and Branch (1974), revealed that few master plans have had any significant influence in shaping the development of cities in United States of America. It has been shown that just one year after the publication of master plans they are already outmoded and significantly less relevant. The impact of the master plan would not be felt if it is not considered immediately have to be kept for a long time not even pass in to law for over five years as it is the case of Jos currently. Not forgetting the fact that, the last for ten years and even more. More details about the situation in Jos Metropolis see section 5.4.3.2. 7.2.1. 7.2.2. in chapters 5 and 7 respectively.

Physical Master Plans are imaginary constructs, which represent physical objects and both their external and internal relationship to space: the emphasis is restricted to analysis of the spatial structure, urban form and land use patterns (Rose, 1974). Physical Planning schemes have tended to pay scant regard to the ecological, social, economic and political processes, which together make up the environment of man (Rose, 1974) be it urban, regional, national or supra- national.

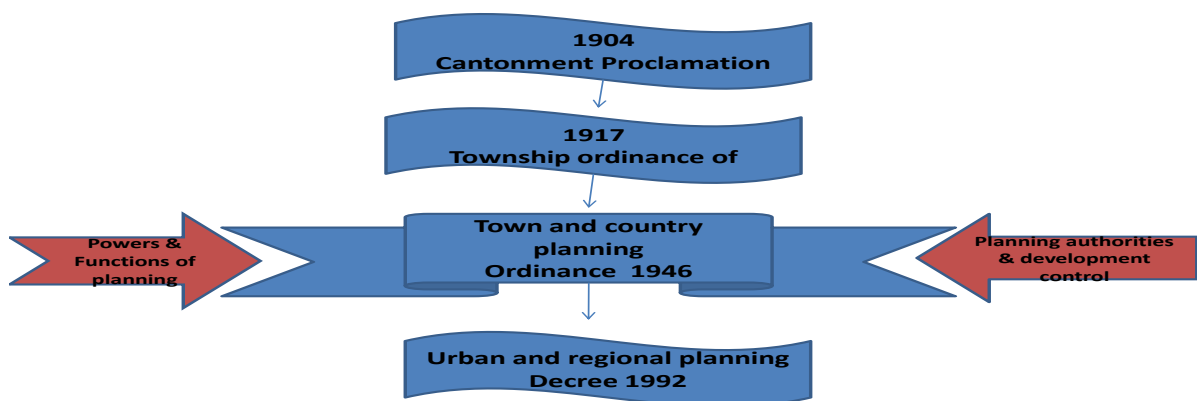
The self-contained master plan is now be replaced by a series of different principles or guidelines which give maximum freedom of choice, communication and association. This has made planners start to think in regional terms and become very conscious of the need for flexibility (Rose, 1974). The role and importance of voluntary organisations and pressure groups, civic societies, conservation groups, studies and sectional interest of every conceivable kind is growing fast, encouraging and supporting interest in conservation, and indicating that public opinion is a force to be reckoned with. Adaptation is the crux of planning although it is not the objective (Rose, 1974). Branch, (2002) also revealed that as cities become bigger and more complex and less subjective to authoritarian decision, the end-state physical spatial (or master) plan is no

longer valid. The end-state concept in city planning should therefore, be abandoned (Jiriko, 2004; 2008).

The chronology of major planning events in Nigeria would be considered between the period observed i.e., from the 1920s to date and would show on how planning in Nigeria has developed over time. The changes would take in the following periods; Colonial period (1920) Post-colonial (1946) Independence (1960) and Post-independence 1962 to date. This concept is illustrated in Table 3-2 and Table 3-3.

The inadequacies of these periods can be seen in the prevailing social and economic problems in the country (Stolper, 1966; Aluko, 2004), and it is evident in the uncontrolled and unguided sprawl of towns and cities without commensurate provision of the required infrastructure (Oyesiku, 2001; Anderson, 2001; Agbola, 2004 and Aluko, 2004).

Although the existing planning administrative system has been unable to cope with the dynamic nature of Nigeria's rapid, socio-economic and political changes, a reasoned, suggested framework for Nigeria at each level of government is to be developed.



**Figure 3-2: Chronology of Town and country Planning Law Administration in Nigeria**

This is also observed in Nigerian states, where the Government, due to lack of concern and understanding of the importance of planning, has constantly moved departments/divisions of town planning in many states from one ad-hoc metropolitan board to another, as observed by Oyesiku (2004).

Consequently Master Planning has been a wishful rather than productive enterprise. Hence, Branch (1974) observed that the chronology of planning development presenting

conventional concepts of Master Planning has been plagued with a number of questionable conclusions as can be seen in Table 3-3 and Table 3-2 respectively.

**Table 3-2 : Questionable Conclusions about Master Planning**

1. It presumes that the purposes, needs and situation of a sizeable and complicated city can be conceived, projected, foreseen, and pre-determined in 20 or no less than 50 years.
2. The end-state concept assumes that peoples' desires, objectives and priorities are sufficiently known and fixed to permit drawing conclusions today, with certainty, concerning what they will want a half century hence – or that city planners alone are wise enough and are allowed to do this for people.
3. It implies that people will themselves want to advance (a quarter to a half century) from now. However very few democratic societies will commit themselves to a completely planned en-state to be attained 20 or more years from now.
4. It presupposes that no unexpected events or developments will take place which make it imperative or desirable to repeatedly alter the plans.
5. It assumes that the municipality is sufficiently independent to project and act with finality on its own long-range future, either apart from regional, state, federal, or international influences and events, or according to reliable forecasts of the future behaviour of these externalities.
6. It assumes that someone or group of persons has the knowledge and technical capability to analyse all important elements and aspects of a city, to project them in concert, identify and quantify their numerous interactions and explain the results and advise significant alternatives to the relevant bodies for intelligent reaction and collective decision; that this complete analysis will be accomplished so promptly such that the data underlying the master plans are still valid at the time of decision and many more of such problems that affect the master planning from being implemented appropriately. This, to a large extent is what is obtainable in Nigeria.

**Table 3-3: Chronology of planning development.**

<b>Colonial periods 1920</b>	<b>Post-colonial 1946</b>	<b>Major features of the Colonial era</b>	<b>Independence 1960</b>	<b>Post- independence 1962 to date</b>	<b>Major features of the post-independence era</b>
<p>Enforcement of sanitary regulations and ineffective land use control measures</p> <ul style="list-style-type: none"> <li>- Piecemeal and ad hoc basis using town planning committees</li> <li>- Establishment of Planning Authorities</li> <li>- Planning was part of general administration</li> <li>- Have planning area or jurisdiction</li> <li>- Frustration by official apathy and opposition from works department and</li> <li>- General lack of technical staff</li> </ul>	<p>Formulation of an ordinance to make provision for re-planning, Improvement and development of Lagos (cap. 103, No 45 of 1928. And the Nigerian town planning ordinance 1946 modelled on UK town and country planning Act of 1932).</p> <ul style="list-style-type: none"> <li>- Proliferation of planning authorities (too many)</li> <li>- Urban policy creation (FMHUDE) created.</li> <li>- Each authority derives its power from the federal and state governments.</li> </ul>	<p>-Piecemeal enforcement of regulation using ad hoc committee</p> <ul style="list-style-type: none"> <li>- Planning generally part of administration</li> <li>- Lacking technical officials staff frustration by having jurisdiction.</li> <li>-Emergence of planning authorities</li> <li>- Formulation of ordinances to make cases for re-planning.</li> </ul>	<p>The 1<sup>st</sup> and 2<sup>nd</sup> national development plans characterised by economic and social variables other than physical variables.</p>	<p>Consolidation of colonial framework Planning and management institution in the urban centres. The functions by the three bodies</p> <ul style="list-style-type: none"> <li>-Planning authorities</li> <li>-Urban councils</li> <li>-Health authorities Instruments</li> </ul> <p>Operating the town and country planning law</p> <ul style="list-style-type: none"> <li>-Council building regulations</li> <li>- Health authority-Health regulation Usually in conflict and constituting constrain.</li> </ul>	<p>Concentration of all economic, social and political developments in Lagos</p> <ul style="list-style-type: none"> <li>- Deprivation of other urban centres in the nation or primacy, dominance</li> <li>- It become a place to leave and not to be live, a crowded and sprawling city of chaotic vehicular traffic congestion and worst on earth.</li> <li>- Creation and development of Abuja to decongest Lagos and create a new Nigerian capital city</li> <li>- Master plan adoption for Abuja which is a crescent shape and implementation in phases.</li> </ul>

Source: Compiled by Author from Branch, 1974; Uyanga, 1982 and Jiriko, 2008

This leads into the discussion of planning for the millennium with a view to bringing to bear the consideration of better physical planning approach for Nigeria.

#### **3.6.4. Planning for the Millennium**

The population of Nigeria according to the national population commission (NPC, 2006), is about 150 million people compared with 25 years earlier when it was reported that the population in 1991 was about 88 million. This means to say that the size of the population is increasing, presenting different characteristics. The characteristic of any population determines what is required for the provision of infrastructure for its wellbeing. The infrastructure provided are captured by plans that take into consideration many different factors such as social, economic, political and environmental factors. The MDGs were set to achieve a level of development for most developing countries but the necessary structure (infrastructure) to ensure this was not in place. This has been the root cause of the failure of past and present plans. Nigeria has the resources to make provision for this infrastructure but past and present plans cannot meet their target goals due to misconception and non-adherence to the standards laid down.

The Government, through different Planning Authorities, has not been able to implement plans to the letter; this is manifested in the emergence of different illegal and informal settlements which are generally characterised by slums (Ebohon, Field & Mbuga, 2002; Parsa *et al.*, 2010). In the case of urban planning in Nigeria different Planning Authorities are involved in the management of the urban centre, this in itself has created so many problems that most cities in developing countries face. The different planning authorities mostly have conflicting roles, functions and responsibilities as observed by Wapwera & Egbu, (2013). This is typical of developing countries encouraged by the fact that the inappropriate physical planning approaches are employed to address dynamic problems in a dynamic society. The case of Nigerian cities and Jos in particular will go a long way to bringing about an improvement in the growth and development of planning in Nigeria. Oyesiku (2004; pg. 520) argued that URP in Nigeria still lacks a definite policy, as the Government's ad-hoc measures in response to the physical development problems, have contributed immensely to the little impact of the statutory Planning Authorities in promoting efficient URP development.



Consequently, he suggested that to achieve the objective of effective Physical Planning and management of urban and rural centres in the country and an adequate vertical and horizontal coordination of planning activities, there is need for a well-structured administrative framework. For the purpose of this study Jos Metropolis would be used as a case study which could be adopted as a framework for enhancement of better planning in Jos and Nigeria at large.

### **3.7. SUMMARY**

From the review of literature on Nigeria the following were obtained:

- ✚ Nigeria has the highest rate of urbanisation in Africa with Abuja having about 10- 11% and Jos in close proximity to it. Its nature is best described using the following adjectives: ballooning urbanisation, rapid urbanisation, mushrooming urbanisation, dependency urbanisation, sub-urbanisation and counter-urbanisation. The causes of urbanisation in Nigeria are the proliferation of states and local government in the country in the recent past. It shows that 50% of the population are located in urban areas and the consequences of this are manifested in urban sprawl characterised by slums, sub-standard housing, declining neighbourhoods in seemingly inevitable states of decay.
- ✚ The components of the institutional framework have been considered in chapter 2 and this chapter also considers identification and discussion of the constraints. These were identified as political, physical, cultural, financial, institutional, legal, knowledge and analytical constraints amongst others. The causes of these constraints are lack of hierarchy, conflict and compromise.
- ✚ The Urban Governance section (institutions) and Urban Management section (technical) are not effective due to the inadequate provision of funding, lack of qualified man power and bureaucracy/bureaucracies amongst others.
- ✚ The operational (administration) section is not effective due to bureaucratic bottlenecks and the planning legislation. The frameworks identified are commission systems and the council-manager systems for the two ministries, Board and Lands section to be used as case studies in this present research.

- ✚ The planning legislations to be considered are the 1992 URP law, LUA 1978, as well as the master plans which have actually imparted very little to Urban Development and Management in most urban areas in Nigeria and
- ✚ Neo-institutional/institutional deficiency theory was considered due to its relevance and applicability to the Nigerian urban planning system
- ✚ From the literature review three main issues are evident;
  - ✓ Theories of urbanisation, urban sprawl, governance, management and master planning were built and need to be tested or better still developed
  - ✓ Literature generated these theories and needs to be tested and clarified or justified using the research questions and hypothesis.
  - ✓ There is a need to justify what was discovered and said in the literature, then

What needs to be done is to generate data by;

- ✚ Identifying philosophy, approaches, strategies and methods
- ✚ Adopt philosophy- approaches- strategies –methods (collect data)
- ✚ Analysis of the data

This now links the theoretical underpinnings with chapter 4 on the methodological philosophy, approaches, strategies and methods in the Physical Planning domain.

## **CHAPTER 4. RESEARCH METHODOLOGY**

### **4.1. INTRODUCTION**

The research problem, aim and objectives were set out within chapters one, two and three of this research. Chapter four seeks to establish and justify the appropriate methodology for this research. Hence, the chapter is structured as follows:

- ✚ Methodological framework for the research
- ✚ Philosophy (purpose and process of ontological, epistemological and axiological contexts),
- ✚ Approaches (quantitative and qualitative), logic and outcomes (inductive and deductive),
- ✚ Research strategies (case study evaluation) and
- ✚ Research methods; empirical data collection and analysis for the study (Denscombe, 2007; Collis and Hussey, 2009; Dawson, 2011; Robson, 2011; Creswell & Plano Clark, 2012).

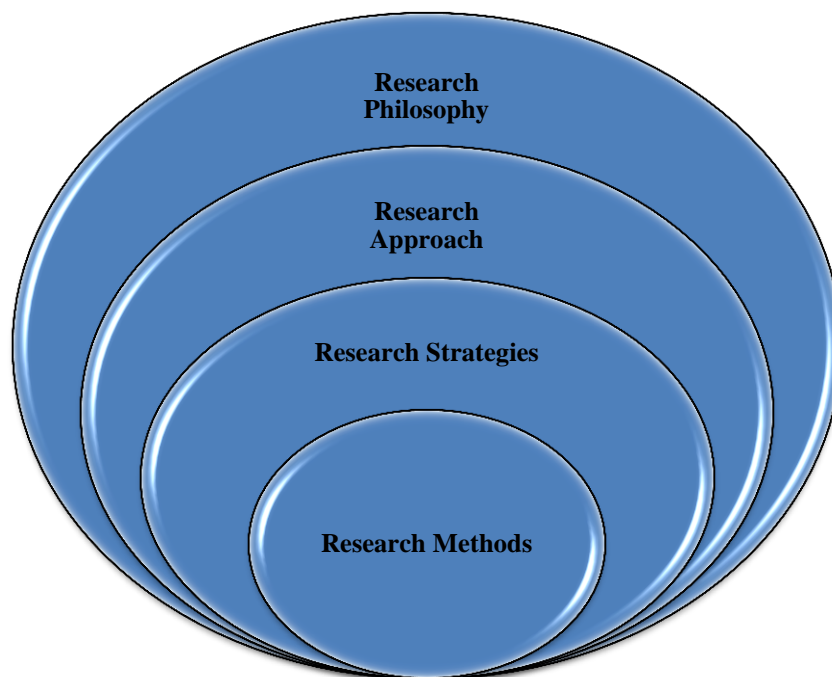
### **4.2. METHODOLOGICAL FRAMEWORK**

Sapsford (2006, p.175) defines methodology as a philosophical stance or world view that underlies and informs a style of research. Stemming from a congruent philosophy, a methodology is a set of principles and ideas that inform the design of a research study. Hence, this section answers the question ‘what is the process of the research’? It emphasises the processes and step by step developments as well as the research tools and procedures to be employed for this research.

It advocates certain research philosophies, approaches/reasoning, strategies and methods. Neville (2005) and Denscombe (2007) argue that with positivism there are two forms of strategy; experimental strategy and non-experimental strategy. While, the phenomenology (social constructivism) has three forms of strategy; case study, ethnographic study and grounded theory study.

Consequently, as Denscombe (2007; p.109) highlights, research methodology can be represented as a procedural framework within which the research is designed and executed. A systemic research methodology is based on several interrelated elements. These elements include the research philosophy, research approach and strategy and research methods.

The “nested-nested mixed method research methodology framework” (hereafter the nested model), described by Kagioglou *et al.*, (1998a), Sexton (2000), and Keraminiyage, (2009) provides a detailed and integrated perspective of how the components guide the research methodology and its implementation process.



**Figure 4-1: Nested mixed method research methodology framework**

**Source: (Kagioglou *et al.*, 1998a; Keraminiyage, 2009)**

As shown in Figure 4-1, the nested approach illustrates that research methods are led and informed by research strategies, and research strategies are informed by the research approach which is guided and informed by the research philosophy. The research philosophy defines the underlying assumptions of the study. The research approaches represents the theory generation and testing strategies adopted to answer the research questions. The research strategies are generally lines of attack employed to address research problems and these include; case study, mixed method, feminist,

ethnographic, experimental, grounded theory, evaluation research and action research amongst others as observed by Clarke (2005); Denscombe (2007); Dawson (2011); Robson (2011) and Creswell & Plano Clark (2011). Research methods are mainly the tools used to collect and analyse data within the selected research strategies. Each component of the nested mixed method research methodology framework is discussed in detail in sections 4.3. 4.4. 4.5. and 4.6. respectively.

**Table 4-1 Nested-Nested mixed method research methodology framework**

Methodology	-	Position	Authors
<b>Research Philosophy</b>	Ontology	Constructivist	(Bryman, 2001; Grix, 2001) Collis & Hussey (2003) Grix, 2004; Denscombe, 2007; Dawson, 2011
	Epistemology	Interpretivist	
	Axiology	Value laden and biased	
<b>Research Approaches :</b> <i>Research Reasoning :</i>		Qualitative & Quantitative, Qualitative & Quantitative/ Deductive & Inductive, Deductive & Inductive	Grix, 2004; Denscombe, 2007; Dawson, 2011
<b>Research strategy</b>	Mixed Methods	Nested-Nested Mixed method Approach	Kagioglou <i>et al.</i> , 1998a; Mingers, 2003; Denscombe, 2007, Yin, 2009; Keraminiyage, 2009
<b>Research Method</b>	Sampling Design	Probability and non-probability	Creswell (2003) and Tashakkori & Creswell (2010) & Plowright (2011)
	Data Collection	Questionnaire, face to face interview and archival documents,	
	Data analysis	ANOVA-N-way, Spearman ranks correlations coefficient Content & thematic analysis	

### 4.3. RESEARCH PHILOSOPHY

Collins English Dictionary, (2009) defines philosophy as the rational investigation of the truths and principles of being, knowledge, or conduct of a specific discipline. It could be for any of the following areas; natural, moral or metaphysical. Furthermore, it could be a critical study of the basic principles and concepts of a particular branch of

knowledge with a view to bringing about improvement or reconstructing them. It deals with general and fundamental problems such as those connected with a branch of knowledge. It explains the methods and general guidelines involved in the conduct of research (Creswell, 1998; 2003). Hart (1998), Grix (2001) and Creswell (2003) and explains it as a way of analysing the principles of methods, rules and hypotheses employed by a discipline and also the systematic study of methods that are, can be, or have been applied within a discipline in this case, urban and regional planning.

Philosophical assumptions help to bring about explanations of methodology by describing the underlying research processes. They explain the underlying principles and rules of inquiry, generic processes and compromise position or stance adopted for any research. Gray (2009) and Crotty (2003) consider that interrelationships exist between a philosophical stance adopted by a researcher, either from the epistemological, ontological and axiological stance. There are relationships that exist between philosophy, approach, strategy and methods which shape the researcher's view of the problem identified.

Therefore, philosophical stance such as epistemology and ontology, as well as axiology, determine, to a large extent, the approaches, strategy and methods of any research. The clear distinction of these philosophical assumptions is that ontology is about what we may know and epistemology is about how we know what we know while axiology is the value of what we know (Bryman, 2001; Grix, 2001).

#### **4.3.1. Ontology**

Ontology is an assumption that is concerned with what is believed to constitute a social reality (Blaikie, 2000; 8; Grix, 2001). It addresses questions on what objects exist or can be said to exist, how these objects can be grouped, related or subdivided according to relationships and variations. Ontology is a systematic account of existence (Genesereth and Nilsson, 1987; Gruber, 1993; 1995). Hence, ontological postulations are concerned with what is believed to constitute subjective rationality (Grix, 2001).

The ontological stance has two divergent views or assumptions at opposite extremes of objectivism and those based on constructivism. Grix, 2001 argued that an individual's ontological position is their answer to the question: What is the nature of the social and

political reality to be investigated? Hay, (2002, pg.3) observed that the assumption is difficult, if not impossible, to refute empirically.

Objectivism is an ontological position that asserts that social phenomena and their meanings have an existence that is independent of social actors. While constructivism asserts that social phenomena and their meanings are continually being accomplished by social actors. This explains the ontological view that entities are assumed to exist within a system and have relationships, and gives a systematic account of existence of the physical planning (urban sprawl) problems under consideration.

(Gray, 2009) observed that objectivists are of the view that things exist, as meaningful entities, independently of consciousness and experience; that they have truth and meaning residing in them as objects - 'objective' truth and meaning, therefore, a careful (scientific) research can attain that objective truth and meaning. The relationship between urban governance and management is through the planning authorities in Jos Metropolis. The presence of numerous planning authorities is believed to be the immediate cause of the failure of the Greater Jos urban master plan that brought about the physical planning problems observed in the Metropolis. This is so because they operate as individual planning authorities without any linkage in their roles, functions and responsibilities within the same jurisdiction or boundary (Wapwera & Egbu, 2013).

The nature of the physical planning problems in most developed and developing countries are termed 'Wicked and Dangerous' as observed by Webber and Rittel, (1966). The simple reason why this is so, is because the factors that determine the conditions are interrelated, they keep changing and increasing, for instance an increase in the standard of living brings about an increase in population and, thus, consumption and demand on the basic infrastructure in the urban area. The absence or the inadequacy of infrastructure in the urban environment leads to the changing nature of the planning problem. This implies that physical planning problems are dangerous problems and that they exist.

On the other hand, objectivists believe that the world exists as evidence and experience and human observation is used gain knowledge of it (Markie, 2004; Baird, Forrest & Kaufmann, 2008). Based on this position, the 'rationality' of issues of urban sprawl characterised by slums lies within the evidence and experience of the humans involved.

This implies that physical planning problems are problems only because people experience and have evidence of the problems that are physical.

Therefore, the ontological claim for this research is that physical planning problems in Jos are dependent on the implementation of the appropriate plan, meaning the ideal conditions (plan i.e. master plan or spatial) are subject to the need for a concrete rationale. It is assumed that the rationale is independent of the evidence and experience of the planners. A compromise stand on how to investigate the rationale tends more towards the constructivist than the objectivist in the consideration of the epistemological view of approaching and observing the phenomena. This is so because previous writers (Faludi, Healey, Hall, Mcloughlin, Hull, Davuodi, Rydin, Newman and Lord amongst others) in this field of study have expressed, in their studies, the belief that physical planning problems are seen as complex issues that are nested in so many issues that it presents a complex system requiring understanding of the actors, the context and the interplay between the actors and the context as well as the researcher. Therefore, the ontological claim for this research leans more towards constructivism than objectivism, drawing from the numerous considerations of other authors in the discipline of urban and regional planning.

#### **4.3.2. Epistemology**

Epistemology is, literally, the study of knowledge and knowing (Gruber, 1993; 1995). It deals with the nature and criteria of knowledge, its possibility, scope and general basis. It is concerned with providing a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate (Crotty 2003). Grix (2001) made this clear, that epistemology is concerned with the question of what and how we know what we assume exists? Putting it in the context of this research, what and how can one understand the factors determining the success or failure of the master planning system in Jos Metropolis? It is firstly by identifying objects (factors) that determine the success or failure of the master plan as a tool to address the problem.

Grix (2001) and Hay (2001) observed that the epistemological stance has two divergent views of assumptions at extreme ends of the continuum with positivism at one end and at the other end assumptions based on interpretivism.



The argument of positivism is that it is a fundamental characteristic of the scientific method that all theories must be tested against observations of the natural world rather than relying solely on reasoning, intuition, or revelation. Positivism is related to empiricism which in the philosophy of science emphasises evidence, especially evidence discovered from experiments (Crotty, 2003 and Dash 2005).

From the explanation above, the theories identified from literature need to be tested against observation of the natural world (social reality), the field work (observation, measurement and collection of opinions and views) to provide the data needed (which is also evidence) for the testing the theories.

Grix (2004) observed that epistemology is concerned with the question of what and how can we know what we assume to exist? Putting it in context of this research, what and how can one understand the factors determining the success or failure of the master planning system in Jos Metropolis? If we use this assumption, the research will uncover the truth of the reality presented above from the experience of failure of the urban master plan in Jos Metropolis. Linking interpretivism to constructivism, which posits that truth and meaning do not exist in some external world but are created by the subject's interaction with the world, the interpretivist believes that to understand this world of meaning one must interpret it. The researcher must clarify the process involved in the meaning of construction and clarify what and how the meanings are embodied in the language and actions of social actors (Schwandt,2001). Constructivist and interpretivist perspectives contrast objectivism and positivism and are based upon ontology (Gray 2009).

Therefore, the epistemological claim for this research leans more towards the interpretivist stance than the positivist stance, drawing from the numerous considerations of other authors in the discipline of urban and regional planning.

Furthermore, Grix (2001), Oates (2005), Creswell (2005), Neville (2005), Denscombe (2007) and Dawson, (2009) observed that the interpretivist position through epistemological assumptions results in a more interpretivist approach which will influence this research based on the following characteristics shown in Table 4-2.

**Table 4-2: Reasons for leaning more towards a position of interpretivism**

<b>Multiple subject realities:</b> There is no single version of truth. What constitutes the real world or knowledge about the world is a construction of the mind, either individually or collectively. Different groups or cultures perceive the world differently. It is best explained in the multi-disciplinary perspective of the study.
<b>Multiple interpretations:</b> Due to the multidisciplinary nature of the research, explanation is not expected to be fixed. Hence, more than one explanation and discussion will emerge because there is more evidence to support (Gummesson, 2003).
<b>Dynamic, socially constructed meaning:</b> Whatever reality is for an individual or group, it can only be accessed and transmitted to others through yet more social constructions such as language and shared meanings and understanding (Gummesson, 2003). It is about the identity of the specific discipline under scrutiny.
<b>Reflection:</b> Basic assumptions, beliefs, values and actions will inevitably shape the research process and affect the situation, this would be manifested in a research because it is not neutral.
<b>Qualitative and quantitative data analysis:</b> There is often a strong preference for generating and analysing both qualitative and quantitative data sets. However, the use of <b>quantitative and qualitative data collections</b> such as surveys and interviews can be analysed in different ways and interpreted to meet the <b>objectives</b> (Game and Metcaff, 1966 as cited by Gummesson, 2003; Denscombe, 2007).
<b>Study of respondents in their natural social setting:</b> The understanding of the respondents in the field (nine Planning Authorities in Jos Metropolis) is very important because the laboratory is the field. Here the field is not artificial.

#### **4.3.3. Axiology**

Collis & Hussey (2003) observed that axiology is another philosophical assumption which studies judgements about value. In this philosophy, in the continuum there are two extreme assumptions which have to be made, whether it is value free and unbiased or value laden and biased (Saunders et al., 2007).

Those who are involved in research (professionals) in the built environment such as builders, architects, civil engineers, quantity surveyors, estate surveyors and valuers in addition to town planners amongst others, by virtue of their training, background, and their idiosyncrasies take a very strong position. Their training generates personal baggage and they bring their bias into the domain. They are not free of bias, they are bias laden and, taking into consideration that the nature of the study is multidisciplinary, faceted and multidimensional, hence the study is open to source the opinion and views of these experts. Brainstorming sessions and discussions can accommodate their bias which is so intrinsic in their mind set that they don't see any value elsewhere. They have acquired personal baggage which they bring to discussions along with any bias they may have gained.

However, the assumptions merely suggest directions along which to look rather than provide a description of what to seek. Therefore, the axiological claim for this research leans more towards value laden than value free, as the research choices are determined by human interest, belief and experience, drawn from the numerous considerations of other authors in the discipline of urban and regional planning.

#### **4.4. RESEARCH APPROACH**

Research approach refers to the methodology that has been adopted to conduct the research. It involves the selection of appropriate research questions and methods as well as the conceptual framework that has to be adopted. It is often asserted that the choice of any approach by the researcher is determined by the questions asked (Akinwumi, 2009).

The research approach can be considered from the following perspectives; quantitative /qualitative, deductive /inductive and primary / secondary research approaches. However, two research approaches were adopted for this current study, this include; Logical, theoretical research and Qualitative, observational research. Many research projects combine a number of these approaches. For instance, some researches use both quantitative and qualitative approaches as observed by Collis & Hussey, (2003); Creswell, (2005); Neville, (2005); and Denscombe, (2007).

However, in any research at this level the methods have two principal functions (a) they offer the researcher a way of gathering or generating information so as to gain insight into the subject matter and (b) enable another researcher to re-enact the first's endeavours by emulating the methods employed (Grix, 2001; Gummesson, 2003). The research questions posed above express the need for learning more about the concept of urban and regional planning as a research domain. Hence, a qualitative research approach based on observations, document studies and interviews taken from real world phenomena and also a quantitative research approach based on a questionnaire administered to actors or respondents is argued for in order to meet the research objectives.

This research seeks to evaluate the need for spatial planning and to develop a framework and a guidance document for addressing physical planning problems which the previous greater Jos urban master plan has failed to address. It employs a mixed method approach to obtain data from the activities/responsibilities of the numerous Planning Authorities and includes case studies, face to face interviews and document reviews.

#### **4.4.1. Qualitative research approach**

The researches that follow this approach are known as case studies (Yin, 2009), grounded theory studies (Strauss and Corbin, 1990; Strauss and Corbin, 1994) and ethnographic methods (Dawson, 2009) amongst others. It offers the researcher the opportunity to be in contact with the field of study to develop an understanding and, as claimed for grounded theory studies, to become able to formulate a conceptually rich theory explaining the phenomenon under investigation. Contact with the field of research may be based on interviews, observations, or analysis of documents and other artefacts. Furthermore, literature studies are performed to the extent required to develop sensitivity in observation and interpretation. A qualitative research approach can be used to develop the understanding required for evaluation of whether a variable is relevant or not to a given problem situation. Comparing the two methods, quantitative research can refer to counting, whereas qualitative research can be seen to be proposing which variables to count.

This approach, also referred to as “constructivist”, “interpretativist”, (Guba & Lincoln,1994) is an enquiry process for comprehending a social or human phenomenon based on building a complex, holistic picture formed from words reporting the detailed views of informants, usually collected in a natural setting (Creswell,2003; Lord,2012).

#### **4.4.2. Quantitative research approach**

Quantitative research, on the other hand, generates statistics through the use of large scale surveys, using methods such as questionnaires or structured interviews (Dawson, 2009).

Grix (2001) observed that this research approach is predominantly concerned with quantity. Quantitative research is also known as the “traditional”, “positivist” or the “empiricist” research paradigm, it is an enquiry into a social or human problem based on testing a theory made up of variables, measured with numbers and analysed using statistical methods in order to determine whether the predictive generalisations of the theory is true (Creswell, 2003; Akinwumi, 2009).

Furthermore, the entire process of the quantitative methodology uses the deductive form of reasoning or logic wherein theories and hypotheses are tested in a cause-and-effect format. Concepts, variables and hypotheses are stated in the early stage of the study and this remains a fixed guide throughout the study. The intent of this study is to make generalisations that contribute to the theories identified in the literature review (global and local) and to enable the researcher to provide a better prediction and explanation as well as a description of the phenomenon under study (Grix, 2001; Creswell, 2003; Akinwumi, 2009; Katsirikou & Skiadas, 2010).

This research approach employs the formal deduction of logical consequences from a set of initial assumptions (axioms). If the axioms are true and the rules are logically sound, the consequences are also true. This mode of research may be appropriate for formal sciences as exemplified by mathematics and parts of computer science. The main concern in this present study is urban and regional planning and the study of the real world (master planning). A logical theoretical approach might not draw upon the benefits of empirical work.

The quantitative approach to undertaking research lies within the classical scientific paradigm of natural, "hard" sciences such as physics, chemistry etc. This scientific method implies postulating hypotheses, doing quantitative experiments, and then either sustaining or rejecting the hypotheses based on statistical analysis of the measured data (verification or falsification of hypotheses) (Grix, 2001; Creswell, 2003; Akinwumi, 2009).

The scientific method may be claimed to be the "best" research approach in relatively well known areas of research and where natural laws can be assumed to exist (in the sense that phenomena are repeatable and to some degree controllable). Even if there are an infinite number of theories explaining a given set of data, the experiments may be repeated and theories can be verified (or rather, confidence in the theories may increase) (Grix, 2001; Creswell, 2003; Akinwumi, 2009).

Grix (2001) Creswell (2003) and Akinwumi (2009) observed that to propose fruitful hypotheses, one must have a well-developed understanding of the research area. An understanding of what constitutes statistically reliable results is very important in survey studies as the number of samples must be large (for survey studies, it has to be above 40, as observed by Galtung, 1967). Both these requirements suggest looking for other research instruments.

Quantitative research is usually associated with counting. Correlation and relationships between variables are estimated using statistical devices (regression analysis, product moment correlation coefficient, Spearman Ranks Correlation Coefficient, Mann Whitney U Test and Kruskal Wallis amongst others). However, in order for counting to be meaningful, one must also know that the variables are meaningful in the given setting (urban planning system). Hence, quantitative research requires a well-developed understanding of a domain, in advance, in order to judge if variables are meaningful (Saunders, Lewis & Adrian, 2009).

#### **4.4.3. Deductive and Inductive**

This empirical study is approached from both deductive and inductive points of view. The deductive approach is a research strategy where testing of a hypothesis is employed using specifically designed techniques for the purpose of developing a theory that is subjected to rigorous testing and prediction of occurrence (Collis and Hussey, 2003;

Saunders, Lewis and Adrian, 2009). In this study, the theories to be considered are theories of urban governance and management such as institutional and deficiency theories. The inductive approach is based on observation of empirical data drawing conclusions from specific to general, and subsequently, using the results to develop a theory (Saunders, Lewis & Adrian, 2009). On the other hand, the deductive approach involves the testing of a theoretical proposition, such as the institutional deficiency theory, by using research strategies specifically designed for the purpose of testing. These methods are expected to provide data that are both qualitative and quantitative in nature.

The research will be based on mixed approaches, but with more emphasis on the qualitative approach to bring about an underpinning of the theories in order to answer the research questions. The questions asked seek to explain the relationships that exist between urban governance and management (by planning authorities in Jos Metropolis) and urban sprawl in the metropolis (Activities of planning authorities in Jos Metropolis and the physical planning problems).

#### **4.4.4. Deductive and Inductive Reasoning**

In reasoning there are two distinct methods namely; deductive and inductive approaches. The deductive approach moves from general to specific. This is also called a "top-down" approach as shown in Table 4-3. The deductive reasoning in this research contends that the number of theories identified about a topic can be narrowed down to the hypothesis stated (a hypothesis that can be tested). This can be narrowed down further by collecting data using different tools allowing the hypothesis to be tested (note that data collected and analysed can either accept or reject a hypothesis and the reason for that is to confirm or refute the original theory (Collis & Hussey, 2003; Neville, 2005; Denscombe, 2007; Dawson, 2011)).

In conclusion, the use of deduction reason from general principles to specific cases and in this case: 'Spatial planning as a tool has a significant relationship to urban management and urban sprawl in the Jos Metropolis'. For the purpose of this study this approach was used largely in the literature review. Spatial planning was only used in Europe and specifically in Great Britain, who was Nigeria's colonial master, and who has used the land use planning/master planning (development planning) and now uses

spatial planning. The literature considered these concepts from the global perspective and narrows it down to Nigeria and Jos to be specific.

The inductive approach moves from specific to general. This is called a “bottom-up” approach as shown in Table 4-3. Inductive reasoning starts from specific observations (*urban sprawl characterised by slums and haphazard developments in the Jos Metropolis*), of the different planning patterns employed (or no patterns) by talking to planners in Planning Authorities and assembling common elements and comparing them with definitions obtained from professional associations about regularities (or irregularities); subsequently formulating a hypothesis with which to work and finally developing general theories or drawing conclusions (Neville, 2005). The inductive reasoning starts with the literature review and identifies specific urban planning problems in Jos Metropolis (Nigeria). The unique characteristics go further to use the hypothesis as stated, a methodology is adopted to collect data, the data is analysed and generalisation are drawn (global).

This approach could be very time-consuming, but the reward might be in terms of arriving at a fresh way of looking at the subject of planning, leading to the disclosure of a number of specific instances which can be weighed against an existing theory; as observed by Neville (2005). See Table 4-3.

**Table 4-3: Research approaches - deductive and inductive**

<b>Theory</b>	<b>Theory</b>
↓	↑
<b>Hypothesis</b>	Hypothesis
↓	↑
<b>Observation</b>	<b>Pattern</b>
↓	↑
<b>Confirmation</b>	<b>Observation</b>
<b>Deductive Reasoning</b>	<b>Inductive Reasoning</b>

Source: Compiled by author from Creswell, 2003; Neville, 2005; Dawson, 2011



Institutional theory/institutional deficiency theory forms the basis for the research using institutional analysis for the relationships between Policy (Greater Jos Urban master plan) and the activities of the numerous Planning Authorities in Jos Metropolis. It considers the nature of the planning authorities (organisations, cultural, social and economic norms and habit) (Keith, 1972; Trent, 2003; Fadare, 2004; Christian et al, 2006) and provides answers to questions, broadly and specifically, about the knowledge of what the key indicators are to the social, economic, cultural and demographic characteristics of Jos Metropolis? What is the current operational, institutional framework for urban and regional planning systems in terms of the current constraints experienced in Jos Metropolis, Nigeria? How effective is the urban planning system in applying spatial planning as a strategic tool in addressing urban sprawl in Jos Metropolis?

To generate data leading to information that would provide answers to the above questions both deductive and inductive approaches are required because of the need to identify issues from a global perspective and to deduce facts about planning and theories relating to local Jos; this is a deductive approach. From the local Jos Metropolis, Nigeria, data would be collected and analysed and information obtained which could be used to make generalisations, this is an inductive approach. This research is in the middles of these two approaches as shown in Table 4-3. The literature review is the inductive element (theory building), whilst the data collection and analysis is the deductive element (theory testing) of the work.

It is against this backdrop that this research employs both deductive and inductive approaches.

#### **4.5. RESEARCH STRATEGY**

Based on the philosophical positioning of the research, the approaches adopted and the reasoning pattern considered; a mixed method strategy was adopted permitting different strategies to be used as well. The philosophical stances and approaches determined the best strategies to use which also informed the methods to be used. Nesville (2005) Denscombe (2007), Robson (2011) and Creswell & Plano Clark (2011), suggested four (4) strategic processes that are relevant to this study; analytical, archival, empirical and opinion as seen in Table 4-4.

**Table 4-4: Strategic research processes adopted for the study**

<b>Analytical:</b> This is based on the type of analysis adopted at every stage. This is largely based on reasoning which could be an inductive and deductive argument and the methods of data collection include: observation, sampling, context analysis and thematic analysis (Nesville, 2005; Denscombe, 2007; Robson, 2011; Creswell & Plano Clark, 2011).
<b>Archival:</b> This is collection of records and documents (government publications and official statistics, newspapers and magazines, records of meetings, letters and memos and diaries amongst others) containing facts relevant to the study and the methods of data collection include: scanning, photocopying, observation and context analysis (Denscombe, 2007, 228; Robson, 2011; Creswel & Plano Clark, 2011).
<b>Empirical:</b> Reliance on experiment and experience to make judgements or construct ideas based on observation with direct access to facts. This could be carried out in a case study which accommodates field work or in a laboratory setting (Nesville, 2005; Robson, 2011).
<b>Opinion:</b> It is a gamut of views, judgements, beliefs or appraisal of the individual, individuals, or groups of individuals which may or may not be dependent on direct observation of the facts. The data collection methods include: questionnaires, opinion or view polls drawn up during interviews and brainstorming (Denscombe, 2007; Robson, 2011; Creswell & Plano Clark, 2011).

This study adopts a mixed methods research strategy which is a combination of both qualitative and quantitative methods of data collection. The research strategy observed by Clarke, (2005); Denscombe, (2007); Dawson, (2011); Robson, (2011); Creswell & Plano Clark, (2011); includes; case study, feminist, ethnographic, experimental, grounded theory, evaluation research and action research amongst others.

Furthermore, Neville, (2005) and Robson, (2011) observed that the type of research questions and research setting is always a major factor in deciding which strategy is more appropriate to a particular research study. Given the arguments based on the philosophical stance, approaches, strategies and type of questions asked and the hypothesis stated, a mixed method approach is adopted because it is a strategy which has the general ability to cover a wide spectrum of ways in which mixing can occur in this research process. Please refer to Table 4-5.

**Table 4-5: Summary of research strategy adopted for the study**

Research Strategy	Positions	Decision
<b>Mixed Method Strategy</b>	Case study evaluation  Strategy: Opinion, Empirical, Archival and Analytic	<b>Opinion:</b> Investigating a phenomenon in a real-life context (master plan) Greater Jos Master Plan (2008-2025).

Table 4-5 shows the research strategy adopted for the study to be mixed method using multi-methods, multi-data and multi-strategies. Yin, (2009) argues that when undertaking social science research five main research strategies can be identified; case study, experiments, surveys, histories and analysis of archival information. This leads this discussion to the consideration of the case study method.

#### **4.5.1. Case study**

Yin, (2009) argues that the best way to do social science research is by identifying a strategy and its characteristics and adopting it if it meets the aim of the study. Robson, (2011) opined that the type of research questions and setting are two major determinants of any methodology. It is based on these factors that this study, after considering the fact that the study is semi-science research (hypothesis) and semi-social science research (questions) due to its multi-disciplinary, multi-faceted and multi-dimensional nature, adopts the case study methodology. This study is aimed at evaluating the need for Spatial Planning in addressing the urban planning problems identified in Jos Metropolis, Nigeria (Jankowicz, 2000; Yin, 2003; 2009; Eriksson & Kovalainen, 2008; Saunders, Mark, and Thornhill, 2009; Robson, 2011). It makes use of the Planning Authorities operating the Master Planning approach. Data was collected from experts working within the Planning Authorities and their opinions and views as to the reasons why they think the Master Planning approach has failed.

In this study, Planning Authorities are captured in real-life situations, based on the analysis of multiple empirical sources which are rich in context (Morris and Wood, 1991; Tellis, 1997; Jankowicz, 2000; Yin, 2003; 2009; Robson, 2002; 2011; Eriksson & Kovalainen, 2008; Saunders, Mark, and Thornhill, 2009). Eriksson & Kovalainen,

(2008) explain that this method helps to collect data that are both qualitative and quantitative, but is typical of the qualitative type of data collection method.

Hence, in this study, extensive case studies would be adopted to generate an elaborate explanation of the general theoretical construct. This will be accomplished by considering the numerous planning authorities as different cases using Jos Metropolis as the context. This study will consider the numerous studies by researchers such as Mabogunji, (2002); Oyesiku, (2004) and Jiriko, (2007), which have taken place in many Nigerian cities such as Abuja, Enugu, Onitsha and Lagos, as well as many university campuses as ordered by the Nigerian University Commission. These studies have shown that the master planning approach has failed and effective physical planning is impossible for Planning Authorities to achieve as they are unable to address dynamic problems.

Jos Metropolis, Nigeria has a plethora of Planning Authorities ranging from federal, state and local government which are to be found in every state of the federation. The data collected from the planning authorities (JMDB, MUD, MLSTP, and LGA'S), would be used to provide information to analyse their institutional framework by identifying their constraints, examining their effectiveness and efficiency and assessing how to spatial planning can be applied. The data from this case study can be analysed in depth and the questions asked could, potentially, meet the stated aim of the study as it relates to the numerous Planning Authorities who interact with each other and facilitate modifications such as those seen in Jos Metropolis (Hakim, 1987; Brantlinger, 1997; Marshall and Rossman, 1999; Jankowicz, 2000; Bell, 2005; Ericksson and Kovalainen, 2008, Yin, 2009; Saunders Mark, and Thornhill, 2009).

Following collection of data from planners at all levels, plus information relating to Planning Authorities and the urban planning system, its effectiveness and an assessment of the application of the spatial planning system is required to pave the way for the development of a framework and a guide to improve the effectiveness of the urban development and management by the planning system in the study area (Robson, 2011).

#### **4.5.2. Mixed method designs**

Plowright (2011) observed that mixed method research encourages one to think through decision points and select a design that reflects interaction, priority, timing and mixing.

There are a number of design options that are most commonly used in practice and which advance functional classification (Robson, 2011). Mixed methods help in the design of studies. It is of the utmost importance to carefully select a design that best matches research based on the problem identified. The reasons established for using mixed methods are that they make the study manageable, simple to implement and describe. A mixed method approach is one in which the researcher collects, analyses, and integrates both quantitative (quan) and qualitative (qual) data in a single study or in multiple studies in a sustained programme of inquiry (Creswell, 2003; Tashakkori & Creswell, 2010). Case study methodology uses multiple sources of evidence, establishes a chain of evidence and requires key informants to review a draft research report (member checking), thus adding value and credence to the research (Yin, 2009; Gilson, 2012). The mixed method approach was judged to be appropriate for use in the nine planning authorities (Lands sections in the six local government areas, MLSTP, MHUD and JMDB) used as case studies. For the purpose of this study the embedded design is adopted.

In general terms, the rigour of case-study work is secured by detailed reporting on the methods of data collection and analysis, so that the reader can assess whether the analysis and interpretation is credible (Gilson, 2012).

The embedded design is most appropriate for this study because of its definition, design purpose, typical paradigm foundation, level of interaction, priority of strands, timing of the strands, the primary point of interface for mixing, the primary mixing strategies and common variants. A detailed explanation can be seen in Table 4-6.

**Table 4-6 Prototypical characteristics of the major mixed methods types of design (Embedded)**

<b>Prototypical characteristics</b>	<b>Embedded Design</b>
<b>Definition</b>	Either the concurrent or sequential collection of supporting data with separate data before, during or after the major data collection procedures
<b>Design Purpose</b>	-Need for a more complete understanding of an experimental trial, such as the process and outcomes (concurrent /during)
<b>Typical Paradigm foundation</b>	-worldview may reflect the primary approach e.g., post-positivist or construct or pragmatism if concurrent
<b>Level of interaction</b>	Interactive
<b>Priority of strands</b>	Either qualitative or quantitative emphasis
<b>Timing of the strands</b>	Either concurrent or sequential
<b>Primary point of interface for mixing</b>	Design level
<b>Primary mixing strategies</b>	-using secondary results to enhance planning understanding or explaining of primary strand.
<b>Common Variants</b>	-Embedded experiment -Mixed methods case study

Source: Adopted by Author from Creswell, Vicki & Plano Clark (2011) and Hesse-Biber (2012)

The method supporting data collection is sequential with separate data collection during the major data collection procedures. The design purpose was to provide a more complete understanding of the research trial, such as the processes and outcomes (design and implementation). The research view is constructivist which is the primary approach at the interactive level. The priority strands are either qualitative or quantitative. The timing strands are sequential with a primary point of interface of mixing at the design level. The primary mixing strategies use secondary results to enhance understanding of planning or to explain primary strands. Finally, the common variants are the mixed methods case studies which use theory in single case studies and

then use replication logic in multiple case studies (test ideas from one case against subsequent cases).

**Table 4-7: Reasons for adopting mixed method approach**

<b>Triangulation</b>	This is the most commonly cited reason why mixed methods are incorporated into research. The researcher is looking for a convergence of the data collected by all methods in the study to enhance the credibility of the research findings.
<b>Complimentary</b>	It enables the researcher to gain a fuller understanding of the research problem and/or to clarify a given research result. This is accomplished by utilising both quantitative and qualitative data and not just the numerical or narrative explanation alone to understand the social chronicle in its entirety.
<b>Development</b>	Mixed methods often aid in the development of the research project by creating a synergy between the ‘results from one method, help in developing another or to inform other methods’
<b>Initiation</b>	Research findings may raise questions or contradictions that will require clarification, thus initiating new or further research.
<b>Expansion</b>	Producing detailed findings helps enable future research endeavours and allows researchers to continuously employ different and mixed methods in their pursuits of new or modified research questions.

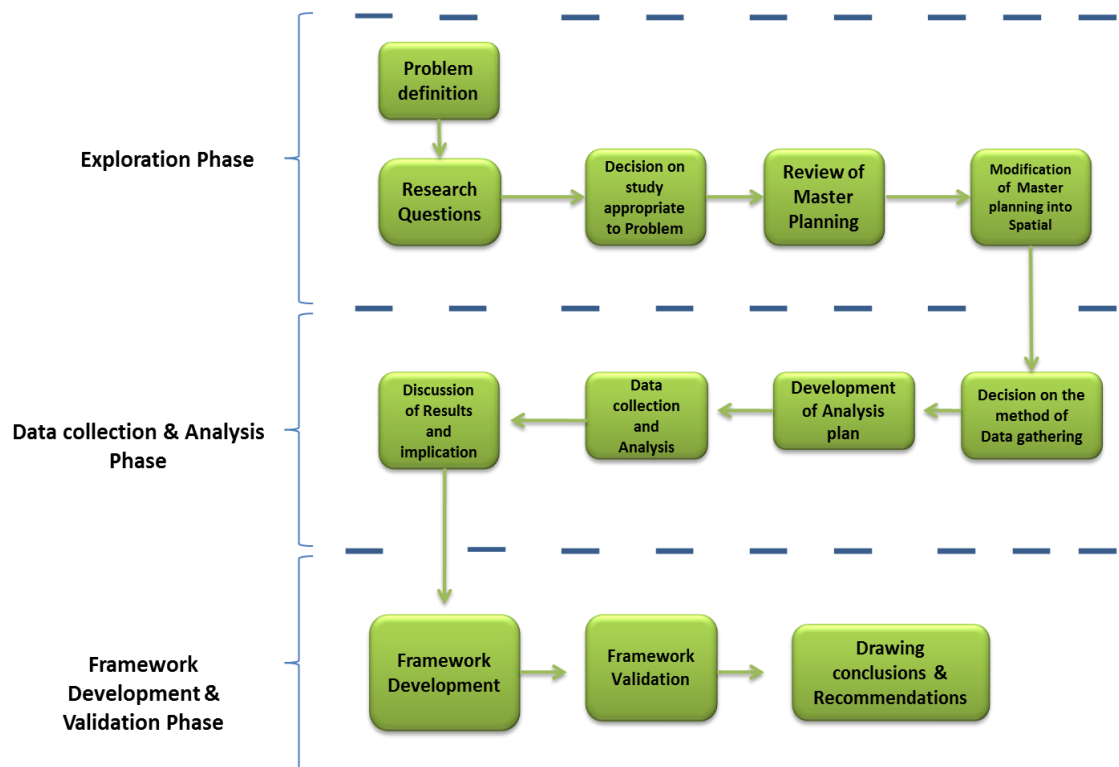
This study is an exploratory, case study employing mixed methods and will draw from all these reasons to create a synergy as to why the adoption of a mixed method research design is appropriate; it considers multiple sources of data, multiple methods of data collection, multiple data analysis, software SPSS and multiple ideas, amongst others, as observed by Creswell, Vicki & Plano Clark (2011), Jogulu and Pansiri (2011) and Hesse-Biber (2012).

### 4.5.3. Research design

A research design is a logical plan of how a study is expected to start and finish. This research is divided into three stages which are: Exploration stage, data collection and analysis stage and framework, guide development and validation stage.

The first stage is to explore and evaluate the need for spatial planning and to develop a framework for addressing the physical planning problems in Jos Metropolis, Nigeria. In Chapter 2 and 3 an extensive review of literature pertaining to urbanisation, urban sprawl, spatial planning and master planning was considered (international and Nigerian) which helped to identify the research problems and to set the research objectives in perspective and this formed the first stage (Creswell & Plano Clark, 2011). The second stage considered the most appropriate research methodology for the study. It also identified the appropriate research methods needed to answer the research objectives and the techniques to be used for the analysis of the data collected (Denscombe, 2007, 228; Robson, 2011; Creswell & Plano Clark, 2011).

The third stage considers the development of the framework and its validation as well as the guidance document. It also reports on how the analytical results meet the stated research objectives of the study.





## Figure 4-2: Research Design

Source: Authors Field work, 2012

This research design shows a clear relationship between the objectives, questions, literature, methodology and methods adopted to meet the aim of the research. Due to the nature of the data required for the study, and considering the exploratory phase and the framework phase of the research, mixed method design becomes very necessary and relevant to the study as shown in Figure 4-2.

**Table 4-8: Relationship between objectives research questions, methodology & data collection methods and linkage to chapters.**

OBJECTIVES	Research Questions & Hypothesis	Methodology & Data collection Methods					
		1	2	3	4	5	6
To analyse the nature of urbanisation and associated problems in Nigerian cities.	What are the key indicators in social, economic, cultural and demographic characteristics of Jos metropolis?	X	X			X	
To critically analyse the current institutional framework by identify the constraints in the urban and regional planning system in Nigeria.	What is the current operational institutional framework despite constraints experienced in the urban and regional planning in Nigeria within which the Jos Metropolis exists?	X	X	X	X	X	5 & 6
To examine the effectiveness of the urban planning system in Jos Metropolis, Nigeria, especially in terms of urban development and management.	How effective is the urban planning system in addressing urban sprawl in Jos Metropolis?	X		X	X	X	7
To assess the applicability of spatial planning as a strategic planning tool in Jos Metropolis.	How can spatial planning be applied as a strategic planning tool to the Jos Metropolis?	X	X	X	X	X	8
	<b>Hypothesis</b>  If spatial planning is applied as an urban management strategic tool, then the urban sprawl conditions in Jos Metropolis can be controlled.	X	X	X		X	7

Source: Author's work, 2013

\*Key: 1. Literature review. 2. Secondary data. 3. Case study. 4. Face to face interviews. 5. Questionnaire. 6. Chapters.

Table 4-8 shows the relationship between research objectives, questions/hypothesis, methodology and data collection methods and linkage to chapters.

Based on the literature review, some attributes from the concepts and the objectives generated from the data collected during the empirical studies, analysis was conducted and the spatial planning framework was developed and validated (section 8.4.6, 8.4.7). From the results of validation the guidance document was developed (section 8.6).

Ozmen, (2012) observed that some attributes make models selective in terms of audience, in this study the issues are focussed on the framework. Hence, the framework is based on model application; selective models cannot produce an output. This research is geared towards theory formulation and theory confirmation as observed at the logical reasoning stage (see section 4.4.6).

The framework developed can rely on both inclusive (field data-Jos Metropolis) and exclusive models from literature (Wilson, Alan, McLoughlin, Ratcliffte, Stubbs & Shepherd).

Each of the variables considered both the appropriate master plan and the spatial plan and the patterns of urban sprawl identified. Due to the correlation for each planning approach (see appendix C), it shows that there is a stronger correlation with the spatial plan than with the master plan.

The hypothesis for this research states that:

*'If spatial planning is applied as an urban management strategic tool, then the urban sprawl conditions in Jos Metropolis can be controlled'* (Section 1.3)

The rationale for the usage of this hypothesis in this study is that it tests and builds on theories, linking the research hypothesis with the research questions and the objectives. Furthermore, previous studies by Champika (2006), Gang, (2008) and Ozmen (2012) stated the hypothesis in addition to the research aims and questions in various areas relating to the built environment. It is against this backdrop that this research places emphasis on the philosophical stance to make a case.

The ontological perspective on the continuum is that it leans towards constructivism which explains multiple realities, (from general to specific) and is linked directly to the research questions (inductive reasoning). The epistemological perspective on the continuum leans towards interpretivism emphasising explanation (from specific to general) and also linking to the objectives and questions (deductive reasoning). While the axiological perspective leans more towards value laden principles.

The remaining part of the continuum, from ontology, epistemology and axiology, are objectivist, positivist and value free respectively and covers the section of the hypothesis which forms the basis for the development of framework. The development of the framework is more objectivist, positivist and value free.

These stances hinge on the fact that the framework is considered to be the magic bullet that makes the difference and which is presumed to be the only way of addressing the problem of urban development and management in the study area. The spatial planning framework is aimed at implementing the spatial plan to control the urban development and management in Jos Metropolis, Nigeria.

The methods adopted explain the sources of data (primary and secondary), the nature of the data (qualitative and quantitative), the sampling technique (probability and non-probability) the instruments of data collection, such as, face to face (semi-structured interviews) and questionnaires and documents (archival documents). Furthermore, the tools employed for data collection include; questionnaire, face to face interview and document review (Hakim, 1987; Brantlinger, 1997; Marshall and Rossman, 1999; Ericksson and Kovalainen, 2008; Dawson, 2009).

#### **4.6. RESEARCH METHODS**

This section considers methods (techniques, ways, specific tools) that data can be collected and analysed. It considers sampling methods, data collection methods and data analysis methods and ethical considerations (informed consent, right of privacy, validation; construct, internal and reliability).

#### **4.6.1. Sampling technique**

Information about town planners in the Jos Metropolis, Nigeria was obtained during the first phase of data collection. The population size was drawn from the nine planning authorities in Jos Metropolis, Nigeria and was considered in order to present an overview of the urban and regional planning system in Jos Metropolis, Nigeria. Sampling strategies are divided into two main groups; probability and non-probability sampling. Probability is the most appropriate for quantitative research whilst non-probability sampling is most appropriate for qualitative research (Walliman, 2011pg. 85).

Non-probability sampling was used on qualitative data whilst the probabilistic sampling technique can be used on the quantitative data in this study. The sampling strategy was employed because the researcher, initially, had little or no control over the choice of who was presented for selection, it can also be used where the controlled selection of participants is not a critical factor; not forgetting that the method is most appropriate for qualitative research (Collis & Hussey, 2003; Neville, 2005; Denscombe, 2007; Yin, 2009; Dawson, 2011; Walliman, 2011).

For this study snowball sampling was used to select the participants for the face to face interviews. The sample showed that only ten (10) professional, registered town planners were identified in Jos Metropolis. Their profile, as registered town planners, and their position as a top management official in a planning authority was the bases for their initial selection. The research started with 10 professionals who in turn nominated two (2) members of the town planning profession who work in planning authorities and execute planning schedules.

The nominated interviewees were then contacted to take part in a face to face interview. Thus, the sample snowballs into a small sized sample (Denscombe, 2007; Yin, 2009; Dawson, 2011). Snowball sampling is an effective technique for building up a reasonable-sized sample, as used in this study, and is compatible with non-probability sampling as observed by Denscombe, (2007); Wang & Hofe, (2007); Yin, (2009); Dawson, (2011) and related to that of the Planning Authorities. Due to the peculiar nature and issues linked to the research and the sampling of the participants for face to face interviews the snowball sampling technique has become very useful for developing

the numbers involved in a study. A total of thirty interviews were conducted, ten (10) with registered town planners and twenty (20) with members of the town planning profession.

Purposive sampling was employed to select the documents that were available and relevant to the study. Hence, documents such as; the Nigerian Urban and Regional Planning Law Decree No. 88, 1992 approved by the Town Planners Registration Council established by Decree No.3, 1988, The establishment of planning agencies in the 1999 Nigerian Constitution, Greater Jos master plan (1975- 2005) previous and (2008–2025) proposed, Development Control Standards of Jos Metropolitan Development Board (JMDB), Roles and Responsibilities of Ministries (MLSTP, MHUD) and that of the Local Government Areas (Jos North, Jos South, Jos East, Bassa, Riyom, Barakin Ladi), the 2009 National Population Commission, Population and Housing Survey Report and the 1978 Land Use Act, amongst others, were purposively selected (Grix, 2001; Neville, 2005; Denscombe, 2007; Dawson, 2011).

Multiple sampling methods were adopted to enhance the multiple methods of data collection bringing validity and reliability to the study shows the multiple sampling techniques employed for the multiple methods adopted in this study. See Table 4-9.

**Table 4-9: Multiple sampling techniques employed for the multiple research methods**

<b>Sampling Method Adopted</b>	<b>Snowball Sampling</b>	<b>Purposive Sampling</b>	<b>Convenience Sampling</b>
<b>Research Method Adopted</b>	Face to face interview (10+20=30) interviews	Document review; government publications and official statistics, journal papers, newspapers and magazines, letters or memos, web pages etc	Nine (9) Planning authorities

Source: Author's Field work, 2012

#### **4.6.2. Data collection Methods**

The research methods refers only to the various, specific tools or ways that data can be collected and analysed, for instance, a questionnaire and interview (face to face) and

documents, data from the questionnaire would be analysed using SPSS software and data from the face-to-face interview would be analysed using NVivo while the data from the documents would be summarised and introduced into the discussion to meet the stated objectives of the study (Collis & Hussey, 2003, p.55; Bazeley, 2007; Nesvile, 2005; Dawson 2011).

The mixed method approach, which could also be referred to as “multi-methodology” employs both quantitative and qualitative research methods in one study, as observed by Creswell & Plano (2009; 2011) and Akinwumi (2010). Multi-methodology is employed in this study. It involves the collection and analysis of both forms of data in a single study. This method is appropriate to this research because the nature and sources of data for the research are from both primary and secondary sources. It is possible to collect both quantitative and qualitative data, to provide a better, in-depth understanding of the problem under scrutiny (Creswell, 2003; Dawson, 2011).

The procedure for collection of data in this method is a combination of the strategies employed in both the quantitative and qualitative research approaches. Furthermore, this has become very relevant due to the multi-disciplinary, multi-faceted and multi-dimensional nature of the research. Based on this notion, triangulation is necessary to discover the convergence of factors emerging from the different quantitative and qualitative data sources and expanded analysis as well as the procedures for mixed method research (Creswell, 2003; Akinwumi, 2010; Dawson, 2011).

As advocates of mixed method research, (Sandelowski 2000; Creswell, 2003) argued that the intricate nature of human phenomenon mandates require more complex research designs to capture complex, robust data (Collins et al, 2006; Onwuegbuzie and Leech, 2006). Furthermore, Creswell, (2003); Onwuegbuzie and Sutton, (2006); and Onwuegbuzie and Leech, (2006) identified the five principles of mixed-methods studies namely; triangulation - seeking convergence and corroboration of findings from different methods that study the same phenomenon; complementary– seeking elaboration, illustration, enhancement and clarification of the results from different methods of data collection; expansion – seeking to expand the breadth and range of the investigation by using different methods for different inquiry components. The first part

of the research methodology consisted of an extensive review of the relevant literature. The research objectives were:

- ✚ To analyse the nature of urbanisation and associated problems in Nigerian cities.
- ✚ To critically analyse the current institutional framework for urban and regional planning in Nigeria.

The next section discusses the instruments used for data collection to obtain both qualitative and quantitative data for analysis, with the aim of meeting the remaining objectives of the research.

#### **4.6.2.1. Interviews (Face to Face)**

There are different types of interview used for the collection of data which include: Semi-structured (Face to face), structured and unstructured interviews with key stakeholders in plan design and implementation, independent planning consultants and experts in addition to elders in the study area. For the purpose of this study the face to face interview (semi-structured) was adopted as a technique/method of data collection (Jankowicz, 2000; Oppenheim, 2000; Jenkins, 2000; deVaus, 2002; Marshall and Rossman, 2006; Dillman, 2007; Saunders and Mark, 2009). Consequently, thirty (30) interviews were conducted with town planners working in nine planning authorities with responsibility for physical planning and development in Jos Metropolis.

The instruments used are structured according to Table 4-8. For further clarification about the linkage of face-to-face guide in appendix C see Table 4-8. It shows the instruments that were used in the study.

**Table 4-10: Interview guide sections and questions**

<b>Sections of Interview Guide</b>	<b>Questions</b>					
Board, Ministries and Sections Profile	<b>1</b>	-	-	-	-	-
Over all institutional framework	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	-
Constraints of the Planning Procedures	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
Effectiveness of urban planning system	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	-	-
Urban governance & management Planning Authorities	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	-
Urban management & application for spatial planning	-	-	-	-	-	-

Source: Author's field work, 2012

The section on urban governance and management application of spatial planning contains two questions which are open to discussion to provided data for policy and practice followed by policy, plan and implementation. The twenty questions in this section are used to capture qualitative data from experts involved in the preparation of the master planning process, the performance of the plan, the documents used by the town planners to carry out their work, area coverage and jurisdiction, the numerous planning authorities, the national planning framework and land issues.

Qualitative data collection methods or instruments play a vital role in providing useful information for understanding the processes observed in the implementation of plans by the Planning Authorities under investigation (Oppenheim, 2000; Denscombe, 2007; Saunders and Mark, 2009; Dawson, 2011). It is employed in many different academic disciplines aimed at gathering an in-depth understanding of human behaviour and the reasons that govern such behaviour (in this case the Planning Authorities ).

It also investigates the why and how of decision making, not just what, where and when. Hence, smaller, focused samples are more often more applicable than large samples; based on this 30 planners were drawn from the nine Planning Authorities in Jos Metropolis and were engaged in face to face interviews.

#### **4.6.2.2. Review of documents (Archival)**

The review of vital documents, such as, the Nigerian Urban and Regional Planning Law Decree No. 88, 1992, particularly the sections concerning the establishment of Planning Authorities in the 1999 Nigerian Constitution and the Greater Jos Metropolis master plans (1975- 2005) previous and (2008 – 2025) proposed. Appendix C presents a list of documents that were reviewed, summarised and included in the relevant sections of the analysis to meet the stated objectives. These are secondary sources of data and include documents such as; government publications and official statistics, newspapers and magazines, records of meetings (minutes of meetings if available), letters and memos, project reports, internal reports from major planning authority ministries, boards and parastatals, and also web pages and the internet all of which provide both qualitative and quantitative data for analysis and subsequently the analysed data is justified by answering some of the research questions.



Documents are considered to be sources of data which supplement the data obtained from face to face interviews and questionnaires and other data collection methods (Denscombe, 2007; Yin, 2009). Documents take different forms viz; written sources (majority), visual sources (pictures and artefacts) and even sounds (music), etc., all of which add value to the research. A major characteristic of this method is access to documentary sources making it very attractive as vast amounts of information are conveniently available without much cost outlay, delay in collection, no prior appointment necessary, without need for authorisation and without the likelihood of ethical problems. Denscombe, (2007) observed that documents pose considerably fewer problems than people as sources of data for research. While this is true, a number of documents can be considered sensitive and confidentiality is required. For instance, organisational reports and memos are only made available when confidentiality of the materials used is assured and the interests of the persons and organisations (planning authorities) involved would not be harmed.

The validity of the documentary sources is crucial for enhancing the study, hence, the selection of the documents used was carefully considered under; authenticity, credibility, representativeness and meaning. Therefore, the evaluation of official documents, records of meetings and statistics have to be considered with great caution (Denscombe, 2007; Yin, 2009; Dawson, 2011).

#### **4.6.2.3. Questionnaire and its development**

The development of the questionnaire consists of the following stages; scaling methods, design and content of the questionnaire, questionnaire design and layout, pilot and administration.

##### ***Scaling methods***

Measurement is defined as a way of assigning numeric values to the attributes of products, ideas or institutions (Oppenheim, 2000). The scale of measurement can be divided into four types: nominal, ordinal, interval and ratio. For the purpose of this research ordinal scales of measurement were employed in the questionnaire to provide answers to some of the research questions and to address the hypothesis.

Ordinal refers to a set of categories that are organised in an ordered sequence, i.e., the ranking of a degree of satisfaction. Data analysis would be done largely using this method. The questionnaire has been structured by ranking the opinion of the respondents. This was used to test for relationships that exist within and between the variables depending on the association that is to be determined. Two statistical techniques were used Spearman Ranks Correlations, Coefficients and Analysis of Variance (N-way anova), as observed by Rowntree (1991) and Pallant (2010).

These types of questions have been used in prior researches and in this study the researcher has adopted five ordinal scales, for the respondents taking part in the interviews, to ask the questions. Using a scale of one to five (1-5) the respondents were asked to rate the level of the impact, adequacy, awareness, appropriateness and agreement, as they relate to their planning authorities; and accuracy, usefulness, and timeliness, to rate the appropriateness of the questions.

The five point Likert scale was adopted over other Likert scales because the five point Likert scale has a mid-point option. Questionnaire designers are advised to keep the number of options as low as possible. It allows the respondents to make a useful choice from among the options listed (Tourangeau *et al*, 2000; Oppenheim, 2000). It has also been suggested that questions, about which nearly everyone has enough information to form some opinion, should be stated without any opinion option (Synodinos, 2003).

This is due to the fact that some respondents will often say they do not know or that they have no opinion. Because such responses do not provide useful information and, essentially reduce the sample size, typical survey practice is to avoid using these options. The respondents are therefore forced to make a choice from among the listed, informative answers. There are, however, researchers who argue for the need to have a 4 point Likert scale to keep the number of options as low as possible. A reduced scale such as this could result in restricting respondents from choosing a response which reflects their lack of opinion or knowledge of the issues being addressed. The five 5 point Likert scale was adopted, by the researcher in this study, as it was thought to be the most appropriate option because ‘it accommodated all respondents and allowed the respondents to choose an answer’. The 5 point scale was adopted to encourage the respondents, and hence, increase the response rate and reduce the tendency of bias being

introduced into the data (Brace, 2004, p.84). However, the Likert scale is not limited to just five points; many studies have used four, seven and even nine point scales e.g., Bayard, (1990). Because of the nature of the data required for the research and the researcher's belief that 5 choices was the most appropriate scale, the Likert 5 point scale was considered to be the most suitable option for the study.

### ***Pilot Study***

The pilot study was conducted to obtain feedback regarding the adequacy of the questionnaire, to ascertain the minimum duration required to answer the questions, and to obtain an opinion from respondents about the information that can be derived from the questions and the syntax and the grammar.

This feedback enabled the researcher to improve the questionnaire, and therefore, the response rate. Between 10<sup>th</sup> and the 15<sup>th</sup> of January 2013 twenty (20) questionnaires were distributed and 15 questionnaires were returned, representing a 60% success rate.

Some of the feedback related to the time taken to complete the questionnaire (about 60-80mins), which was too long and this was adjusted to 45-60mins. The respondents reported that there were some technical issues, such as, not enough space for comments, no page numbering, irregular font size all through the questionnaire and the need to darken/ bold the separating lines. Also, some questions were too lengthy, unclear and the questions were unfamiliar, whilst some of the issues for consideration should be chronologically arranged, for instance, 1979 LUA, should come before URP law 1992.

### ***Questionnaire Design & Layout***

The questionnaire was designed for the researcher to elicit information from the responses, and therefore, potential respondents were encouraged to complete the questionnaire appropriately, thus allowing efficient analysis of the data. For this purpose, the questionnaire mainly employed closed ended questions with fixed alternatives (Dawson, 2011). The advantage of this type of question is that it requires lower interview skills, takes less time to complete and is easier for the respondents and makes group comparison easier (Oppenheim, 2000).

The respondents were asked to put an 'X' or a tick (✓) in the appropriate place in response to a number of pre-determined choices, based on belief, belief behaviour and attributes (Saunders et al, 2000).

The survey tool is designed to collect data from participants who have adequate experience in the urban and regional planning sector. Previous studies have shown that people are more likely to respond to a questionnaire that covers issues that are relevant to them. The layout of the questionnaire consists of five main sections which were divided into fifteen (15) major questions without neglecting the value of timeliness, accuracy and usefulness.

### ***Section 1: General Information***

Questions 1-3 requested general information from the respondents. This included; a description of their planning authority, their current role and the number of years of experience with the organisation.

### ***Section 2: Overall institutional Planning Frameworks***

Questions 4 and 5 were concerned with the extent of the respondent's awareness of the existence of the following criteria or constructs; Institutional Framework for Urban and Regional Development in Jos Metropolis and the extent to which the characteristics of the institutional framework are effectively operational/implemented in the urban regional planning system.

### ***Section 3: Constraints in the urban planning system and procedures***

Question 6 sought to extract the factors that have constrained knowledge, institutional, cultural, political, legal, analytical, financial and physical practices in the urban planning system and processes.

### ***Section 4: Effectiveness of the urban planning system in terms of Development control***

Questions 7 to 10 generated information /data about the factors that determined the effectiveness of the urban planning system in development control, the adequacy of master planning for development control, and the possible outcome from the 1975 and 2008 urban master plan implementation.

### ***Section 5: Application of spatial planning as a strategic tool***

Questions 11 – 15 obtained data about the appropriateness of employing master and spatial planning as strategic tools in planning authorities. The influence of the individual or strategic planning process, measures for spatial planning as a strategic tool and the

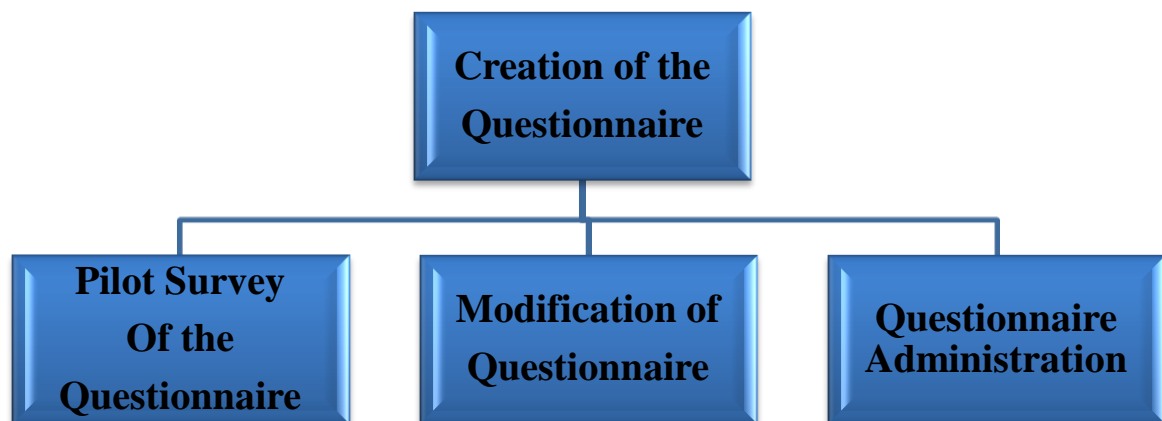
number of urban management agencies using spatial planning to control urban sprawl patterns in Jos Metropolis.

Respondents were also asked to express their views on the level of influence, effectiveness, constraints, appropriateness, impact etc in the various sections of the questionnaire.

#### ***Administration of the main study questionnaire***

The questionnaire was carefully designed to reflect the aim, objectives and hypothesis of the study and to foster a high response rate. It uses simple, clear language and was produced using good quality paper and printing. Denscombe (2007) state that questionnaires are more likely to obtain the best results if they contain straightforward, easily answer questions.

In doing this, the researcher ensured that the final questions were direct, specific and clear whilst avoiding ambivalent questions, leading or emotive questions which are too complex or ambiguous.

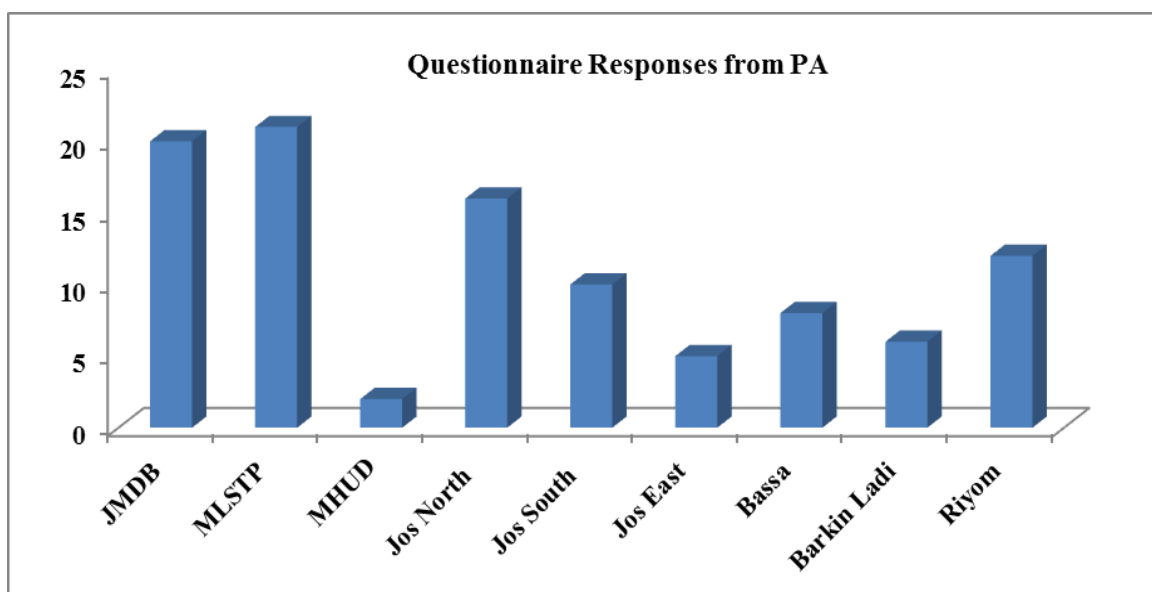


**Figure 4-3: Show the steps taken by the Researcher to develop and administer the final questionnaire within the sampled Planning Authorities**

Source: Authors Field Work, 2013

A period of 4 weeks was allotted to participants to complete the questionnaire. Each questionnaire sent was accompanied by a covering letter, an introductory page which contained the objectives of the study, research definitions and benefits of the study and

a guarantee to maintain the confidentiality of the individual and their position in the planning authority. A sampling technique was not adopted. Hence, the entire group of respondents was used to administer the questionnaire. The questionnaire was sent to 173 respondents (Town planners) from nine planning authorities. After 4 weeks 100 completed responses were received representing 58% success rate. The procedure followed was adopted from Denscombe, (2007) who noted that each follow up effort brings added returns. At the four week cut off point 100 questionnaires had been returned and was considered to be very appropriate for the study, further details can be found in Figure 4-4.



**Figure 4-4: Responses from questionnaire**

Source: Author's Field Work, 2013

The response rate for this research is based on that suggested by Bryman, (2004) where the number of usable questionnaires is only considered as the numerator.

Response rate =  $\frac{\text{No. of questionnaires}}{\text{Total sample-Unusable samples}}$

$= \frac{100}{173} \times 100 = 57.80346821\%$

Therefore response rate = 58%

The above calculation revealed a response rate of 58% which is within the range of response rates in similar researches. The response rate was deemed adequate considering the very comprehensive nature of the questionnaire. The completed

questionnaires yielded sufficient data sets for the research aim, objectives and hypothesis to be successfully achieved. A sample of the questionnaire can be found in appendix C.

Data collection is an important aspect of any research study. Inaccurate data collection can impact the results of a study and ultimately lead to invalid findings. This explains why it is imperative that careful consideration of the type of research methods, as well as the construction of the instruments of data collection is required. The methods or tools used for data collection determine and improve the quality of qualitative research; as observed by Collis & Hussey, (2003); Denscombe, (2007); and Dawson, (2011). The methods or tools used for the collection of qualitative data in this study were; interviews (face to face interviews with interview guidelines), observation and document reviews. While multiple methods and tools were used for qualitative data collection, quantitative data was collected using the questionnaire.




#### **4.6.3. Data analysis**

##### **4.6.3.1. Introduction**

This section seeks to present a step-by-step description of the processes and procedures employed to analyse the data obtained from documents, face-to-face interviews, observation and questionnaires. It is structured into sections headed: Developing the analysis for qualitative data, coding and categorisation of information, analysis of face-to-face interviews, observations, document reviews (90) and questionnaire responses (100). Furthermore, statistical techniques such as Cronbach Alpha, Mean Value, Analysis of Variance (F-ratio) and Spearman Rank Correlation Coefficient (rho) were also considered for analysis of the data.

##### **4.6.3.2. Developing the Analysis for Qualitative data**

Four steps were adopted to develop the analysis of the qualitative data, it was developmental and sequential. These four aspects are:

-  Focus on data which are of high quality and are easily analysed.
-  Focus on one process at a time.
-  Narrow down to one part at a time of the process.

- ✚ Compare the different sub-samples of the data set.

Focusing on the rich aspect of data which is of high quality can help to develop ideas in the provisional analysis that can then be compared with other research sites and groups. The choice of a rich data source allows for relatively robust initial findings. Later steps will include interpretation of data on a 'not to be taken-for-granted basis' as observed by Silverman, (2001); Taylor-Powell and Renner, (2003) and Gibbs and Taylor, (2005).

Bruce Berg, (1998: pg. 226) observed that the act of 'deciphering' text is essential in all qualitative data analysis. The term refers to the fact that words do not always mean the same thing, while at the same time different words can be used to mean the same thing in other situations. One prime criticism of qualitative research is the use of choice quotes to promote particular conclusions. Such evidencing acts make analysis more accountable and also more reflective.

#### **4.6.3.3. Coding and the Categorisation of Information**

As a major process in the analysis of qualitative data, categorisation of information, otherwise known as coding of data or indexing of data, is the crux of qualitative analysis which is necessary for exclusive labelling of variables with codes or values.

To bring meaning to the text from the document review, case studies, observation and face- to-face interviews, the following was considered;

- Identifying themes or patterns (ideas, concepts, behaviour, interactions, incidents, terminology or phrases) and
- Organising them into coherent categories that summarise and bring meaning to the text) (Huberman, 1998; Taylor-Powell and Renner, 2003; Gibbs and Taylor, 2005; Denscombe, 2007)

Taylor-Powell and Renner (2003) and Gibbs and Taylor (2005) and Saldana (2009) defined coding as the process of combing the data for themes, ideas and categories and then marking similar passages of text with a code label so that they can easily be retrieved at a later stage for further comparison and analysis.

#### **4.6.3.4. Analysis of the Interviews (Face-to-Face)**

The present study employed interviews (face to face) which were semi-structured to obtain qualitative data. The data obtained was analysed using thematic and content



analysis (Onwuegbuzie and Teddlie, 2003; Denscombe, 2007; David and Sutton, 2009). Dawson, (2011); Yin, (2009); Dawson, (2011) and Robson, (2011); observed that to be able to analyse data, it must be produced in a format that can be easily analysed. The face-to-face interviews, documents, a series of written answers on the interview guidelines, field notes and written memos compiled by the researcher were transcribed.

The qualitative data obtained from the case studies and face-to-face interviews contained the views and opinions of respondents and are concerned with words that were coded and analysed using qualitative content data analysis. This was followed by the interpretation of meanings and explanations as to the way people perceived, behaved and understood the social constructs.

For the purpose of this study thematic analysis was used to analyse the data generated in the face-to-face interviews. See Figure 4-5 coded into nodes: themes and sub-themes.

Look for:		Search In		Nodes		Find Now	
Nodes							
Name	Sources	Referen	Created On	Created	Modified On	Modified	
CONSTRAINTS OF PLANNI	0	0	07/08/2013	S.D	07/08/2013	S.D	
Analytical	30	56	07/08/2013	S.D	28/08/2013	S.D	
Cultural	30	56	07/08/2013	S.D	28/08/2013	S.D	
Financial	30	56	07/08/2013	S.D	28/08/2013	S.D	
Institutional	30	56	07/08/2013	S.D	28/08/2013	S.D	
Knowledge	30	56	07/08/2013	S.D	28/08/2013	S.D	
Legal	30	56	07/08/2013	S.D	28/08/2013	S.D	
Physical	30	54	07/08/2013	S.D	28/08/2013	S.D	
Political	30	56	07/08/2013	S.D	28/08/2013	S.D	
EFFECTIVENESS OF URB	0	0	07/08/2013	S.D	07/08/2013	S.D	
Institutions	30	60	07/08/2013	S.D	28/08/2013	S.D	
Legal	30	60	07/08/2013	S.D	28/08/2013	S.D	
Operation	30	60	07/08/2013	S.D	28/08/2013	S.D	
Technical	30	61	07/08/2013	S.D	28/08/2013	S.D	
OVER ALL INSTITUTIONAL	1	1	07/08/2013	S.D	07/08/2013	S.D	
Administrative structure	29	55	07/08/2013	S.D	28/08/2013	S.D	
Institutions	29	54	07/08/2013	S.D	28/08/2013	S.D	
Organisations	29	56	07/08/2013	S.D	28/08/2013	S.D	
Planning Legislations	29	56	07/08/2013	S.D	28/08/2013	S.D	
URBAN GOVERNANCE AN	1	1	07/08/2013	S.D	07/08/2013	S.D	
Implementation of Plans	30	56	07/08/2013	S.D	28/08/2013	S.D	
Planners	30	56	07/08/2013	S.D	28/08/2013	S.D	
Planning Authorities	30	56	07/08/2013	S.D	28/08/2013	S.D	
Processes & Procedures	30	56	07/08/2013	S.D	28/08/2013	S.D	

**Figure 4-5: Coding of face-to-face interview transcript**

The recording of the interviews was done verbatim, using an audio-tape, which was an arduous and time consuming process but provides rich text. The transcription was done in the same sequence as the questions were asked during the interview, and careful selection of the important aspects of the interview was captured. See appendix E for further breakdown and used in chapters 5 & 6. Full recording and written notes were

considered to be the best approach to ensure conservation of every important fact revealed by the interviewees (David and Sutton, 2004. pg 191; Silverman, 2007; Bryman, 2008).

The process of transcribing involves a degree of analysis that is often underestimated or even ignored; yet it was very useful as the responses give more insight and due to this many of the research questions were answered. David & Sutton, (2004, Pg. 192) and Silverman, (2007) observed that it is better than passing the transcription process to an audio typist to save time. In this research, the researcher to gained more insight into the data because listening to the recordings involved an element of analysis and provided excellent understanding of the issue and offered more ideas and inferences as the process of transcription progressed.

A bank of records was created from the data which was drawn from each interview as a means of identifying what data has been obtained. In the case of conversational analytic research (face-to-face interview), the process of transcription takes on an added significance as it is the attention to detail (sequence of interaction, pauses and overlaps) that provide conversation analysis with the material that is being sought for analysis. Specific attention will be placed to doing thematic analysis for the face-to-face interviews. For further breakdown see appendix E.

#### **4.6.3.5. The analysis of the document reviews and case study**

The use of document reviews and case studies as sources of data for this research is very important because it is an exploratory research. The use of text as a source may be of two types;

- Primary text – text not produced for the purpose of research that is, newspapers, diaries, memos and letters etc.
- Secondary sources – text generated by previous researchers

In both cases, the selection represents a set of prior analytical choices and the text once selected is subjected to further analysis (David and Sutton, 2004.pg 192; Denscombe, 2007; Yin, 2009; Boeije, 2010; Dawson, 2011).

The use of text as a qualitative data source highlights a number of issues about QDA. The conversion of a variety of experiences (speech, observations, memories and so on) into text is a huge step in the process of qualitative research. It is not usually the first step, as encountering this source is preceded by recording them, and recording such

experiences may not be in text form. The documents were summarised and incorporated into the text in units of communicative meaning that is, words and sequences of words. Both content and thematic analysis was used to analyse the data which is often a prerequisite for subsequent forms of qualitative analysis (David and Sutton, 2004, pg 192; Denscombe, 2007; Yin, 2009; Boeije, 2010; Dawson, 2011).

Summaries of over 70 different documents were made according to the objectives of the research. The reviews were coded into themes and sub-themes to create categories for the reviews gathered from documentation derived from the nine sub-case studies which were then coded and analysed using content analysis.

The transcriptions from the written memos and notes were done immediately the data was captured, and this has helped to focus the work and keep records of vital points which could emerge from the data. The memos and transcripts were analysed alongside the data obtained from other sources. The purpose of the study is to provide input into the need for spatial planning in Jos Metropolis following the failure of the Greater Jos master plans both past and proposed. The new findings will be incorporated into the spatial planning framework, by influencing the factors that determine the positive implementation of a plan.

The 9 Planning Authorities identified and selected were made up of one planning board, two ministries and six local government areas. The summary of information relating to the nine case studies was developed from the numerous documents (over 70 different documents), observation, views and opinion of officials with the responsibility for planning. Nine officials from the planning authorities were consulted to provide information about their planning organisation.

This was analysed according to the objectives of the research and themes and sub-themes were created. These documents made a significant difference as they created patterns and linkages that answered the questions posed by the research (David and Sutton, 2004; Pg. 192; Silverman, 2007; Boeije, 2010).

The analysis was not conducted on the nine planning authorities because the nested approach employed considers the town planners to be a unit of study, the town planners are nested in the planning authorities and the planning authorities are nested in Jos Metropolis, Nigeria. The qualitative data from document reviews and observation were analysed using content analysis in terms of the four methods of data collection used.

Firstly, the questionnaire form was used to capture the case study data and entered into the excel spreadsheet created. The content of the questionnaire was analysed according to the data extracted to provide the information required to meet the needs of objective 3, 4 and 5. Content analysis was conducted on the case studies (Planning Authorities) based on the data obtained. It, typically, included several sources that generated text and narrative data such as; brief responses from questions, surveys, transcripts from interviews or focus groups, notes from logs or diaries, newspapers, field notes, text or published reports, and data from people, etc., (Denscombe, 2007; Yin, 2009; Boeije, 2010; Walliman, 2011).

However, there is cross-pollination between the socio-economic traditions and organisational procedures in institutional analysis due to the multi-disciplinary, multifaceted and multidimensional nature of the problem of planning in urban areas. Subsequently, the focus is to explain how planning authorities (organisations) and planners (individuals) within organisations make economic and managerial decisions, particularly by investigating the non-rational, non-economic and non-psychological factors. The main thrust of this form of analysis is the identification of hidden forms of power that initiate behaviours that influence planning procedures (Chomsky, 2006; Christian, 2006; Boeije, 2010).

#### **4.6.3.6. Developing the Analysis for Quantitative data**

One hundred questionnaires were returned. Prior to the return of the questionnaires a template was prepared aligned to the sections in the questionnaire. It contained two hundred and sixty eight variables (268) arising from 15 questions. The data was entered into the excel spread sheet and thereafter underwent a cleaning process to ensure consistency in the entry of the ranked data.

The variables were used for the analysis based on the requirement for each of the variables for each analysis. The data was then exported into the statistical package (SPSS version 20) for analysis.

#### **4.6.3.7. Analysis of the Questionnaire**

The data from the questionnaire survey responses was analysed using (SPSS Version 20). This makes it easier to handle large data sets. One major task in this process was the identification of the data type for the adoption of correct method of data analyses.

For the purposes of this research the (ANOVA (F-ratio) & Spearman Ranks Coefficient Correlation (rho)) were employed as statistical test to analyse the data (ordinal scales) from the questionnaires to provide answers to some of the research questions and the hypothesis.

#### **4.6.3.8. The commonly accepted rule for describing internal consistency using Cronbach's Alpha is as shown in Statistical Techniques and Measures used in this Study**

To evaluate the need for spatial planning in Jos Metropolis, Nigeria, face-to -face interviews, questionnaires and documents were used. Hence, the use of multiple methods is necessary. The adoption of both qualitative and quantitative research leads to the development of a comprehensive data base which would not have been possible if only one approach had been used for the research. This has allowed access to areas and issues that cannot otherwise be reached, so that a complete account can be obtained as observed by Blackie, (2003); Saunders *et al.*, (2007) and Robson (2011).

Data collected via these methods were analysed using several techniques. The data analysis techniques were chosen based on the nature of the research objectives, research questions and sample populations (Saunders et al., 2007; Robson, 2011). This study adopted the non-probability, purposive sampling technique for the qualitative data collected (Saunders et al., 2007; Robson, 2011). Furthermore, Field (2009) observed that the type of variables that are used determines the types of data analysis that is used. The data set was not distributed in a normal arrangement and, therefore, this was taken into consideration when deciding on the statistical technique to be used for the analysis of the data in this study (Field, 2009).

This study used an ordinal level of measurement which does not limit the data analysis; rather, it increases the range of statistical techniques that could be applied to the analysis. Neither does it limit the types of analysis that can be conducted on the study. The choice of statistical tests depends on the level of measurement and the type of data required for the analysis.

The questionnaire was structured in such a way as to obtain data which would relate to the Likert scale; as ordinal data (non-parametric) tests are used for ranking. The ranking shows high scores being represented by large ranks and low scores with low ranks. Two

major statistical techniques (Spearman Ranks Correlations, Coefficients (rho) and Analysis of Variance (F-ratio), were used in the study to analyse the data (Field, 2009; Walliman, 2011). See Table 4-11.

**Table 4-11: Research Hypothesis, Objectives & Quantitative data Analysis and Tools Used**

Hypothesis	Questions	Objectives of the research	Specific quantitative data analysis tools/to be used for analysing the data	Comments/ issues and challenges
<b>If spatial planning is applied as an urban management strategic tool, then the urban sprawl conditions in Jos Metropolis can be controlled.</b>	x	x	X	X
	1-3	x	X	Use for identification
	4	Objective 2	N-ways ANOVA	Repeated several times
	5	Objective 2	N-ways ANOVA	
	6	Objective 2	N-ways ANOVA	
	7	Objective 3	Spearman Ranks rho	x
	8	Objective 3	Spearman Ranks rho	x
	9	Objective 3	Spearman Ranks rho	x
	10	Objective 3	Spearman Ranks rho	x
	11	Objective 4	Spearman Ranks rho & N-ways ANOVA	x
	12	Objective 4	Spearman Ranks rho & N-ways ANOVA	x
	13	Objective 5	-	x
	14	Objective 4	Spearman Ranks rho & N-ways ANOVA	x
	15	Objective 4 & Hypothesis	Spearman Ranks rho	Repeated several times

Source: Author's Field work, 2012

Reliability and validity were tested followed by content analysis of the data sets that were used to describe opinions across the established sets of attributes within the different methods of data collection and sources, such as, case studies (planning authorities), questionnaire, interviews (face-to-face) and document reviews. This was

followed by an analysis encompassing the development of recommendations to provide information for the development of the framework and a guidance document for spatial planning in Jos metropolis.

The purpose of this research is to provide input into the governance and management of the Jos Metropolis, Nigeria (Spatial Plan), an essential component to influence growth and development in Jos Metropolis and other urban cities in Nigeria. The SPSS software was used to analyse the questionnaire and quantitative data captured (Bryman and Cramer, 2001; Blackie, 2003).

Thematic and content analysis was conducted on the data from the face-to-face interviews and documents reviewed to obtain data which would provide the information required to meet the needs of objectives 3, 4 and 5. The basic idea of content analysis, as observed by Denscombe (2007), was to create three categories as the research is both quantitative and qualitative. The analysis was employed because the data obtained were highly qualitative in nature. This is illustrated in Table 4-12.

**Table 4-12: Summary of Data sources and method of analysis employed for the study**

	<b>Data source &amp; method</b>	<b>Analysis</b>	<b>Area of analysis</b>
<b>1</b>	<b>Questionnaire</b>	Spearman Ranks Correlation Coefficient (Sp) $r^2$ and Analysis of Variance (ANOVA)	173 questionnaires sent out and 100 questionnaires returned representing 58% success rate
<b>2</b>	<b>Document review</b>	Content	Documents reviewed
<b>3</b>	<b>Face to face interview</b>	Content and thematic	According to the responses in the interview guide (8 sections )
<b>4</b>	<b>Observation</b>	Content and thematic	According to the observations captured to meet the objectives.

Source: Compiled by Author, 2012

#### 4.6.3.9. Cronbach's Alpha of the Survey Data

This is the coefficient used to test for reliability or consistency. Alpha coefficient ranges from 0-1 in value, where 0.5 is low and 0.9 is high and desirable.

**Table 4-13: Cronbach's Alpha Consistency**

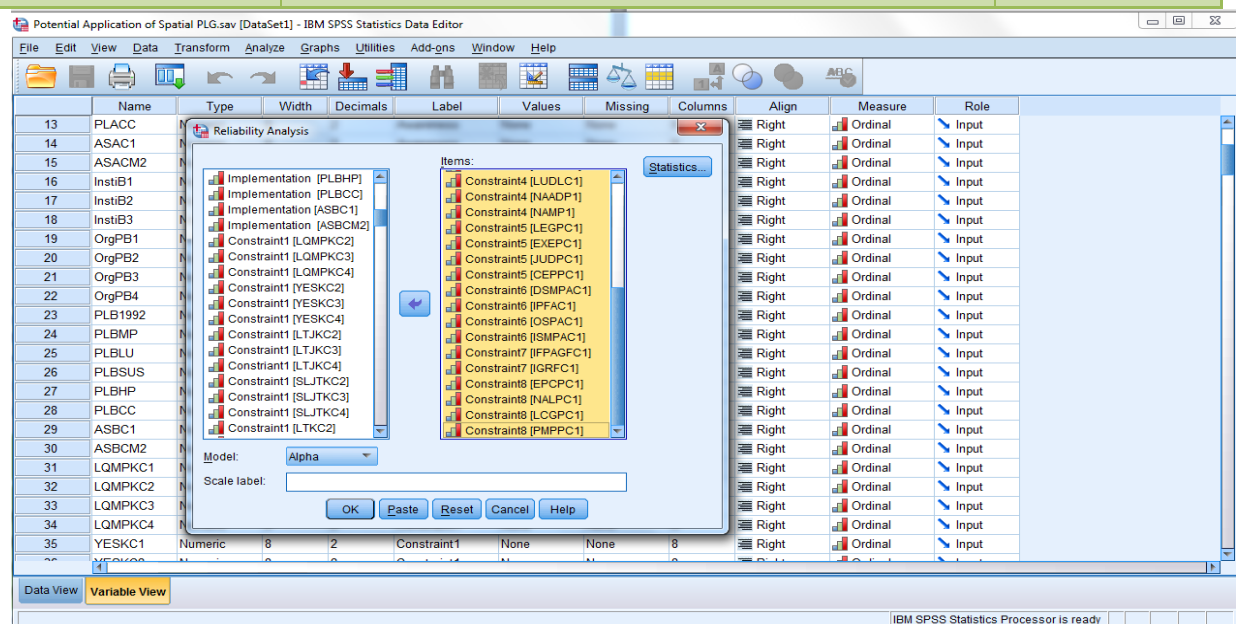
Cronbach's Alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

desirable.

Table 4-13 shows the range of alpha  $\alpha$  value for internal consistency, Table 4-14 shows the results of Cronbach's Alfa when applied to the data set used in this study.

**Table 4-14: Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
<b>.841</b>	<b>.845</b>	<b>30</b>



**Figure 4-6: Reliability and consistency of data using SPSS**



Table 4-14 shows the level of reliability and consistency of the data set falls within the acceptable, good and excellent range as indicated in desirable.

**Table 4-13.** It is against this backdrop that the conclusion can be drawn that this data set is reliable, consistent and desirable and will provide accurate results to address the problem of Urban Development and Management in Jos Metropolis Nigeria.

#### **4.6.3.10. Mean Value Comparison**

The mean is an average value in a data set. Mean value comparisons will be used to identify differences between two or more samples (in this case the response from planners working in 4 Planning Authorities) in quantitative data analysis. The mean values are considered in section 5.3.1

#### **4.6.3.11. Analysis of variance (ANOVA, F-ratio) and Spearman ranks correlation coefficient (rho)**

Analysis of variance (ANOVA) is a collection of statistical models, and their associated procedures, in which the observed variance in a particular variable is partitioned into components attributable to different sources of variation and in this using the Likert scale system of ranking (5-point). In its simplest form, ANOVA provides a statistical test of whether or not the means of several groups are all equal, and therefore allows for generalisation about two groups or more than two groups (Research methods and statistics course syllabus, 2008; Field, 2009; Pallant, 2010). Sections 5.1.1. 5.2.2. 5.3.2. and 5.5.2.

The Spearman ranks correlation coefficient (rho) was used to determine the relationship between the variables. The statistical test provided results about the relationships between several groups and allows for generalisation. It also uses the Likert scale system of ranking (5-point) and the results from the analysis were used in section 6.2.2. 6.3.2. 6.4.2. 6.5.2. chapter 6 and sections 7.3.4. in chapter 7.

Scores are converted to ranks and the mean ranked for each group is compared. In this test, if output at the significant level is less than the alpha level of 0.5, it means that there is a difference in the variables across the groups. These statistical tests are very strong because they test the differences within and between groups and tell which groups are statistically significantly different from one another (Field, 2009).

These statistical tests were employed according to the components that are contained in it each question. The reasons for the adoption of these analyses are that the anticipated data from the questionnaire meets the aim objectives and hypothesis of the research as it was designed based on that. The number of groups was according to ranks structure using the five point likert scale (Research methods and statistics course syllabus, 2008).

#### **4.7. ETHICAL CONSIDERATIONS**

Ethics is the appropriateness of behaviour in relation to the rights of those who are subjects in your research or who may be affected by it, as observed by Saunders et al, (2007) and Dawson, (2011). The researcher's ethical responsibility is to ensure the privacy and confidentiality of the respondents, particularly when interpreting the information that is value-laden, judgemental and highly politically sensitive (Jankowicz, 2005). This section considers the right of privacy, informed consent and professional honesty as captured in this study and which is a basic requirement for the research.

##### **4.7.1. Right of Privacy**

During the qualitative and quantitative data collection, participants were under no obligation to continue if they felt the urge to withdraw their participation and at no point of interaction during this study were participants obliged to contribute their views, ideas or experience under duress. Hence, the right to accept or decline to contribute remained with the contributors at all times. Partial or total withdrawal was accepted and granted at any time without any form of coercion originating from the researcher.

The researcher was not biased to the views, ideas or contribution of any of the participants, and ensured that the participants were not at risk by virtue of their contribution to this study. Mostly importantly, anonymity was granted to participants, and the sources of results and data were kept in strict confidence, without compromise. The results and conclusions drawn from this study will be open and available to all contributors and participants, without bias, as a way of appreciating and acknowledging their participation (Denscombe, 2007; Yin, 2009; Dawson 2011).

##### **4.7.2. Informed Consent**

Permission was requested by the researcher to quote directly from interviews but the provenance of any view point would be concealed if/when requested. Permission to use

the planning authorities and their names was obtained following completion of the analysis. Registered town planners and members of the town planners profession were contacted and their informed consent was given (Jankowicz, 2005; Saunders et al, 2009). All participants, regardless of the degree of their contributions, age or status were informed of the purpose of this research work as well as the source and directional path it intended to follow. No form of deception or coercion was employed in order to gain the cooperation of participants. The principle of well-informed consent was employed and all participants in this study were provided with a clear picture of the subject purpose as well as their role and position in it before participating. The use of an audiotape recorder during the semi-structure interviews/pilot study and the use of postal questionnaires (in the main study) were strictly based on the consent of the respondents and participants (see Appendix 4).

#### **4.7.3. Research Validation**

For the purpose of this research validation was be considered to be a test procedure used to show that the triangulation of the data, obtained from qualitative and qualitative analysis, was suitable for the purpose it was used.

Robson (2002) argues that there are no standardised and universally accepted validation measures for most qualitative research. Hence, it has received criticism with reference to its validity as “scientific investigations”. Lincoln and Guba (2000) argue that qualitative research is often based on the researcher’s demand that their readers should trust them to have produced valid conclusions. One difficulty in addressing the traditional validation issues in qualitative research appears to be the nature of the phenomenon being investigated. Be it as it may, the nature of the phenomenon being investigated which has informed the philosophical positions adopted and used, the adoption of a traditional validation criteria used in positivist studies would create a problem.

Based on the above argument and the fact that this research is a mixed method research where both qualitative and qualitative data are generated from the validation of the framework, it is considered most appropriate that the vital requirement of doing a “valid” research is applicable to all research irrespective of the philosophical stances adopted, as observed by Keraminiyage (2009,138).

Finally, to monitor and manage the outcome of research generally, it is important to consider the quality of the outcome using the following; construct validity; internal validity; external validity and reliability, as observed by Denscombe (2007) and Yin (2009).

#### **4.7.4. Construct validity**

Miles and Huberman (1994) observed that it is the measure of the correctness of the constructs that have been established for the issues being investigated. At the initial stages of the study, triangulation by theories was attained when conducting the literature review, through the integration of different streams of literature from urbanisation, urban sprawl, urban governance, urban management, spatial and master planning as discussed in chapters 2 & 3.

It is also based on the instruments used for data collection; as to whether they are appropriate for the research study. Construct validity was met by triangulation of the research methods as multiple sources of data were used and triangulation by methodology (mixed method) was achieved by integrating multiple data analysis approaches, such as, Analysis of Variance (F-ratio), Spearman Ranks Correlation Coefficient ( $\rho$ ), content analysis and thematic analysis in this research see sections (5.1.1., 5.2.2., 5.3.2. and 5.5.2. in chapter 5. and 7.2.1. 7.2.2. 7.3.1.1. and 7.3.2.1. in chapter 7).

#### **4.7.5. Internal validity**

This is concerned with the application of the different methods of data analysis to the issues being investigated. Linking the appropriate data to the theoretical propositions, an analytical strategy is vital to achieve internal validity. It was achieved in this research in several ways

Firstly, the careful choice of the research design enabled the choice of an appropriate research approach, research strategy and research methods based on the modified nested model (Nested-Nested mixed method research methodology framework). Secondly, by providing research objectives and hypothesis for this study and advancing them in the literature review leading the research direction and focus.

#### **4.7.6. External validity**

The extent to which the research findings can be generalised is termed external validity. As Yin (2009) explains, case studies lead to analytical generalisation rather than theoretical generalisation. This is common to qualitative research, in the same vein quantitative research leads to theoretical generalisation rather than analytical generalisation (statistical generalisation).

Yin (2003) explains analytical generalisation as follows:

*“a previously developed theory is used as a template with which to compare empirical results of the case study” (Yin, 2003, pg.31).*

In multiple case studies, if two or more cases support the same theory, replication may be claimed and thereby ‘cross-case generalisation’ can be achieved. In this study four cases, planning authorities from the study area, were considered. Furthermore, multiple sources of data were used in addition to the case studies which include archival documents, face-to-face interviews and a questionnaire.

Prior to the data collection an extensive literature review was conducted from a global perspective and trimmed down to a local perspective and then down to Nigeria and Jos Metropolis to be specific. Data was collected from Jos Metropolis, analysed, and which supported theories identified and confirmed from the literature review. Based on this generalisation can be achieved.

The research findings of this study were, therefore, generalised based on the fact that the case studies considered (four planning authorities from the study area) were also found in the metropolis’ of all the states in Nigeria, the archival documents were applicable to all the study variables, the face-to-face interviews and questionnaires were also from the population of town planners within the Jos Metropolis. Based on these findings, generally similar results could be found across other cases leading to the generalisability of the findings, in the context of the study.

#### **4.7.7. Reliability**

The entire research process was vindicated by step-by-step justification of the adoption of each of the philosophies, approaches, strategies and methods within the scope of the

research. The development of the methodological framework discussed in the early stages of this chapter provided transparency, thus ensuring reliability. This has demonstrated that the operations of the study could be repeated with the same results and explains the meaning of 'reliability'.

#### **4.8. SUMMARY**

This chapter presented the research methodology for this research. This research seeks to evaluate the need for spatial planning in addressing urban sprawl conditions and to develop a framework in Jos Metropolis, Nigeria with a philosophical position leaning towards interpretivism, constructivism and value-laden research (epistemological, ontological and axiological respectively). The approach adopted was both qualitative and quantitative which was based on deductive and inductive reasoning. Using mixed methodology which allows mixed methods as a research strategy. The research adopted a questionnaire survey, face-to-face interviews and archival or document review as research methods. The total number of experts in the built environment, working in the nine planning authorities, in Jos Metropolis and those with the responsibility of town planning numbered 173. Hence, 100 questionnaires were returned. This has returned a good Cronbach Alpha value of .84.

## **CHAPTER 5. INSTITUTIONAL FRAMEWORK AND CONSTRAINTS IN THE URBAN AND REGIONAL PLANNING SYSTEM**

### **5.1. INTRODUCTION**

This chapter critically analyses the current institutional framework for urban and regional planning in Nigeria within which the Jos Metropolis lies. It uses the identified constraints as a framework to analyse the current institutional framework within which the Planning Authorities exist in Jos Metropolis and how it has affected the implementation of the Greater Jos urban master plan.

Chapter 4 focused on establishing and justifying the research methodology used in this research. This current chapter presents the data, analysis and discussions on the institutional framework and the constraints identified in urban and regional planning systems, with particular emphasis on Jos Metropolis, Nigeria and how its been structured to bring about the implementation of plans to control development. It uses the data from the responses obtained from the questionnaires, face-to-face interviews, case studies (Planning Authorities) and from the documents reviewed.

Accordingly, this chapter is structured as follows:

- ✚ Interpretation of the output from between-within Anova (F-ratio)
- ✚ The Institutions at the three tiers of Government and the related constraints
- ✚ The Organisation (Planning Authorities) and the related constraints
- ✚ Planning Legislation and the related constraints and
- ✚ Administrative structures and the related constraints

These are considered to be components of the institutional framework using the constraints as the bases for analysis and discussions to meet the objective of the research.

### **5.1.1. Interpretation of output from mixed between-within Anova**

This is a multivariate Anova (it does not require sphericity as observed by Pallant, 2010). It measures the between-subject and within-subject factors, multivariate tests, tests for within-subject effects and tests for between-subject effects. The results obtained from SPSS from these variables are used to discuss the implication of the result on the constraints of the components of the institutional planning framework.

The key values from the output results that need to be considered include; descriptive statistics (three sets of scores- mean, standard deviation and population), assumptions (for the value to be non-significant it should be higher than 0.05 and the test of equality of covariance matrix should be higher than 0.01), interaction effect (the commonly reported statistic is Wilks Lambda and the interaction effect is not significant if the value is greater than alpha level of 0.05) and main effects (if the interaction effect is not significant, assess the main effects of the independent variables). If Wilks Lambda for a variable is less than 0.5 and the significant value is 0.000 it means that it is statistically significant. Finally if the value obtained for a variable is 0.663 using common guide line = 0.01 is a small effect; 0.06 is a moderate effect; 0.14 is a large effect and means a very large effect size. The variables coded were extracted from question 4-section 2 (institutions, organisations, planning legislations and Administration 1-15) see appendix H.

The extensive literature review discussed in chapter 3 has shown that there is no existing institutional framework, but there are structures that allow the urban planning system to function. These have sustained the system, whether or not there is coordination between the components. Hence, in this study an institutional framework with the following as the basic components was identified; 3 tiers of government, organisational/ planning authorities and administrative structures planning legislation. Previous works by Ratcliffe, Stubbs & Shepherd, (2002); McLoughlin, 1969 , George Chadwick, Alan Wilson and Al-Ghassani, (2003); Ahmad, (2010) and Hendrix, (2011), amongst others, have also developed frameworks which were used to bring about understanding.

The field survey, face-to-face interviews and document reviews revealed that the constraints that affect the institutional planning framework were; political, cultural, institutional, legal, knowledge, analytical, physical and financial.



The institutional framework and related constraints that affect the components without deviating from the aim and specific objective of the research are the main sources which provide the data for analysis and results from the statistical, content and thematic analysis as presented in the next section.

This chapter will be arranged under three main headings namely; data presentation, analysis and discussion for each of the components of the institutional framework.

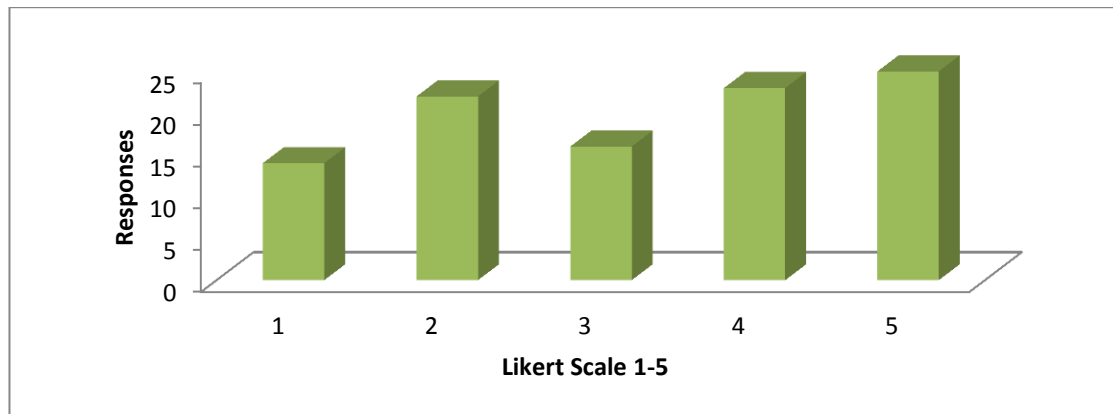
## **5.2. THE INSTITUTIONS WITHIN THE TWO TIERS OF GOVERNMENT AND THE RELATED CONSTRAINTS**

There are eight forms of constraints identified in the literature which include; political, cultural, institutional, legal, analytical, knowledge, financial and physical. The sources from which the data, relating to the constraints, have been drawn are; questionnaire, face-to-face interview and document review. This section seeks to analyse the institutions as component of the institutional framework for urban and regional planning in Nigeria, within which Jos Metropolis lies, using the above listed constraints.

The analysis of variance, Anova-F ratio, was used to demonstrate how the variables independent (constraints) are affecting the dependent (institutions) in Jos Metropolis.

### **5.2.1. Data Presentation for institutions**

The variables were drawn from the data gathered from the institutions (independent, state or local government) were in the first group. The second group used variables drawn from the constraints (dependent; the 8 constraints). Both the dependent and independent variables are measured based on the responses from the Likert scale 1-5 which is ordinal. For the measure of within-subjects factors (Institutions & Constraint) see Figure 5-1



**Figure 5-1: Responses for within-subjects factors (Institutions & constraints).**

Source: Field work, 2013

### **5.2.2. Data Analysis for Institutions and Constraints identified**

The result of the multivariate analysis is presented as follows:

The interaction between the variables at the institutions within the two government tiers and the constraints shows no significant difference between the institutions or the constraint variables, Wilks Lambda = 0.74,  $F(7, 28) = 4.40$ ,  $P=0.00$  and the Partial Eta Squared = 0.26 and Wilks Lambda = 0.67,  $F(7, 28) = 1.35$ ,  $P=0.16$  and the Partial Eta Squared = 0.095. When the results for the dependent variables were considered the main effects for variables for institutions within the two government tiers and the identified constraints is not significant.

The common guideline used was; 0.01 = the effect is small, 0.06 = the effect is moderate and 0.14 = the effect is large. The value to be used for determination is Wilks Lambda which states that if the Wilks Lambda score is less than 0.5 and the value calculated is 0.000, it is statistically significant.

### **5.2.3. Discussion of the findings from analysis of institutions and identified constraints**

From the above analysis it can be observed that the identified constraints have no statistical significance on the institutional (two tiers of government) components of the institutional framework within which Jos Metropolis exists. The possible reason why this has little impact, even though the tiers of government operate in the country, is that they operate only at federal government level where resources are distributed. This result was justified based on the emphasis of Respondent X1 who stated that...

*'The Federal Government only makes policies and it ends there, and at the State level planning it is very poor, it is better at the federal level even though their emphasis is only on Abuja'.*

It is clear that policies are made at the federal level, but are not implemented because there is no direct contact between the people and the government, as well as the Planning Authorities, under each of the tiers that operate. Constraints are generally induced by limited provision of one form of support or another (resources) depending on the nature of the constraint. The institutions governing planning activities, using the Planning Authorities, are basically from the state and local government. The presence of the federal government in the state is shown by the presence of a secretariat and a small portion of land, however the power to authorise the right to land is vested in the hands of the state governors as confirmed by the Land Use Act, 1978. Hence, when the master plan was prepared, those at federal and local level were never consulted. This was confirmed by 75% of the respondents who felt, that at the local government level, they do not have a policy to formulate but rely on the one passed down to them.

This also explains why the Greater Jos Urban Master Plan (GJUMP), that was prepared at state level, did not involve those at federal and the local government levels.

The three tiers of Government are financially constrained because the Government did not consider that when the plan was issued as the master plan (state & local government) that it did not show details of how the plans would be funded, this was a major flaw. Hence, Respondent X3 observed that, due to financial constraints and various other broad issues, it is practically impossible to implement the plans.

Similarly, there was also an assumption that the funding of the plan would be through a public private partnership. This was not feasible as there is no model to that effect. This was verified by the minutes of a stakeholders' meeting in (2007) for the implementation of the GJUMP.

The implementation of plans is a capital intensive project and needs funding from the government or institutions that initiated its preparation, but the government has not adequately funded the Planning Authorities responsible who are then unable to fully implement the plans and cannot achieve any of the stated goals in the plans.

Another constraint is manifested in the non-provision of equipment, qualified man power or funding in form of grants and scholarship for training purposes. This has made the operating practices of Planning Authorities erratic; leading to haphazard developments as seen in the study area.

As a political commitment on the part of the government, master plans were prepared at both local government and state level. The preparation and implementation of the plans are a political commitment to the people but, as observed by 50% of the respondents, while these stages were on-going the local government were not involved.

Those in local government were not involved, but were in direct contact with the community, who were still custodians of their land and developments have to take place on land. The implementation of the master plan has been constrained as the institutions have no control over land acquisition. The political environment of the government tiers lies in their powers to operate as government of the people, for the people and by the people and its authority is concerned with the politics and the way in which it operates and influences decisions. Understanding the law and the outcome of the political process is, therefore, fundamental to planners. To address the constraints of politics in planning and the non-implementation of the master plan, there is a need to reform the political structures within which the Planning Authorities operate and to measure their ability to support credible policy commitments.

The institutions that control development within each jurisdiction are very vital, and as observed earlier, the institutions represented at this point are the state and local government.

The reason could be that smaller authorities have less power in the political process, unless they establish a coalition and configure a reasonable lobbying strategy. The issue of lobbying determines how plans are designed and implemented because it is as a result of good lobby that an organisation is financed to build and achieve its aim.

The impact of plan implementation is felt more strongly at state and local government levels than at the federal level. This is because at state and government levels awareness of culture, religion social welfare and economics abound. Furthermore, whilst efforts are been made to sensitise the general public to the provisions in the master plan, a greater section of population must be able to read the recommendations made.

The Government should set up realistic standards for housing quality to be developed in each sector. These standards should match the desires and capabilities of the population to be served in each sector. Public private participation in housing schemes should be encouraged by the Government; hence, private developers should have access to bank facilities to develop properties, which are subsidised by the government. The following was observed by Wapwera *et al*, 2011; 296);

*'80% of the population are below the low-income level, for the plan to be implemented the government need to provide adequate funding to ensure that the plan is implemented and the housing has been funded adequately'*

These constraints have made it very difficult for institutions that are not organized to operate in an urban planning system such as Jos Metropolis. For instance most organisations do not employ personnel who are qualified to take on the responsibilities of implementing the plan. This was confirmed by about 70% of the respondents who said that the Planning Authorities are highly under staffed to adequately do their work.

Furthermore, the data collected revealed that there are two local government areas within the metropolis that have a master plan (Riyom and Jos East Local Government areas). These master plans are conflicting with the GJUMP at state level which was prepared for the entire metropolis. When the master plans in local government areas were designed, there was no consultation with the State to consider necessary additions, adjustment and corrections, hence, the confusion and contradiction in the implementation of the plans was confirmed by about 70% of those interviewed; indicating that this has contributed to the uncontrolled urban development and management in the Jos Metropolis.

The above stated considerations have not been captured in the proposed GJUMP which, in a way, has institutionally constrained the Planning Authorities that are supposed to use the plans to control development.

Another constraint is the fact that the Planning Authorities that are supposed to ensure implementation, by monitoring the project, are not named; as a result of these conflicts have always arisen between Planning Authorities. The phasing problem has also constrained the system; for instance, no pathways exist to lead organisations through the

step-by-step processes needed to achieve the goal of the plan. This is considered to be a major problem because the institutional framework that would support the development process is absent and therefore, this could be considered to be a knowledge constraint.

The Government has the right to formulate laws that relate to the provision of any infrastructure, as was documented in a stakeholders' meeting and which becomes a constraint. See Appendix B and Table 5-1 for more information.

**Table 5-1: Stakeholders' meeting**

✚	Minimal standard of upgrade for dilapidated buildings and infrastructures should regularly be setup and maintained (undertaken).
✚	The greater GJUMP will be meaningless if the land desired for its implementation cannot be secured. The problems associated with land acquisition by government for overriding public interest, the plan envisage a trade by barter approach, this is not quite clear.
✚	The serious involvement of community leaders in selling the idea to their community when compulsory acquisition becomes inevitable. This calls for the engagement of consultants. Experts and professionals such as Estate Surveyors and Valuers should be involved to carry out the compensation determination and process of payment, as well as, work closely with Government office to minimise litigation and resistance from displaced persons.
✚	The proposed creation of new residential environments is very essential.
✚	The culture of maintenance should not always be about building but also about maintaining whatever is built; the proposed Greater Jos Urban Development Authority should be well armed with all instruments of enforcement so as to come up with a well-built development in accordance with the provision of the master plan.

Source: Minutes of meeting for stakeholders, 2007

In addition to the problem of legal constraint, the basic problem that has affected the implementation of plans is bureaucratic bottlenecks in the legislative procedure to pass the said plans and laws formulated 5, 4 and 3 years after preparation of the plans to allow Planning Authorities to control urban development and management. The three master plans that were identified, one at state level and two at the local government level, were the Greater Jos Urban Master Plan, Angware Urban Master Plan and the Master Plan of Riyom).

This was also confirmed as 25% of the respondents felt that ambiguity is a problem because as Planning Authorities their responsibilities are not clear for implementation of the master plan. The issues of man power and spatial jurisdiction without spatial identity at state, urban and local level, where it has become a problem dependent on the

state expecting better and clearer jurisdiction. This is a physical constraint as some areas are part of the metropolis while others remain in the domain of local governments.

Finally, the constraints identified have not affected the institutions in either of the two tiers of government statistically because there is no linkage between the tiers of government. The constraint is due to the hierarchy in the institutions in all the levels but the constraints are felt more individually than holistically. The constraints are not equally distributed through all the components at the same rate or level. Perhaps the respondents' opinions in the questionnaire were based on their previous experience and not on present circumstances as the analysis revealed that it is not significant, therefore, the constraints observed have not affected the performance of the institutions at any of the two tiers of government.

### **5.3. THE ORGANISATION (PLANNING AUTHORITIES) AND THE RELATED CONSTRAINTS**

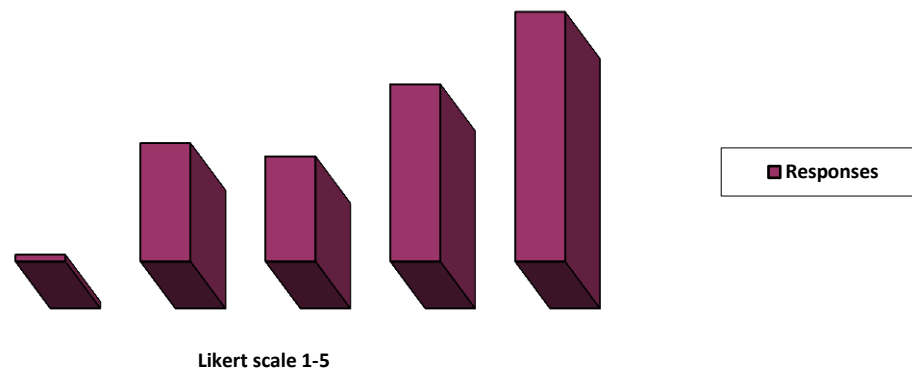
Eight forms of constraint were identified in literature namely; political, cultural, institutional, legal, analytical, knowledge, financial and physical. The sources of data for these constraints and organisation (Planning Authorities) were drawn from the questionnaire, face-to-face interviews and documents. This section seeks to analyse the organisations as a component of the institutional framework of urban and regional planning in Nigeria, within which Jos Metropolis lies, using the above listed constraints.

The analysis of variance, Anova-F ratio, was used to demonstrate how the independent variables (constraints) are affecting the dependent variables the organisations (JMDB, MLSTP, MHUD, Lands Section of the six local government areas) in Jos Metropolis.

#### **5.3.1. Data presentation for organisations (Planning Authorities)**

The data that was collected from organisations provided the variables (independent; JMDB, MLSTP, MHUD, Lands section) which comprised the first group. The variables which constituted the second group were drawn from the constraints (dependent; the 8 constraints). Both the dependent and independent variables were measured against the responses from the Likert scale 1-5; which is ordinal. For the measure of within-subject factors (Institutions & Constraint) see

Figure 5-2.



**Figure 5-2: Response for between -subject factors for Planning Authorities**

Source: Author's Field work, 2013

### **5.3.2. Data analysis for organisations (Planning Authorities) and constraints identified**

The result of the multivariate analysis is presented as follows:

The interaction between the variables and constraints in organisations shows that there is no significant difference between the organisations (Planning Authorities) and the constraints variables as revealed by Wilks Lambda = 0.74,  $F(7, 28) = 1.02$ ,  $P=0.44$  and the Partial Eta Squared = 0.26 and Wilks lambda = 0.90,  $F(7, 28) = 1.42$ ,  $P=0.21$  and the Partial Eta Squared = 0.11. When the results for the dependent variables were considered the main effect for variables for organisations (Planning Authorities) and the identified constraints is not significant.

Furthermore the main effects for comparison between the two types of variables; organisation (Planning Authorities) and the identified constraints are significant, as  $S = F(6, 29) = 1.44$ ,  $P=0.23$  and the Partial Eta Squared = 0.57. See Appendix F.

Using the common guideline of: 0.01 the effect is small, 0.06 the effect is moderate and 0.14. the effect large. The value to be used for determination is the Wilks Lambda. It states that if Wilks Lambda is less than 0.5 and the value calculated is 0.000 it means that it is statistically significant.



The main effect for variables and constraints in the organisation is that Wilks Lambda is greater than 0.5 and the value calculated is greater than 0.000 it is, therefore, not significant. Finally, the main effect when comparing the variables was statistically significant based on the variables from the two groups.

### **5.3.3. Discussion of the findings from the organisations (PAs)**

The analysis revealed that the identified constraints have a statistically significant relationship with the organisations (Planning Authorities) as components of the institutional framework within which the Jos metropolis is regulated. The Planning Authorities exist at both state and local government level and the institutions in each level can influence the Planning Authorities within their tier of government, either negatively or positively this becomes an institutional constraint.

The implications of the results obtained from the data analysis on organisations and Planning Authorities is that the functions, roles and responsibilities of the planning authorities have a direct impact on the implementation of the master plan within the institutional framework of Jos Metropolis. To discuss the implications of the result obtained, the question posed is ‘what are the constraints that have affected the Planning Authorities?’

The GJUMP does not state the roles and responsibilities of the potential PA that would implement the various aspects and phases of the plan (2008-2025). The report is completely silent on the matter, whereas in the previous GJUMP (1975-2005) the roles and responsibilities were declared. Interestingly, JMDB was expected to play a pivotal role in implementing the master plan, while the other Planning Authorities that were expected to contribute to the implementation of some aspects of the plan were not invited to do so, as observed by a small number of those interviewed. This could be considered as an analytical, institutional and legal constraint.

The private sector and individuals which includes; private developers, land owners, organisations and companies that are involved in the physical development of urban areas as observed by the prepared design brief should have been involved. Based on this principle it could be said that ‘effective strategies should be put in place to strengthen JMDB and other Planning Authorities to increase their capacities to implement the plan;

they being the statutory bodies with that responsibility'. More information can be found in the documentation on the sustainable cities programme in Appendix B.

Furthermore, the presence of numerous Planning Authorities creates problems and based on this it can be seen that the government has not adequately funded these Planning Authorities. For further explanation on this statement see Appendix (C). Based on the law that brought about the establishment of Boards; Edict No. 5 of 1974 Section 7 subsections 2 and Law No. 19 of 1982 which was amended by Edict No. 2 of 1986, JMDB been given the responsibility of implementing the master plan in 1975. Consequently, in 2006, MHUD was established to formulate a policy, however a firm of consultants prepared the GJUMP 2008-2025. Respondent X6 lamented that these developments have affected the rate and way in which JMDB operates because the MHUD is the supervisory ministry. Institutionally, JMDB has been a constraint because it is new without experience and does not have the capacity to be supervisory ministry.

It becomes very difficult for JMDB to operate because it would take MHUD some time to understand the mode of operations adopted by JMDB for efficiency, and to also understand what the firm of consultants has prepared for adoption. At this juncture it is very important to observe that there are many Planning Authorities within the metropolis that some form of responsibility geared towards implementing the master plan and to ensure controlled urban development and management.

What is interesting in the document (secondary data) obtained is that, within the same metropolis two different master plans were found to exist at various levels of preparation. See section 5.3 in Chapter 5 for more details.

Hence, it has become vital to have a comprehensive institutional framework that would coordinate the implementation of GJUMP as well as two master plans as well as planning authorities at metropolitan level (involving both the state and the local government).

The important part of the environment of any PA is that which is concerned with politics and the way it influences their function, roles and responsibilities within their jurisdiction to achieve their stated goals and objectives. To address the constraint of politics in planning and the non-implementation of the master plan, there is a need to

identify the political structure within which the Planning Authorities operate and to ascertain their ability to support credible policy commitments. Twenty per cent (20%) of respondents indicated that strategic planners can take a proactive approach which improves the performance of the Planning Authorities and avoids political attacks and government intervention.

This is very possible that because if 1992 urban and regional planning law is to be implemented and put to work Planning Authorities would be established in all local government areas as stipulated in this law (not neglecting the fact that only one is available and that is in Lagos state).

Planning Authorities are supposed to take responsibility for housing issues but are not known to have become involved with any critical issues and do not have qualified personnel or have a housing department in the ministry, as observed by Dung-Gwom, Hirse and Pwat (2008). These problems have compounded into constraints that have made it very difficult for the Planning Authorities. Institutionally constrained, the Planning Authorities cannot comment on the mining activities prevalent in Jos Metropolis and its environs, which have left many mining ponds and mounds which have altered the beautiful landscape and land uses. It affects the State's economic and agricultural purposes. Reclamation of the mining ponds was not captured or integrated into the previous GJUMP. This has been a continuous physical constraint for the Planning Authorities.

The Planning Authorities have to make provision to address this major issue as 70% of the land mass in the metropolis (physical constraint) has been affected by the mining activities, as observed by Bingel (1978). Consequently, no Planning Authorities have been given the responsibility of addressing land reclamation. This has become a constraint because no effort is made to recover the derelict land as a result of the tin mining activities that have occurred. The deficit in land has led to higher demand for land, and the ecological funds made available by the federal government, but which never reached areas that have suffered from conditions of degradation, which would have brought about controlled development, as confirmed by Dung-Gwom (2001). He observed that the process of land reclamation and legal ownership rights to land is cumbersome, very difficult and the bureaucracy it involves is lengthy and demanding.

This was also confirmed by Hernando De Soto, (2000) and respondent X6 supported this stance during the interview. The fact that the contract for the preparation of the GJUMP was awarded to a firm of consultants which resulted in the non-involvement of PA staff, especially those in the Lands Section of local government areas within the metropolis, is a major impediment towards the successful implementation of the plan by the Planning Authorities considering their relevance and particular involvement in urban development and management within the metropolis.

For the successful implementation of any plan there is a need to put in place a model to involve the staff and professionals in the various areas of the plan as they are responsible for ensuring development control in these areas in the metropolis. The proposed GJUMP has completely ignored the existing built-up areas of the metropolis. Sixty (60%) of the respondents observed that no action plan had been proposed for solving the problems in these areas and therefore the built up areas of the metropolis need to be reconsidered to ensure that the infrastructure on ground meets the needs of the areas concerned.

Furthermore, 80% of the respondents were of the opinion that the non-coverage and capture of problems on ground has rendered the master plan invalid and on the way to failure without a remedy. This is because plans emerge from existing problems and are followed by proposals and consideration of a solution. Planning Authorities need existing built-up areas for development control and in the event of changes in land use.

This is also evident as the bill for the passage of the master plan into law, has not been considered (for further explanation see appendix C). A number of areas within the jurisdiction of the old and new metropolis have numerous planning problems, because these major constraints have not been addressed due to the majority of the planners not prioritising the existing problems adequately.

The Master Plan has not always addressed existing problems. For instance, community leaders or planners in Planning Authorities are not involved in the process of design; this goes a long way to affecting the implementation of the plan, as observed by the majority of the respondents who affirmed that the firm of consultants was supposed to produce a final draft for scrutiny. The firm of consultants failed to provide a final draft

to stakeholders, or even the public, for criticism and corrections; instead the document was submitted directly to the government.

The Universities of Jos, Angwa Rogo and Angwan Rimi decided to re-design and re-construct after the sites were acquired by the government in Jos-Bukuru metropolis, in order to avoid the chaotic nature of buildings developed in such areas/sites. In view of this specific Planning Authorities should be assigned the responsibility for the resettlement of displaced institutions, organisations or even people., This assertion was confirmed in the minutes of a stakeholders' forum that took place on 12/2/2009. With no such arrangement in place it becomes a major constraint, the implementation of plans is marked by resettlements and payment of compensations to displaced persons.

Planning Authorities are influenced by the culture of the people within their jurisdiction; the cultural context influences the public process in any given locality. Public policies must conform to the cultural norms of the community, from design to adoption and successful implementation. For instance, if a country sees inducements as normal, others might term it bribing. It has a tendency to frustrate the Planning Authorities that might accept inducements prior to a planning process being carried out. Over 50% of those surveyed reported that the State Governor viewed accepting inducements as corrupt and has a tendency to frustrate his administration. This also presents another element being considered under institutional deficiency which is characterised by corruption and delay in the activities and processes of some Planning Authorities in the study area.

Capacity building is vital to any PA and if this is lacking many problems are bound to arise. The training of personnel working for Planning Authorities is vital in order to ensure the sustainability of Planning Authorities, without training personnel lack the skills needed to move the system forward. The majority of the respondents (70%) confirmed this by saying the relevant professional bodies must be involved in the process of master plan preparation.

The implication is that they were not involved in the preparation of master plans. This means fewer people will have the technical expertise to prepare a plan; leading to knowledge constraint. They are constrained because the knowledge needed to prepare a plan remains with the consulting firm.

In the planning brief given to the consultants, provision was made for the involvement of JMDB staff in the preparation of the master plan in order to enhance their capacity to implement the plan. This was anticipated as being a training opportunity for the personnel of the planning development board. The planning consultants failed to do this and lack of action deprived the PA of the opportunity for its staff to acquire the necessary knowledge about design and implementation of the master plan; this constraint has made it very difficult for the plan to be implemented and in the long run incapacitates the system. For further information about this aspect please refer to Appendix C.

The knowledge of how a master plan is designed and implemented is limited to only a small number of personnel and this in turn limits the ability of the planning system to produce more services. It could, rightly, be concluded that lack of knowledge has constrained Planning Authorities from implementing the Master Plan.

The Planning Authorities have been constrained by many factors that have placed them at a disadvantage, and as such, have reduced the significance of the institutional framework because key issues are not properly articulated and incorporated into the plans prepared and used by the Planning Authorities, thereby critically constraining the Planning Authorities. This was confirmed by 70 respondents, during the face-to-face interviews, when they observed that the plan cannot be used outside the Plateau State. It can only be use in the metropolis which covers only six out of seventeen local governments in the Plateau State thus limiting the scope of the plan.

Many of the constraints are observed as pertaining to the Planning Authorities but the implementation of GJUMP encountered a great deal of bureaucracy, red tape and bottlenecks. The lack of flexibility in the rules and regulations has not changed. The attitude of public officials towards the implementation of the master plan is very poor; it is not at all encouraging against corrupt practices which affect their professional competence in the delivery of their services. This is manifested in the haphazard and uncoordinated development within and around the metropolis.

Critically, 10% of the houses in each zone of the GJUMP have been identified as being in a poor state of repair. It is important for the Government to involve engineers to verify the structural condition of the buildings to justify their continued existence in the

master plan area. Furthermore, many of the buildings lack sanitary systems and show signs of cracks, deflection and serviceable failure. It is important that the potential for structural collapse of buildings should be born in mind in the implementation of GJUMP. This issue has become nationally important due to the considerable loss of lives and property associated with the collapse of buildings as observed by Dung-Gwom (2008). The possibility of such an incident happening should be analysed and incorporated into the plans.

The inability of professionals in most of the Planning Authorities to carry out design and analyse the details embedded in the plan, at any given time, has made it very difficult for the master plan to be implemented. The inadequacy of experts to diagnose faults or correct designs has become a constraint (analytical) to achieving the goals of the plans.

This links the discussion with the challenges of Planning Authorities as an integral component of the institutional framework in Jos Metropolis as shown in Table 5-2.

**Table 5-2: The challenges of the Planning Authorities**

✓ Inability of the PA to live up to their responsibilities which has attracted the attention of planners over the past decade.
✓ Planning Authorities are hampered by insufficient man-power, particularly the shortage of professional, physical planners
✓ Planning Authorities lack administrative autonomy to perform efficiently as they rely mainly on the directives and instructions from their respective Ministries, Boards and Departments or State agencies in charge of administration.
✓ Planning Authorities lack the initiative/innovation of planning schemes or any form of developmental plans to address the planning problems within their jurisdiction.
✓ Uncooperative stands by local government councils as well as federal and state government parastatals within the area of jurisdiction of the authorities.
✓ Local government councils contend that they have local status and bases to operate within the area in the same way as the authorities but employ different regulations and laws.
✓ The operation of the local government authorities and the local government often run at cross-purposes thereby limiting the effectiveness of the authorities at the local level.

Source: Compiled by Author from Oyesiku, 2004; Wapwera & Egbu, 2013

These challenges have constrained the planning authorities making it impossible for the master plan to be implemented. This statement was confirmed by a majority (80%) of the respondents who felt that the planning authorities have, indeed, been constrained and also supported or confirmed the work of Mabogunji, (2002); Oyesiku, (2004) and Jiriko (2008). Hence, it also agrees with the statistical analysis which revealed that the effects of the constraints on organisations (planning authorities) are statistically significant.

This leads the discussion on to planning legislation as an integral component of the institutional framework within which Jos Metropolis exists.

#### **5.4. THE PLANNING LEGISLATION AND THE IDENTIFIED CONSTRAINTS**

This section seeks to analyse the planning legislation 1992 Urban and Regional Planning law; the GJUMPs, Land Use Act 1978, Urban Sustainable Issues, National Housing Policy and Climate Change as components of the institutional framework of urban and regional planning in Nigeria within which the Jos Metropolis lies using the above listed constraints.

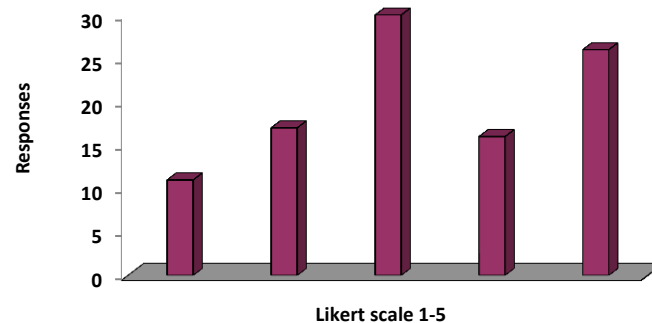
The sources of data concerned with constraints and organisations (Planning Authorities) are drawn from the questionnaire, face-to-face interviews and documents. The constraints affect the performance of the PLs which are part of the institutional framework identified in the study. According to the 1992 Urban and Regional Planning Law, it is expected that a Planning Commission at the federal level a Development Board at the state level and Planning Authorities at the local government level would be established.

##### **5.4.1. Data Presentation for Planning Legislation (PL) and the identified constraints**

The variables used as data from the PL (independent; 1992 URP law, the master plan, Land Use Act 1978 (LUA, 1978), Urban sustainable issues, National Housing Policy and Climate Change shape the first group. The second group used are drawn from the variables of constraints (dependent; the 8 constraints). Both the dependent and independent variables are measured based on the responses from the Likert scale 1-5



which is ordinal. For the measure within-subjects factors (Institutions & Constraint) can be seen in Figure 5-3.



**Figure 5-3: Responses for Within-subjects factors for PL & Constraints**

Source: Author's Field work, 2013

The following are responses of constraints that have affected the Planning legislation in Jos Metropolis affecting the existing institutional planning framework through which plans are implemented.

#### **5.4.2. Data analysis for PL and constraints identified**

The result of the multivariate analysis is presented as follows:

The interaction between variables on the PL and the constraints shows there is no significant difference between the organisations (PLs) on the constraints variables, Wilks Lambda = 0.75,  $F(7, 28) = 0.68$ ,  $P=0.15$  and the Partial Eta Squared = 0.91 and the Partial Eta Squared = 0.26 and Wilks lambda = 0.75,  $F(7, 28) = 0.75$ ,  $P=0.00$  and the Partial Eta Squared = 0.25. When the results for the dependent variables were considered the main effect of variables for organisations (PLs) and the identified constraints is significant.

Furthermore the main effects for comparison between the two types of variables; (PLs) and the identified constraints are significant as  $S = F(6, 29) = 0.83$ ,  $P=0.50$  and the Partial Eta Squared = 0.03. See Appendix F for further explanation.

Using the common guideline at 0.01 the effect is small, at 0.06 it is a moderate effect and at 0.14. it is a large effect. The value to be used for determination is the Wilks

Lambda. It states that if Wilks Lambda is less than 0.5 and the value calculated is 0.000 it means that it is statistically significant.

The main effect for variables in the organisation and constraints is that Wilks Lambda is greater than 0.5 and the value calculated is greater than 0.000, therefore, it is not significant. Finally, the main effect of comparing the variables is not statistically significant based on the variables from the two groups. Therefore, the analysis of the interaction between the variables in planning legislation and the identified constraints is not significant.

This now leads us to the discussion on findings for planning legislation and the constraints identified.

#### **5.4.3. Discussion of the findings on PL and constraints identified**

The analysis shows that the identified constraints have no statistical significance on the PL as a component of the institutional framework within which the Jos Metropolis exists. The PL is a gamut of legislative documents prepared by legislatures at the two levels of government (State & Local government) that are planning related (addressing different aspects of the built environment) and which are used by Planning Authorities to control development. The analysis revealed that the effect is not statistically significant but there are evidences to negate that; evidences from the documents reviewed and the face-to-face interviews show a positive or significant constraint as can be seen Figure 5-4 and Figure 5-5



**Figure 5-4: Tudun Wada along the Bauchi Ring Road**

Source: Author's Field work, 2012



**Figure 5-5: Mado Village on the Tudun Wada Ring Road**

Source: Author's Field work, 2012

Figure 5-4 and Figure 5-5 shows a high level of haphazard development in the settlements captured. The implication is that the planning legislations used for the control of development and management are constrained.

Consequently, the submission of the prepared plans and real time satellite imageries were expected to be completed by the consultants by 2009 for the entire planning area. There was a delay in the submission of the plans and in the passage into law of the GJUMP, this is an embodiment of the constraints such as legal, political, cultural, analytical and institutional amongst others. The bill has been prepared but is still in the High Court of Justice for reconciliation and passage of the plan into a bill. For further information refer to Appendix C. The submission was made but has still not been passed into law in 2013. The Governor of the state has also placed an embargo on approval and issuance of certificates of occupancy in the state. Further constraints are the long delays and bureaucracy by the courts processing the documents for the approval of certificates and rights of occupancy. The long delays have affected the level and rate of controlled development which has never been static. This has heralded and encouraged the haphazard development as observed in Figure 5-4 and Figure 5-5 above.

Accordingly, there is a need for the Government to put a mechanism into operation to address the issue of embargos on approvals and issuance of certificates of occupancy and long delays through bureaucratic bottlenecks introduced by officials for the public trying to gain access to the services rendered by the Planning Authorities.

When the legal backing is informed standards are maintained. The legal backing that is required is always delayed and eventually becomes a constraint as observed by Dung-

Gwom (2001). The lack of legal backing has left many issues that have not been address. This, eventually, makes it difficult to obtain approval and eventually constrains the implementation process. Legal title to land, housing and other properties is difficult to obtain hence, the capital starts to collapse. This has been confirmed by the work of Hernando De Soto (2000; pg 36) in Lima Peru and Parsa et al, (2010) in Dar es Salaam.

The number of planning legislations used to carry out development control has constrained the institutional framework; making it very difficult to achieve or ensure the implementation of the master plan which is also legislation having passed into law to become functional in ensuring development control, as observed by Cullingworth & Nadin (2002; pg 2) who state that plans become legally binding documents. Indeed, they are part of the law, and the act of issuing a permit is no more than a certification of confirmation that a proposal is in accordance with the plan.

Furthermore, the implication (haphazard and uncontrolled development of the metropolis) of the results obtained from the data analysis on planning legislation and its related constraints is, and the following discussion will consider; The 1992 Urban and Regional Planning Law, The Greater Jos Urban Master Plan (providing infrastructure), Land Use Act 1978, Urban Sustainable Development, National Housing Policy and Climate change.

#### **5.4.3.1. The 1992 URP Law**

The law has suffered from rejection and non-acceptance by the government since its conception by the Nigerian Institute of Town Planners. Up to the present day the law has not been adopted for use, even though the Supreme Court Judgement in 2003 was in favour of the Town Planners (NITP). The non-adoption of this law has constrained the Government (institutions) and management (Planning Authorities) from introducing Urban Development and Management in the urban metropolis basically because of the non-availability of the right documents needed for regulation. This has confirmed what Gamde (2004; pg22) observed in his study. For more information refer to Appendix C.

This law has not been put to use, and hence, has constrained the activities of planners in many places but especially in Jos Metropolis where there are only a few planners with a wide area to control. One major reason why the law has not been accepted is due to the fact that the planning powers of the Federal Government are now strictly limited to the

federal capital territory. According to the court, it is a non-controversial political philosophy of federalism that the federal government does not exercise supervisory authority over state governments and also stated that it is clearly wrong for the federal government to issue building permits, licences or approval for federal land in any state territory. All such permits, licences or approval must be issued by the State government in conformity with the planning laws and State regulations.

Furthermore, the judge observed that *'Any Act, be it the federal Highways Act, the Civil Aviation Act or the Nigeria Railways Corporation Act which intends, or is implemented in a way that intends, to exercise or assume such function is unconstitutional and in appropriate circumstances will be declared so'*.

The implication is that the state government are free to repeal the URP Act or to adopt it as state law after deleting the unwanted sections of the law. This has established a principle that has important ramifications to the practice of Physical Planning in most urban areas in Nigeria, and in this case Jos metropolis. As observed earlier in the issue of federalism, planning powers, the states' exclusive planning powers, the national assembly not formulating laws, the Federal Government seeking planning permission for its projects from the State, and ownership of land, does not confer planning powers on to the Federal Government. This simply means that all government agencies in the three tiers of the government must seek and obtain planning permission for their projects; however, this stricture has seldom been adhered to and has resulted in uncontrolled Urban Development and Management in the metropolis.

The provisions of the 1992 URP law have not been implemented, as a National Planning Commission, State Planning Board and local Planning Authorities have not been created, except for those in states such as Lagos, Kaduna, Kano, Plateau and Niger (State Boards). Only a few local councils in Western and Eastern States of Nigeria have local Planning Authorities as observed by Gamde, (2004; pg 23) but the entire Northern states, within which Jos Metropolis lies, does not have any local Planning Authorities as stipulated by the law. In addition the 6 local governments located within the Jos Metropolis know nothing about the provision of the law.

The implication is that the presence of plan-less urban centres continues as does haphazard and ineffective planning; and, furthermore, means that the outdated

ordinance of 1946 is being still in used (even if unofficially) all over the country, and in this case, also in Jos Metropolis. The non-implementation of the law has constrained the establishment of a viable administrative framework leading to the absence of development plans as stated by law.

The law has a close ties with the LUA, 1978, which is part of the Nigerian constitution, but LUA has been faulted by almost all professions in the built environment, and lawyers, from different geopolitical regions in the country. Respondent X10 observed that the vast segment of society find it difficult to work with LUA as it requires a comprehensive review that will take into consideration the interests of the vast majority in Nigeria and also requires that a professional physical planner sits as a permanent member of the Land Allocation Advisory Committee.

Furthermore, the complexity of the Nigerian legal system has contributed to the difficulties in the implementation the 1992 URP law. The non-enactment of the national urban development policy by the government, for twenty 21years, has constrained planning activities, allowing it to remain disjointed and uncoordinated due to the absence of a development policy for planners to use.

Based on the above, there is a need for the Federal Government to reconsider, and to pass, the Nigerian urban and regional planning law which will allow the states to control urban development and management. This is necessitated by the fact that almost every form of physical planning and other planning legislature derives its structure and direction from the law, which means that the structure of the law can form the basis for the institutional framework for the planning in Nigeria.

#### **5.4.3.2. The Proposed GJUMP (2008-2025) and other Master Plans**

Once Master Plans are in place, they should give way to local plans which should provide a more detailed basis for development control within the local area. Most urban areas have uncontrolled development and need urgent attention. Increased traffic problems in urban areas and transport planning and management should, similarly, be given prompt attention, as observed by Dung-Gwom, Hirse and Pwat (2008). The data from the interviews revealed that 60 % of the respondents were aware that the master plan had not been passed into law and the bill had yet to be considered which has results

in the situation of there still being no legitimate document for use 5 years after the proposal was lodged with the courts.

Bad governance over the years has affected urban development in the country. Plateau State, for example, has shown a tendency to disregard national policies and programmes, because it has not made any effort to adopt and implement them in the state. This was confirmed by the majority of the respondents and also reaffirmed by the work of Dung-Gwom, Hirse and Pwat (2008), who stated that there is no urban development policy; no policy on urban development for the Jos Metropolis between the years of 1975-2005 and the Greater Jos Urban Master Plan is still used because it is the only legitimate document in existence.

Similarly, the Master Plans for major urban areas (Greater Jos Master Plan, Riyom Urban Master Plan and Angware Urban Master Plan) have either not been reviewed or not implemented. Presently the Government is making effort to consider the formulation of new policies and a review of existing policies to bring about controlled urban development and management.

The Government has assisted urban development and housing through the adequate provision of funds in the annual budgets for state and local governments. (See Appendix C for 2010-2012 budgets). The Government has to source funds from other bodies, such as; UN-Habitat, United Nations Development Programmes, NEPAD, African Development Bank, the European Union and bilateral assistance from friendly countries, as observed by Dung-Gwom, Hirse and Pwat (2008), who when further to say that the assistance in the form of grants and other packages from multi-lateral and bilateral bodies are not used efficiently to ensure the essential infrastructure is provided that will trigger urban development and management.

Development control (DC) remains a huge problem in Jos Metropolis and other urban centres in the state. The impact of the Planning Authorities (JMDB and others) in terms of development control in Jos Metropolis is negligible to say the least, while in other urban centres no system for development control actually exists (local government). This is due to magnitude of other mitigating factors such as; inadequate manpower, equipment, land tenure, outdated and obsolete plans, conflicting roles of public agencies and Planning Authorities and even hostile confrontation with the urban local

governments which operate at cross purposes to the planning authorities at state level. This suggestion is confirmed by the field survey and the documentation reviewed.

The PL (Master plan) cannot be achieved until there are effective Planning Authorities to implement them (institutional reform). The tendency in the past had been to create new Planning Authorities once a problem was identified; as if the creation of such institutions were a panacea to solving problems without taking a closer look at the quality of the planning authorities. This was observed by respondent X4 who commented that when the Greater Jos Urban Master Plan 1975-2005 was prepared the then government established the JMDB to implement it. After the master plan expired the ministry of Housing and Urban Development was established to prepare and implement the master plan (2008-2025).

Presently, there are a plethora of Planning Authorities in the state that perform overlapping functions and work at cross purposes rather than addressing different issues and problems. For example, the the MLSTP, MHUD, JMDB and Lands Section in Local government are located within the metropolis. The counterparts of these planning authorities at the federal level are also carrying out the same function, roles and responsibilities. See section 6.3.5 in chapter 6 for the functions, roles and responsibilities of the 4 Planning Authorities used as case studies in this study and involved in the control of urban development and management in the Jos Metropolis.

Finally, the PLs have not been passed and so their implementation has been delayed. The time lag has not been reconsidered and accommodated in the plan; hence provisions have not been made to overcome the non-implementation of the PL and this constraint has affected the GJUMP, as legislation. This is the most fundamental of reasons which makes it not significant.

#### **5.4.3.3. Land Use Act 1978 (LFN, CAP L5, 2004)**

The 1978 LUA has been constrained because of the following; it vested powers in the governors of the states while the population customarily has ownership of the land, determination of urban and non-urban areas and the need for constitutional amendment especially the section that concerns land use to meet the present needs.



The Government through the Planning Authorities plans for the needs of the community while safeguarding natural resources. The systematic assessment of land and water potential, alternatives for land use and economic and social conditions, in order to select and adopt the best land-use option is captured by master plans, area action plans and subject plans etc., as observed by Young (2003) and Litman (2004; 2005; 2006) in section 2.3.3. chapter 2.

Master planning is adopted to regulate the use of land through the designation of areas of development, protection and application of performance criteria. It is in the form of a schedule of policies and decision rules to regulate land use for the administrative area. Mapping of designated areas and sites for development purposes and protection discretely leads to the adoption of a final blueprint plan. Confrontational processes, instigated through consultation on draft plans and political negotiation, can be ascertained through the work of LGA, (2001), Obateru, (2004); Oyesiku, (2004) and Jiriko, (2007) in chapter 2.

This is also confirmed by this research as respondent X2 stated that individuals, families and clans own land inherited from generation to generation, hence land situation within his jurisdiction has remained fragmented.

The aim of the LUA, 1978 land use decree in is to nationalise the radical title to land. And in doing so the Government set up an administrative structure to administer the provision; two divisions, urban and non-urban. It gave power to the state governor to determine what an urban area means. It is the state governor who determines what the urban and non-urban areas are in his state. To be amended it has to be removed from the constitution. Land, in Nigeria, has not been adequately nationalised and the LUA has been in use from 1978 up to the present date.

The LUA is obsolete and outdated and it needs to be amended but the procedure involved in processing land documentation is cumbersome and unending, as observed by Hernando De Soto (2000), Dung-Gwom (2001) and Parsa *et al*, (2010).

The government have succeeded in nationalising land by using the 1978 LUA, but the aftermath is seen in the haphazard growth of most urban areas in Nigeria. The reason is due to the cumbersome nature of processing the document by the lack of accessibility to

any form of loan or support. This haphazard growth has been captured by Figure 5-4 & Figure 5-5 where uncontrolled urban development and management can be seen.

Any developments by the general public are always termed illegal due to the non-availability of land documents that could be used as legal document for a titled property which, in turn, could be used as collateral. Titled property continues to increase without due documentation and, hence, the implementation of the proposed GJUMP remains a mirage. This was encouraged by the simple fact that such considerations were not factored into the master plan because the stakeholders (property owners and population) were not included or consulted, and because the planning approach is not interventionist-oriented (rigid) and makes no provision for unforeseen, external occurrences which has crippled the performance of the urban planning system.

The LUA, 1978 is one of the PL that has not encouraged urban development and management but has encouraged uneven development in Jos Metropolis. Other studies have shown that access to and control of land is a major constraint to sustainable urban development. Other measures should be considered or else the master plan and its good intentions will remain on paper and never be more than a mirage.

There is a need for the government to amend the LUA, 1978, because it serves as a basis for other legislation to facilitate their implementation as it is dependent on land as observed by the National Housing Policy (2006), Wapwera, Ali & Egbu, (2012).

Finally, the implication of the the LUA, 1978 as a PL is not statistically significant owing to the fact that the act is part of the Nigerian constitution and it has not been updated. It cannot be updated as a stand-alone document because its now a part of the Nigerian constitution and this has constrained the use of this PL.

#### **5.4.3.4. Sustainable Urban Development**

This discussion seeks to examine the local concept of sustainable urban development, the impact of sustainability on urban growth, its regional relationships and linkages. The purpose is to show how urban sustainability initiatives have contributed to economic, social and environmentally viable and robust growth, decent work creation and poverty alleviation, while improving resource efficiency and minimising environmental, social and economic depletion as observed by the SCP, 2002-2007. It begins with a critical

discussion on sustainable urban development and is followed by debating its non-availability and the implication of its use as a planning legislation in this study.

Sustainable urban development in Nigeria is directly tied in with the project of the National Poverty Eradication Programme (NAPEP). This programme viable though it was not considered in the preparation of the master plan, though its aim is to provide basic infrastructure that can trigger social and economic growth, consideration of the programme and the willingness to see its implementation to the fullest degree has been neglected. Planning legislations, such as (NAPEP), have not been captured (included) and as a result the non-inclusion have contributed to constraints such as analytical and financial because it was to have been operated from the federal budget, political because it is not a state initiative, culturally because it is not in the culture of master plans to incorporate other initiatives and other constraints.

The essence of sustainability, in this context, is to make development sustainable. This was confirmed by this study and supported by the Sustainable City Programme (2002-2007; pg 5) that observed that it is broad based involving stakeholders rather than the approach presented by the master-plan.

The absence of the elements of sustainability makes the master plan unsustainable. This is because NAPEP considers vital indicators that are responsible for triggering sustainable growth and development and because it has not been included in the plan it has affected the performance of the master plan. The programme needs a structure, such as, the master plan to be implemented, while the master plan needs the programme to be a driving force to help the master plan meet the targets set, which are to bring about proportional growth and development.

This was confirmed by this study as over 70% of the respondents claimed that the above stated elements have not been captured by the master plan, when they observed that the overall economic and social development, environmental protection, infrastructure investment and provision were all adequately captured and policies, such as, youth empowerment (NAPEP) , women's empowerment and environmental protection laws and the three pillar point policies of the state government, which is concerned with economics, human capital and infrastructure developments were not.

The PL, in conjuncture with others, has been classed as statistically insignificant because no positive impact has been recorded, even though it is not considered to be a physical planning legislation and does not need land for its implementation. On the other hand, the Sustainable Cities Programme (SCP, 2002-2007) is geared towards achievements in social, economic and physical development and to ensure sustainability it has to use natural resources.

However, this is not the case, which means it is not meeting the focus of Agenda 21, which are:

- ✚ To improve urban, environmental planning and management processes by supporting city demonstration projects, assisting policy development and promoting decentralised city-to-city co-operation and
- ✚ To build local, institutional support for environmental planning and management by creating partnerships with selected local institutions, supporting networks of national and regional technical institutions and supporting the national adaptation of EPM tools

It operates at all the three tiers of government, but for the purpose of this research it is at state and local government level. Yet, while it is due to the lack of management capacity, there is serious need for cooperation to build capacity and develop urban planning and management as a continuous and on-going process at both state and local government level.

The problem of non-inclusion of sustainable urban development is partly due to the lack of a framework for coordination and as an instrument for localising Agenda 21 and which the master planning approach is unable to accommodate in order to address the problem and sustain the system.

Sustainable urban development programmes have been constrained by many factors ranging from political, analytical, cultural, physical, financial and legal constraints amongst others. These are interrelated and interwoven such that the absence of one affects the other. For instance, climate change is dependent on the issues of sustainability as it affects the economic, social and environmental elements. These elements were constrained and can be operated, when properly articulated, to be a continuous approach for planning and management of urban settlements, which is the

main aim of sustainability highlighted in the UN, 1987 report to meet the needs of the present without compromising the ability of future generations to meet their own needs.

Urban sustainable development if incorporated into any plan has attributes such as those observed by the Sustainable City Programme (2002-2007; 9) which states that it is necessary to have a bottom-up planning approach, anchored to the participation and commitment of stakeholders which suggests a mixed plan of action, a systematic approach for better planning and effective management of urban development, a powerful tool for communication and information sharing and facilitating the strengthening of local acceptance of the plan.

Based on the aforementioned discussion there is need for sustainable urban development oriented planning approach that could address Urban Development and Management in Jos Metropolis.

#### **5.4.3.5. National Housing Policy**

The policy is aimed at ensuring that all Nigerians own or have access to decent, safe and sanitary housing in a healthy environment with infrastructure services at an affordable cost, with secure tenure. This positions the housing sector as one of the prime drivers of socio-economic development, including job creation and employment, as well as accelerated national transformation. If the housing sector considers policy measures in the areas of; land for social housing, finance, maintenance and building materials, in the same way as the national housing policy and creates a link to the constraints that have affected the national housing policy as planning legislations.

Other policy measures made and laws enacted to improve conditions in housing in the cities were: The establishment of the Federal Mortgage Bank of Nigeria in 1977, and the enactment of the LUA, 1978 to unify land policy in the country. The formulation of the National Housing Policy of 1991, which though quite comprehensive in content and scope, was not implemented. The National Urban Development Policy of 1987, the enactment of the National Housing Fund 1992, Nigerian URP Law 1992, and the mass transit and the Nigerian Environment Primary Mortgage Institutions amongst others.

So on paper, there exist fairly well articulated policies on housing and planning at the national level. However, these policies and laws have not made positive impact on

urban development and housing at the turn of the century mainly due to lack of political will by the Government to implement them, poor governance and corruption and the ever increasing rate of migration into the cities. In fact, the urban housing situation has continued to worsen as observed by Dung-Gwom, Hirse and Pwat (2008).

The Land Use Act, 1978 has been and will be a major constraint in the Nigerian urban planning system, as it has impinged on the rate of housing development. Since its enactment in 1978, the objectives of the Land Use Act have not been achieved. It is, therefore, desirable that this Act be amended. The adverse impact of the LUA, 1978 goes far beyond the poor delivery of housing. It is arguably the single biggest constraint in Nigeria's desire to transform from a cash-based to a credit economy. Without the relevant amendments to the existing Act, the expectations of Vision 20:2020, as observed by NTM (2006) and for Nigeria to become one of the world's twenty largest economies would be a mirage.

The national Housing policy set out to ensure sustainable maintenance of all physical assets and infrastructure in urban areas; this has not been achieved as more housing structures have not been made available. It becomes a major problem maintaining the existing housing stock due to a poor maintenance culture (cultural constraint); this can be seen in the failure of effective monitoring and coordination of all maintenance work. Maintenance work is not given due consideration and the allocation of only 10% of the budget for maintenance of all buildings and infrastructure projects that are above five years old is not adhered to, to ensure sustainability of the structures.

In terms of housing delivery, only a few housing estates were planned and executed when the Government acquired land and allocated plots for settlers to develop themselves. Over 80 % of the respondents complained about the basic requirement for infrastructure and its non-availability years after the policy was enacted.






There are few public estates in Jos Metropolis, the states low cost (250 units) senior staff quarters at Bauchi Road, Laminga, and Commissioner quarters to mention but a few, have now been allocated to occupants who are expected to pay within the stipulated time.

#### 5.4.3.6. Climate Change

The impact of climate change on most environments in Nigeria is pressure on resources due to poor management and uncontrolled urban development, resulting in irregular/haphazard development in both rural and urban areas. The change in morphology has triggered adapting strategies to curb climate change.

Climate change has not been considered in master planning because it is a recent phenomenon and its nature is non-interventionist. The implications of climate change on the Urban Development and Management in the Jos Metropolis are social, economic and political impacts manifested in the unequal distribution of facilities, utilities and services. In this environment, natural increases in population and rural-urban migration has been observed as confirmation in chapters 2 and 3 and also observed by Wapwera & Dung-Gwom (2009). This puts pressure on the resources available creating the following pressures as can be seen in Table 5-3.

**Table 5-3: Pressure on different aspects in Jos Metropolis**

 Inadequate security in Jos Metropolis and environs.
 Transportation, traffic control and congestion.
 Inadequate recreational facilities etc
 Little or no data on the quality of some fundamental facilities, utilities and services.
 Overstretching of the existing infrastructure, inadequate access to facilities such as water, light, housing and transport etc.

Source: Wapwera & Dung-Gwom, 2009

In the outer part of the metropolis (rural area) due to rural – urban migration a lot of problems are inherent. The policies made that concern infrastructures are urban biased (urban bias theory). Thus rural areas are characterised by the following characteristics as identified by Wapwera & Dung-Gwom (2009) in an earlier study and can be seen Table 5-4.

**Table 5-4: characteristics of the rural areas in Jos Metropolis**

✚	Bio-diversity measures that are currently in use have been threatened in a situation whereby about 65 % of its plants and animals were affected. Thus the prediction by FAOs' that by 2085 there will be a reduction in food production.
✚	Good air and soil temperature that is good for “fadama” farming enabling the cultivation of vegetables during the dry season, which gives it the name ‘vegetable basket’ of the nation.
✚	Irrigation farming ‘fadama’ is high in this area. It has brought about increased revenues over the past 20 years to farmers in the regions.
✚	Forty (40%) of disused mine ponds on the Jos Plateau are in the rural areas. If properly harnessed, it will go a long way to creating job opportunities and improve agricultural productivity in this environment.
✚	Stocks of biodiversity, forest, wet lands, clean water, productive soil and natural processes that has been mining ponds due to human occupation.

Source: Wapwera & Dung-Gwom, 2009

Based on this study non-consideration of the impact of climate change in the master plan and the morphology of Jos Metropolis the following conclusions were drawn as recorded in Table 5-5.

**Table 5-5: Conclusions about the physical morphology of Jos Metropolis**

✚	Built up areas that emerged have contributed to the change in the urban morphology see Figure 5-4 and Figure 5-5.
✚	Climate change over time has impacted on rural morphology as crops lands and animals are being exposed to threats and developing countries (such as Nigeria) do not have mitigation measures in place to address the issues.
✚	Factors that influence changes in rural and urban environments/morphology include urbanisation, increased population, dwindling resources, communal conflicts, poor land management, vulnerability, migration, among others as observed in chapters two and three.
✚	The resources affected are those dependent on climate especially those in the rural environment which help in servicing the urban environment.
✚	There are significant implications of climate change on the urban and rural environments of the Jos metropolis. This has been manifested in the continuous crises recorded in Jos Metropolis and its environs.

Source: Wapwera & Dung-Gwom, 2009

Adapting to climate changes in the environment urban and rural inhabitants have embarked on several strategies for survival which has become a major problem because the master plan does not have any measures in place to mitigate their impact.

The major cause of climate change world over is global warming. Fuelled by different greenhouse gases that causes the ice to melt in the northern hemisphere which raises the

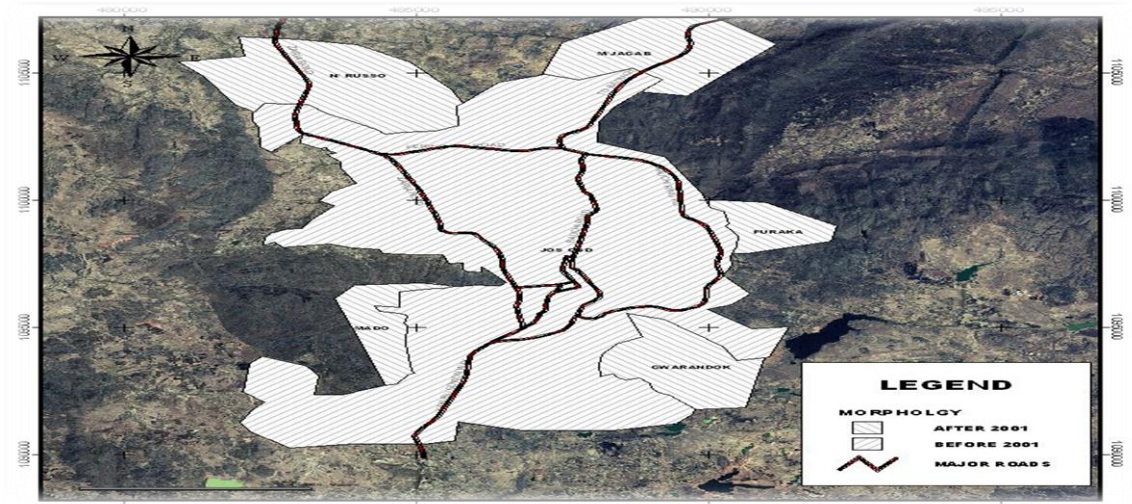


level of the sea. Climate change has a rate of about 3% which is projected to increase to double digits in the next ten years.

The results obtained show the causes of climate change in the area of study are changes in temperature and rainfall but the factors that are responsible for impact of climate change on the Jos Metropolis are; population, resource exploitation, poor conflict management and housing development.

The data obtained from the University of Jos weather station gives a picture of the elements that affect the climate, shows temperature variability and rainfall change ranges. These factors cause the environment and people to be vulnerable to a lot of negative influences which affect growth and development. FAO, has predicted that by 2085, 11 % of arable land in developing countries could be lost to climate change with the loss of cereal production in more than sixty five (65) countries, where eighty (80%) of these are in Africa.

This is because developing countries often lack institutions and infrastructure for dealing with climate change. Therefore there is a need for measures to mitigate the effects of climate change since agriculture plays a vital role in national economics and subsequently determines the availability of basic infrastructure. This is also confirmed in this research and agrees with views of Obateru, (2001) which can be found in Chapter 3. In the urban environment, in the central part of the metropolis, there is infrastructure but it is unevenly distributed especially in the settlements that have just emerged which have expanded the boundaries of the Jos Metropolis. See Figure 5-6.



**Figure 5-6: Imagery showing changes in the morphology of the Jos Metropolis before and after 2010**

Source: Wapwera & Dung-Gwom, 2009

Figure 5-6 shows that along Bauchi Ring Road (Furaka), Tudun Wada Ring Road (Mado), Gwarandok, Naraguta Russuo, and Gidan moi Jagab are emerging settlements. These settlements are characterised by inadequate drainage systems, poor access roads, haphazard developments, substandard materials used for buildings and poor utilities, services and facilities as observed by respondent X4, who stated that the provision of infrastructure definitely is on the right path but there is still much more that needs to be done immediately. The Government is concentrating on roads and street lighting which is admirable, but there are many different infrastructure needs that the Government is involved with and one feels that the Government is trying to respond positively to all that is required but that what is needed is time.

In Jos Metropolis, resources have been destroyed due to the 2001, 2008, 2009 ethno-religious crises where many lives and properties (resources) worth billions of Naira were lost. When this happens a greater level of competition occurs for the resources available as observed by 80% of the respondents who mentioned that security is the greatest challenge facing the metropolis right now. The whole idea of the master plan is that once properly implemented it will improve security because the problem that occur due to changes in many neighbourhood areas are supposed to be addressed by the master plan.

The issue of flooding in Jos Metropolis in 2012 is an indication that climate change is happening, how is that reflected in this study and its implication?

Respondent X1 observed that the 2001, 2008 and 2010 ethno-religious crises in Jos Metropolis and its environs has made it very difficult for planning officials to enter, inspect and carry out development control in certain zones in the metropolis. Settlers within such zones then build on the water courses and close to the banks of the river Delimi in the Rikkos area. In August, 2012 due to the effect of climate change, heavy rainfall was recorded and the river Delimi flooded its banks destroying all buildings close to the river and killing about 80 people, and destroying several other properties within the zone.

These are physical constraints but it was suggested that such areas should be converted to green zones where a protective green belt could be developed. The water courses will serve as collectors for surface water, runoff and sewage lines while the occupants of such areas would be re-settled and compensation paid if they have approved building documents, (for more information see Appendix C). This will provide an opportunity for the community to install drainage infrastructure as observed by Dung-Gwom, (2008). This is a major constraint in the implementation of the master plan. See the Appendix D.

The relief map of the metropolis shows continuous rock outcrops which make it difficult for development to take place, it creates extra costs due to the difficult terrain and this has constrained Urban Development and Management in the metropolis. The dense dendrites of small stream channels which could be very dangerous as flooding can easily occur can be seen all through the area.

However, while this remains a constraint it also creates opportunities, these physical characteristics gives rise to deposits of minerals within the region. This can be a source of raw materials for many industries and can create job opportunities for inhabitants and a source of revenue for the State and Nation as a whole.

Dung-Gwom (2008) observed that Jos is a colonial creation and its history and early growth is closely tied to the tin mining industry on Jos Plateau. From a small town of less than 10,000 in 1930, 20,000 in 1950, the population grew to over 155,000 in 1973

and to over 600,000 in 1991. Currently, the population of the city is estimated to be about 1.3 million people as observed in the NPC, 2009. Adjoining these areas are other settlements that have emerged over the years as a result of various factors that have posed challenges to implementation of the urban master plans in Jos.

Finally, it can be concluded that most of the PL expected to assist in the control of Urban Development and Management in Jos Metropolis have not been adequately employed as their usage has been constrained by one factor or the other. A majority 80% of the respondents agreed that the state has not made any attempt to adapt legislation such as; 1992 URP Law, GJUMP 2008-2025, Riyom Urban Master Plan, Angware Master Plan, Climate Change Initiatives, Urban Sustainability Issues and many more, to suit the region, Therefore, it is impossible to ascertain what PL applies in the state which is a very serious condition.

The relationship between the numerous PLs and constraints might be insignificant, yet the legislations are not addressing the problem of uncontrolled development in the study area. Based on the aforementioned, it could rightly be concluded that the PLs are the best available way for addressing different issues that concern Urban Development and Management, they might be constrained, but not significantly. The legislations, either good or bad can be made to address the problems for which they were formulated. The government should provide an enabling environment for the legislations to function adequately ensuring controlled Urban Development and Management.

In conclusion, IPCC (2001, p4) observed that the climate change issue is part of the larger challenge of sustainable development. As a result, climate change policies can be more effective when consistently embedded within broader strategies designed to make national and regional development paths more sustainable. Climate change and sustainable development are related and if considered together in any planning approach will bring about a viable system.

This links the discussion to administration as an integral component of the institutional framework within which the Jos Metropolis operates.

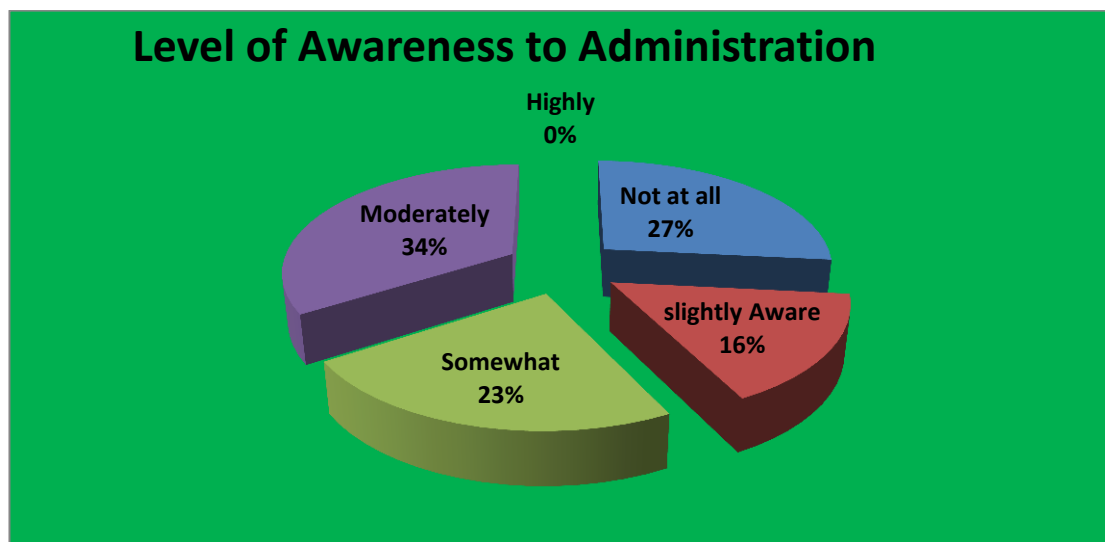
## 5.5. THE ADMINISTRATION STRUCTURE AND THE IDENTIFIED CONSTRAINTS

This section presents the administrative structures; commission system and council – manager system in relation to the constraints.

The sources of data for these constraints and the administrative structures are drawn from the questionnaire, face-to-face interviews and documents. These constraints affect the performance of administrative structures. The analysis of variance (Anova-F ratio) was used to analyse the variables (constraints) affecting the administrative structures. Hence, the structure obtained for the Ministries, Boards and Department in this study.

### 5.5.1. Data Presentation for Administrative structure and the identified constraints

The variables used as data for the Administration structures (independent) were drawn from the commission system and council-manager system and composed the first group. The second group used are drawn from the variable constraints (dependent; the 8 constraints). Both the dependent and independent variables are measured based on the responses from the Likert scale 1-5 which is ordinal. For measure within-subjects factors, administrative structures & constraints see Figure 5-7.



**Figure 5-7: Responses for within-subject factors for administration structure & constraints**

Source: Authors Field work, 2013

Figure 5-7 shows the responses regarding constraints that have affected the administrative structures of the Planning Authorities in Jos Metropolis.

### **5.5.2. Data Analysis for administrative structure and constraints identified**

The result of the multivariate analysis is presented as follows:

In the interaction between variables of administrative structures and the constraints there is no significant difference between the administrative structures and the constraints variables, Wilks Lambda = 0.75,  $F(7, 28) = 0.68$ ,  $P=0.15$  and the Partial Eta Squared = 0.91 and Wilks lambda = 0.75,  $F(7, 28) = 4.48$ ,  $P=0.001$  and the Partial Eta Squared = 0.25. Furthermore the main effects for comparison between the two types of variables administrative structure and the identified constraints are significant as  $S = F(6, 29) = 0.60$ ,  $P=0.009$  and the Partial Eta Squared = 0.12. See appendix (F).

Using the common guideline of 0.01 is the effect is small, 0.06 is the moderate effect and 0.14, is the large effect. The value to be used for determination is the Wilks Lambda. It states that if Wilks Lambda is less than 0.5 and the value calculated is 0.000 it means it is statistically significant.

Therefore, in the analysis the interaction between variable administrative structures and the identified constraints is not significant.

### **5.5.3. Discussion of the findings on administrative structures and constraints identified.**

The analysis revealed that the effect is not statistically significant but there is evidence to show case that; evidence from the documents reviewed and face-to-face interviews shows that the relationship between the administrative structure and constraints are positive or significant as the administrative structure determines the functionality of the Planning Authorities within the institutional framework.

The administrative structure for planning authorities should have influenced the way the master plan should have been implemented. This is because it determines, to a large extent, the way instructions are passed from either top-down or bottom-up. The structure of administration varies from one Planning authority to another. See Table 5-6.

**Table 5-6: Planning Authorities and type of structure used**

s/n	Planning Authority	Type of Structure Used
1	Jos Metropolitan Development Board	Council – Manager system
2	Ministry of Lands Survey & Town Planning	Commission
3	Ministry of Housing and Urban Development	Commission
4	Lands Section in the Local Government	Council – Manager system

Source: Authors Field work, 2012

The question is how have the identified constraints affected the type of structure in operation? The next section considers how the administrative structure affects the operation of the Planning Authorities and the subsequent non-significance of the constraints.

#### **5.5.3.1. The Commission system for MLSTP & MHUD**

The ministries considered in this study are the Ministry of Lands Survey & Town Planning (MLSTP) and the Ministry of Housing and Urban Development (MHUD). The administrative head of the ministry determines how the operation and procedures of the ministry takes place. The commissioner is the administrative head and is usually politically appointed. The implication of this is that the actions of the commissioner might be towards his political ambition which has a detrimental effect on the ministry as professionals cannot discharge their duties appropriately due to political bias.

The hierarchy in the organisation of the MLSTP & MHUD shows the level and direction of the flow of information is from the commissioner to the deputy directors. For the purpose of achieving controlled Urban Development and Management in urban areas of the state the ministry has area offices. The administrative structure in the commissions does not favour controlled urban development and management; this is due to the fact that the headship of the commission lacks consistency in governance, this does not encourage continuity of policies. This has frustrated the effort of the professionals involved in the monitoring and implementation of the plan, bringing about delay in the processing of documentation.

Eighty percent (80%) of respondents observed that the process and procedures used in the ministry are questionable and emphasised that red tape creates undue delay and problems especially with regard to the rules and regulations. What is clearly important is what needs to be done and how it should be done without so much red tape.

Officials have used questionable methods to their advantage and this has become an issue of corruption as much as an element of institutional deficiency (theory verification). As all payments are subject to collection of demand notices for payment at designated banks because some payments made to some officials were not receipted (payments are made but no receipt is given). In other word no proof to show that payments have been made. This means to say that the administrative structure, as it relates to the collection of funds, is porous and highly unreliable.

MHUD is the ministry that bears the responsibility for formulating policies and for tracking their implementation from start to finish. This ensures coordination of key issues, such as, housing being the major occupant of space and with the problems of haphazard growth and development in most urban centres in the state.

The ministry is new and bestowing such responsibility for formulating and implementing a plan is precarious because the ministry lacks the capacity and experience to carry out the task.

Furthermore, respondent X25 observed that the ministries don't have the staff qualified to do the job, as they have only two members of staff on secondment from another PA who are expected to go back to their original place of work. This has constrained the efforts of the professionals involved in the monitoring and implementation of the plan, bringing about delays in the processing of documentation.

These findings also confirmed another institutional deficiency where it was observed that there is inadequate man power and few qualified personnel to carry out the task, see the list of documents in Appendix B. Even though there are elements of corruption, the ministry has survived without a functional organisational structure. This has also verified the theory of institutional deficiency.

#### **5.5.3.2. The Council-Manager system for Lands Sections and JMDB**

This system affects both the Planning Authorities in the local councils (Lands sections in the local government) and the Boards which has managers to control the daily operations.

The 1992 Urban and Regional Planning Law that is yet to be enforced stipulate that....



*'Each local government authority should have an Urban and Regional Planning Department or section to carry out the functions of urban and town planning in the local areas'.*

As it stands URPDs are only available in Lagos state and in only one local government. It is structured as follows; it has an executive chairman and he has a deputy and is responsible to two arms of government, the legislative and traditional councils.

The lands section does not have autonomy, it operates within a section. This reduces its functionality as the procedures and processes involved in carrying out the activities of the section are too cumbersome and complex, making it difficult to control development within the jurisdiction of the urban section of the local government area. Monitoring in this section is so poor that it performs below expectation with the emergence of haphazard developments within and outside the urban areas, as observed by 20% of respondents. The Final Physical Development Plan (FPDP) for Angware, 2008-2018 wherein shows no structure for development control.

The said plan has not yet been passed into law and hence, has not been implemented four (4) years later. In the same vein it has no structure to control its development. The Riyom Master Plan 2009-2019 has also not yet been passed into law and implementation has not started three (3) years later.

This situation has been exacerbated because the heads of the local governments are politicians who are given a mandate to remain in office for the period of three (3) years. The case is not so different from JMDB which has the following as its departments to provide for a smooth administration both during military and civilian regimes; Town Planning, Public (Environmental) Health, Engineering, Estates and Buildings, Administration, Accounts, Audit.

The Board has six (6) departments with the heads of each department responsible for the daily running and implementation of policies and decisions in each department and is answerable to the general manager. The departments are as follow; Town Planning, Environmental Health, Estates and Buildings, Engineering and Administration and Finance (Accounts and Audit). Each of the departments performs specific functions to meet the main goal of the Board.

The main problem is that the Board of Directors dictates to the Manager how to manage the processes and procedures for ensuring effective control of development. The budget provided no detailed information but it was clear that the board was not properly funded. Equipment required for different tasks are highly inadequate, vehicles for distribution of relevant notices and the policies of the government also hindering a number of actions, and this affects the output and performance of the Board. This also confirms elements of the institutional deficiency theory. The theory of planning practice is also made manifest in the JMDB, a good organisation for industrial experience for interns at various levels, having gone a long way to enriching the town planning courses in tertiary institutions where training takes place and where the board sends employees for industrial experience for different durations.

Finally, all the administrative heads of the all the Planning Authorities are politically appointed. The ministries are headed by commissioners, the board is headed by a politically appointed manager and the chairman of the local government council is either elected or appointed without ensuring that they have a controlled Urban Development and Management.

In conclusion, this chapter set out to critically analyse the current institutional framework of urban and regional planning in Nigeria within which the Jos Metropolis lies. It uses the identified constraints as a framework to analyse the current institutional framework within which the Planning Authorities exist in Jos Metropolis and how the constraints have affected the functionality of the framework towards the implementation of the GJUMP and other related plans within the metropolis. The results from the analysis and discussion shows that the identified institutional framework has been constrained leading to a non-functional framework, based on this result it could be concluded that objective 2 of this research has been achieved.

## **5.6. SUMMARY**

This chapter sought to critically analyse the current institutional framework of urban and regional planning in Nigeria within which the Jos Metropolis lies and the following is a summary of the findings;

- 📌 The institutions are constrained but not statistically significantly, but interestingly, the institutional framework is unable to control the Urban

Development and Management as the flow of information and resources does not have a specific direction within and between the components of the identified institutional framework, as the constraints are spread across the two tiers in the institutional framework.

- ✚ The constraints have affected the Planning Authorities making it impossible for the master plans to be implemented, hence, it is in agreement with the statistical analysis saying that the effect of the constraints on the organisations (Planning Authorities) is statistically significant. These challenges have constrained the Planning Authorities making it impossible for the Master Plan to be implemented.
- ✚ The PLs are constrained but not statistically significantly. The Master Plans have not been passed into law to allow for the implementation of the Master Plan and the other planning legislations have not been considered and accommodated in the plan, for a controlled Urban Development and Management within the study area.
- ✚ The administrative structures are constrained but not statistically significantly. The two types of administrative structure identified for the Planning Authorities does not encourage seasoned civil servant (planners), but politicians who come and go and do not favour controlled Urban Development and Management within the study area.
- ✚ The theoretical clarification yielded and confirmed theories which include: the theory of urban governance and management which is applicable to Nigeria is the neo-institutional/institutional deficiencies theory, planning practice, as well as urban complexity theory.

The next chapter presents the outcomes of the analysis and present the empirical findings about the effectiveness of the urban and regional planning system and the state of the urban and regional planning in Jos Metropolis in terms of urban development and management.






## **CHAPTER 6. EFFECTIVENESS OF THE URBAN AND REGIONAL PLANNING SYSTEM IN JOS METROPOLIS**

### **6.1. INTRODUCTION**

This chapter seeks to examine and present the empirical findings about the effectiveness of urban and regional planning (URP) in terms of urban development and management (Urban Development and Management). The effectiveness of the urban planning system (Urban Planning System) was considered based on urban governance (Urban Governance) (institutional), urban management (Urban Management) (Development control goals and measures) which is the technical aspect. The administration (structure) operates using the law (laws and ordinances) which is generally an embodiment of regulations to achieve the stated goal of the Urban Planning System.

The findings from face-to-face interviews, questionnaire responses and document reviews presented through data analysis, presentation and discussion concerning the institutional framework and constraints in the Urban and Regional Planning System were presented within chapter five of this thesis. Using the findings, the initial concepts presented within chapters two and three were refined. Within that context, chapter five has critically analysed the current institutional framework for urban and regional planning in Jos Metropolis Nigeria using the identified constraints as framework.

Consequently, this chapter is structured as follows:

-  Interpretation of the output from Spearman Rank Order Correlation ( $\rho$ )
-  Urban governance (institution)
-  Urban management, development control goals and measures (technical)
-  Administrative (operational)
-  Legal (laws and ordinances)

These are considered to be components of the Urban Planning System used as a basis for analysis and discussions to meet the objective of the chapter.

#### **6.1.1. Interpretation of output from Spearman Rank Order Correlation ( $\rho$ ) of the components of the Urban planning system**

This is a bivariate correlation coefficient (non-parametric as observed by Pallant, 2010; pg 126) designed to explore the factors that determine the effectiveness of the components of urban planning which affect urban development and management in Jos Metropolis. The main question to be considered in this chapter is; what is the relationship between the effectiveness of the various components of the urban planning system in terms of Urban Development and Management in Jos metropolis?

To determine the direction of the relationship an upward relation indicates a positive relationship and a downward line indicates a negative correlation. The negative result does not necessarily mean an absence of correlation, as observed by Pallant, (2010). Two sets of variables are required, either continuous or dichotomous (two variables), and what the Spearman Ranks does is to describe the relationship between the two continuous variables in terms of both strength of relationship and direction.

Finally, it is also determines the strength of the relationships using the scale suggested by Cohen (1988) stating that; with  $\rho$  value  $\rho = .10$  to  $2.9$  it is small correlation,  $\rho = .30$  to  $.49$  it is medium correlation and  $\rho$  value of  $.50$  it is large correlation. With this scale the interpretation of the output of correlation was obtained, even though it is dependent on the way the variables were scored, hence there is a need to always check with the questionnaire.

The results obtained from SPSS using these variables were used to discuss the implication of the result of the effectiveness of the components of the Urban Planning System in Jos Metropolis.

From the output of correlation, between the total institutions and total technical, for effectiveness each component is present with two or more results of  $\rho$ . Although the values might be similar or different, it is always good to test the statistical significance of the correlations reported. The significant levels would be used to determine the difference in the correlations observed for the groups (institutions & technical,

operational and laws or ordinances) and when there is no real difference in the strength of the relationship for the two groups considered. When the value for the variable is less than 0.5 and the significant value is 0.000 it means that it is statistically significant.

Literature (Chapters 2 and 3) has shown that the effectiveness of the Urban Planning System in terms of Urban Development and Management is dependent on the performance of each of the components to achieve controlled Urban Development and Management. From the field survey and the documents reviewed it was clear that each component is determined by a set of its variables.

Without deviation from the aim and specific objective of the research these components are the main sources which provide the data for analysis and results from the statistical, content and thematic analysis are presented in each of the sections. For the purpose of this study the empirical section would be considered under three main headings namely; data presentation, analysis and discussion for each of the components of the Urban Planning System which determines effective Urban Development and Management.

This links the discussion to the factors that determined the effectiveness of urban governance (institutions) using the Great London Authority (GLA) as a basis for comparison to determine the effectiveness of the existing Urban Planning System in Jos Metropolis.

## **6.2. EFFECTIVENESS OF THE URBAN GOVERNANCE (INSTITUTION)**

This section seeks to examine the effectiveness of the institutions (urban governance) in the Urban Planning System in terms of Urban Development and Management using the variables considered under urban governance.

Institutional effectiveness can be examined by careful consideration of the elements of good urban governance which has the involvement of multiple factors from territorial levels of government (State and Local government) and how these are effective as the components of the Urban Planning System is being organised to bring about good governance at all the levels represented in the jurisdiction to ensure Urban Development and Management.

The Spearman Ranks Correlation Coefficient ( $\rho$ ) was used to analyse the variables.

### 6.2.1. Data Presentation for Urban Governance (Institutions)

The variable used as data from the institutions (adequacy of funding provided by the government, creating awareness about development control, consistency in governance to continue with development control, non-participation of major stake holders (broad-based) and effective communication from the planning authorities to the public. All variables were measured based on the responses from the Likert scale 1-5 which is ordinal. The measure of the relationships determines correlation in the sub-components of the component for the effectiveness of the institutions (urban governance) see Table 6-1.

**Table 6-1: Data presentation for the components of institutions**

<b>Variables Coded</b>	<b>AFUGEF</b>	<b>CAUGEF</b>	<b>CGUGEF</b>	<b>PMUGEF</b>	<b>ECUGEF</b>
<b>AFUGEF</b>	1.000	.330**	.373**	.446**	.596**
<b>CAUGEF</b>	.330**	1.000	.798**	.537**	.550**
<b>CGUGEF</b>	.373**	.798**	1.000	.613**	.653**
<b>PMUGEF</b>	.446**	.537**	.613**	1.000	.820**
<b>ECUGEF</b>	.596**	.550**	.653**	.820**	1.000

\*\* Correlation is significant at the 0.01 level (1-tailed). The value for p: 0.000 for all the values.

\*The meaning of the variables coded is as follows;

<b>Variables coded</b>	<b>Codes</b>
Adequacy of funding provided by the government	<b>AFUGEF</b>
Creating awareness about development control	<b>CAUGEF</b>
Consistency in Governance to continue with development control	<b>CGUGEF</b>
Participation of major stake holders (broad-based)	<b>PMUGEF</b>
Effective Communication from the planning authorities to the public	<b>ECUGEF</b>

See question 7-section 4 (urban governance institutions 1-5) in appendix H.

The output of the analysis is a matrix giving the correlation coefficient between the variables (.33, .37, .45, .59 ) and underneath is the significance value of this coefficient

(0.01) and finally the sample size  $(100)^3$ . The significant value for this correlation is less than 0.05.

#### **6.2.2. Data Analysis for the components of urban governance (institution)**

The result of the analysis shows that there is a strong correlation based on the scale suggested by Cohen (1988). Table 6-1 shows that the relationship is from a medium to strong significant relationship between the variables measured for the effectiveness of urban governance (institutions). The results obtained from SPSS using these variables are used to discuss the implication of the result of the effectiveness of the components for the urban planning system in Jos Metropolis.

#### **6.2.3. Discussion of the findings from analysis of the components for urban governance (institutions)**

From the above analysis it shows that the variables have a positive relationship with each other to determine the effectiveness of the urban governance (institutions) which eventually determines the control of Urban Development and Management in the right direction. Therefore, it means that it is effective. The GLA is considered to be the basis for consideration of the effectiveness for urban governance in Jos Metropolis. The result shows that there is effective control in the Urban Development and Management and it could be seen negating the fact on ground.

To start with, there is inadequate funding, by the government, for the Planning Authorities to control development at all the levels considered, see Budgets 2010-2012 in Appendix B. This was further justified by approximately 80% of the respondents who were of the view that the 2012 State Government budget for each of the Planning Authorities (Board & Ministries) was not adequate enough to run the activities of the Planning Authorities.

This has constrained most of the Planning Authorities from achieving their stated goals; see section 5.3.3. in chapter 5. The levels of government responsible for the provision of funds, in this case the state and local government, assigned to the PA within their jurisdiction.

The Planning Authorities are ineffective in controlling Urban Development and Management in Jos Metropolis because the funding from the government is grossly



inadequate, hence, the Planning Authorities use other sources such as revenue generated from the processing and approval of all vital documents such certificate of occupancy (C of O) or right of occupancy (R of O), building approvals and plan approvals amongst others. This process has been a major problem because it has been high jacked by a bureaucratic bottleneck leading to delays in approval of plans. This act affects the effectiveness of urban management as it is unable to help in controlling the rate of Urban Development and Management in Jos Metropolis.

The situation is different from the GLA Review, 2005-06 which observed that the GLA is mostly funded by direct government grant and it is also a perceptive authority, with some money collected allocated from the local Council Tax.

The media House (ministry of information) in Jos Metropolis, Plateau State, Nigeria does not work hand in hand with the Planning Authorities except on special invitation to cover and broadcast their activities, thereby bringing and creating awareness of development control (DC) within the study area. Hence, the level of awareness by the public, about the activities of the Planning Authorities, is very minimal.

Furthermore, there is no direct contact between the people and the Government as well as the Planning Authorities under each of the tiers that operate. Again, this has also given way to the non-participation of major stakeholders (broad-based). Seen in the way the proposed GJUMP was prepared, little of the input and opinions of stakeholders was included in the plan, as 70% of the respondents highlighted citing the document Sustainable Cities Programme, pg 5 stating that broad based stakeholder involvement should be employed rather than the master-planning approach.

Interestingly, this statement shows that master planning (Master Planning), which is utilised in Jos Metropolis Nigeria, calls for a framework for coordination. This is what pertains in most European Urban Planning System and is typical in areas such as London, Great Britain.

The consistency in governance to continue with DC is a major problem, each government that is elected tries to start from an entirely different point. Government administration has different areas of emphasis and is not interested in continuation of the previous administration. The white paper, on the report of the Investigation Panel

into the operations of JMDB in July 2008, observed that the previous Jos master plan 1975-2005 and the proposed GJUMP 2008-2025, have seen more than four administrations and numerous heads of the Planning Authorities.

Hence, this inconsistency in governance has affected the performance of the Planning Authorities as it pertains to Urban Development and Management over time. The Planning Authorities have passed through a series of changes in both structure and scheduling of duties which has always been inconsistent with pre-stated schedules for the organisations.

Based on the above discussion and considering the various components that make up urban governance (institution), it shows it is not effective as a part of the Urban Planning System which is expected to control Urban Development and Management in Jos Metropolis. Urban governance (institution) is enhanced by the government institution, which is at the state or local government level, which subsequently manages the Planning Authorities within their domain.

Whilst in Master Planning stakeholders might not necessarily be involved in the preparation of the plans, for spatial planning (Spatial Planning) the stakeholders are fully involved as the approach employed is bottom-up problem solving rather than top-down decision making which has been the order of the day. The consistency in governance has ensured continuity over time; hence, no gap is created for any lapse in urban development and control.

### **6.3. EFFECTIVENESS OF THE URBAN MANAGEMENT (TECHNICAL); DEVELOPMENT CONTROL GOALS AND MEASURES**

This section seeks to examine the effectiveness of the (technical) urban management (Urban Management) in the Urban Planning System in terms of development control (DC) to ensure Urban Development and Management using the variables considered under Urban Management.

The effectiveness of the Urban Management (technical) can be examined by careful consideration of the variables from control; height, space and density control). Effective use of zoning regulations (building line regulations), adopting and implementing development control standards and adequate skilled man power to ensure strict

compliance with the development control and planning system in use (master planning) and how these are effective as components of the Urban Planning System at all the levels represented in the jurisdiction to ensure Urban Development and Management.

In Jos metropolis, there are multiple Planning Authorities and these include; JMDB, MLSTP, MHUD and the Lands Sections that are all affiliated to the state or local government area. Due to this affiliation, the effectiveness of the Urban Management (technical) would be determined based on the functions, roles and responsibilities of the Planning Authorities in Jos Metropolis.

The Spearman Ranks Correlation Coefficient ( $\rho$ ) was used to analyse the variables.

### **6.3.1. Data presentation for Urban Management (technical); development control goals and measures**

The variable used as data from the Urban Management (technical) were measured based on the responses from the Likert scale 1-5 which is ordinal. The measure of the relationships is to determine correlation in the sub-components of technical (urban management) as show below in Table 6-2.

**Table 6-2: Data presentation for the Components of urban management (technical) Spearman's  $\rho$  Correlation Coefficient for urban management (technical)**

<b>Variables Coded</b>	<b>CTUMEF1</b>	<b>EUUMEF2</b>	<b>AIUMEF3</b>	<b>ASUMEF4</b>	<b>PSUMEF</b>
<b>CTUMEF1</b>	1.000	.522**	.673**	.510**	.591**
<b>EUUMEF2</b>	.522**	1.000	.565**	.564**	.499**
<b>AIUMEF3</b>	.673**	.565**	1.000	.671**	.682**
<b>ASUMEF4</b>	.510**	.564**	.671**	1.000	.750**
<b>ECUGEF5</b>	.591**	.499**	.682**	.750*	1.000

\*\* . Correlation is significant at the 0.01 level (1-tailed). The value for p: 0.000 for all the values.

\*The meaning of the variables coded is as follows;

<b>Variables coded</b>	<b>Codes</b>
Control (Height , Space, density control)	<b>CTUMEF1</b>
Effective use of Zoning regulations (Building line regulation)	<b>EUUMEF2</b>
Adopting and implementing Development control standards	<b>AIUMEF3</b>
Adequate Skilled Man power to ensure strict compliance to development control	<b>ASUMEF4</b>
Planning System in use (Master planning ) to support development control	<b>PSUMEF5</b>

See question 7-section 4 (urban governance institutions 6-10) in appendix H.

The output of the analysis is a matrix giving the correlation coefficient between the variables (1.0, .52, .67, .51, .59 ), underneath is the significance value of this coefficient (0.01) and finally the sample size (100)<sup>3</sup>. The significant value for this correlation is less than 0.05.

Therefore, there is a very strong correlation in the relationship between the variables.

### **6.3.2. Data analysis for the components for urban management (development control goals and measures) technical**

The result of the analysis shows that there is a strong correlation based on the scale suggested by Cohen (1988). Table 6-2 shows that the relationship is a medium to strong significant relationship between the variables measured for the effectiveness of urban management (technical). The results obtained from SPSS for these variables are used to discuss the implication of the result of the effectiveness of the components of the Urban Planning System in Jos Metropolis.

### **6.3.3. Discussion of the findings from analysis of the components of urban management (Technical)**

From the above analysis the variables have a positive relationship with each other to determine the effectiveness of urban management (technical) which are the main elements of development control for effective urban development and management in the metropolis.

The positive relationship obtained from the analysis shows effectiveness in Urban Management, but why is there a high level of haphazard development within the metropolis and its environs? See section (Interpretation of output from mixed between-within Anova, pg 165 and 2.4). Based on this fact, comparing information from data

analysis and data from secondary sources it could be seen having contradictory issues associated with it.

There is a problem with the DC and Planning Authorities to control development at all the levels considered. Non-compliance with the regulations by both developers and DC staff in Planning Authorities has remained high as there have been problems such as; control of height, space and density. Due to non-compliance or adherence to set standards the Planning Authorities have been constrained from achieving their stated goals, this is confirmed by JMDB (2006) and can be found in Appendix C.

This makes Planning Authorities ineffective in managing urban development and management, because the entire activities of Planning Authorities are about enforcing and ensuring strict compliance with the planning standards for development control and management. The problem of non-compliance with standards was observed by respondent X6, that another area of concern is housing and development hence, the housing department ensures that the building section adheres to the approved standards.

Because planning standards are not strictly adhered to the haphazard development of houses results in uncontrolled development. Contrary to this in the GLA there is always a check on the DC, and consequently, the development of the entire area is checked, with the help of the other departments such as police fire and emergency planning as observed in the GLA Review (2005-06).

Furthermore, when considering the functions, roles and responsibilities of Planning Authorities, 60% of the respondents were aware that local surveying services are available in the Land Sections and the preparation and production of site plans are products of such an exercise. Land administration is a major service provided by Lands Departments in ministries or Lands Sections in local government. They coordinate the processing of the land titles ensuring that encroachment cases are sorted out as well as the preparation and production of layouts. More details about land issues can be found in section 5.4.3.3. in chapter 5. It is a confirmation of what obtains in 2.4.3. of the section not effective because 3.5.4.2. serves as a deterrent towards achieving controlled Urban Development and Management in Jos Metropolis.

There is a need for the improvement and effectiveness of Lands Sections in local governments as the Planning Authorities are responsible for various activities to ensure the implementation of various policies, plans and programmes in the metropolis. The Planning Authorities have a special section or department called DC.

The DC sections serve notices to erring developers who are building without due approval from the Planning Authorities responsible. A notice is a document served by the Board's Development Committee notifying the developer, or client, about an action to be carried, out as explained earlier on in this section. The notices usually contain the location of the building, the stage of development of the building, the development, the reason for the notice and the action to be taken.

The notice is a very important tool in the DC section of the Planning Authorities. For instance, JMDB monitor the DC within the metropolis using planning scouts. They check and report back on what they have observed within their zones to zonal officers, who in turn report to the Planning Department who then initiate the necessary action. While this is the case in Jos Metropolis, in Britain the GLA covers 32 London boroughs and the inner City of London as observed by GLA Review (2005-06).

Subsequently, as way of identification of the issuance of a notice the structures are marked with either a red or yellow "X" depending on the team that serves the notice. Figure 6-1 and Figure 6-2 clearly show how this operates.



**Figure 6-1: Marking the structure 'X' with red for demolition**

Source: Author's Field work, 2012



**Figure 6-2: Marking the structure 'X' with red for stop work**

Source: Author's Field work, 2012

The implication of Figure 6-1 and Figure 6-2 is that there is a problem in that the Planning Authorities are incapacitated by inadequate man power to ensure strict compliance with DC, as observed in section 5.3.2. Previous studies have proven that there is high level of unskilled man power to ensure strict compliance with regulations and this was confirmed by 90% of the respondents who observed that the numerous Planning Authorities (planning system) are highly under staffed and do not have the correct equipment to adequately do their work. There is no comparison with the information obtained from the GLA review which states that there are about 600 members of staff to help the Mayor and the authority in the discharge of their duties to ensure Urban Development and Management.

The system of planning that operates is another problem that has affected the effectiveness of urban management. Considering the characteristic of the master planning approach, which is rigid and long term and places emphasis on land use, has severely constrained the Planning Authorities. For instance, the previous GJUMP 1975-2005 and the proposed (GJUMP) 2008-2025, have not been implemented as expected.

About 75 % of the respondents feel that this is due to the nature of the planning approach in that the system is not effective having rigid approach and not meant for an increasing population. The population in Nigeria and Jos is dynamic making the Master Plan irrelevant and inadequate for bringing about Urban Development and Management in Jos Metropolis.

The Planning Authorities have passed through a series of changes in both structure and scheduling of duties which have always been inconsistent with the main aim of trying to implement the plans to bring about controlled urban development and management.

The implication of the ineffectiveness of the urban management (technical) is; poor development control and non-compliance with standards for height, space and density control, ineffective use of zoning regulations and negligence in adherence to building line regulations, poor adoption and implementation of development control standards and the high proportion of inadequately skilled man power to ensure strict compliance with development controls in addition to the strict compliance with an outdated and inappropriate planning system (master planning) which is rigid, static and old fashioned for the dynamic population in the study area as observed in chapters 2 & 3.

Urban management (technical) is enhanced by the government in place at the time, in this case state or local government level, which subsequently manages the Planning Authorities within their domain. The performance of the Urban Management component of the Urban Planning System is determined by the set goals and measures needed to ensure controlled Urban Development and Management.

Wong, (2000) has observed that in Britain there has been a continuous process of delegation of power to local and regional actors to carry out monitoring and data collection, strengthening the process of centralisation of funding and performance control under the guidance of central government.

This situation is similar to the situation in the study area, yet it is not effective. The process of developing a plan seems to be dependent on experience even though the fault with this lies in the process of developing the plans. In order to move beyond traditional methodology to prepare and ensure effectiveness in Urban Planning System, strategic planning must consist of a clear process for planning that involves all the tools used by adequately skilled employees, using all the technical potential in the Planning Authorities; personnel, instruments, rules and regulations such as the DC. Consequently, the existence of various professional bodies, authorities and institutions can serve as a guideline in the execution of their activities. This pre-supposes that the Planning Authorities have multidisciplinary professionals from recognised institutions working in their different departments. See Table 6-3 for a list of professional bodies.



**Table 6-3: Professional Bodies**

	<b>Professional Bodies</b>	<b>Acronyms</b>
<b>1</b>	Council of Registered Engineers of Nigeria	COREN
<b>2</b>	Town Planners Registration Council	TOPREC
<b>3</b>	Architects Registration Council	ARCON
<b>4</b>	Nigerian Institute of Personnel Management	NIPM
<b>5</b>	Council of Environmental Health Officers	CEHO

Source: Author's Field work, 2012

These professionals are employed by the Planning Authorities to provide expertise in the various professions such as Builders, Architects, Civil Engineers, Estate and Quantity Surveyors, Environmental Health Officers and Town planners. Ninety percent (90%) of the respondents asserted that there are very few that are registered members of the professions. This makes it very difficult for planning authorities to improve their output and performance in general. In the case of the GLA, the professionals are only employed when they are registered to ensure that a properly qualified professional is at work. This brings about improvement in performance and a rise in standards. The Planning Authorities and stakeholders in the study area consider the current situation, what has been accomplished over the past year and any problems that they encountered. Respondent X20 observed that effort is being made to set the stage for understanding the past in order to overcome any obstacles that might prevent the Planning Authorities from achieving the stated goal.

Furthermore, an evaluation of the future for the Planning Authorities is required to ensure that the correct assumptions are made about what the future responsibility of Planning Authorities and about the potential contributions they can make to in the future to ensure DC.

The presence of numerous Planning Authorities in Jos Metropolis has also contributed to creating, or compounding, the problem of Urban Development and Management due to the conflict in their roles, functions and responsibilities. For an in-depth detailed, clarification the next section will consider the activities of Planning Authorities in Jos

Metropolis, Nigeria by identifying and comparing their roles, functions and responsibilities as they impact on urban development and management in the region.

The discussion will be on the Planning Authorities showing clearly the functions, responsibilities and role and how they are related, and a reflection on the areas of conflict at various levels (tiers of government as discussed in chapter five) as there is no linkage between them. Each planning authority has a clear role, function and responsibility but similar to others hence roles are not clear, functions are overlapping, and responsibilities not fully discharged. For more explanation about the roles, functions and responsibilities of the Planning Authorities in relation to DC see article by Wapwera & Egbu, (2013).

Before proceeding with the discussion on the functions of the Planning Authorities, a brief discussion about development control is apposite.

#### **6.3.4. Development Control by Planning Authorities**

DC, otherwise known as, planning control is a management component of the United Kingdom's planning system for town and country planning through which local government regulates land use and new building control. It relies on a "plan-led system" whereby urban and regional development plans are formed and the public is consulted.

Ratcliffe, Shephard & Stubbs (2002) observed that any development requires planning permission, which is granted or refused by reference to the development plans as a material consideration. The term "development control" is often abbreviated to DC. Previous studies have shown that there are 421 local planning authorities (Planning Authorities) in the United Kingdom while in Nigeria there are 774 local government areas (Planning Authorities) and yet they do not have planning departments or sections.

Development involving mining, minerals or waste disposal matters is dealt with by county councils in non-metropolitan areas.

Planning Authorities have roles, functions and responsibilities which include; formulation of policy, development control and implementation and are also responsible for; public acquisition and compensation, land administration and investigation and litigation amongst others. These services bring about many improvements which results

in successful development control by the Planning Authorities. Public acquisition and compensation, deed registry, investigation and litigation are essential units for service improvement and provision. The failure of Planning Authorities in the study area to ensure controlled urban development and management is manifested in many ways which include; haphazard development, slums, substandard housing wrongly configured and built with shoddy materials and instances of poor control such as buildings constructed under high tension wires etc. See Figure 6-3 for a clear illustration of the results of uncontrolled urban development.



**Figure 6-3: High Tension cables Passing over a Plot**

Source: Author's Field work, 2012

Planning conditions are imposed to ensure standards are met by the developer in order for acceptable developments to be produced. Sometimes, planning permission is granted subject to the applicant entering into a legal agreement depending on which act is in place at the time. The act might require that certain details must be done or money be paid to the PA. The payment becomes a source of revenue for the organisation and can be used for the improvement of the infrastructure serving the development before the development commences. Such revenues can only be requested if they are necessary to make the development acceptable and relate directly to the development proposed. This is a major and powerful tool in the hands of the Planning Authorities for achieving their stated goals.

Issues of this magnitude are carefully considered and provision made about initiatives and monitoring arrangements to avoid confusion and contradiction. Nadin (2006), outlined details about European and British planning reforms. It can be observed, in the

study area, that there are departments that are replicated in another ministry but which have no affiliation to each other. For instance, the Lands Section in the MLSTP is available in local governments but is not affiliated to MLSTP. The lack of affiliation between Planning Authorities makes Urban Management very difficult to achieve a controlled Urban Development and Management in the metropolis.

Finally, there is need for further research to provide intelligent information about the roles, functions and responsibility to serve the commission of spatial policies to an enlarged Jos Metropolis of 6 local governments with a specified scope. Based on these findings and the previous discussion it convenient to say that the Urban Management, which is the technical section of the Urban Planning System, is not effective in spite of the result obtained from the Spearman Rank Correlation Coefficient as being positively correlated.

#### **6.4. EFFECTIVENESS OF ADMINISTRATIVE (OPERATIONAL) COMPONENT OF THE URBAN PLANNING SYSTEM**

This section seeks to examine the effectiveness of the administrative (operational) component of the Urban Planning System by comparing it with the GLA in terms of Urban Development and Management by using the variables considered under administrative system (operational).

The effectiveness of the administration (operational) can be examined by considering the elements of the administration (operational) component of the Urban Planning System; commission system, council–manager system, coordinated administrative machinery, framework operation using the plans and policies provided to ensure development control and the lack of a strategic planning framework to tackle the physical planning problems. For these issues to be effective components of the Urban Planning System they have to be organised to bring about effectiveness in the operational (administration) component within the jurisdiction of Planning Authorities to ensure Urban Development and Management.

The Spearman Ranks Correlation Coefficient ( $\rho$ ) was used to analyse the variables.

#### 6.4.1. Data Presentation for Administrative (operational) Component of the Urban Planning System

The variable used as data from the administrative (operational) component of the urban planning system were measured based on the responses from the Likert scale 1-5 which is ordinal. The measure of the relationships is to determine the correlation in the sub-components of the component of the operational (administration) see Table 6-4.

**Table 6-4: Data presentation for the components of administrative (operational)**

Variables	CSAOEF1	CMSAOEF2	CAMAOEF3	FRMAOEF4	NSMAOEF5
CSAOEF1	1.000	.770**	.811**	.718**	.661**
CMSAOEF2	.770**	1.000	.744**	.756**	.655**
CAMAOEF3	.811**	.744**	1.000	.755**	.734**
FRMAOEF4	.718**	.756**	.755**	1.000	.719**
NSMAOEF5	.661**	.655**	.734**	.719**	1.000

\*\* . Correlation is significant at the 0.01 level (1-tailed). The value for p: 0.000 for all the values.

\*The meaning of the variables coded is as follows;

Variables coded	Codes
Commission System	CSAOEF1
Council – Manager System	CMSAOEF2
Coordinated administrative machinery	CAMAOEF3
Framework operates using the plans and policies provided to ensure development control	FRMAOEF4
No strategic planning framework in tackling the physical planning problem	NSMAOEF5

See question 7-section 4 (administrative (operational) 11-15) in appendix H.

The output of the analysis is a matrix giving the correlation coefficient between the variables (1.0, .77, .81, .71, .66) underneath is the significance value of this coefficient (0.01) and finally the sample size (100)<sup>3</sup>. The significant value for this correlation is less than 0.05.

#### **6.4.2. Data Analysis for the components administrative (operational) component of the urban planning system**

The result of the analysis shows that there is a strong correlation based on the scale suggested by Cohen (1988). Table 6-4 shows that the relationship is a very strong significant relationship between the variables measured for the effectiveness of the administration (operational). The results obtained from SPSS from these variables are used to discuss the implications of the result of the effectiveness of the components administration (operational) of the Urban Planning System in Jos Metropolis.

#### **6.4.3. Discussion of the findings from the analysis of the administrative (operational) component of the Urban Planning System**

The result of the analysis shows that the relationship between the variables has a highly positive correlation which determines the effectiveness of the administrative structure that helps the Planning Authorities to ensure effective Urban Development and Management in the Jos metropolis.

The highly positive relationship obtained from the analysis shows effectiveness in the administrative structure, but what happens with the high level of uncontrolled urban development in the Jos metropolis and its environs? (See section 5.6.3 in chapter 5). Based on this fact and comparing information from the data analysis, data from secondary sources and face-to-face interviews in addition to the result of the statistics, the results are compared with what takes place in the GLA.

The administrative structure for the Planning Authorities has influenced the way in which the master plan should have been implemented. This is so because it determines, to a large extent, the way instructions are passed from either top-down or bottom-up. The structure of administration varies from one PA to another. The big question that comes to mind is; how effective is the administrative structure of the Urban Planning System? Administrative regulations and guidelines are being written by policy makers to serve as planners in carrying out their duties effectively.

The next section considers how effective the administrative structure of the Planning Authorities is in determining the proportional Urban Development and Management in Jos Metropolis.

#### **6.4.3.1. The Commission system**

The commission system is the administrative structure identified in the two ministries used as case studies in this research. The ministries considered were the MLSTP and MHUD.

The MLSTP is divided into 5 major departments comprised of two general services departments and 3 professional departments each headed by a director who is a career civil servant and who must have registered with their relevant professional body. The professional departments are Lands, Survey and TP both of which are headed by directors answerable to the Permanent Secretary and the Commissioner. This organisational structure is also applicable to the MHUD ministry.

The Administration/Personnel Department controls the secret and open registries and also supervises the records registry of the Lands Department. For more effective monitoring a coordinator was appointed who is a senior officer in the ministry.

The General Service Department includes: Administration/Personnel Secretary, Administration and Finance and Supplies. The Personnel Department is concerned with the day to day administration of the ministry and is headed by the Secretary, (Administration and Finance) and supervised by the Permanent Secretary. The General Services Department controls the secret and open registries and also supervises the records registry of the Lands Department. See section 5.5.3.1. The Commission system for MLSTP & MHUD in chapter 5.

There is a future plan to create additional area offices for proper urban and semi-urban planning as observed in 5.6.3, in chapter 5. However, will the presence of these additional offices infer effectiveness in the management of development in most urban areas in Jos Nigeria? If not, then why the proliferation of offices?

The Greater London Authority Act 1999 and the Greater London Authority Act 2007, states that the GLA is the top-tier administrative body for Greater London, England. It consists of a directly elected executive Mayor of London and a 25 member assembly with powers of scrutiny.

It also consists of numerous bodies and subsidiary partnering with the GLA but it does not directly provide services itself.

The Lands Department, in MLSTP in the Jos Metropolis, is concerned with initiating the processing of applications for grants of statutory right of occupancy; the breakdown of applications, from 2007, of those receiving the right of occupancy is shown below. The number of applications prepared by the Deed Registry is very small, only 3 C of O between the years of 2006-2012, which is not a good growth rate for Jos Metropolis. It has a high propensity for encouraging uncontrolled Urban Development and Management.

The result of the embargo placed on approvals by the Governor of the state in 2007 has contributed to the uncontrolled and haphazard development observed all over the metropolis, as people are forced to build without approval.

Consequently, 20% of the respondents felt that in regards to the public acquisition and compensation of units, the MLSTP is responsible for the registration and processing of applications received for public projects, assessment of sites entitled to the payment of compensation and valuation of properties for assignment and part surrender.

The ministry has been able to process and obtain approvals for public acquisitions with payments made by the ministry officials on behalf of government to natives or land owners. In addition to these functions it also has a Deed Registry concerned with the registration of land instruments and transactions. It is involved in the investigation of complaints made regarding land matters and attending court proceedings on behalf of the ministry. All payments for the processing of documents (R of O, C of O) are subject to the collection of demand notices for payment at designated banks.

Based on this, concealed under the disguise of officials/bureaucrats, 25% of the respondents observed that some payments were made directly to individuals who did not provide receipts and had no proof to show that the payments were made. This process has affected the proper running of the ministry and other Planning Authorities and indicates fraudulent activities.

Some officials of the ministry have become 'middle men' for land transactions which frustrates the process of document approval. High levels of corruption, inefficiency,



quackery, delay in approval, loss of documents etc., explain the theory of institutional deficiency (theory verification), are prevalent in the Planning Authorities.

Furthermore, the Master Plan prepared, by Doxiadis 1975, was not properly implemented, projections were made for 25 years, but after 10 years the population had outgrown the area. Only about 10%, or less, of the master plan proposals were realised; the relocation of the airport to Heipang, the construction of a few urban roads and the development of a small industrial layout. It expired before its time.

Konstantinos Doxiadis, a leading figure (consulting firm), under the direction of the Ministry of Coordination, developed a new, large scale approach for managing spatial problems. In Jos Metropolis Doxiadis prepared another master plan in 1975, however, the master plan was never implemented due to externalities that could have been avoided if the plan had been properly projected and recommendations made to accommodate speculations. This is evidence to show that the Master Plan was faulty, hence the failure.

Spatial planning was developed as a distinct speculative and independent planning approach with a destiny closely linked to the national economic plan, in contrast to the case with master planning. The current master plan, GJUMP, has not been implemented 5 years after it was supposed to be because it has not been passed into law. Seventy percent (70%) of the respondents felt that these are the reasons that have incapacitated the Planning Authorities and the administrative arm of the ministry can do anything about it.

The administration section of MHUD has a Personnel Department which is concerned with the day to day administration of the ministry. It is headed by the secretariat, (administration and finance) and supervised by the Permanent Secretary. The department controls the secret and open registries and also supervises the Records Registry of the ministry. (See section 5.5.3.1. in chapter 5 for the organisational structure for MHUD).

According to the GLA Review (2005-06), there are about 600 members of staff to help the Mayor and the Assembly members in their duties.

This is a practical demonstration and confirmation of the theory of institutional deficiency that can be seen in Table 6-5.

**Table 6-5: Verification of the theory**

✚	The entire ministry has only two staff in the TP Department, both of whom are not registered and are not qualified to consider or adequately draw out the inadequacies of the proposed GJUMP (inadequate man power and qualified personnel: in institutional deficiency theory verification.
✚	The Ministry is too recently formed and thereby too inexperienced formulate the policies that would reach the stage of implementation. The ministry lacks adequate man power, resources and expertise to carry out the tasks enumerated. Also, the staff were drawn from the JMDB

Source: Analysis of data from field work, 2012

The proposed GJUMP has 6 local government areas: Jos North, Jos South, Jos East, Bassa, Barkin Ladi and Riyom, who need to establish URP or TP sections. The 1992 URP Law stipulated that there should be a Town Planning Department and have at least 3 registered planners in each of the 774 local governments in Nigeria.

To date no such departments or sections exist in the entire country, Lagos state has one department in only one local government. The MLSTP and the MHUD are supposed to be policy formulation bodies (URP Law, 1992/ policy); but the JMDB was given the responsibility of implementing the Master Plans. From the above discussion the commission system of administration for the MLSTP & MHUD in Jos Metropolis Nigeria is proved to be ineffective in the control of Urban Development and Management.

#### **6.4.3.2. The Council - Manager System of Administration (Lands section) of Local Government Planning Authorities**

The 1992 URP law that is yet to be enforced stipulates that each local government authority should have a URP department or section to carry out the functions of urban and town planning in local areas. As it stands such organisations are only available in Lagos state and in only one local government as observed in section 5.5.3.2. 6.4.3.2. in chapters 5 and 6 respectively. In the case of Plateau state, the local government has, as its departments for the smooth administration both during military and civilian regimes, the following; Social Welfare, Works, Agriculture & Natural Resources, Health,

Finance, Administration and Education Departments. The structure comprises an executive chairman and his deputy and two arms of government; the legislative and traditional councils. The secretary to the Local Government is the chief scribe of the council.

#### **6.4.3.3. The manager system of administration for JMDB**

The JMDB has the following departments for smooth administration both during military and civilian regimes; TP, Public (Environmental) Health, Engineering, Estates and Building, Administration, Accounts, Audit. It is structured as follows; it has Board of Directors that oversees the operations of the General Manager and Secretary who is also a legal adviser. Each of the departments performs specific functions to meet the main goal of the Board. (See section 5.5.3.2. in Chapter 5.)

The Development Board has six (6) departments each with a head of department responsible for the daily running and implementation of policies and decisions who is answerable to the General Manager.

The Administrative Department provides services to meet and ensure the basic function of the Board's administration, personnel management, security, public relations and transport. It is subdivided into Accounts and Audit. The director in charge of the department is Secretary to the Board and has the responsibility of overseeing the running of the activities and coordinating the departments.

The Accounts Department is responsible for the collection and disbursement of revenue accrued to the Board and has the Stores as a unit under it. The Audit is involved in carrying out pre-auditing/checks on all expenditure made by the Board to ensure payments conform to the financial policies laid down by the board. The TP Department is charged with the responsibility of development control, enforcement of PLW and standards, plan processing, activities, property rating, maintenance of parks and gardens and city beautification. The Director of TP oversees the day to day running of the activities of the department.

The big question is how effective is the administration of the JMDB with control of Urban Development and Management in Jos Metropolis, Nigeria? The administration

has not been effective for the following reasons; change in administrative structure and nomenclature and public image.

Change in administrative structure and nomenclature has affected the performance of the Development Board as it used to be part of the Governor's office. The general managers received instructions directly from the Governor to carry out development control, but with the change in administrative structure, placing the Development Board under the jurisdiction of MHUD, the General Manager now takes instructions from the Commissioner. This explains the theory of structuration as the Planning Authorities have an entirely different administrative structure where instructions are passed from top to bottom.

This could be seen to have increased the level of bureaucracy, extending the duration of the processing and procedures that need urgent attention. The dynamic nature of the population in the study area and the rigid approach of the Master Planning currently in operation, this shows why the manager-system of administration has not been effective in controlling Urban Development and Management in Jos Metropolis.

#### **6.5. EFFECTIVENESS OF THE LEGAL (LAWS AND ORDINANCES) COMPONENT OF THE URBAN PLANNING SYSTEM**

This section seeks to examine the effectiveness of the laws and ordinances as a component of the Urban Planning System in ensuring controlled Urban Development and Management using the variables of; LUA, 1978 (LFN, Cap 5. 2004) which is part of the Constitution of the Federal Republic of Nigeria (1999) amended, 1992 URP Law, Development control standards, GJUMP and Development control measures; (zoning regulations, density control, building line regulation, height control act).

The effectiveness of the Legal (laws and ordinances) component of the Urban Planning System can be considered by a careful assessment of the elements in the system. It is examined using the elements which are considered to be the factors which determine the effectiveness of the Legal component otherwise known as the laws and ordinances used in ensuring proportional Urban Development and Management in Jos Metropolis, Nigeria. The effectiveness of the laws and ordinances could not be determined based on

the performance of each of the documents (policies and plans) used to achieve good urban development and management in Jos Metropolis.

The Spearman Ranks Correlation Coefficient ( $\rho$ ) was used to analyse the variables.

#### 6.5.1. Data Presentation for Legal (laws and ordinances) component of the Urban Planning System

Using the variables above, the measures were based on the responses from the Likert scale 1-5 which is ordinal. The measure of the relationships is determined by correlation of Legal the sub-components of the legal (laws and ordinances) component as seen in Table 6-6.

**Table 6-6: Data presentation for the legal components (laws and ordinances) Spearman's Rank Correlation Coefficient ( $\rho$ ) for the legal (laws and ordinances) components.**

Variables Coded	DCMLOEF1	LUDLOEF2	URPLOEF3	DCSLOEF4	GJULOEF5
DCMLOEF1	1.000	.605**	.696**	.662**	.572**
LUDLOEF2	.605**	1.000	.649**	.605**	.475**
URPLOEF3	.696**	.649**	1.000	.635**	.609**
DCSLOEF4	.662**	.605**	.635**	1.000	.681**
GJULOEF5	.572**	.475**	.609**	.681**	1.000

\*\*. Correlation is significant at the 0.01 level (1-tailed). The value for p: 0.000 for all the values.

\*The meaning of the variables coded is as follows;

Variables coded	Codes
Development control measures; Zoning regulations, density control, building line regulation, height control act.	DCMLOEF1
Land use decree 1978 (LFN, Cap 5. 2004) Constitution of Nigeria (1999)	LUDLOEF2
1992 Urban and Regional Planning Law	URPLOEF3
Development control standards	DCSLOEF4
Greater Jos Urban Master plans	GJULOEF5

See question 7-section 4 (legal (laws & ordinances 16-20) in appendix H.

The output of the analysis is a matrix giving the correlation coefficient between the variables (1.0, .60, .69, .66, .57) underneath is the significance value of this coefficient (0.01) and finally the sample size (100)<sup>3</sup>. The significant value for this correlation is less than 0.05.

Therefore, there is a very strong correlation in the relationships between the variables.

#### **6.5.2. Data analysis for the effectiveness of legal (laws and ordinances) component of the Urban Planning System**

The result of the analysis shows that there is a strong correlation based on the scale observed by Cohen, 1988. Table 6-6 shows that the variables have a very strong significant relationship between the variables which measure the effectiveness of legal component (laws and ordinance). The results obtained from SPSS from these variables are used in addition to the face-to-face interviews and documents to discuss the implication of the results of the effectiveness of the legal components (laws and ordinance) of the Urban Planning System in Jos Metropolis.

#### **6.5.3. Discussion of the findings from analysis of the effectiveness of legal component (laws and ordinances)**

From the above analysis the variables have highly positive relationships with each other to determine the effectiveness of the (laws and ordinances) which are the main elements of development control for effective Urban Development and Management in the metropolis. It shows that regulatory theory plays a vital role as the absence of an appropriate tool leads to uncontrolled and haphazard Urban Development and Management.

The legal documents used are expected to control development within Jos Metropolis. (See section 5.4.3. in chapter 5). Based on the results from the data analysis and the data from secondary sources and face-to-face interviews the discussion would provide more insight into the effectiveness of the legal section of the Urban Planning System. The information shows that there is contradictory impression when compared with the Urban Development and Management in GLA.

The action of bureaucrats, especially experts, (planners in this case) is most important in any implementation process. The role of private and non-governmental actors is also significant. One major challenge of implementation is the context in which the plans are set.

In the case of the GLA, there exists a jurisdictional mandate to administer the planning services of varying categories in an area of about 1579 sq km area (610 sq. miles) of Greater London. It shares local government powers with the councils of 32 London boroughs and the City of London Corporation. It was created to improve the coordination between the local authorities in Greater London.

This was observed in the GLA Review (2005-06). But in Jos metropolis plans are made by the state and they are expected to be implemented by local government, but 60% of the respondents interviewed felt that, in the study area, both the state and local government get their subvention from the federal government. The goals and expectation in the plans and policies are not authoritatively defined, nor are they agreed upon by the actors involved in implementation.

The plans, as legal documents, are expected to be implemented by the Planning Authorities at the state and local government level, but it does not reflect what actually happens in the PA. However, the problem of implementation becomes complex because with the preparation of the master plans at local government level is done without consultation with the government at state level. Hence, about 25% of the respondents felt that there are diffuse, multiple and competing goal statements which are recognised as normal conditions, a deliberate product of conflict, compromise and negotiation that characterised the design and legitimation processes necessary to produce legislation.

Usually goals are vague enough to accommodate multiple points of view which translate into specific, concrete implementation actions renewing the potential for conflict and compromise. The usage of the laws and ordinances for regulation is very vital in addressing the physical planning problems identified in urban areas. This makes the level of effectiveness of the documents become less effective.

Respondent X4 observed that the MHUD was established in 2006 with the view of formulating new policy for the development of Jos Metropolis after the former master

plan elapsed in 2000. The ministry has not been able to implement the policy it has formulated for three reasons: Firstly, it did not formulate the policy (GJUMP), secondly, it didn't consult the stakeholders i.e. the inhabitants of the regions plus NGO's CBO's and private organisations to discover the exact problems that affected people and thirdly, it is the wrong planning approach to adopt to address the problems of a dynamic population.

This was confirmed by previous studies such as DungGwom (2001) shows that there is a need for dynamic and timely policy and decision making which is better than the traditional way of approach; this was adopted in the UK which was incorporated in the spatial plans and proved to be unwieldy in the adoption process leading to widespread delays (Nadin, 2006).

Moreover, once adopted plans have often been found to be inflexible in use and difficult to review and modify. These are the major characteristics of master planning, even though there are fairly well articulated policies on urban development, housing and planning at national level.

Hence, the urban housing situation has continued to worsen due to non-adoption of these policies by the state governments, especially in Plateau State. None of these policies and laws have been adopted in Plateau State, let alone been implemented; including the Urban Development Policy, National Housing Policy and the 1992 URP Law, amongst others, as observed in section 5.4.3. , the policy documents that are supposed to be regulatory tools are relegated to the background.

The reason is best seen in the character of the Master Plan which has a non-interventionist planning approach that accommodates other policies. As 70% of the respondents acknowledged, in Plateau State very limited success has been recorded in the area of urban development and housing, notable was the preparation of a master plan for the Greater Jos Bukuru Area by the visionary government of the late J. D. Gomwalk to give Jos a befitting status as a state capital and an emerging regional centre in the north central area of Nigeria.

Furthermore, JMDB was also created to implement the plan. This was soon to be followed by the Regional Plan for the whole state which was prepared by Shankland



Cox in 1980. This plan identified the natural and human resources that abounded in the state and proposed policies for harnessing them.

These Master Plans were prepared for some of the major urban areas in the state by various consultants but were not implemented due to the characteristics of the Master Planning approach. This was also confirmed by the Plateau State Regional Study Final Report, Volume 2 May, 1980.

The non-utilisation or implementation of the document used as a standing order included; the LUA, 1978 Gazette, physical development plans, if available, such as in the case of Angware 2008-2018 (Jos East) and Riyom 2009-2019 (Riyom) which if passed into law would go a long way to addressing the issues. These are implemented using change of ownership form (C of O), inspection form, the land committee report as well as the topographic map used with reference sheets for Kurra NW 1:50,000 and sheets 172 NW, NW 168, 172 NW, produced in 1964 and 1974 which are still in use within the metropolis.

One basic problem with the documents used is that they are obsolete and highly inadequate to meet present day demands. These and many more have made the Lands Sections at the local government level highly ineffective in achieving the aim of addressing urban development and management in the study area. The character of Spatial Planning will allow for the consideration of interventions to address future problems within the jurisdiction.

This is the case with the UK experience where a stronger tone is used in Planning Policy Statement 12, (ODPM, 2004) which states that land development planning documents must be soundly based in terms of their content and the process by which they are produced. They must also be based up on a robust, credible evidence-based approach.

Such an evidence-based approach can be likened to Spatial Planning which has already taken place in the UK and most European countries.

The documents use by the ministries of MHUD and MLSTP to carrying out their duties include; LUA, 1978, 1992 URP law, Plateau State Geographic Information System (PLAGIS), C of O and R of O, amongst others. The documents used were prepared by

Doxiadis, 1975 (Master Plan), but were not properly implemented for projects for 25 years, but after 10 years the population had out grown the area and the document was redundant. This leads to the present day GJUMP; scheduled for implementation but failed to be passed into law 5 years after its inception.

Finally, this chapter set out to examine and present the empirical findings about the effectiveness of the URP system in terms of Urban Development and Management. The GLA was used as a basis for comparison, because the GLA has adopted the Spatial Plan approach and has achieved its objective of ensuring controlled Urban Development and Management. The results from the analysis and discussions show that the Urban Planning System in Jos Metropolis is not effective leading to the achievement of objective 3 in this research and subsequently making a case for the assessment of the applicability of Spatial Planning based on the state of the URP in Jos Metropolis and discussed in the next chapter.

## **6.6. SUMMARY**

This chapter discussed the data presentation, analysis and the findings regarding the effectiveness of the urban planning system of the Jos Metropolis and the following was revealed;

- ✚ The Spearman Rank Correlation Coefficient ( $\rho$ ) was used to analyse the variables that determined the various components of the Urban Planning System and the following were obtained;
- ✚ There is a very strong statistical correlation between the institutions (Urban Governance) but no effective control of Urban Development and Management due to poor funding, inconsistency in governance, lack of awareness about DC, poor publicity about DC and the non-involvement of stakeholders. This was confirmed when compared with the UK in the GLA.
- ✚ There is a very strong statistical correlation between the technical (Urban Management) section and no effective control of Urban Development and Management due to the conflict of functions, roles and responsibilities, encouraged by the planning approach adopted by the Planning Authorities having similarities to their functions, responsibilities and roles. This was

confirmed when compared with the UK to the GLA as there was no coordination between Planning Authorities.

- ✚ There is a very strong statistical correlation between the operational (administration) section 6.4.2. but no effective control of Urban Development and Management due to the inability of Planning Authorities to implement the 1992 URP law which stipulates that there should be Town Planning Departments with at least 3 town planners in each local government. The town planners are expected to head the commission system, council and manager system. To abolish alleged inefficiency in GLA, has a top-tier administrative body of the Great London Authority which is administered by a directly elected executive Mayor for London and a 25 member Assembly with scrutiny powers.
- ✚ There is a strong statistical correlation between the laws and ordinances (legal) but no effective control of Urban Development and Management due to the fact that the laws and ordinances documents are obsolete and unable to meet present day challenges. There is no coordination in any of the documentation, the reason being that a master planning approach is operated. This was confirmed when compared with the GLA in the UK who use a spatial planning approach which has a flexible, interventionist character, coordination and incorporation into policies.
- ✚ Theories were also validated through the discussion in this chapter, (see section 6.4.3.1 institutional deficiency) about structuration, institutional theory, urban regimes, contingency theory, regulatory theory and systems theory

This chapter examined and presented the empirical findings about the effectiveness of the urban and regional planning system and the situation of the urban and regional planning system in Jos Metropolis in terms of urban development and management.

The succeeding chapter draws on chapter 5 and the present chapter 6 by linking them to make a case for the application of spatial planning as a strategy tool in Jos Metropolis.







# **CHAPTER 7. APPLICATION OF SPATIAL PLANNING AS A STRATEGIC PLANNING TOOL IN JOS METROPOLIS, NIGERIA**

## **7.1. INTRODUCTION**

This chapter seeks to assess the applicability of spatial planning (Spatial Planning) as a strategic tool (SPT) in Jos Metropolis, Nigeria (Jos Metropolis Nigeria). It utilised the findings discussed in chapters 5 and 6 (The Constraints Identified & the Effectiveness of the Urban Planning System) to make a case for the application of Spatial Planning in Jos Metropolis and many urban cities in Nigeria.

The previous and proposed master plans (Master Plans) were not implemented due to numerous problems that have acted as inhibiting factors over the years; hence the option of an alternative is advantageous because it is intended to trigger social, economic, political and cultural activities which in the past have hampered the implementation of the proposed Greater Jos Urban Master Plan (GJUMP). The assessment of the applicability of Spatial Planning as a strategic tool in Jos Metropolis Nigeria is based on the data obtained from the questionnaire, face-to-face interviews conducted and from the documents reviewed.

Accordingly, this chapter is structured as follows:

-  Implication of the Urban planning system: failure of the urban Master Planning approach in Jos and many cities in Nigeria
-  The need for an Spatial Planning framework and comparison between Master Planning and Spatial Planning
-  Testing of the hypothesis and adoption of spatial planning as an appropriate management tool in Jos Metropolis, Nigeria.
-  A case for the application of spatial planning; the 3<sup>rd</sup> Way and the Other Path
-  The strategic spatial planning tool and
-  The summary of the findings and linkage

This chapter will discuss, by making comparisons, what has been achieved in developed countries where spatial planning has been used as a planning approach to control Urban Development and Management.

## **7.2. IMPLICATION OF THE URBAN PLANNING SYSTEM: FAILURE OF THE MASTER PLANNING APPROACH**

In chapters 2 and 3 the implication of Spatial Planning and Master Planning on the Urban Planning System in Jos Metropolis has been deduced. The data collected and analysed shows that the institutional framework has been constrained even though there was no significant relationship between the components of the framework. However, there was a strong correlation between the components of Urban Planning System but it was not effective enough to bring about a controlled Urban Development and Management in the metropolis.

The Planning Authorities under-perform because they lack a coordinated approach that would result in proportional development within Jos Metropolis. Furthermore, Urban Management through Planning Authorities is not effective due to the lack of adequately qualified man power.

The administrative performance of the Planning Authorities has been constrained due to their structure which has proved to be ineffective because the urban metropolis has expanded without any comprehensive or organised plan over the years. This calls for the development of a comprehensive and collaborative administrative structure where all the Planning Authorities are linked together in one structure through which information can flow from either top to bottom, bottom to top, right to left or left to right.

An example of a structure that could have been successful was suggested in the 1992 URP law: that a planning commission could be established at federal level and a Board at state level with local Planning Authorities operating at local government level.

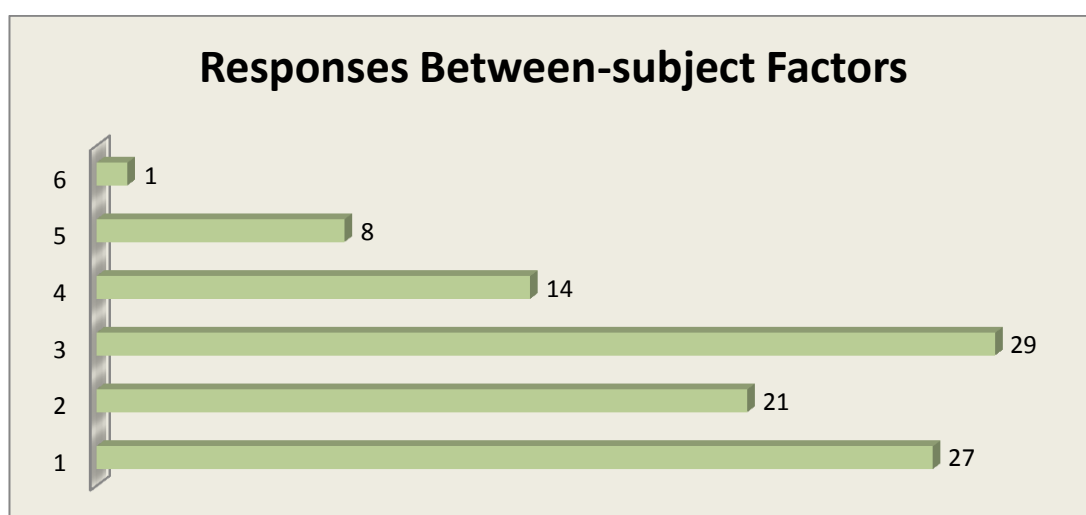
The results of the analysis in this study showed that, the numerous constraints identified does not have any significant relationship with the planning legislations (PLs), see section 5.4.1. chapter 5 but has strong correlations with other PLs documents, see 6.5.1. The availability of laws and ordinances has not effectively addressed the problem of Urban Development and Management in Jos Metropolis.

Careful consideration of the results show that the issues raised concerning infrastructure (facilities, utilities and services) development, provision and investment have not been addressed. The use of land in the metropolis (residential, industrial, commercial etc) is questionable, improvement in the locality (settlement changes, roads construction, schools etc.) and adjustment to change is a challenge for most UPSs when the master plan was utilised.

The analysis of effectiveness and impact of the Master Planning system offers a clue to see figures Table 7-1 and Table 7-2 for more details.

### 7.2.1. Data analysis of the outcomes of previous Master Plan implementation

From the analysis the effectiveness between the variables of implementation outcomes and the previous master plan (1975) in Jos Metropolis is not significant = 0.00 as shown in Figure 7-1.



**Figure 7-1: Responses to between-subject factors in the previous Master Plan**

Analysis of variance ANOVA (F-ratio) was used to analyse the variables. The result of the multivariate analysis is presented as follows:

The interaction between variables in the previous master plan and the possible outcomes is not significant as Wilks Lambda = 0.97,  $F(7, 28) = 1.00$ ,  $P=0.39$  and the Partial Eta Squared = 0.32 and Wilks Lambda = 0.90,  $F(7, 28) = 0.59$ ,  $P=0.87$  and the Partial Eta Squared = 0.031.

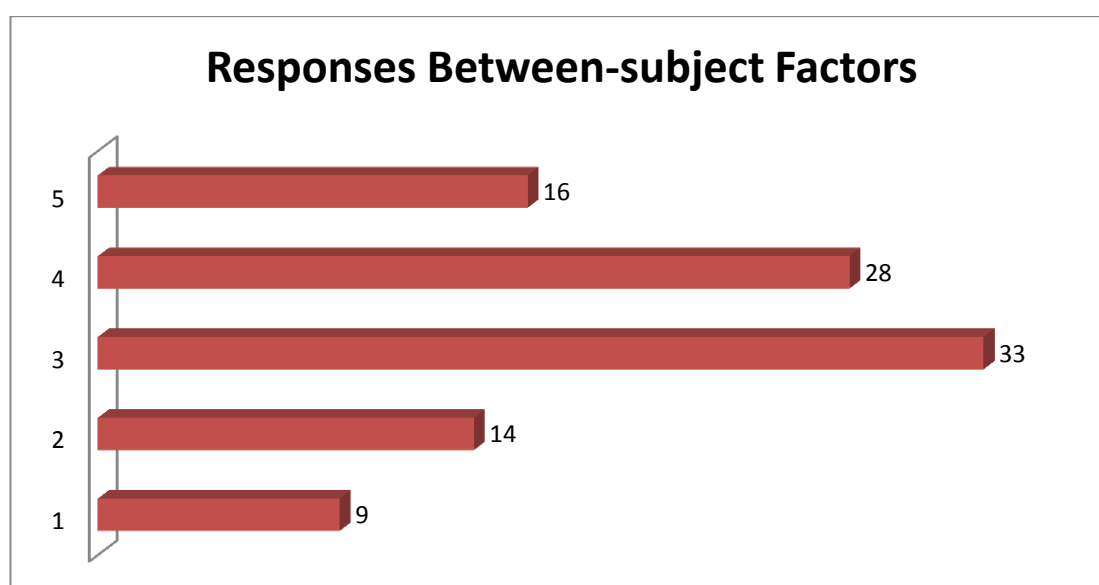
Using the common guideline of 0.01 the effect is small, 0.06 it is a moderate effect and 0.14 is a large effect. The value to be used for determination is Wilks Lambda. It states

that if Wilks Lambda is less than 0.5 and the value calculated is 0.000 it means it is statistically significant.

Therefore, when the results for the dependent variables were considered the main effect for the variables in the previous master plan and the possible outcomes is not significant.

### 7.2.2. Data analysis of the impact of the proposed GJUMP implementation

From the analysis the effectiveness between the variables of implementation outcomes and the proposed GJUMP in Jos Metropolis is significant = 0.00. Figure 7-2 provides the finding from the analysis.



**Figure 7-2: Response between-subject factors for GJUMP**

Analysis of variance ANOVA (F-ratio) was used to analyse the variables. The result of the multivariate analysis is presented as follows:

The interaction between variables in the previous master plan and the possible outcomes is not significant as Wilks Lambda = 0.94,  $F(7, 28) = 1.88$ ,  $P=1.38$  and the Partial Eta Squared = 0.05 and Wilks Lambda = 0.72,  $F(7, 28) = 2.71$ ,  $P=0.00$  and the Partial Eta Squared = 0.10.

Using the common guideline of 0.01 the effect is small, 0.06 it is a moderate effect and 0.14 is a large effect. The value to be used for determination is the Wilks Lambda. It

states that if Wilks Lambda is less than 0.5 and the value calculated is 0.000 it means it is statistically significant.

When the results for the dependent variables (proposed GJUMP) were considered the main effect of the variables for the implementation outcomes in Jos Metropolis is not significant.

Hence, the implications in this analysis revealed that the impact from the previous and proposed master plans is not significant but it was used as a guide for provision and instatement of facilities, utilities and services required to trigger economic, social and political development in different areas of the metropolis.

As observed in section 3.5, 5.5, 6.3 and 6.5 in chapters 3, 5 and 6 that the Master Plan approach has failed to address the urban planning problems identified (Urban Development and Management in Jos Metropolis) in many cities in Nigeria and most developing countries.

It is therefore, against this backdrop that this study makes a case for the consideration of an alternative planning approach to address the problems of physical planning in Jos Metropolis. This now leads the discussion to the consideration of the application of Spatial Planning in Jos Metropolis with a view to applying it in other cities in Nigeria in particular and Africa in general.

### **7.3. COMPARISON OF IDEAL TYPES OF MASTER PLANNING AND SPATIAL PLANNING**

A careful comparison of Master Planning and Spatial Planning will help in the consideration or adoption of a hybrid framework to address the problems of Urban Development and Management in Jos Metropolis Nigeria. Table 7-1 provides more details of the comparison.



**Table 7-1: Comparism of Ideal Types of Master Planning & Spatial Planning**

SN	Measure of Difference	Master Planning (MP)	Spatial Planning (SPG)
1	<b>Purpose</b>	Regulating land use and development through designation of areas for development and protection and application of performance criteria.	Shaping spatial development through the coordination of the spatial impacts of sector policy and decisions.
2	<b>Form</b>	Schedule of policies and decision rules to regulate land use for the <u>administrative</u> area. Mapping of designated areas and sites for development purposes and protection.	Strategy identifying critical spatial development issues and defining clear, desired outcomes across functional areas. Visualisation of spatial goals and key areas of change. Principles and objectives that will guide coordinated action.
3	<b>Process</b>	Discrete process leading to adoption of final blueprint plan. Confrontational process instigated through consultation on draft plans and political negotiation. Stakeholders using the process to protect and promote their own interests.	Continuous process of plan review and adjustment. Mutual learning and information sharing, driven by debate on alternatives in collaborative political process. Stakeholders using the process to achieve their own and mutual goals.
4	<b>Ownership and policy community</b>	A document of the planning authority providing guidance to other professional planners promoting and regulating development.	A corporate document of the local authority in shared ownership with communities and other stakeholders, partnerships and NGOs.
5	<b>Procedural safeguards</b>	Final plan determined through adversarial inquiry into parts of the plan; subject to objections.	Final plan determined by inquisitorial examination of the soundness and coherence of the whole plan.
6	<b>Methods</b>	Mapping of constraints and collection of <u>sectoral</u> policy demands. Bargaining and negotiation with objectors and other stakeholders, informed by broad planning principles. Checking of proposals through sustainability appraisal/strategic environmental assessment.	Building understanding of critical spatial development trends and drivers, market demands and needs for social, economic and environmental impacts of developments. Analysis of options through visioning and strategic choice approaches. Generation of alternatives and options assisted by sustainable strategic environmental assessment.
7	<b>Delivery and implementation</b>	Seeks to direct change and control investment activity in land use through prescriptive regulation, whilst mitigating local extremism through conditions and planning agreements.	Seeks to influence decisions in other sectors by building joint ownership of the strategy and a range of incentives and other mechanisms including land use regulation and planning agreements.
8	<b>Monitoring and review</b>	Measures conformance of plans, policies and proposals with planning control outcomes. Data provides portrait of plan area as general context for implementation of proposals. Having infrequent review of whole plan.	Measures performance of the plan in influencing sector policy and decision-making. Data informs understanding of spatial development and the application of the strategy. Regular adjustment of components of plan around consistent vision.
9	<b>Perspectives;</b>		
	<b>Use</b>	Traditional, land use planning	Spatial planning goes beyond traditional land use planning
	<b>Integration</b>	Does not integrate policies for the development	Bring together and integrate policies for the development
	<b>Enhancement</b>	Does not use land in conjunction with other policies and programmes which can impact on land use.	Use of land in conjunction with other policies and programmes which can impact on land use,
	<b>Influence</b>	Influence the nature of places but not how they can function.	Influence the nature of places and how they can function.
	<b>Duration</b>	Comprehensive long range plan intended to guide growth and development of a community or region	Non comprehensive short range plan intended to guide growth and development of a community or region
	<b>Emphasis</b>	Emphasising its included analysis, recommendations, and proposals about the community's population, economy, housing and basic infrastructure as well as land use.	While it emphasises its included analysis, recommendations, its proposals are about where the community's population, economy, housing and basic infrastructure should be in the arranged land use for sustainable urban development.
	<b>Inputs</b>	It is based on government input, surveys, planning initiatives, existing development, physical characteristics and social and economic conditions	It is based on public input, surveys, planning initiatives, existing development, physical characteristics and social and economic conditions.
10	<b>Components of Plans</b>	Master plan lies at the centre of the physical components; land use, circulation, housing, provision of facilities, utilities and services, open spaces and urban design.	Spatial plan lies at the centre of the physical components, land use; circulation, housing, provision of facilities, utilities and services, open spaces and urban design. It also considers sustainability and climate change

Source: Compiled by Author from (ODPM, 2005; 2006; Jiriko, 2007)

Table 7-1 shows the differences between Master Planning and Spatial Planning using a ten point measure and emphasising the components of each of the plans.

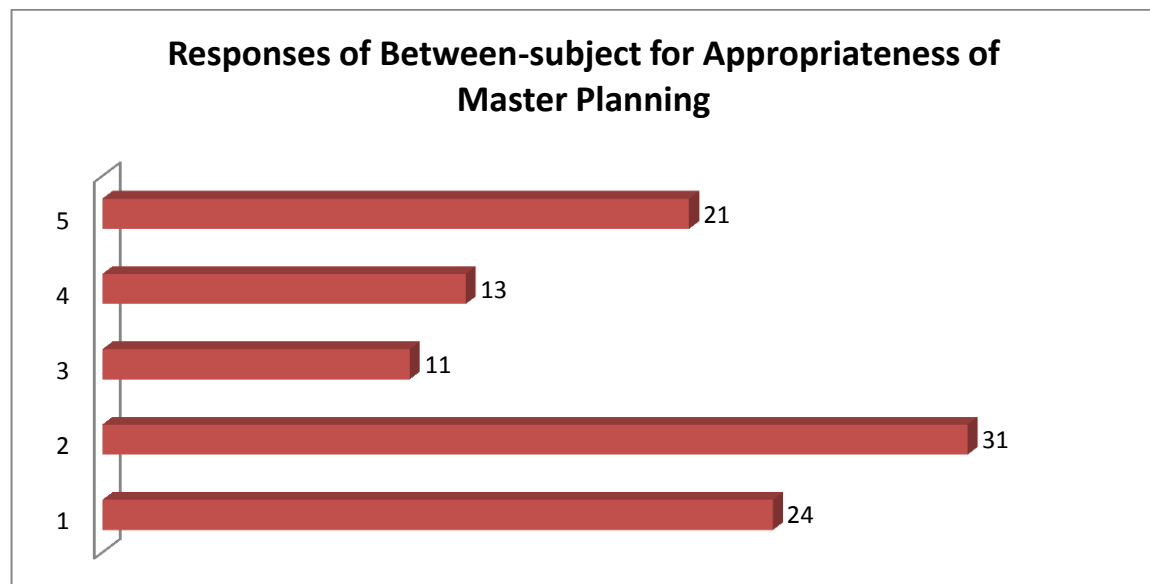
### 7.3.1. Data Analysis of the appropriateness of applying Master Planning as a strategic tool

From the analysis of the appropriateness of applying Master Planning as a strategic tool and the various ways of applying the tool Jos Metropolis is significant= 0.00. See appendix F.

#### 7.3.1.1. Appropriateness of applying Master Planning

The result of the multivariate analysis is presented as follows:

The responses could be seen in Figure 7-3.



**Figure 7-3: Responses for Appropriateness of Applying Master Planning**

Analysis of variance ANOVA (F-ratio) was used to analyse the variables. The result of the multivariate analysis is presented as follows:

The interaction between variables in the master plan is significant as Wilks Lambda = 0.85,  $F(7, 28) = 1.89$ ,  $P = 0.71$  and the Partial Eta Squared = 0.14 and Wilks Lambda = 0.65,  $F(7, 28) = 1.22$ ,  $P = 0.19$  and the Partial Eta Squared = 0.09.

Using the common guideline of 0.01 the effect is small, 0.06 it is a moderate effect and 0.14 is a large effect. The value to be used for determination is the Wilks Lambda. It

states that if Wilks Lambda is less than 0.5 and the value calculated is 0.000 it means it is statistically significant.

Therefore, when the analysis for the dependent variables for Master Plan were considered along with the main effects of the variables for implementation outcomes in Jos Metropolis the result was found to be not significant.

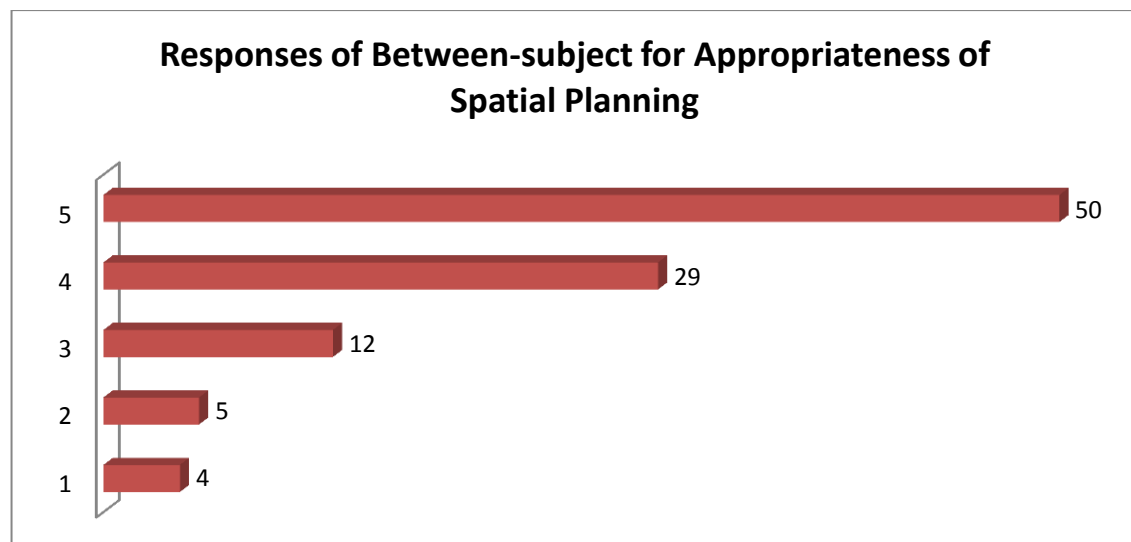
### **7.3.2. Data Analysis of the appropriateness of applying Spatial Planning as a strategic tool**

From the analysis of the appropriateness of applying Spatial Planning as a strategic tool in Planning Authorities between the various ways of applying the tool in Jos Metropolis is significant= 0.00., as can be seen in appendix F.

#### **7.3.2.1. Appropriateness of applying Spatial Planning**

The result of the multivariate analysis is presented as follows:

The responses could be seen in Figure 7-4.



**Figure 7-4: Responses for Appropriateness of applying Spatial Planning**

Analysis of variance ANOVA (F-ratio) was used to analyse the variables. The result of the multivariate analysis is presented as follows:

The interaction between variables in spatial planning and its outcomes is significant as Wilks Lambda = 0.79,  $F(7, 28) = 2.88$ ,  $P = 0.00$  and the Partial Eta Squared = 0.20 and Wilks Lambda = 0.52,  $F(7, 28) = 1.94$ ,  $P = 0.00$  and the Partial Eta Squared = 0.14.

Using the common guideline of 0.01 the effect is small, 0.06 it is a moderate effect and 0.14 is a large effect. The value to be used for determination is the Wilks Lambda. It states that if Wilks Lambda is less than 0.5 and the value calculated is 0.000 it means it is statistically significant.

Therefore, when the analysis of the dependent variables for Spatial Planning and the outcomes were considered along with the main effects of the variables for implementation outcomes in Jos Metropolis the result is significant.

Furthermore, the analysis of variance (F-ratio) showed that Master Planning and Spatial Planning are appropriate as strategic tools to ensure controlled Urban Development and Management in Jos metropolis. The same variables were used to ascertain the appropriateness of these tools. (See Figure 7-3 and Figure 7-4)

Figure 7-3 shows that less than 50% of the respondents acknowledged that Master Planning was the appropriate strategic tool to ensure controlled Urban Development and Management in Jos metropolis. Whilst, this is the case with the Master Planning, Figure 7-4 shows over 70% of the respondents acknowledged that Spatial Planning is an appropriate strategic tool to ensure controlled Urban Development and Management in Jos Metropolis.

In conclusion, the analysis and decisions show that the dependent variables for Master Planning were considered and the main effects for variables for the implementation outcomes in Jos Metropolis is not significant while that of Spatial Planning is significant.

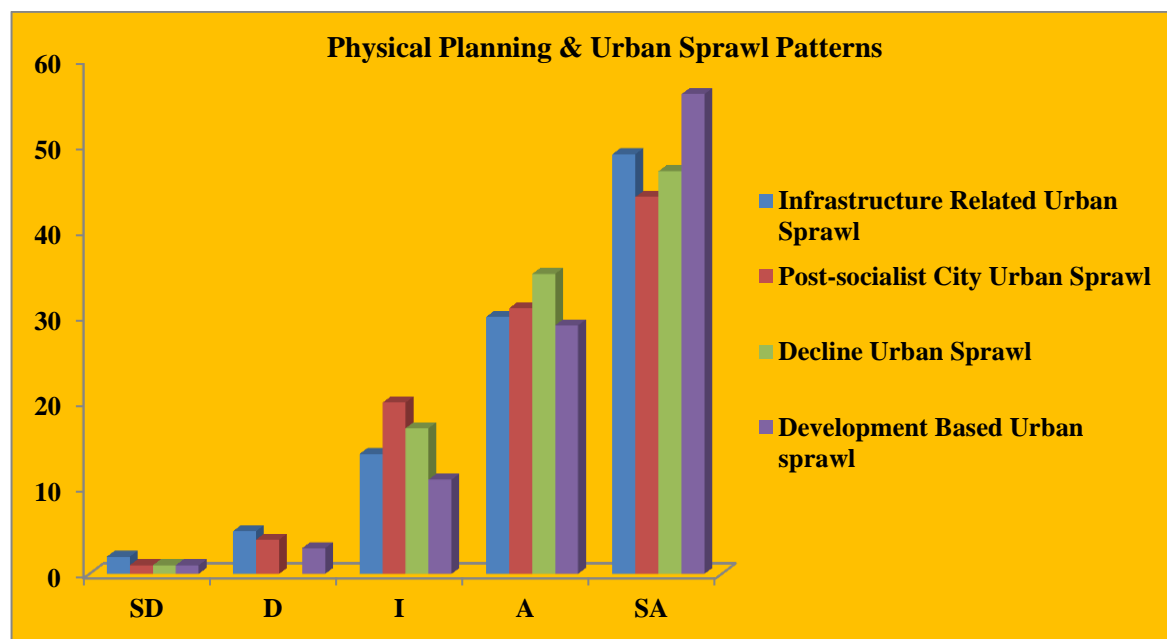
The implication is that there is a strong agitation for the adoption of Spatial Planning within the region.

### 7.3.3. Testing the hypothesis and adoption of Spatial Planning as an appropriate management tool in Jos Metropolis

This section presents the results of the hypothesis testing. The hypothesis stated in chapter 1 was based on the appropriateness of a strategic management tool and the pattern of Urban Sprawl by using the factors that control Urban Sprawl in Jos Metropolis (Appendix C records the variables). The hypothesis states that...

*'If spatial planning is applied as an urban management strategic tool, then the urban sprawl conditions in Jos Metropolis can be controlled'.*

To consider this point the data shows the responses in relation to common Urban Sprawl conditions apparent in the study area. The physical approaches appropriate for application were linked to each of the four Urban Sprawl conditions using descriptive statistics and the responses are presented in **Figure 7-5**.



**Figure 7-5: Physical Planning & Urban sprawl Patterns**

Figure 7-6 shows the physical planning approaches as they relate to Urban Sprawl patterns; the respondent agreed with one or another of the various levels with the exception of the 'Decline Urban Sprawl'.

The implication is that there is no pattern to Urban Sprawl that is declining, or better still, the planning approaches have the capacity to bring about CD meaning that the

urban area does not have any sprawl. Therefore, applying Spatial Planning as an appropriate strategic management tool, as this study has investigated, is very important to address Urban Development and Management problems in Jos Metropolis (section 4.3). The next section considers the relationship Urban Sprawl patterns and Master Plan and Spatial Plan and the determinants of Urban Management factors controlling Urban Sprawl and its related patterns.

#### **7.3.4. Urban Management factors controlling Urban Sprawl & the related patterns/determinants of correlation between Master Planning & Spatial Planning with Urban Sprawl patterns**

The Spearman Rank Correlation Coefficient (rho) was used to determine the relationship between Master Planning, as a strategic management tool, with the related pattern of Urban Sprawl and this was then repeated for Spatial Planning,

The results of the analysis show that there is a stronger relationship between the variables used for the four patterns of Urban Sprawl for Spatial Planning than for Master Planning, the rho values can be seen in Tables

Table 7-2 and Table 7-3 shows the outcomes are presented in Appendix F.

**Table 7-2: Correlation Coefficient Spatial Planning**

<b>M</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>SD</b>	<b>.33</b>	<b>.47</b>	<b>.44</b>	<b>.33</b>	<b>.27</b>	<b>.39</b>	<b>.30</b>	<b>.28</b>	<b>.26</b>	<b>.40</b>

**Table 7-3: Correlation Coefficient Master Planning**

<b>M</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>SD</b>	<b>.06</b>	<b>.11</b>	<b>.23</b>	<b>.24</b>	<b>.20</b>	<b>.36</b>	<b>.30</b>	<b>.24</b>	<b>.22</b>	<b>.25</b>

##### **7.3.4.1. Decision**

The comparison between Master Planning and Spatial Planning shows that the latter has a higher level of correlation than the former. From the analysis the relationship between the variables in urban sprawl based on Master Plan and Spatial Plan. It shows that there

is a strong correlation based on the scale suggested by Cohen, (1988) and Wang & Vum Hofe, (2007) stating that; an rho value from .10 to .29 means it is small correlation, rho from .30 to .49 means a medium correlation and rho value of .50 means it is a large correlation. Table 7-2 and Table 7-3 shows there is a small to medium? relationship which is significant in the case of the Master Planning and a medium to strong significant relationship which is more significant in the case of Spatial Planning and between the variables measured for the urban management factors that control Urban Sprawl and its related patterns.

Based on the outcome of the values it means that if Spatial Planning is applied it would bring about controlled Urban Development and Management in Jos Metropolis.

#### **7.3.4.2. Conclusion**

Based on the results and the decision taken it means that.... *'If spatial planning is applied as an urban management strategic tool, then the urban sprawl conditions in Jos Metropolis can be controlled'*. This now leads to the acceptance of a null hypothesis. Furthermore, the implication is that Spatial Planning has a strong relationship with the various patterns of Urban Sprawl and has the ability to control urban sprawl.

Therefore, the application of Spatial Planning, as a strategic tool, is appropriate for implementation in Planning Authorities. To apply a Spatial Plan strategy a central coordinating body should be put in place. The urban government should take over the responsibility for coordinating the Planning Authorities in state and local government, institute a common administrative structure and channel the Planning Authorities into developing a framework to address the Urban Development and Management problem in Jos Metropolis. This would enable the government to use a single tool, Spatial Plan, to control development in any given jurisdiction in a similar way to that which operates in the GLA, UK.

#### **7.4. A CASE FOR THE APPLICATION OF SPATIAL PLANNING: THE 3<sup>RD</sup> WAY & THE OTHER PATH**

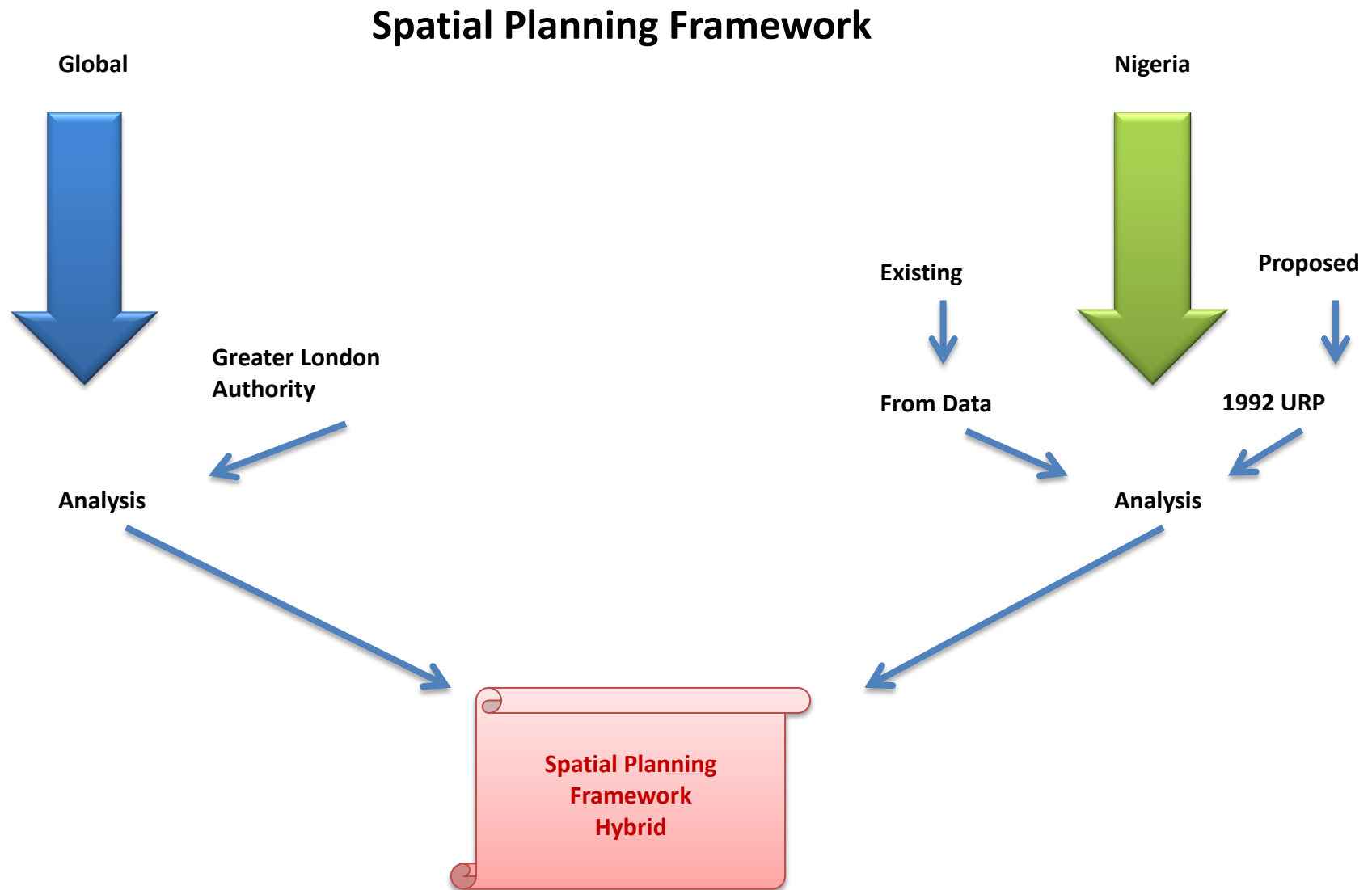
After a critical review of literature, analysis of data, discussions about the constraints of the institutional framework and the effectiveness of the Urban Planning System the following was arrived at from chapters 6 and 7; according to the PL (1992 URP Law)

the institutional planning framework does not exist. However, the components that are required to ensure that the urban planning system could function within the URP system in Jos Metropolis are available but are constrained rather than being coordinated or linked together. The urban planning system required to control Urban Development and Management is not effective and the system has been incapacitated due to the planning approach that was adopted.

In section 7.3 and 7.4 the analysis of the data regarding the impact of the previous and proposed master plans showed that it is not significant. Comparison of Master Planning and Spatial Planning showed that both are appropriate strategic tools for controlling Urban Development and Management in the study area. Interestingly, it showed Spatial Planning to be more appropriate than Master Planning and based on this the hypothesis stated in section 1.3.1, chapter 1 was tested and the results showed that if Spatial Planning was adopted it would control Urban Development and Management in Jos Metropolis.

For the purpose of this research a framework was developed, validated and fine-tuned to arrive at the best outcome from its adoption. (As shown in Figure 7-6).





**Figure 7-6: Sources for the creation of the Spatial Planning framework**

Figure 7-6 presents information gathered from planning authorities in the GLA where spatial planning is operated, the features taken from the GLA's Spatial Planning were taken into consideration and compared to the system used in Nigeria. The results of the analysis were used to develop the Spatial Planning framework, as seen in section 8.3 in chapter 8.

A viable planning approach is urgently needed in Jos Metropolis to ensure a controlled Urban Development and Management. The thoughts and concepts from the publications 'The Third Way' by Anthony Giddens and 'The Other Path' by Hernando De Soto were incorporated into the framework.

During the British colonisation of Nigeria Spatial Planning was part of the planning system used and they left behind a sound development planning structure. (see chronology of Planning History in Nigeria in table 17, Chapter 3). During the second republic of Nigeria, (1988), the Master Planning approach was adopted. For Spatial Planning to be applied in Jos Metropolis, as a strategic planning tool, two things are required; an operational institutional framework and a functional Urban Planning System.

This leads the discussion to the transformation of Great Britain from 1945-1997 the point at which Spatial Planning was adopted.

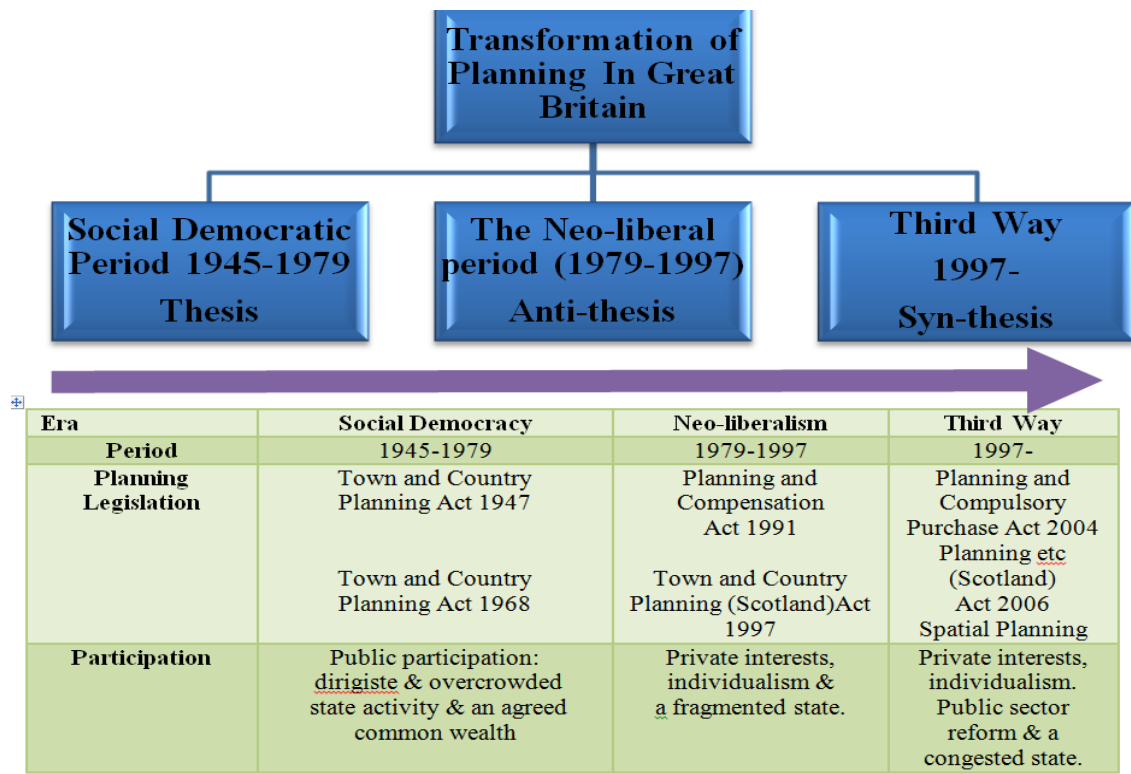
#### **7.4.1. Transformation of planning services in Great Britain: Consideration of *'The Third Way'***

Rydin, (1985) observed that the period from 1945-1979 was considered to be the period of classical social democracy in Britain, which indicates strong state involvement in the social and economic life of the population. The state dominated civil society and the roles for the markets system which was a mixed or social economy. It ensured full employment with a comprehensive welfare state protecting citizens from 'cradle to grave' as observed by Rydin (1993) and Tewdwr-Jones, M. (1999). The system had a

low ecological consciousness but was internationally known, and was termed the 'far left'.

The neo-liberal period (1979-1997), championed by Margaret Thatcher (Thatcherism or New Liberalism), and otherwise known as the 'new right' was a typically traditional nation. It advocated minimal government involvement and market fundamentalism with a strong economic individualism. Moral authoritarianism emphasised economic growth through the labour market and the welfare state was regarded only as a safety net. Ecological consciousness was low just as in the social democratic period but issues of inequality were totally accepted as observed by Giddens (2000).

1997 heralded the period of 'The Third Way' which advocated strong political leadership from the centre and promoted devolution and the new democratic state by being active in civil society. This is termed the new mixed economy, rebalancing public and private life by ensuring equality as social inclusion and frowning upon positive discrimination, economic growth was paramount and the nations' poor ecological consciousness was raised (Giddens, 2000). See Figure 7-7.



**Figure 7-7: Transition of the planning services in Great Britain: Consideration of the ‘Third Way’**

Source: Compiled by Author and adopted from Rydin (1993); Tewdwr-Jones, M. (1999).

#### 7.4.2. Reforming the PS

Planning under the new labour government was characterised by devolution, asymmetric planning, planning delivering a fundamental change, Green Paper (2001), and the Planning and Compulsory Purchase Act 2004.

Prior to this period in time the PS needed reforming because planning was assumed to be “complex, remote, hard to understand and difficult to access” (DETR, 2001c). It was also perceived that local plans were doomed to be overly complex, often inconsistent with regional or national policies, too lengthy, inflexible in content and slow and expensive to carry out.” (Ratcliffe et al., 2009). Hence, a new policy framework was required.

DC was considered to be variable in speed of accomplishment when measured across councils, as well as being unresponsive to the needs of business/investment in the community (Ratcliffe, Stubbs & Shepherd, 2002). Hence, a fundamental change in

culture was required. In 2004 and 2006 a major recommendation was made for further action to be taken to deliver an efficient PS by reducing delays and addressing unnecessary complexity (HM Treasury 2004 and 2006). The period from 2001 to 2010 would be characterised by almost continuous change and a rolling series of new legislation and other reforms amongst which was the Planning and Compulsory Purchase Act 2004 (Ratcliffe et al., 2009).

#### **7.4.3. Direction of the reformed PS**

Established within the new framework was a two-tier system of ‘RPs and ‘local development frameworks’ which replaced the old-style structure and local plans. This confirmed that the tiers of government and type of plan had to be replaced.

Alongside the changes that had taken place the policies that the system was supposed to deliver (i.e. climate change and mitigation) were themselves rapidly changing to accommodate a more environmentally aware agenda. At the present time these concerns are absent from the Master Planning approach which Nigeria, and most of Africa, and developing countries are using, but previous studies have shown that Nigeria and most developing countries are vulnerable to the effects of climate change (FAO, 2002) and Wapwera & Dung-Gwom (2009).

The Planning and Reform Act 2008 would itself continue reforms by introducing an ‘Infrastructure Planning Commission’ for major projects and a ‘Community Infrastructure Levy’ as a mechanism for planning gain. Presently, there is a deficit of infrastructure, due to the inability of the Government to implement those plans.

The 2008 Act would also redress some of the technical deficiencies of its 2004 precursor, notably the complexities of preparing the stages of LDFs. . It has been observed by many authors, such as Mabogunji, (2002), Oyesiku, (2004) and Jiriko (2008) that the process by which Master Plans are prepared has always been cumbersome, lengthy and unending. Hence, by the time the Master Plan is ready for implementation it has been overtaken by other events (development). In Nigeria there are no such acts to redress technical deficiencies. See Appendix C GJUMP, AMP & RUMP

In urban policy matters the most significant issue has been the promotion of an ‘urban renaissance’ (Urban Task Force 1999 and 2005). The drift away from past crises in urban areas (especially amongst more affluent groups) alongside the creation of ‘bland’, car dependent environments in the suburbs or fringe housing developments and out-of-town shopping and campus-style office/business parks, has been largely reversed. This is not the case in Nigeria and Jos Metropolis. *‘This is being promoted, as seen in the sprawl in urban areas and haphazard developments all over the place’* as observed by Dung-Gwom (2008).

Standards of urban development and design require significant improvement and the private sector must be encouraged (and supported) to recycle urban land that may be derelict, vacant and even contaminated land. Presently, there are old standards but these are never enforced by the authorities concerned, and because these standards are obsolete and outdated they have become irrelevant for addressing the present situation in Jos and Nigeria (Agbola, 2004; Jiriko, 2008). A great deal of consideration needs to take place to address the physical and urban development design, as well as management, by which the PS may ‘repair’ the city.

#### **7.4.4. Issues identified for consideration**

First – Past reliance on rigid planning standards stifled creativity. Adherence to highway standards (road widths and radii and visibility at junctions) predominated post-war urban layouts and the ‘roads first, houses later’ priority produced bland civic design. Streets should be seen as places, not transport corridors. In Nigeria the reliance on the rigid planning standards has always stifled innovation and compounds the problems of roads as well as housing, and as always the problem of the lack of appropriately qualified man power to analyse the system.

Second – the Urban Task Force promoted the notion of a ‘compact city’ to foster both sustainability and urban quality. Sustainability can be achieved by linking urban density to a hierarchy of urban centres/local hubs providing shops and services within well connected public transport and walking routes. Poor connectivity discourages sustainability and urban quality as the source of supply from one area is short circuited due poor accessibility. Jos Metropolis has sprawled over the years leading to a high cost

in maintaining the urban centre and bringing about inequality in the distribution of the resources in the same urban environment.

Thirdly – it should be acknowledged that density alone is not an indication of urban quality, although it is an important factor. The Urban Task Force argued that higher densities (and not necessarily high-rise developments) contribute to urban sustainability. Previously, in England, half of all land used for housing has been at prevailing densities of 20 or fewer dwellings per hectare, equating to 54 % of all land used providing just one quarter of all housing units completed (Tewdwr-Jones, 1999;2001a).

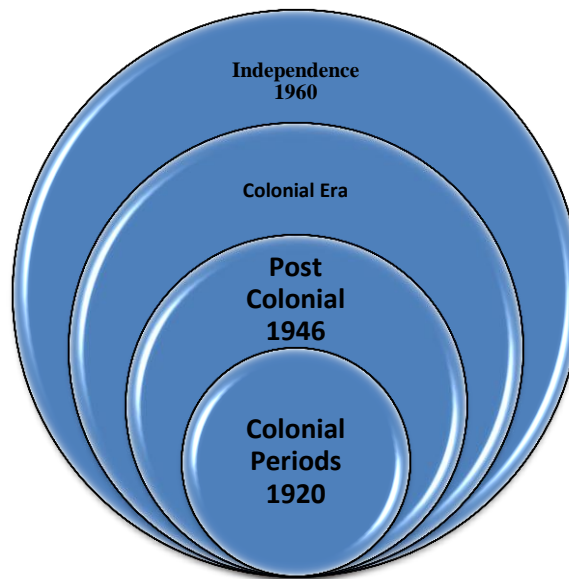
Finally - greater attention should be paid to Urban Development and Management, to facilitate mixed-use/mixed tenure development and to foster sustainability. Furthermore, the Urban White Paper published in 2006 presented a vast array of policy initiatives dealing with the social, economic and environmental dimensions of urban life. The lack of these policies is a major problem but more so because it has never been considered.

The government took forward many ideas to promote the recycling of Urban Development and Management, the improvement of urban design and architecture, and the employment of taxation and fiscal policies to encourage development in deprived areas etc. New thinking emerged in many quarters, ranging across the private sector, Planning Authorities and the research community (Tewdwr-Jones, 1999; 2001a & b; Parsa, 2011).

#### **7.4.5. Transformation of planning in Nigeria: Consideration of '*The spatial planning*'**

Figure 7-7 presents the systematic documentation of past planning activities. It is a record of the development of planning activities with specific reference to physical development and the arrangement of settlements in both rural and urban areas. The quest for the roots of planning and professional identity and the search for specific strategies and tactics used in the past, which might be useful in the future, have motivated the backward consideration in the profession that essentially looks forward. This is very important for many reasons but especially for the future of the discipline itself where because it is at a rudimentary stage a century after its introduction into a system (Uyanga, 1982; Oyewale, 2004 in Agbola, 2004).

This section of the review intends to consider the trends for development of planning in Nigeria with a view to identifying the weakness and strengths and trying to make a case for why it has become very necessary to call for reconsideration of the on-going situation where its impact is not felt in spite of the outstanding efforts put forward by planners past and present to address planning problems identified in different cities in Nigeria. It considers the development of planning in Nigeria. See Figure 7-8.



**Figure 7-8: Chronology of planning events, 1920-1960+period**

Source: Compiled by Author from Branch, 1974; Uyanga, 1982 and Jiriko, 2007

The colonial period was characterised by the following hindrances; enforcement of sanitary regulations and ineffective land use control measures, piecemeal and ad hoc town planning committees, establishment of Planning Authorities, planning was part of general administration, creation of planning areas or jurisdictions, frustration by official apathy and opposition from works department and general lack of technical staff. This was also manifested in the findings from the face-to-face interviews, questionnaire and document review as well being confirmed by information obtained from the literature review. The colonial era was also characterised by heavy piecemeal enforcement of regulations using ad hoc committees, planning was generally a part of administration which lacked technically qualified staff, the frustration felt by official staff by being encumbered by a jurisdiction, emergence of Planning Authorities and the creation of ordinances to make cases for re-planning.



The independent period was characterised by the 1<sup>st</sup> and 2<sup>nd</sup> national development plans. It was followed by the post-colonial periods which observed the initiation of an ordinance to make provision for re-planning, improvement and development of Lagos (cap. 103, No. 45 of 1928). The Nigerian town planning ordinance of 1946 was modelled on the UK's town and country planning Act of 1932. The act did not create room for the proliferation of planning authorities, this was good because having a central coordinating PA is vital to a control urban development and management. Whilst this is the case in UK the proliferation of Planning Authorities which derive their power from the federal and state and now some from the local government, would create a chaotic urban environment.

Furthermore, the major features of the post-independence era were; concentration of all economic, social and political developments in Lagos, deprivation of other urban centres in the nation or primacy, dominance, it became a place to leave and not to live in, a crowded and sprawling city of chaotic vehicular traffic congestion and the worst on earth.

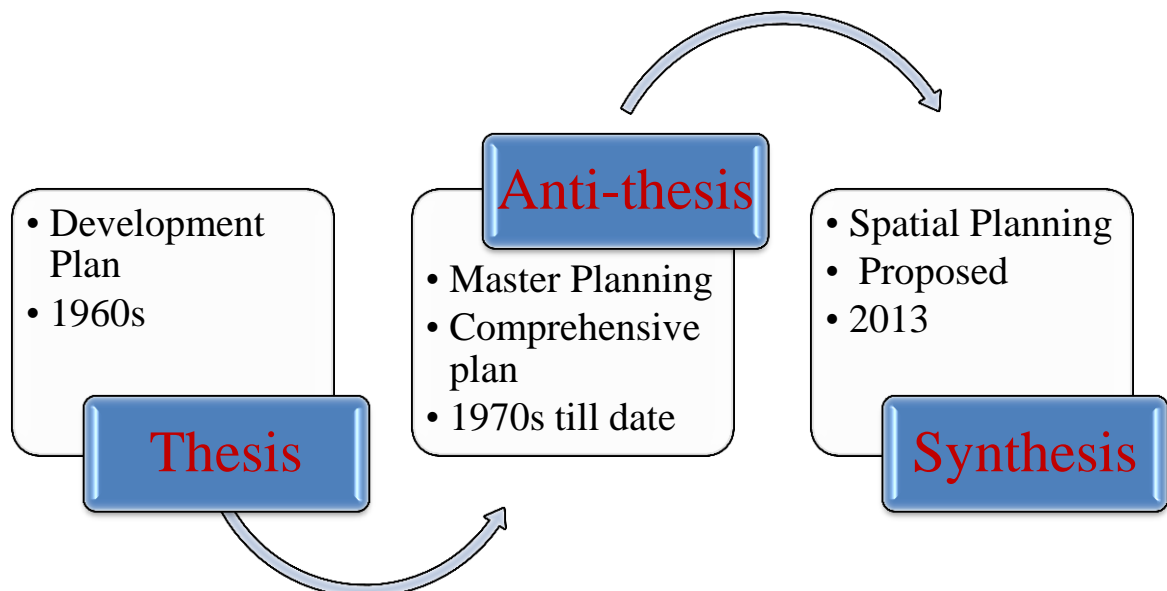
The creation and development of Abuja to decongest Lagos and create a new Nigerian capital city through the adoption of a Master Plan for Abuja and implementation in phases has failed to bring about the expected controlled urban development and management as emphasised by Jiriko (2007) in his study which is also confirmed by this study clearly shows that there is the absence of a coordinated institutional framework and an effective urban planning system in Jos metropolis as well as many cities in Nigeria, calls for an alternative urban planning approach.

The self-contained Master Plan has now been replaced by a series of different principles or guidelines which give maximum freedom of choice, communication and association. This has made planners start to think in regional terms and become very conscious of the need for flexibility (Mabogunji, 2002; Oyesiku, 2004; Jiriko, 2008). The role and importance of voluntary organisations and pressure groups, civic societies, conservation groups, studies and sectional interest of every conceivable kind is growing fast and the encouraging thing is the interest in conservation which indicates that public opinion is a force to reckon with. Adaptation is the crux of planning although it is not the object as observed by Rose, (1974) and documented in chapter 3; Branch, (1974) also revealed

that cities become bigger and more complex and less subject to authoritarian decision, the end-state physical Master Plan is no longer valid as ascertained in chapter 3 of this research. The end-state concept in city planning was therefore abandoned (Jiriko, 2004; 2008).

#### 7.4.1. Trends in the development of planning in Nigeria

Development may refer to: a general improvement in land use (green development, land development, mixed-use development, real estate development, subdivision (land), urban planning, and transit-oriented development etc) (Obateru, 2004; Oyesiku, 2004; Oyewale, 2004). It could also be a part of other disciplines related to planning such as science and technology, social sciences, arts and other humanities as well as other professionals. For the purpose of this study emphasis is placed on land use (Master Planning). This explains the main pointers of the periods observed from 1920s' to the present day of how planning in Nigeria has developed over time. The next section will consider the following periods; Colonial period (1920); Post-colonial period (1946); Independence period (1960) and Post-independence period (1962) to the present 1970 to 2012. Table 18 illustrates more details of the chronology of major planning events in Nigeria.



**Figure 7-9: Trends & Planning Phases**

Source: compiled by author from Federal Government of Nigeria, (1962, 1975, 1980) and Okpala, (1979); Uyanga, (1982); Oyewale, (2004) Agbola, (2004).

Figure 7-9 shows the transformation of planning in Nigeria from dependence to the time when researchers began to reveal the inability of Master Planning to address the problem of Urban Development and Management in urban cities in Nigeria thereby raising a clarion call for a better planning approach to address the problem in view of the nature of population in most of the cities. It is against this backdrop that the consideration of Spatial Planning becomes very pertinent due to its characteristics and ability to address the problem of urban sprawl and by tracing the route of spatial planning and its implementation in most European countries, including Britain, and by considering results it has yielded over the years in achieving proportional Urban Development and Management. The British colonial masters left a planning structure in place in Nigeria. When considered from that perspective it can be seen that once this planning approach has been adopted and has yielded positive results in other countries, it means, that it could be adopted in Nigerian cities and will yield similar results thereby bring about controlled Urban Development and Management.

Based on the aforementioned these structures can accommodate a shift from one policy reform to another, as can be seen from the experience of Britain which migrated from the far left to the far right and then adopted the third way, as confirmed by Giddens (2000). Nigeria started with the development plan that existed between the 1960s and 1980s when rolling plans were used, and finally, the master plan (comprehensive master plan concept) was established, as observed by Jiriko (2008). Hence, spatial planning can be adopted as a strategic planning tool (3<sup>rd</sup> way) to address the issue of Urban Development and Management in Jos Metropolis, Nigeria.

## **7.5. THE SPATIAL PLANNING AS A STRATEGIC TOOL**

Spatial Planning is characterised by a deliberate approach to planning, where there is pre-determination of the objectives to be achieved. The plans usually have an outline of activities to be achieved in order to realise the objectives. Some of the plans or activities are at organisational level, variously known as strategic plans; and some of the activities are at operational level. Most organisational strategies following the strategic planning school, with the approach describe above. The examples typically found in most

national, state or local organisations follow the strategic plans for instance; the master plan, spatial plan and development plan are typical of the plans that are favoured.

Elbanna (2008, p. 786), defined strategic planning practice as “the extent to which the company uses strategic planning tools”. He claims that the use of strategic planning tools as an indicator of the practice of strategic planning provides the bases for more objective evidence of the practice; in this case planning. Although this cannot in itself completely measure strategic planning practice. Planners work with a mission and/or vision and long-term objectives and strategies. Hence, strategic planning practice becomes their watch word; the intent is to convey that a PA’s strategic planning process involves some strategic tools which are explicitly used to put the strategic planning concept into action.

For the purpose of this study Spatial Planning can be considered to be a strategic planning tool, there is a need for the introduction of Spatial Planning variables into one of the strategic tools mentioned above to make it a ‘strategic spatial planning tool’. Different disciplines for adopting different reasons to address different problems.

The reason for this consideration in this study is due to the multidisciplinary, multidimensional and multifaceted nature of the research. Mintzberg, Ahlstrand & Lampel (2008) identify 10 approaches to the subject of strategy. See Table 7-4. Each of these approaches will be discussed to show how they operate and how they relate to this study. The following are examples of strategic schools of thoughts relating to planning that can be related to the Planning Authorities. (See Table 7-4).

**Table 7-4: Strategic Schools of thought**

1. The design school which sees strategic management as a process of attaining a fit between the internal capabilities and external possibilities of an organisation.
2. The planning school which extols the virtues of formal strategic planning and arms itself with SWOT analyses and checklists.
3. The positioning school heavily influenced by the ideas of Michael Porter, which stresses that strategy depends on the positioning of the firm in the market and within its industry.
4. The entrepreneurial school which emphasises the central role played by the leader.
5. The cognitive school which looks inwards into the minds of the strategists.
6. The learning school which sees strategy as an emergent process. Strategies emerge as people come to learn about a situation as well as their organisation's capability of dealing with situations.

7. The power school which views strategy as emerging out of power games within the organisation and outside it.
8. The cultural school which views strategy formation as a process rooted in the social force of culture.
9. The environmental school which believes that a firm's strategy depends on events in the environment and the company's reaction to them.
10. The configuration school which views strategy as a process of transforming the organisation. It describes the relative stability of strategy, interrupted by occasional and dramatic leaps to new ones.

Source: Mintzberg, Ahlstrand & Lampel (2008)

Table 7-4 enumerated ten (10) strategic schools of thoughts as observed by Mintzberg, Ahlstrand & Lampel (2008) in their book ‘Strategic Safari’. These strategic schools include: planning, cognitive, environmental, power, enterprise, positioning, cultural, configuration, design and learning schools. All these schools are all characterised by a deliberate approach to planning whereby there are pre-determined objectives to be achieved. The plans, spatial or master, are aligned to the activities and the need to realise the objectives for each of the approaches.

For the purpose of this study these ten strategic schools would be considered in relation to the Planning Authorities. The PA has functions, responsibilities and roles and all the Planning Authorities in Jos Metropolis Nigeria have one responsibility that is unique to them. Egbu, (1994) observed that seven main schools of thought concerned with learning theory were used, hence, in this study reflection on the numerous sections in the strategic schools makes it very relevant for consideration and application of meeting the targets set for each of the planning authorities.

Each one of the approaches in the schools of thought is related to spatial planning in its own unique way. By placing them in the context of their background the design school sees strategic management as a process of attaining a fit between the internal capabilities and external possibilities of Planning Authorities.

It is different in the planning school which extols the virtues of formal strategic planning and arms itself with SWOT analyses and checklists because even though it is possible for the Planning Authorities there is an analysis of strengths and weakness that enable consideration of the strategies (Ricardian concept).

The positioning school is very important because the three tiers of government in which the Planning Authorities are located have different functions, roles and responsibilities at every level and helps in addressing the problems at every level as well as any specific issues. The enterprise school helps the Planning Authorities to play their role in the design and implementation of the physical development plans.

The cognitive school helps by considering the minds of those who put forward strategies for implementation and tries to decipher the rationale behind the decision taken; which lies with the Planning Authorities, planners, residents and other stake holders as well as other policy makers.

The learning school sees strategy as an emergent process and ensures that strategies emerge as the planning authorities come to learn about the physical planning problems as well as their strengths for dealing with those problems.

The power school views strategy emerging out of power games within the organisations and external to them. All the Planning Authorities are established by law and from such law comes strength or power to ensure DC as seen in the GLA Review 2004.

The cultural school views strategy formation as a process rooted in the social force of culture i.e the way of life of the people involved in the PS considering their norms and values. For any planning approach to succeed the culture of the people must be considered, for instance, the negligence of the culture of the people concerning LUA has made it almost impossible for the Planning Authorities to control Urban Development and Management as seen in the Land Use Act, 1978.

The environmental school believes that a Planning Authorities strategy depends on activities in the environment and the Planning Authorities reaction to these activities. Planning is an activity-led process; hence it is related to this research.

Finally, the configuration school views strategy as a process of transforming an organisation, it describes the relative stability of strategy interrupted by occasional and dramatic leaps to new strategies. When a development planning process and DC process is planned to achieve targets related to the physical development of a given geographical area it is considered to be a strategic plan. Strategy, in short, bridges the gap between “where we are” and “where we want to be”. The issue to be addressed

here is how can spatial planning be applied as a strategic tool? Strategic tool in this study is defined as an instrument used by the Planning Authorities in Jos Metropolis to address problems that are concerned with the allocation of resources to achieve the adoption, assimilation and improvement of space and place, location and quality, social, economic and environmental changes often as a result of the creation of spatial plans to the more localised design and organisation of towns, villages and neighbourhoods. It is against this backdrop that the following will be observed as ways in which it will be applied as a strategic tool.

In Nigeria this is reflected in the report of the National Planning Office and the establishment of a policy guideline with a breakdown at every level and in various fields. The state translates and operates by making various urban master plans which also translate into programmes to address the problem. All these are related in terms of the physical planning. Spatial Plan is the act of making available what is supposed to be there in any given physical environment (National Assembly of Wales, 2004). Hence, at any given point it is very important to consider the core of the strategy where the growth point is considered through the governance and management. Finally, Healey (2006) also reiterated the fact that Spatial Planning is succeeding and flourishing in Britain without any changes in political culture and institutional design.

#### **7.5.1. Application of Spatial Plan strategy by the planners**

The role of planners in Planning Authorities is categorised into three areas; ensuring proportional development, formulation of policies and the organisation of planning activities to ensure proportional Urban Development and Management in all regions.

The Spatial Planning strategy is applied in respect of these main areas by the planners as it forms part of their responsibility viz; Spatial Planning development, spatial policy and Spatial Planning as observed by Nadin (2006; pg 15). ODMP (2006) argued that it is the move or shift from an interest in master planning to spatial development. Spatial development is the distribution of both natural features and manmade features across a region and includes the qualities of those features and activities in the plans. It is to negate the disparities in the distribution and access to infrastructure from one location to another (urban, rural or city-region). These form the bases for planning practice across regional spaces within a wider context.

Spatial Plan influences DC and land use changes through regulations, mostly in reaction to market demands. It is a product of many sectoral policies and actions in public and private sectors, for instance, health and education are becoming more important but the spatial impact of decision making in sectors, described as spatial policy, is rarely considered explicitly as observed by ODMP, (2006).

It is concerned with ensuring that the spatial policy impacts are considered and coordinated – in the interests of sustainable spatial development. The application of spatial policy by the planners would place emphasis on the cross-sectoral integration around spatial or territorial strategies depending on the jurisdiction of the PA in which they work. This does not necessary mean that the planners are the only experts involved in the process of designing plans, it is always down to team work.

#### **7.5.2. Application and integration of spatial planning as a strategy by Planning Authorities**

The application of Spatial Planning by the Planning Authorities in Jos Metropolis would be reflected in the roles, functions and responsibilities played by each PA showing clear roles and responsibilities and how they are related. It would lead to clarification in the areas of conflict at various levels (tiers of government) as there was no linkage between them in the past. Laws and decrees that are obsolete and form a barrier to the effective discharge of roles, functions and responsibilities of the Planning Authorities would be made reference to and recommendations made.

The application of the new Spatial Plan approach is expected to grow and replace the old Master Plan approach, this is critical because it encourages positive collaboration related to spatial development which is highly desired. This forms the basis for the reality of day-to-day planning in the interests of all sides of the planning application process and decision criteria set out in policy, which will remain in some form.

Some Planning Authorities have long since separated out the broader strategic function from the regulation tasks by clearly stating the functions, roles and responsibilities of Planning Authorities so as to achieve the goal of DC in Jos Metropolis (Nadin, 2006).

Changes are needed to accommodate DC into the shift from Master Planning into Spatial Planning. The emphasis in the reform has been on the policy making functions



and other implementation tools, with only incremental changes proposed for DC (so far). The discussion of Spatial Planning suggests that more radical changes may be necessary, especially if the transition will fundamentally alter the regulation functions of the local plan.

The implication in the Spatial Planning approach is that it allow for widening of the scope in decision making and support the task of the Planning Authorities. It also reflects the reality of the role of plans and strategies in influencing spatial development. The Planning Authorities carry out DC which is fundamental to the reforms, but there is a need to create a relationship between DC and planning policy (Spatial Planning) and then manage the change in the relationship between the created development control and planning policy in Jos Metropolis, Nigeria.

The LDF use the act, regulations and policy guidance; a very substantial shift in thinking and practice is also needed if the Spatial Planning approach is to be applied. At the same time, there is considerable pressure on most authorities to drive ahead with the adoption of local planning policy.

There is a need for evidence-based facts about development documents. It may also take some time for the development documents to fully mature to suit the system. It may be that the need to get up-to-date policy into place (and the desire to be one of the first; Jos, Metropolis and subsequently in other Nigeria cities) is driving the application of the Spatial Planning approach and affecting the quality of plans. It may also be that the scale of the challenge and the opportunity is not fully recognised in practice. The Planning Authorities take a long term view of the challenge, especially in developing the skills, experience and confidence needed to take advantage of the new planning approach so as to avoid being incapacitated.

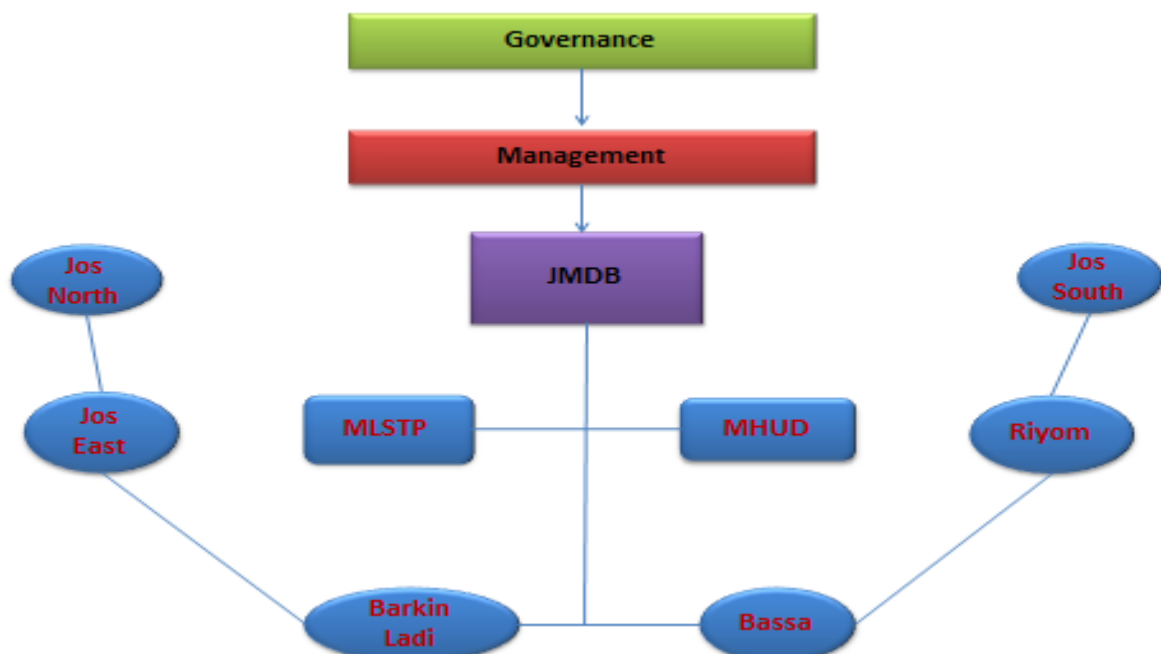
Sectors such as Environment, Housing, Land, Health and Education are engaged in collaborative activity that involves planning. Hence, this is an opportunity to bring in policies such as the Land Use Act, 1978, URP, 1992, NAPEP, NHP and UBE and incorporate them into the planning approach. Whilst the Master Plan does not support the incorporation, integration and collaboration of multiple policies that can influence and determine Urban Development and Management, Spatial Planning supports the integration, incorporation and collaboration of these policies. This has become very

necessary because the planning approaches are dependent on different policies for their implementation.

The theory of planning practice has been confirmed by this assertion where policy integration in the Spatial Plan approach supports collaboration, integration and joining up. The approach does not need any guides to be devised for collaboration and integration as Planning Authorities could develop and modify guidelines that suit their roles, function and responsibilities. The proliferation of Planning Authorities has caused Urban Sprawl problems within the study area, and hence, a framework is needed to clearly state the mechanisms and foci to promote and integrate policies and Planning Authorities.

Finally, the application of Spatial Planning as a strategic tool for town planners and Planning Authorities would help in ensuring controlled Urban Development and Management as observed by Albrecht (2006), where the roles of planners are enumerated.

The urban government manage the urban area through the Planning Authorities using the plans; in this case Spatial Planning (See Figure 7-10).





**Figure 7-10: Application of Spatial Planning by Planning Authorities**

Finally, this chapter seeks to assess the applicability of Spatial Plan as a strategic tool in Jos Metropolis. There has been strong agitation for the adoption of a planning approach that could address the problems of Urban Development and Management in most Nigeria cities. The results from the analysis and discussion show that both Master Planning and Spatial Planning are appropriate approaches for controlling Urban Development and Management and could be used as strategic tools; but Spatial Planning has a stronger correlation with the urban sprawl conditions which form the basis for the application and leads to the development of the Spatial Planning Framework and the effective implementation of Spatial Planning in the study area, the three phases of the thesis, anti-thesis and synthesis for both Great Britain and for Jos Metropolis Nigeria, giving a strong indication that objective 4 has been achieved in this research.

## **7.6. SUMMARY**

This chapter set out to assess the applicability of spatial planning as a strategic planning tool in Jos Metropolis, Nigeria which has become very necessary considering the fact that the previous and proposed master plans were not implemented due to numerous problems that have acted as inhibiting factors over the years. Jos Metropolis has found itself in that dilemma and needs a good way of resolving the problems.

This chapter has considered an alternative that could be used to address the problem. It considered the following;

-  The implication of the failure of the urban master plan approach on the urban planning system as a result of the constraints affecting the institutional framework which in turn affects the performance of the components of the urban planning system; which is the consideration of the effectiveness of the urban planning system in addressing the physical planning problem identified in the Jos metropolis and in many cities in Nigeria and most developing countries.
-  The comparison between Master Planning and Spatial Planning revealed that the application of Master Planning and Spatial Planning as a strategic tool for Planning Authorities are both appropriate in addressing the Physical Planning problem identified (Urban development and management). But Spatial Planning was more

appropriate considering the peculiarities of the Jos Metropolis in terms of Urban Development and Management.

✚ A case for the application of Spatial Planning was arrived at by drawing from the international experience of the United Kingdom that once colonised Nigeria and left a structure for planning after independence in 1960. Tracing the transformation of Great Britain and Nigeria explains the three phases; Thesis, Anti-thesis and synthesis for both countries. Blair's philosophy of adopting what is do-able was the basis for the consideration.

✚ The strategic Spatial Planning tool was considered according to the ten schools of thought; planning, cognitive, environmental, power, enterprise, positioning, cultural, configuration, design and learning schools observing that all these schools emphasised one aspect or another.

The implementation of spatial plan as a strategic tool was considered by planners and by Planning Authorities in their roles, functions and responsibilities which are reflected in their roles for development, policy and planning across the region and as in this study, Jos Metropolis.

## **CHAPTER 8. SPATIAL PLANNING FRAMEWORK DEVELOPMENT, VALIDATION AND ITS GUIDANCE DOCUMENT**

### **8.1. INTRODUCTION**

The aim of this research is to evaluate the need for spatial planning (Spatial Planning) and develop a framework (FW) and a guidance document for addressing urban development and management (Urban Development and Management) in Jos Metropolis, Nigeria (Jos Metropolis Nigeria). Chapter seven concentrated on the assessment of the possible application of Spatial Planning as a strategic planning tool in Jos Metropolis, Nigeria (Jos Metropolis Nigeria) and concluded that there is great need for the development of a spatial planning framework (Spatial Planning Framework) for implementation in Jos Metropolis Nigeria. Hence, this chapter seeks to develop a spatial planning framework (Spatial Planning Framework) and to validate the framework. It also purports to develop guidance documentation for the implementation of urban development and management (Urban Development and Management) in Jos Metropolis Nigeria. Accordingly, the chapter is structured as follows:

- ✚ The development of the spatial planning framework (Spatial Planning Framework )
- ✚ An overview of the framework development process
- ✚ The Urban Planning System and framework analysis
- ✚ Framework Validation
- ✚ The Spatial Planning Framework (Spatial Planning Framework ) Implementation
- ✚ Development of the Guidance document
- ✚ Background to the Guidance document
- ✚ Structure of the good guidance document
- ✚ Scope and contents of the guidance document
- ✚ Questions and Answers to Develop the Spatial Planning Guidance
- ✚ Guidance Document for Implementation of the Spatial Planning Framework

### **8.1.1. The Development of the Spatial Planning Framework (Spatial Planning Framework )**

Earp and Ennet, (1991) and DCLG, (2007) consider a framework to be that which is used for organising and integrating information. It could be a representation of a theory. Graphical presentations help individuals to understand a process and how various factors interact and influence the outcomes of the process. It helps in creating a linkage amongst a set of concepts in a particular issue. The Business Dictionary, 2013 defines it as a broad overview, outline, or a set of interlinked items which supports a particular approach to a specific objective, and serves as a guide that can be modified as required by adding or deleting items.

There are few known Spatial Planning Framework to assist in improving physical planning (PPG) processes for most cities and urban areas in Nigeria. Frameworks developed for urban planning systems (Urban Planning System) in developing countries are not available nor are frameworks developed for Urban Planning System in most cities in developed countries readily available (Ekop, 2007). Furthermore, in Nigeria previous studies have shown that FWs are not effective, are unreliable and yet highly needed. For instance in the NHP (2006; pg77) it states that....

*‘The institutional framework for effective housing delivery and urban management at all tiers of government needs to be stabilised, empowered and strengthened to effectively discharge their respective functions as identified in the National Housing Policy’.*

This was also captured by the SCP who also observed that....

*‘A framework for coordination of local support is needed’.*

Finally, as observed in chapters 5, 6 and 7, the 1992 URP law has not been implemented 21 years after the Supreme Court found in favour of it, hence it could be concluded that there is no urban and regional planning (URP) framework, let alone an Spatial Planning Framework in most developing countries and in, particular, Nigeria enable the smooth implementation of Spatial Planning in Jos Metropolis (Jos Metropolis) and other cities in Nigeria.

The early planning process frameworks or models were to govern the implementation (development control process (DCP)) of the PA and their activities. These were used for application in the post-tin mining planning system: where emphasis was placed on both the production and implementation of a locally produced planning policy as introduced by the Town and country planning Act 1947 (Ratcliff, Stubbs & Shepherd, 2002; DCLG, 2007).

The implementation of the Spatial Planning by potential users to ensure controlled Urban Development and Management within the study area is the main aim of the framework (Ratcliff, Stubbs & Shepherd, 2002; Obateru, 2004; Udoudoh, 2007). The emergence of infrastructure-based Urban Planning System would bring about and support appropriate development and there is a need to incorporate a coordinated institutional framework (IF) identifying the constraints that impinge on the functionality of its component and also the effectiveness of the Urban Planning System which exist in the institutional framework.

With reference to chapters 5, 6 and 7 and in addition to the planning processes of the URP system the Spatial Planning Framework is developed to function within an urban structure to bring about the effectiveness of the urban planning system with the following as its components; urban governance (institutions), urban management (technical), administration (operation) and legal (laws and ordinances). This forms the core of the FW following the theory of structuration where the following exist in the structure; Planning Authorities as agencies, planners as agents and the people as actors as observed by Giddens, (2006).

Based on the above the spatial planning framework is developed so as to enable the Planning Authorities and planners in addressing the Physical Planning problem usually created by people, who are termed actors, in Jos Metropolis and other cities in Nigeria. Hence, to develop a FW of Spatial Planning for the Nigerian URP system, the system thinking approach is used and the review of existing FWs are discussed.

For the purpose of this research a Spatial Planning Framework is an overview outline of the juxtaposition of the institutional Frameworks identified and the Urban Planning System which supports the Spatial Planning approach to address the Physical Planning problem in Jos Metropolis Nigeria.

### **8.1.2. The Overview of the Development Process of the Framework**

The development of a Spatial Planning Framework and guidance document for this study requires a comprehensive review of relevant and related literature FWs, their implications, strengths and weaknesses. The objectives of this study and its limitation are carefully considered in the formulation of the FW as observed by DCLG, (2007) and Luo, Dang & Mao (2009). An extensive literature review was also required taking into account the objectives for the formulation of the FW and the context of the application which is to develop a FW and guidance document for Spatial Planning for Urban Development and Management in Jos Metropolis Nigeria.

This study also took into account of the system thinking approach in the development of the FW, where the vision of the system or FW is not limited to the objective of the study but expands its views instead to the bigger picture of the study. This allows the present study to determine the operation in reality, noting the location and permeability of the boundary of the system to be modelled. Hence, the present study seeks to develop a Spatial Planning Framework and guidance document for the URP system in Jos Metropolis to implement the Spatial Planning as the non-existence of the coordinated FW has affected the implementation of master plan (Master Plan) which is obviously not relevant and inadequate for the dynamic population; more over it is not flexible, robust and does not address the issues of urban sustainability and climate within the study area as claimed by previous literature.

This Spatial Planning Framework purports to provide a tool to the three tiers of government, Planning Authorities at all tiers of government and planners in all Planning Authorities to use in the implementation of Spatial Planning to control Urban Development and Management in Jos Metropolis Nigeria. The benefit of having a controlled Urban Development and Management is to keep the following in check; change in land use, loss of agricultural land, open spaces, ecologically sensitive habitats, unplanned outgrowth of urban centres along the periphery of the cities, unplanned growth along highways and unplanned growth along the roads connecting the city, to discourage outgrowths devoid of basic amenities like water, electricity and sanitation and which act as a potential threat to future development; thwarting the main aim of sustainability in any region.



The provision of the guidance document with the FW would increase the level of awareness about Spatial Planning in Nigerian URP system. The strategy for FW development was drawn from McLoughlin, (1969) and Luo, Dang & Mao (2009). The opinion strategy was also used in addition to semi-structured interviews and survey as a technique for theory development. To facilitate these processes inferences were drawn from Fellow and Liu, (2003) who suggested four types of classification for frameworks or models viz; iconic, replication, analogue and symbolic.

Iconic: This is a graphical representation of certain aspects of a real system

Replication: It is display of significant physical similarity to reality.

Analogue: Using one set of characteristics to represent another which the system proposes and

Symbolic: This is commonly use in mathematics and requires logic.

Two basic activities are involved in the development of any FW:

1. Identification of the situation to be framed and
2. Converting the situation into the frame.

Focusing on the area of interest, outcome and variables of the situation under consideration is the starting point in the development of a FW. This process continues with the selection of the potential connection point. The development of the FW has three stages which are;

Stage I: Developed from the review of literature on generic planning frameworks (planning processes) and spatial planning frameworks from other countries (South Africa, UK and European countries) and from countries using the master planning approach called Draft 1 as shown in figures Figure 8-1, Figure 8-2 and Figure 8-3.

Stage II: Modification of the framework developed from literature review taking into consideration the results from interviews (face-to-face) and the questionnaire which are the views and opinions of planners/practitioners and also taking into account the real world. See Figure 8-4.

Stage III: The modified framework is put forward for validation to obtain the views of the planners/practitioners which is then analysed and added to the modified framework to complete the final spatial planning framework See Figure 8-6.

#### **8.1.2.1. Stage I: Development of Frameworks for Urban Planning Systems**

DCLG, (2007) and Luo, Dang & Mao (2009) in their study 'The Study of System Framework of Urban Planning Based on Workflow' argued that there is little literature investigation into Spatial Planning Framework in the URP industry. For the purpose of this study a review of relevant and related literature would be considered. This is to enable the researcher to develop an Spatial Planning Framework to enable the Planning Authorities and planners in Jos Metropolis Nigeria to implement spatial planning within the urban planning system.

The framework is developed by refining the existing frameworks on spatial planning from countries such as South Africa, UK and other European countries. This study, therefore, reviewed four models of a Spatial Planning process which were; Ratcliffe, Stubbs & Shepherd, 2002 (DPP and DCP), McLoughlin, 1969 , (Systems Approach, 1969), DCLG, (2007) and the Local Government Performance Indicator Framework, George Chadwick, and Alan Wilson. For more details about McLoughlin, 1969, (Systems Approach, 1969), George Chadwick, and Alan Wilson read the work of Hall (2002).

All of the above drew their formulations from the sciences of cybernetics and systems analyses, which are helpful in the consideration of the urban planning process; hence, a more simplified FW has to be adopted to give a clear account of the separate stages of the process based principally on the classification of McLoughlin, (1969) and Ratcliffe, Stubbs & Shepherd (2002).

The framework considers the two components of any Physical Planning application by Ratcliff, Stubbs & Shepherd (2002) which are; the DPP and DCP. These processes work within the Urban Planning System where development plans (Master Plan or Spatial Plan) are developed and adopted/used to control physical development and management in an urban and regional domain.

The DPP addresses the decision to adopt a planning system, goal formulation and the identification of objectives and the study of possible causes of action with the aid of models or what is termed the plan i.e. Master Plan, structure plan etc. The DCP is

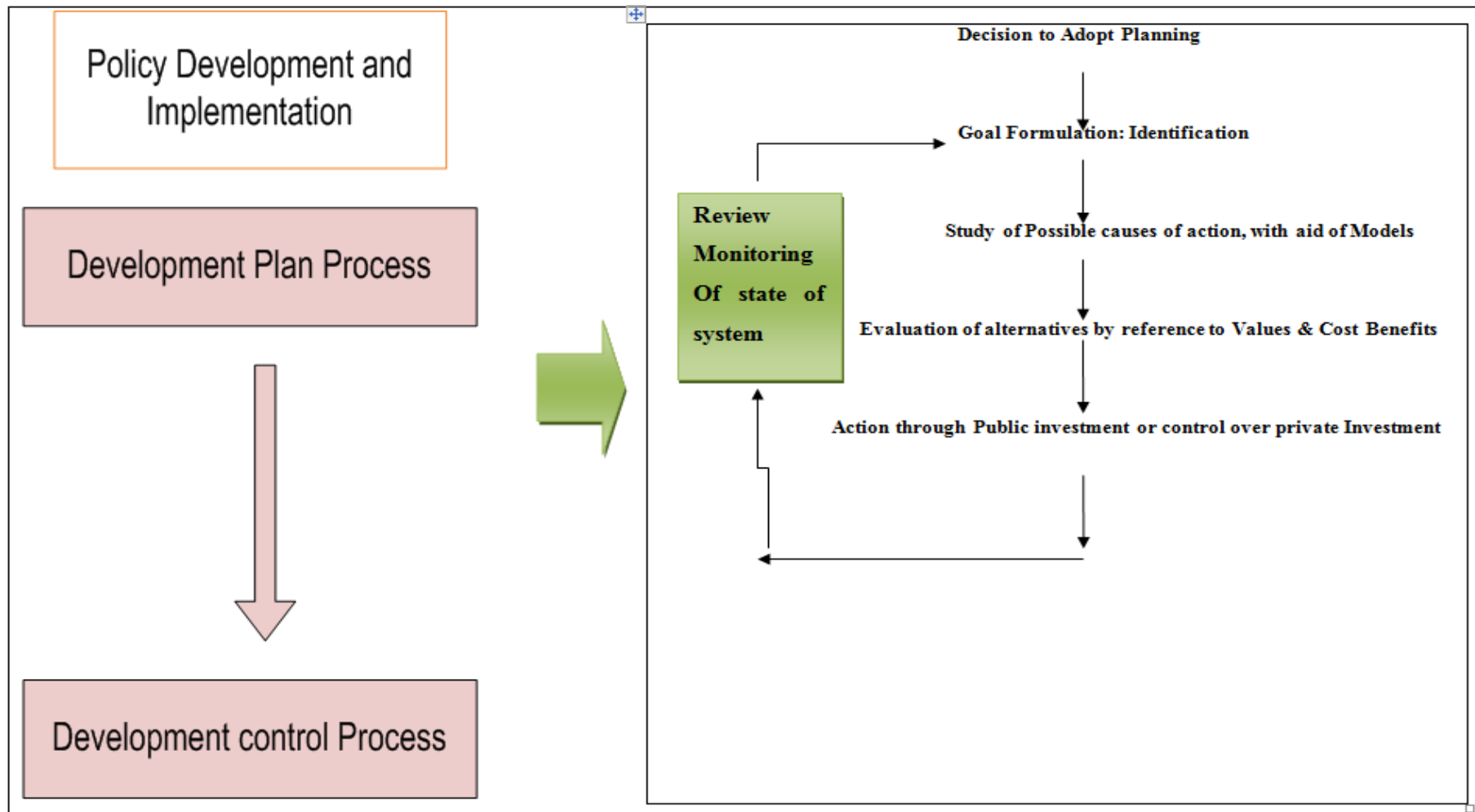
considered at the evaluation of alternatives with references to values and cost benefits for actions to be taken for public investment or control over private investment. This is managed continuously by the Planning Authorities for the duration within which the plan or policy is marketed.

At any time when the plan is to be reviewed this process is repeated, in the case of the Master Plan it was done every 10yrs -15yrs, i.e. the plan duration is finished before revisions and alterations are undertaken, but the spatial plan is constantly reviewed and altered following any changes that have been effected in other policies which the plan relates to.

It is against this backdrop that the Spatial Planning Framework was adopted using the Ratcliff, Stubbs & Shepherds' DPP and DCP and McLoughlin's planning process using the Urban Planning System. See Figure 8-4.

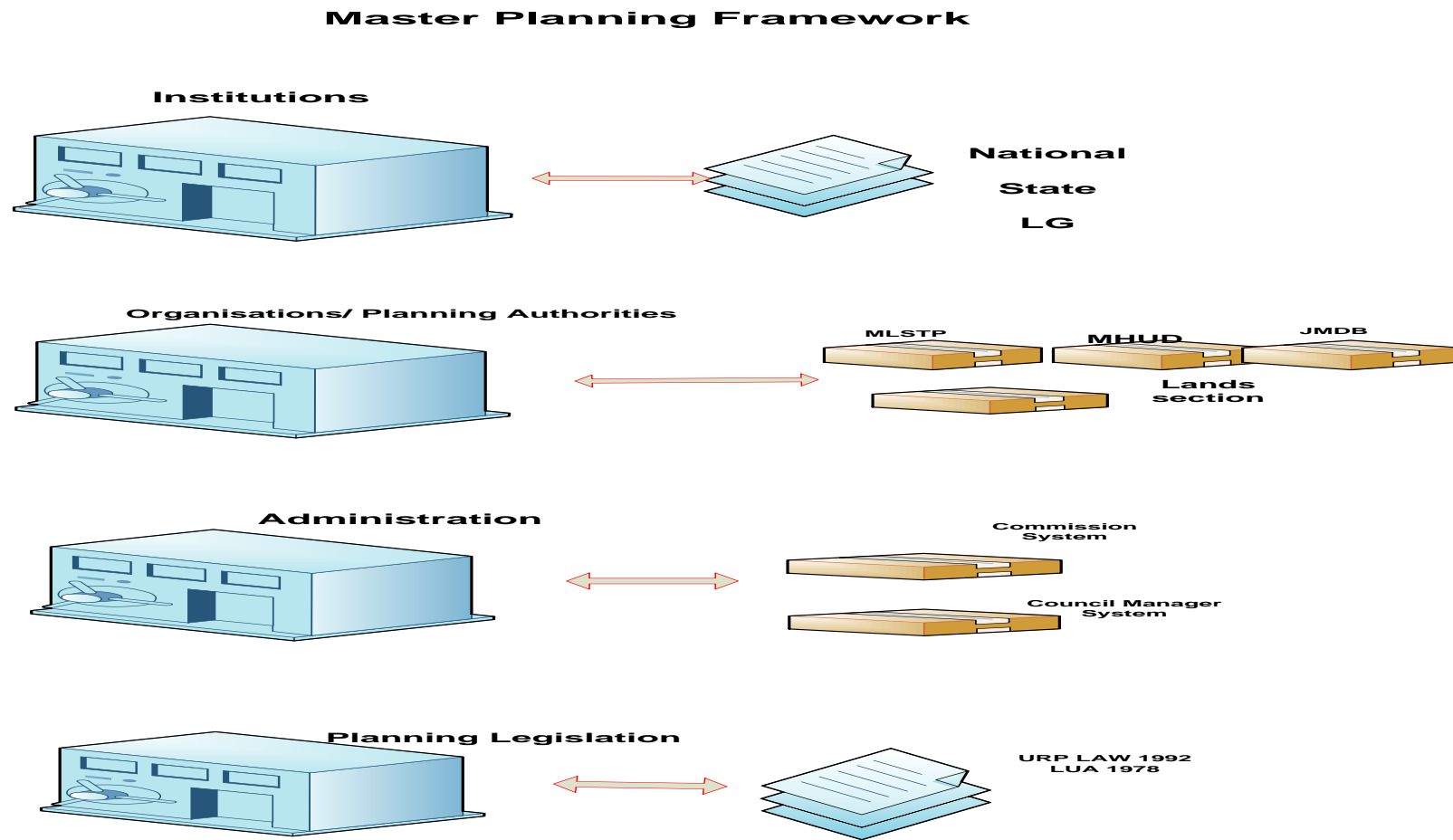
These frameworks have the basic generic components of planning frameworks that take into consideration policy development (development plan process and development control process) as did Ratcliffe, Stubbs & Shepherd (2002) and linking the decision to adoption of the planning systems approach of Brian McLoughlin.

Considering the literature review from a global perspective, and specifically from a Nigerian perspective see Figure 8-1 and Figure 8-2 which shows the differences between a master planning framework and a spatial planning framework.



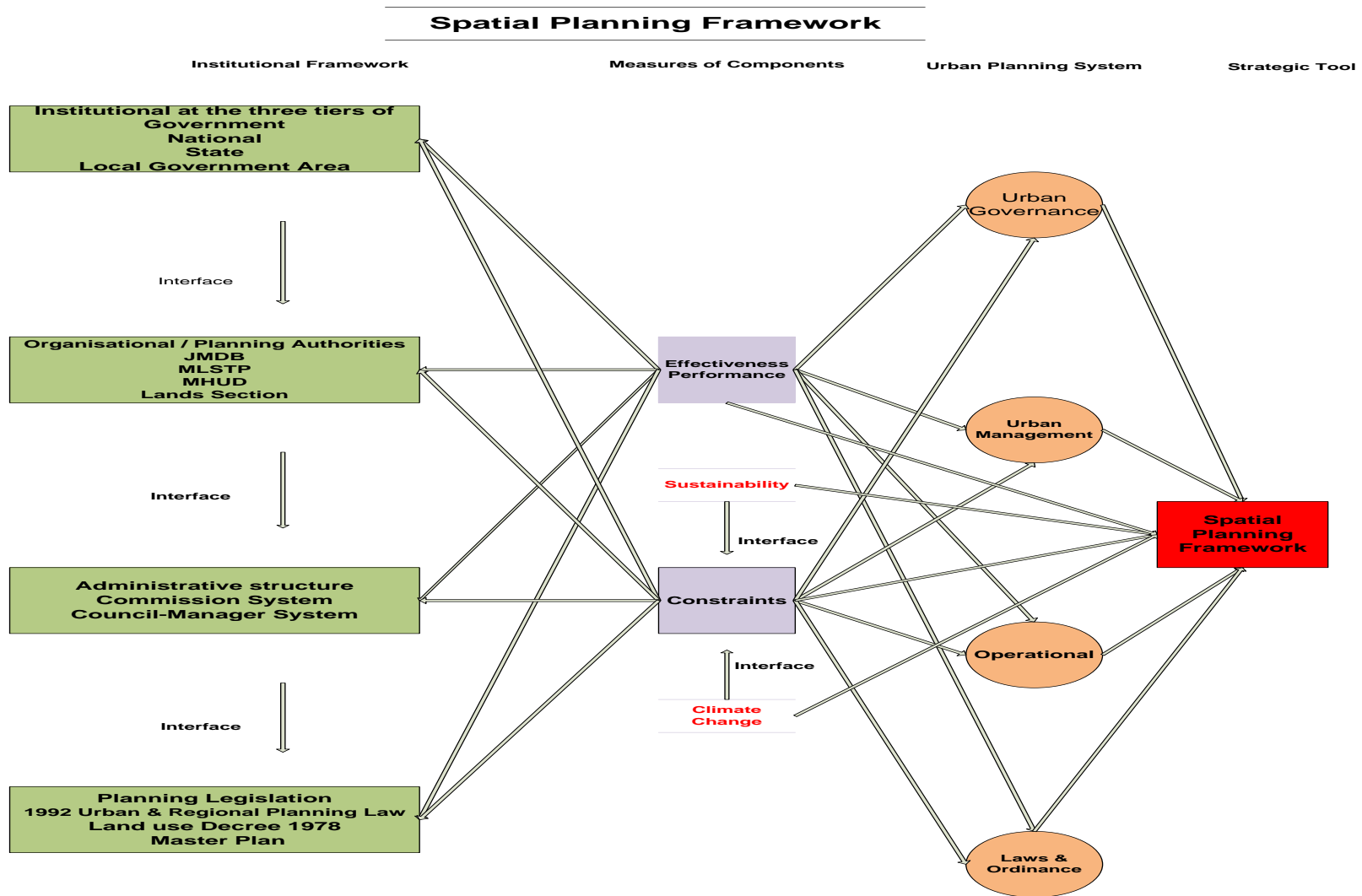
**Figure 8-1: Generic physical planning framework**

Source: Adopted by Author from Ratcliffe, Stubbs & Shepherd (2002) & McLoughlin (1969)



**Figure 8-2: The Master Planning Framework**




Source: Adopted by Author from Ratcliffe, Stubbs & Shepherd (2002) & McLoughlin (1969)



**Figure 8-3: Spatial Planning Framework (Spatial Planning Framework ) DRAFT I**

The master plan framework and the spatial plan framework utilises the generic physical planning framework process to ensure implementation in any given jurisdiction. DCLG, (2007) and Luo, Dang & Mao (2009) observed that even though the different components of the Urban Planning System have different scopes of application and implementation, at the same time, they have three overall characteristics as shown in Table 8.1

**Table 8-1: Characteristics of the components of Urban Planning System**

 Function in the planning period: it primarily considers the development plan process and the definition and modelling function of the relative actions of the planning authorities.
 Development control function in the running period: it executes the development plan process and completes the function of the numerous planning authorities burdened with the numerous tasks in every process within the given area of jurisdiction.
 Professionals performing their function in the spatial planning period (flexible): it realizes the interaction between user's professional tools and application tools (spatial planning framework) in the development control process.

For the purpose of this research, emphasis will be placed on the Spatial Planning Framework which is expected to be utilised by the Urban Planning System. This framework gave a detailed description of the relative conceptions of the Urban Planning System, simultaneously described the task of each functional section that constituted the Urban Planning System and the interface function definition between each functional section.

The basic component of the framework is showed in Figure 8-3. According to the operational demands of Spatial Planning Framework and relating to the Urban Planning System defined by the research, a systematic Spatial Planning Framework system based on the Urban Planning System is showed in Figure 8-3.

These are the major components of the Spatial Planning Framework which will become the institutional framework with the following as component institutions in the 3 tiers of government; organisations (Planning Authorities), Administration (commission and council-manager system) and the planning legislation such as the URP law of 1992 if used, Land Use Act 1978 now LFN.Cap.5, and the GJUMP proposal if passed into the law books.

The measurement components take into consideration the constraints of the constituents of the Institutional Framework and measure the effectiveness of the Urban Planning System. Consequently, the components of the Urban Planning System are urban Governance (institutions), urban management (technical), Administration (operational) and the legal (laws and ordinance).

The Spatial Planning Framework is the basic functional, behavioural and mainly the complete–abstract expression to the operation process of the Urban Planning System. Because the constructed framework needs to be used in the planning environment, the Spatial Planning Framework should not be just understood by the Town Planning professionals or those with planning responsibility alone, but also needs to be understood by other professionals in other fields of the built environment.

There are many kinds of framework structures used to describe the planning process, for instance, component-based activity framework, activity-based component framework, component role–based framework and function-based framework, amongst others, generally based on state charts and semantics.

The component-based activity framework is designed on the basis of a systems approach using diagrams and graphs; it strengthens the systematic description of the Urban Planning System activities of the operation through its component elements (legal, operational, technical and institutional). Therefore, the framework based on the activity network is the best option in terms of adoption by any of the Planning Authorities for use in achieving proportional distribution of infrastructure and ensuring controlled growth and development of the urban area within its jurisdiction.

Figure 8-3 explains the Spatial Planning Framework in a diagrammatic way, emphasising linkages amongst a set of concepts in a multidirectional way. The upper level works hand in hand with the second level presented in the institutional framework, stating the institutions as the three tiers of government, organisations as Planning Authorities and administration, which is basically the structure being followed by each of those Planning Authorities and planning legislations. The planning legislations used for the DC have legal backing.

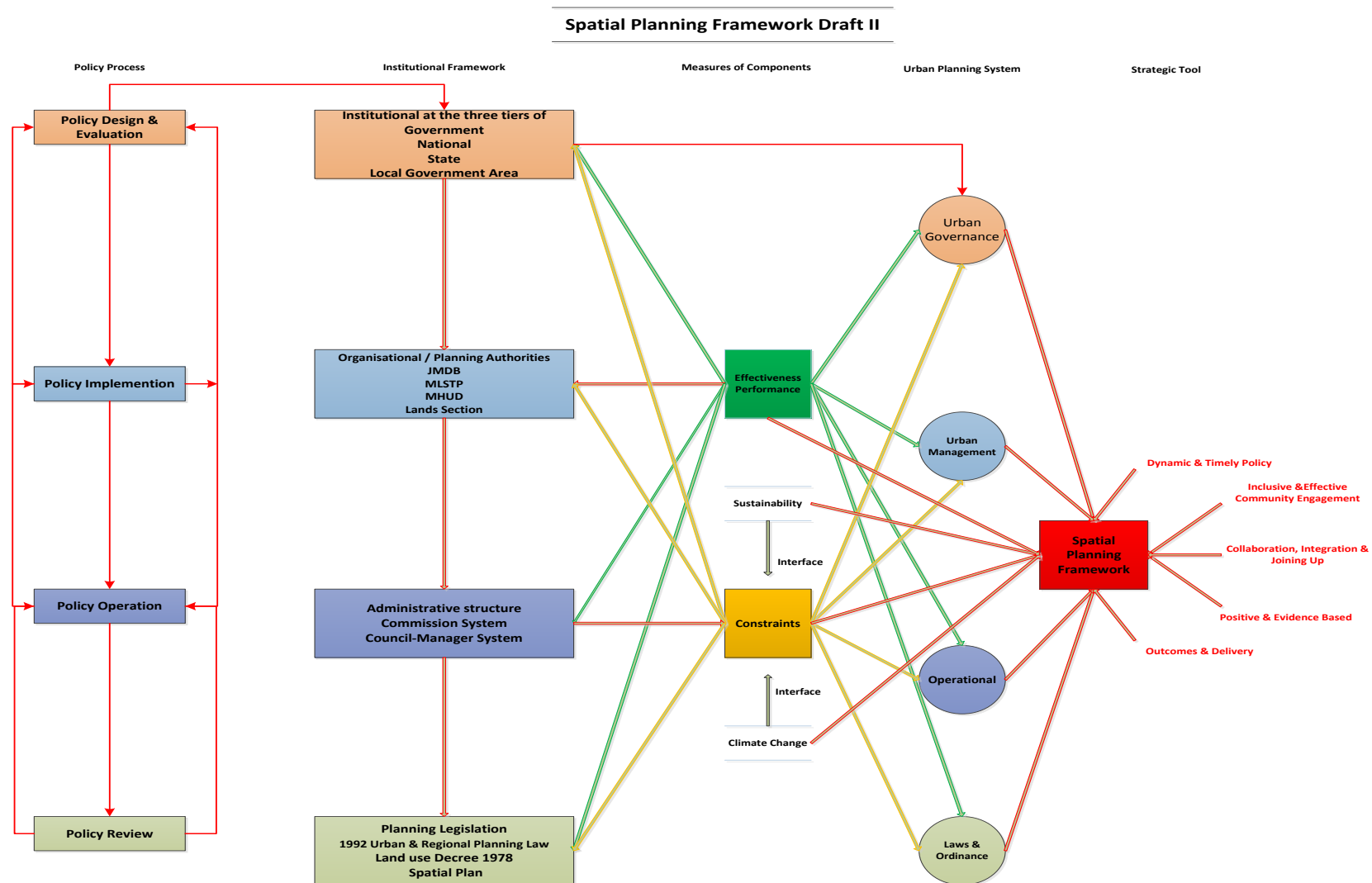
The third layer is the Urban Planning System with the Urban Governance, Urban Management administration and legal. These components work through institutions,



technical, operation and legal respectively. It is the most intuitive and natural descriptive manner for the process. Figure 8-3 describes the kind of Urban Planning System based on the activity network in the Spatial Planning Framework considered to be Draft 1.

#### **8.1.3. Stage II: Modification of Frameworks for Urban Planning Systems using data**

The findings from the data analysis (face-to-face interview, questionnaire and achieved data) were presented in chapters 5, 6 and 7: Constraints in the URP system, chapter 5: Effectiveness in the URP system, chapter 6: Application of Spatial Planning as a strategic tool in Jos Metropolis Nigeria, Chapter 7. These findings informed Draft II of the Spatial Planning Framework because they are the views and opinions of professional planners working in the various planning authorities. The second draft takes into account the real world view as can be seen in Figure 8-5.



**Figure 8-4: Spatial Planning Framework (Spatial Planning Framework ) Draft II**

Figure 8-4 shows a network of interrelationships between and within the elements that form the Urban Planning System within the Spatial Planning Framework. It is an analogue form for the Urban Planning System reflecting the network that creates links in the system from the institutional Framework, constraints, effectiveness and the application of Spatial Planning as objectives. The links represent how connected the various components are and how each influences the other. The effectiveness is measured against each component of the institutional framework and Urban Planning System. The constraints identified influence both the institutional framework components and the Urban Planning System. Urban sustainability variables such as economic, social and environmental are part of the financial and cultural constraints, while climate change forms part of the constraints under physical variables. All these (sustainability and climate change) as well as other characteristics of Spatial Planning Framework were added.

The Spatial Planning Framework is an analogue for the Urban Planning System ensuring adequacy while enhancing best practice, proportional growth and development in Jos metropolis.

#### **8.1.4. Stage III: Presentation of Frameworks for Urban Planning Systems to practicing Planners**

Draft II is presented to the practicing planners in the Planning Authorities to obtain their views and validate Draft III. At this stage the framework validation, analysis, results of the validation and recommendations are considered.

##### **8.1.4.1. Framework Validation**

A final framework for this research will be developed for the Nigerian Planning Authorities and planners in the Urban Planning System. This has become very important to the beneficiaries of the framework as Grijzen (2010; pg 67) observed that.....

*‘The strong role of spatial planners overlaps with a broad use of planners in other policy fields as well, like social planning and welfare planning’.*

Based on this the government employed planners who subsequently became foremost bureaucratic professionals, basing their judgments on scientific knowledge and trying to rationalise the procedures to come “from knowledge to plan.”

This led Van der Cammen (1979: pg 16) to define planners as....

*‘Experts with a scientific education involved in spatial policy in the service of government organisations.’*

To validate the Spatial Planning Framework four (4) Planning Authorities and two (2) private planning consulting firms were selected based on their experience as planning organisations with use strategic tools to control urban development and management of the metropolis and with about 10-20 years’ experience. The Planning Authorities include: One (1) Development Board, one (1) Ministry and two (2) Lands Section organisations from local government areas within the Jos Metropolis and the two (2) private consulting firms practicing within the study area.

Taking into consideration the number of questionnaire responses received at the data collection stage and obtaining a good Cronbach alpha value of .7 to .8, 20 %, 20 validation questionnaires were sent and 10 responses representing, a 50% response rate, were received.

In a related study Ahmad (2010), proposed obtaining feedback from respondents to verify the usability and usefulness of a model. The usability of a model includes specific issues such as usefulness/purpose, systematic, comprehensive reliability, appropriateness, applicability and sufficiency. This model’s usefulness includes the assessment of the benefits that the model can offer users or beneficiaries. This approach would be considered for the Spatial Planning Framework as it was developed from the process of Chadwick’s approach of obtaining feedback about problems, in this case usability and usefulness, and in the case of McLoughlin’s approach systems etc.

Finally, the Spatial Planning Framework was validated by obtaining feedback from the Planning Authorities (industry) using a questionnaire survey. This process has been adopted by several authors such as Al-Ghassani, (2003), Ahmad, (2010) and Hendrix, (2011), amongst others, to validate their models or frameworks; hence this approach was adopted for this study.

The validation questionnaire includes four aspects see sample of questionnaire format see

**Table 8-2.**

**Table 8-2: Framework Validation Form**

Feedback Variable					
	1	2	3	4	5
Clarity of the contents					
Simplicity of use					
Meeting real life situations					
Usefulness of the framework					
Comments:					

\*Rating scale:

\* Likert scale Rating : 1 is lowest and 5 is the highest.

#### 8.1.4.2. Results of the Validation

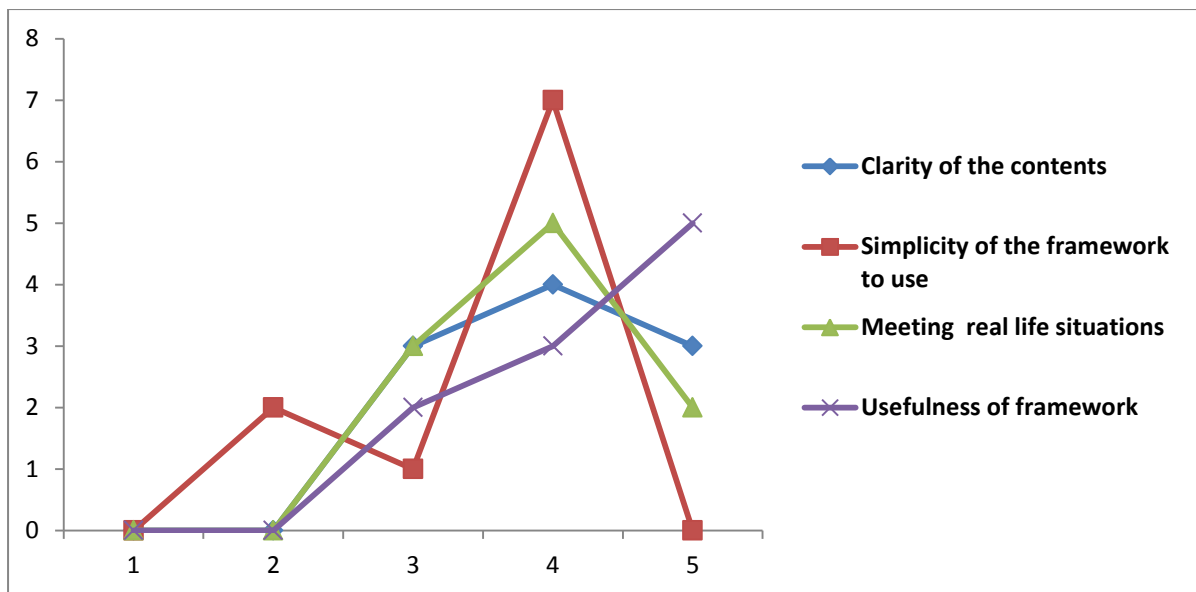
The results show that all cases, variables or data values passed the requested checks as can be seen in Table 8-3.

The following table shows the result of the identifier checks.

**Table 8-3: Duplicate Identifiers**

Duplicate Group	Identifiers	Number of Duplicates	Cases with Duplicate Identifiers	Identifier
				UF
1		4	1, 2, 5, 7	5
2		4	3, 4, 8, 10	4
3		2	6, 9	3

The comments from the validation respondents show that; The respondent's observations were analysed using content analysis which were tied to the major themes; clarity of the contents, simplicity of use, meeting real life situations and usefulness of the framework. The responses from the Likert scale are represented in Figure 8-5.



**Figure 8-5: Results of Validation**

Source: Validation Feedback, 2013.

Figure 8-5 revealed that the responses to the questions asked in the validation questionnaire are elaborated below;

**Clarity of the contents:** The contents of the framework are clear and its highest response rate was 4 units. The content is clear and satisfactorily interrelated in the framework using the planning (spatial) paradigm that seems new in developing countries, especially Nigeria. The framework integrates the required components for the design to address the conflict in urban planning policy and practice.

#### **Simplicity of use:**

The framework is simple to use and its highest rating was 7 units. The framework looks good but is a little complex; it could be made simpler for a layperson to understand. There is a good interrelationship in the framework using the planning (spatial) paradigm. It's a new development in the planning system in Nigeria. It is straight forward simple and easy to follow.

#### **Meeting real life situations**

It captures the real life situation as the components are basic and its highest response rate was 5 units. The framework can be applied even at the state level. If these issues are not made

explicit on the framework then its purpose, as a tool for dealing with real life situations, then the issues will not be understood by its users.

**Usefulness of framework** the framework is a most needed tool not only to the URP. Its highest rating was 5 units. The majority of the respondents agreed that the current system of Master Planning in Nigeria has fundamental flaws, but there is a high level of expectation that it would offer the necessary solutions to address the problems of Urban Development and Management in the area. Overall, the proposed framework has the potential for improving the current planning practice.

If the Spatial Planning Framework is judiciously applied even at state level, it would help to address policy issues relating to URP. Based on the personal assessment the respondents, if properly implemented and adhered to it would enable many urban/city and rural areas to develop simultaneously i.e. development of the rural areas will also be accorded priority status.

Using a scale of measurement from 1 to 5 the respondents demonstrated that determined implementation of the framework could be a leap in the right direction to negate the popular, though rigid, Master Plan in the face of the ever changing urban environment resulting from the various forms of urban mobility currently being witnessed in major towns in Nigeria. Finally, it is hoped that the Spatial Planning Framework has the potential to solve institutional problems, climate change issues, ineffective performance and operational matters or constraints; and it is being proposed to rationalise the legal framework for Urban Governance and management and operational challenges amongst other impediments.

**Recommendations:** the respondents made the following recommendations; issues of conflict in planning laws and institutional framework should be also be considered. There should be vivid but succinct explanation as to the intentions for the Spatial Planning Framework and the degree of importance of the interrelationships and linkages. There should be an explanation showing the strengths of the interrelationships. The level of interconnectivity will deliver the much needed improvement to the Urban Planning System. There is a need to fine tune the framework. The framework looks good, but is a little complex; it could be made simpler for a layperson to understand.

Based on the recommendations and the findings from the validation the draft framework was modified and made ready for implementation after development of a guidance document for the beneficiaries. Figure 8.7 illustrates Draft III of the Spatial Planning Framework.

#### **8.1.5. Spatial planning framework implementation**

The Spatial Planning Framework uses cybernetic feedback or iterative learning drawn from the inferences of the planning activities in the study area and used to improve on the output for the implementation of the present framework. Spatial Planning Framework uses cybernetic feedback to enhance its capabilities within the prevailing circumstances. The iterative learning brings about improvement in the work of planners learning from the positive and negative comments obtained from the framework validation and conduct more research and fine tuning to achieve a better understanding and improvement in the areas of Urban Development and Management in Jos Metropolis Nigeria.



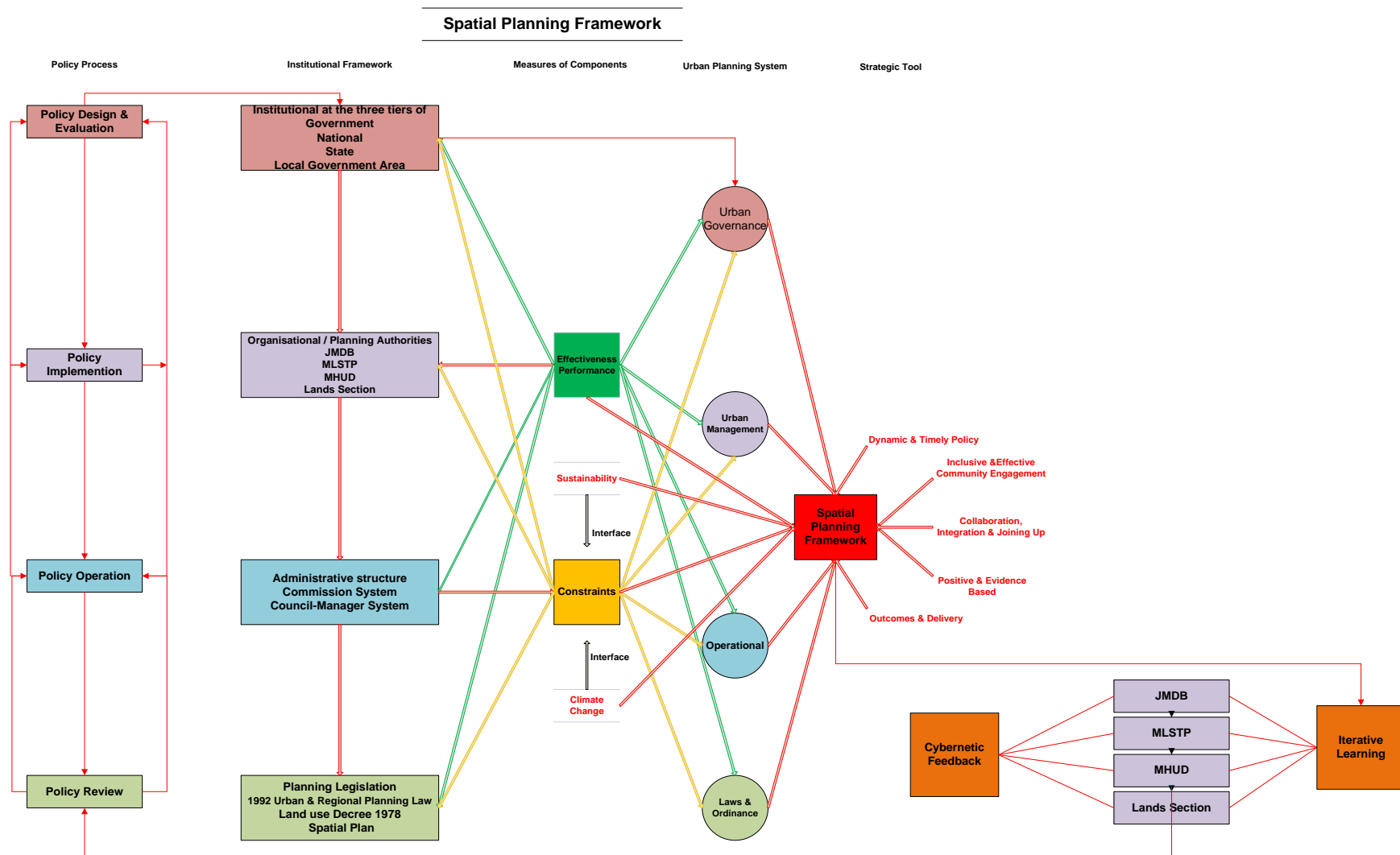


Figure 8-6: Spatial Planning Framework (Spatial Planning Framework ) Draft III

## **8.2. DEVELOPMENT OF A GUIDANCE DOCUMENT FOR THE SPATIAL PLANNING FRAMEWORK**

### **8.2.1. Introduction**

This section seeks to develop a guide to explain best practice for the use of the spatial planning framework that will allow the implementation and improvement of spatial planning, as a planning approach, by the Planning Authorities and the Town/spatial planners in Jos Metropolis, Nigeria. It is intended to assist Planning Authorities and planners to solve urban development and management problems which the master plan has been unable to do. The guideline will improve and create awareness amongst experts in the built environment (planners) involved in the implementation of spatial planning by the Planning Authorities in Jos Metropolis.

Consequently, the study would consider; the background (overview) of the guidance, the aim of the guidance, the scope of the (content) guidance, structure (characteristics) of the guidance, questions and answers relating to the guidance and the implementation of the guidance.

### **8.2.2. Background to the guidance**

The National Guidance Forum (2005) define ‘guidance’ as the process of facilitating individuals or groups to develop their capacity for self-management of their personal, social, educational, training, occupational and life choices in order to grow towards their potential and thereby to contribute to the development of a better society. Bimrose et al (2004), also considers guidelines to be tools for helping the user to understand how to achieve the goal and objectives of any framework or tool and in this case the Spatial Planning Framework in Jos Metropolis Nigeria.

The guide could be considered to be a reference document for an intended process, providing guidance to facilitates participants through the process. Process guides contain, at least, process definition and may be extended by services for browsing and searching the definitions, storing process information and providing the Planning Authorities and experts (planners) with guidance to carry out their roles effectively (Kellner et al., 1998). Guidance also can be something that provides direction or advice as to a decision or course of action,

the act of guiding or showing the way in documents to explain government regulations to the public (National Guidance Forum (2005)). Guidance documents are required to assist in the implementation of any framework. The written guidance provides broad advice for following a set of procedures or processes instead of providing inventory of precise requirements or standards.

For the purpose of this research the definition adopted for this guide is that it is a written document used as a reference to provide direction for the process of the design, evaluation, implementation and operation to the review of the Spatial Planning Framework. It could be considered to be a manual used to operate the Spatial Planning Framework, which would be used as a strategic planning tool.

Furthermore, the Research Excellence Framework (REF) produced a document for 2014 entitled 'Making Submissions to the 2014 REF'. The central focus of this document is on; procedures, the data that will be required and the criteria and definitions that will apply. The REF goes on to give an explanation about the process and procedures (OGC, 2007).

The ineffectiveness of the Urban Planning System to control Urban Development and Management in Jos Metropolis is attributed to the institutional deficiencies which result from a lack of qualified man power, delays in the planning processes for approval, corruption, user satisfaction and lack of coordination etc. The data analysis and discussions in chapters 5 and 6 show that the institutions in the three tiers of government; organisations, administrative structure and PLs have factors such as analytical, legal, institutional, cultural, political, physical, financial and knowledge that have constrained the Institutional Framework as well as the Urban Planning System.

To implement Spatial Plan there is need for a framework and for the framework to work effectively there is a need to develop an effective Spatial Planning document for the benefit of the Planning Authorities and planners controlling the Urban Development and Management in the study area. Therefore, the successful implementation of Spatial Plan is largely dependent on a clearly defined Spatial Planning Framework.

Guidance provides direction to planners as a course of action; it serves as a conduit to show which path to take. The benefits of using guidance include; resource training, best practice and providing clarification on the methodological approach of the framework. Its weak link is that it relies totally on trained staff, thereby bringing about bureaucracy rather than best

practice. Hence, Ian (2004), advocated the benefits of promoting best practice as can be seen on Table 8-4.

Very little literature is available on guidance documents, little was found on how to produce a guidance document and what constitutes good guidance and therefore the analysis of the guidance document became very difficult. However, NMC (2006) confirmed the assertion that limited literature on guidance documents is available. For best practice and improvement in Town Planning and to make the guidance document more effective, the Spatial Planning Framework needs to be more prescriptive so that they become irrelevant and inappropriate for use in some circumstances. The guidance document should be flexible in character to meet future needs.











In developing a guidance document, consultation during the development process and focusing on the needs of the intended audience (Town Planners and Planning Authorities) is very necessary in a bid to improve on the readability of the guidance document; it has to be straightforward. Kirwan (2005) and Bezweek (2012) observed that practitioners prefer more prescriptive, user-focused guidance by demanding more tables and flow charts and less text; even stating that background information is not important.

The guidance document should specifically focus on the needs of planners and the authors should think like planners in order to discover how planners would like to see the new instrument fits into their day to day working practice (Therivel et al., 2004, p264 as cited in Bezweek, 2012).

Furthermore, guidance documents should be periodically reviewed to ensure that they remain current and relevant to changing ideas. Guidance is very necessary to ensure Spatial Planning practices are correctly applied. As the professionals observed it should be a guide rather than a prescriptive essay.

Ian (2004) and Davis (2006) stated the following to be the basic principles for developing a guidance document and for best practice as can be seen in Table 8-4 and Table 8-5.

**Table 8-4: Principles for developing a guidance document for a spatial Planning framework**

<b>Guidance</b>	
	The process of developing and evaluating a guidance document should focus on outcomes included in the spatial planning framework.
	The guidance should be based on the best available evidence and should include a statement about the strengths and weaknesses of the recommendations made and evidence based on the level, quality, relevance and strength.
	Develop the guidance based on evidence. Take evidence from the results of the research and convert it into recommendations depending on the judgement and experience and good principle of developing the guidance document.
	The process should be multidisciplinary, multifaceted and multidimensional which includes, practice, policy and academia.
	To improve the quality it should be both generalist and specialist; this makes it easier for adoption..
	It should be flexible and adaptable taking into account context settings and the constraints identified. Provision should be made for accommodating the different values and preferences and planners in Planning Authorities.
	Guidance should be developed with research constraints in mind.
	Developed to be implemented taking into account the Planning Authorities and planners and also disseminated in such a way that practioners/planners and Planning Authorities are aware of them and use them.
	The impact of the guidance should be evaluated after implementation and
	The guidance should be reviewed constantly.

Source: Davis, 2006 as cited in Bezweek (2012)

**Table 8-5: Principles of best practice in spatial planning frameworks**

Best Practice
✚ Planning should be integrated, so individual, short-term decisions are consistent with broader, strategic goals.
✚ Planners should be objective, fair and respectful.
✚ Insure adequate public involvement. Stakeholders should be kept informed and have opportunities for involvement.
✚ The planning process should be understood by all stakeholders, with clearly defined visions or problem statements, goals, objectives, evaluation criteria and performance indicators.
✚ Consider a wide range of possible solutions including some that may initially seem unrealistic but could be appropriate as part of an integrated programme. Support innovation: recognising that some new strategies fail, but even unsuccessful experiments provide useful information.
✚ Identify resources, constraints, and conflicts. Draw attention to potential problems.
✚ Make sure results are comprehensible to the planners and Planning Authorities, using suitable language and visual information (graphs, maps, images, etc.). Highlight differences between options.
✚ Be prepared for setbacks. A planning process sometimes initially fails, but succeeds if repeated, due to changing circumstances, more stakeholders understanding and commitment.
✚ Changes should be implemented as predictably and gradually as possible.
✚ Analysis should be comprehensive, reflecting all significant perspectives, impacts and objectives. A broad range of options and impacts should be considered.
✚ When appropriate use contingency-based planning, which identifies a wide range of potential solutions and implements the most cost-effective strategies justified at each point in time, with additional strategies available for quick deployment if needed in the future.

Source: Ian (2004) & Litman (2011)

Furthermore, in order to develop and implement the guidance document consideration should be made are based on the evaluation of current practice, identifying critical problem areas, analysing detailed operations, identifying best practice and implementing corrective solutions in a continuous improvement programme (Ian, 2004; Reiner, 2005).

Ian (2004) in his best practice guidance document explain how to plan and design guidance documents. He proposes the following steps when designing guidance documents:

- ✚ The first step is identifying and engaging with stakeholders. Input from stakeholders on the design of guidance documents will help to ensure the guidance will work in practice. The stake holders are individuals, organisations or companies who have an interest in, or will be affected by the issues in the guidance document (broad options). In this step it is important to identify and have a good understanding of those who will use the guidelines. This will help to design guidelines in an appropriate format and language and the guideline will have a good chance of reaching the target audience. User involvement in designing the guidelines also helps to raise the effectiveness of the guidelines because it meets the needs of the end user.
- ✚ The format and language of the guidance should be considered. The easier the guidance is to understand the more likely it will be followed correctly. The language used should be as easy to understand as possible. Using acronyms and jargon which are not familiar to the end users should be avoided.

The guidance should be in compact format, so the user can understand it in as short a time as possible. If the guidance is not already short and straight forward, a quick-start guide should be made available. In order to get a better understanding, forms of communication other than text can be used. Other techniques which can be used are graphics, flowcharts, video, a question and answer section and interactive tools.

The guidance should contain a summary level backup providing more details or technical information. Summary versions allow the user to quickly view the content of the guidelines and assess the relevance of the guidance to them. It is also beneficial to include a case study in the guidance so the users can see how the guidelines will help them.

Finally, it should be structured in such a way as to inform users by a question and answer section to help Planning Authorities and planners to easily follow the step by step procedures for implementation of the guidance document.

### **8.2.3. Structure of a good guidance document**

The structure of the guidance document is an outline of the logical course of action for implementing the Spatial Planning policy. It should be a simple document that is accurate and easy to understand (Guide to the National Quality Framework, 2011). There is always a tendency for most people being reluctant to read regulations simply because they are too long

and not clear. Making a guide simple and user friendly is highly recommended and it's a mark of a good guide.

In order to have a document that is easy to understand, the document should be written in plain language. The guidance should cover all conditions and provide an explanation of the rule, there should be no additions or no ambiguity in the guidance document (ibid, 2011).

The guidance is always a summarised version of the regulations, so it usually consists of a small number of pages with the following sections: Title or headings, introduction, definition of terms and a series of headings addressing the various issues covered in the guidelines and appendices that consist of references, glossary, acronyms and abbreviations, see Table 8-6.



**Table 8-6: Summaries of the components of a good guidance**

<p><b>Title:</b></p> <p>The title should explain the issues the guidance document is addressing at a glance. It is important to include the date in the title since regulations often change and it tells the reader the current edition of the guidance document. Hence, the title for this guidance is ‘Spatial Planning Guidance for Urban Development and Management in Jos Metropolis Nigeria’</p>
<p><b>Introduction:</b></p> <p>The first section is the introduction section which consists of an acknowledgement and a foreword, table of content, summary tables and figures, summary and introduction. The purpose of the introduction is to familiarise the reader to the subject of guidance. Also it usually has a disclaimer so as to explain that the guidance is not a rule, and therefore, is not legally binding.</p>
<p><b>Definition of terms:</b></p> <p>For a spatial planning framework terms such as; development plan process, development control, planning authorities, development control documents, physical planning problems, climate change, sustainable development, infrastructure development and town planners amongst others, should be defined.</p>
<p><b>A series of headings:</b></p> <p>The second section encompasses the third section which is based on understanding the problem and the solution. The last section is the appendices that consist of references, glossary and acronyms and abbreviations.</p> <p>The Department of Business Innovation &amp; Skills observed that there are eight golden rules employed when developing a guidance document for a spatial planning framework and should be:</p> <ol style="list-style-type: none"><li>1. Based on a good understanding by users (town planners)</li><li>2. Designed with input from users and their representative bodies (town planners &amp; planning Authorities at all levels)</li><li>3. Organised around the users ways of working (organised around development control and other activities in planning authorities at all levels)</li><li>4. Easy for the intended user (town planners and other experts in the built environment)</li><li>5. Designed to provide users with the confidence of how to comply with the law.</li><li>6. Issued in good time (always available for use)</li><li>7. Easy to access (readily available for use at all sections and departments)</li><li>8. Reviewed and improved (regular updates to meet the dynamic nature of urban environment).</li></ol>

Source: Guide to the National Quality Framework, 2011.

According to Transparency International (2004) and the 2014 Research Excellence Framework (REF), a guidance document could be structured in three parts which consist of the background, implementation and questions and answers on key topics. This pattern was adopted by Bezweek (2012) in his research ‘Quality of Communication Processes in Public sections in Libya’. Based on the similarities in process and applicability this was adopted in this research.

Guidance may be presented as free text, flow charts or any format that facilitates understanding. Abbreviations and symbols add value; hence, it is important to define the concepts used. Based on these suggestions the researcher adopted the guidance structure recommended by Transparency International (2004) and the Office of Government Commerce (OGC, 2007). This structure is characterised by being simple, concise and easy to follow for timely delivery of the aims of any government.

#### **8.2.4. Scope and Contents of the Guidance document**

The guidance document is developed to assist Planning Authorities and planners to implement spatial plans to enhance and improve the Urban Development and Management in Jos Metropolis Nigeria. Safour (2011), when developing her guidance document observed that most of the guidance was presented in question form or in bullet points with tables or diagrams.

Planning Authorities and planners are struggling to ensure proportional Urban Development and Management in Jos Metropolis Nigeria, in general, as the problems of implementing urban planning policies and use of strategic tools within the given jurisdictions still linger. To overcome the problems plans should be simple, clear and relevant to Planning Authorities and planners who are involved in the implementation process. To meet the set goals of the Planning Authorities there are high expectations of implementing Spatial Planning guidance within the region.

To overcome the lingering doubts about the effective implementation of Spatial Planning for the Planning Authorities and Planners in Jos Nigeria, a framework was set out. The framework was built on five main pillars /topics as can be seen in Table 8-7.

**Table 8-7: Main Pillars of the Framework**

<b>1. Policy Process: this includes;</b> <ul style="list-style-type: none"><li>✚ Policy Design &amp; Evaluation (DPP) characteristics of the types of plans (structure, unitary and local Plan), Spatial Planning design and Spatial Planning and the benefits of plans</li><li>✚ Policy implementation (DCP) decision making on application, appeals procedure</li><li>✚ Policy operation: Enforcement of planning control at all levels and</li><li>✚ Policy Review: How to improve the plan (structure, unitary and local plan based on spatial planning principles).</li></ul>
<b>2. Institutional Framework: this includes;</b> <ul style="list-style-type: none"><li>✚ Institutions in the three tiers of government (Federal, State and Local Government area)</li><li>✚ Organisations/ Planning Authorities (JMDB, MLSTP, MHUD and Lands Section)</li><li>✚ Administrative structure (Commission system and the Council-Manager system) and</li><li>✚ Planning Legislation (1992 Urban and Regional Planning Law, Land Use Act, 1978 and spatial plan).</li></ul>
<b>3. Measures of Performance: this includes;</b> <ul style="list-style-type: none"><li>✚ Constraints (analytical, cultural, financial, knowledge, institutional, legal political, physical). Placing emphasis on the institutional framework.</li><li>✚ Effectiveness of the urban planning system which includes urban governance, management, operation and laws and ordinance.</li></ul>
<b>4. The Urban planning system: this includes;</b> <ul style="list-style-type: none"><li>✚ Urban governance</li><li>✚ Urban management</li><li>✚ Operation and</li><li>✚ Laws and ordinance and</li></ul>
<b>5. Strategic tool : spatial planning framework is characterised by the following;</b> <ul style="list-style-type: none"><li>✚ Dynamic &amp; timely policy</li><li>✚ Inclusive &amp; effective community engagement</li><li>✚ Collaboration, integration &amp; joining up</li><li>✚ Positive &amp; evidence based</li><li>✚ Outcomes &amp; delivery</li><li>✚ Sustainability (urban, rural, metropolitan) and</li><li>✚ Climate change.</li></ul>

Recent researchers have shown that guidance for spatial planning can effectively bring about changes in urban development and management. The guidance is underpinned by the positive, evidence-based knowledge of spatial planning practice and good decision making which takes account of all the stakeholders' opinions, values and the views of experienced planners as well as the availability of resources. See Appendix B for a sample of OGC, 2007 guidance document.

#### **8.2.5. The Guidance document for implementing the Spatial Planning Framework**

The final guidance document is concerned with the implementation of the Spatial Planning Framework document for Urban Development and Management in Jos Metropolis. When it is

effectively implemented it could trigger social, economic and political activity within the metropolis, helping to address the haphazard development which thwarts sustainable Urban Development and Management in the region.

The planning process is the fundamental basis for any PA to achieve their goals. The government, Planning Authorities and planners are dependent on policies, plans and programmes, which are largely dependent on norms and values (institutional values), to effectively achieve proportional growth and development which forms the basis for economic, social and political activity. The employment of these values ranges from PA to PA. The Planning Authorities have no form of communication between them; hence, the flow of information from one PA to another is too uncoordinated to ensure the effective implementation of Spatial Planning in Jos Metropolis Nigeria. Only a well-coordinated, well aligned institutional framework within which the Urban Planning System in Jos Metropolis exists, could facilitate proportional Urban Development and Management in Jos Metropolis Nigeria.

The Spatial Planning Framework guidance document will help the Government, Planning Authorities and Planners in the control of urban development and management. For implementing the Spatial Planning Framework guidance document would enhance understanding and empower the beneficiaries. From time to time feedback could be obtained to continue modification of the document. The flow of information arising from the processes involved would initiate modifications to meet the dynamic changes arising from population changes creating a strong relationship between the Government, Planning Authorities and Planners.

The developed guidance is designed to help the Spatial Planning Framework as a strategic tool for addressing Urban Development and Management in Jos Metropolis. The developed guidance can help in establishing a series of rules that may shape future Urban Development and Management (Bruton & Nicholson, 1987; Healey et al, 1988). It also provides the starting point for the consideration of various Urban Development and Management proposals.

The developed guidance document can help to overcome the constraints observed in the institutional framework and its components as well as the ineffectiveness of the Urban Planning System to bring about optimum performance. This guidance document and its

subsequent implementation was developed using data collected from the literature review and the outcomes of the analysis of the data collected. It was designed and planned to address the questions that will be considered in the next section.

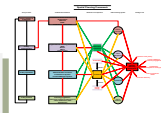
#### **8.2.6. Questions and Answers to Developing the Spatial Planning Guidance Document**

The data required can be captured by deploying questions such as; why, what, when, who and how.

- What is Spatial Planning Framework Guidance Document?
- Why implement Spatial Planning Framework Guidance Document in Jos Metropolis?
- What are the criteria for a successful Spatial Planning Framework Guidance Document scheme?
- Why is implementation of the Spatial Planning Framework Guidance Document needed in Jos Metropolis?
- What are the main features of implementing Spatial Planning Framework Guidance Document?
- How will the implementation of the guidance document for the Spatial Planning Framework be funded?
- How will the guidance impact on Spatial Planning?
- What are the barriers that prevent the implementation of Spatial Planning?
- How would Planning Authorities & Planners overcome these barriers?

The guidance is presented in text format with sets of clear and concise questions and bullet points to facilitate understanding. Abbreviations and symbols are designed to be consistent and easy to follow. Important terms and other words that might be misinterpreted are clearly defined. The guidance documents did not involve the target group but the spatial planning framework did. However, the guidance tries to explain that the changes in planning practice and the guidance will be sufficient and flexible enough for use in the various planning authorities without prejudice to interpretation or consistent consultation with the target group.

## 8.2.7. Guidance of implementation for spatial planning in Jos Metropolis Nigeria

Significant Factors	Salient Factors	Implementation of Factors	
<p align="center"><b>Spatial Planning Guidance document for Urban Development &amp; Management in Jos Metropolis Nigeria</b></p> <p><b>Introduction</b></p> <p>The guidance document is a manual prepared to assist the Planning Authorities and its planners to make the spatial planning framework workable to address the urban development and management problems identified which are manifested as;</p> <ul style="list-style-type: none"> <li>✚ Uncoordinated and non-functional institutional framework which is constrained by varying factors ranging from economic, social, political as well as environmental and</li> <li>✚ Uncontrolled haphazard urban development and management as a result of the non-effectiveness of the Urban Planning System in the study region.</li> </ul> <p>This guidance is set up to help in the implementation of the Spatial Planning Framework developed to control Urban Development and Management in Jos Metropolis, Nigeria. This guidance document is structured into three parts namely; significant factors, salient factors and implementation factors, with the significant factors considered as the aim of the development of the spatial planning guidance. While the salient factors are the issues that concern the effective implementation of the spatial guidance.</p>			

### 1: Significant factors considered

<b>1.1 What is the Spatial Planning Framework Guidance Document?</b>	<ul style="list-style-type: none"> <li>✚ This document is used as a reference to provide direction for the processes and procedures of the design and evaluation, implementation, operation through to the review of the spatial planning framework. It could be considered to be a manual used to operate the spatial planning framework, which would be used as a strategic planning tool.</li> </ul>
<b>1.2 Why implement Spatial Planning Framework Guidance Document in Jos Metropolis?</b>	<p>The literature review and empirical findings have shown that there is an absence of a coordinated and functional framework, hence the implementation of the Spatial Planning Framework Guidance Document will result in:</p> <ul style="list-style-type: none"> <li>✚ Planning Authorities and planners having a coordinated and functional framework bringing about a better understanding</li> <li>✚ Policy that comes from documents will offer benefits in terms of managing urban development and bringing about an effective urban planning system</li> <li>✚ Offers benefits in ensuring proportional growth</li> </ul>

	<p>and development within the metropolis.</p> <ul style="list-style-type: none"> <li>✚ Increase in revenue generated for the PA and planners alike.</li> </ul>
<b>1.3 What are the criteria for a successful Spatial Planning Framework Guidance Document scheme?</b>	<ul style="list-style-type: none"> <li>✚ Urban governance structures that ensure adequate funding of the Planning Authorities at every tier of government</li> <li>✚ Improvement in urban management i.e. the Planning Authorities within each tier of government</li> <li>✚ Training and retraining of officials in Planning Authorities to increase capacity building and enhance skilled man power.</li> <li>✚ Employment of qualified personnel in appropriate positions in the Planning Authorities and to eventually achieve the goal of spatial planning in the metropolis.</li> </ul>
<b>1.4 Why is implementation of Spatial Planning Framework Guidance Document needed in Jos Metropolis?</b>	<ul style="list-style-type: none"> <li>✚ To meet the need for achieving controlled growth and address the problem of Urban Development and Management in Jos Metropolis Nigeria.</li> <li>✚ To address the problem of non-coordination between the Planning Authorities and planners</li> <li>✚ To meet the target goal of guiding Urban Development and Management to achieve sustainable urban development and to maintain the trend for future developments in Jos Metropolis Nigeria <ul style="list-style-type: none"> <li>✚ To meet the goal of Spatial Planning Framework Guidance Document in achieving collaboration with other policies.</li> </ul> </li> </ul>
<b>1.5 What are the main features of implementing Spatial Planning Framework Guidance Document?</b>	<p>The implementation of the Spatial Planning Framework Guidance Document requires the following;</p> <ul style="list-style-type: none"> <li>✚ Developed and non-constrained, coordinated institutional Framework <ul style="list-style-type: none"> <li>◆ Institutions in the 3 tiers of Government (Federal, State &amp; Local Government)</li> <li>◆ Organisations/Planning Authorities (JMDB/MLSTP/MHUD &amp; Lands Section in the six local governments)</li> <li>◆ Administrative structure for the Planning Authorities (commission &amp; council-manager system)</li> <li>◆ Planning Legislations (1992 URP Law, LUA, 1978 and Master Plan &amp; Spatial Plan etc</li> </ul> </li> <li>✚ Developed and effective urban planning system <ul style="list-style-type: none"> <li>◆ Urban Governance</li> </ul> </li> </ul>

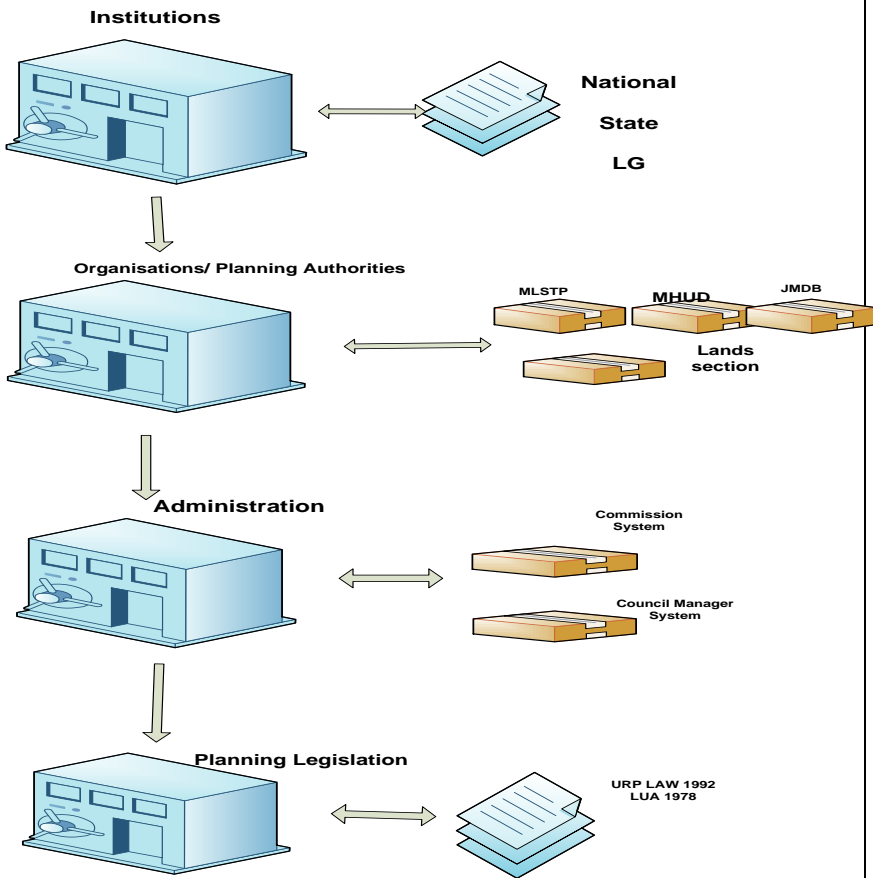
	<ul style="list-style-type: none"> <li>◆ Urban Management</li> <li>◆ Operations and</li> <li>◆ Laws &amp; Ordinances</li> <li>✚ Adequate and qualified man-power</li> <li>✚ Adequate funding for the entire system</li> </ul>
<b>1.6 How will the implementation of the guidance document for Spatial Planning Framework be funded?</b>	<ul style="list-style-type: none"> <li>✚ The funding will come directly from government grants from all the various tiers of Government and also from the affiliated authorities, with additional money collected with local Council Tax.</li> </ul>
<b>1.7 How could the guidance document have an impact on spatial planning?</b>	<p>Previous studies have shown that the guidance document has a high impact on the general processes and procedures in planning specifically by ;</p> <ul style="list-style-type: none"> <li>✚ Increased interrelationship between planners within and outside Planning Authorities</li> <li>✚ The planners now have an additional tool to assist them in their work</li> <li>✚ Planning practice is enhanced (preparation of plans, design process, data collection, stakeholder meetings and drafting of the plans etc)</li> </ul>
<b>1.8 What are the barriers that prevent the implementation of spatial planning?</b>	<ul style="list-style-type: none"> <li>✚ A culture of resisting change</li> <li>✚ The administrative structure of the Planning Authorities</li> <li>✚ Lack of adequately qualified man power (planners)</li> <li>✚ Poor funding</li> <li>✚ Unending bureaucracy</li> <li>✚ Gross ineffectiveness of the Planning Authorities</li> </ul>
<b>1.9 How would Planning Authorities &amp; planners overcome these barriers?</b>	<p>To overcome the above listed barriers Spatial Planning Framework Guidance Document policy makers need to adopt and put in place strategies such as the following;</p> <ul style="list-style-type: none"> <li>✚ Improve the administrative structure of the Planning Authorities that makes planners and others resist change and encourage the professionals by empowering them as well as delegating responsibility and offering incentives to honour hard work to those concerned.</li> <li>✚ Providing employment for those qualified to do the Job as well as providing regular training programmes to build capacity.</li> <li>✚ Providing funding to implement the plans prepared, by buying equipment for work at the Planning Authorities, creating awareness in the public domain through radio and TV</li> </ul>





	<p>programmes, by paying compensation, paying salaries when due.</p> <ul style="list-style-type: none"> <li>✚ Improving the process through which planning is carried out from the institutional level, organisations and in the planning and administrative level.</li> <li>✚ Improving the level of efficiency and effectiveness by drawing on examples from other cases such as that of Greater London Authority.</li> </ul>
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## 2: Salient factors

What are the main factors in the implementation of the Spatial Planning Framework Guidance Document?	
<div style="background-color: #92d050; padding: 5px; text-align: center; border: 1px solid black;"><b>Factor 1</b></div> <p><b>To determine the existence of a coordinated and functional framework</b></p>	<p>Before the implementation of any plan, there is a need to examine the existing institutional framework in the urban and regional system. This is done through seeking the opinions, views and perspectives of the Planning Authorities to inform the case studies and from the planners through a questionnaire and face-to-face interviews. Special consideration of secondary sources of data amounting to over a hundred documents which adequately triangulates the data to bring about clarification if required. The institutional framework is then examined to identify the constraints that have affected its various components. To determine the existence of the institutional framework, it is important to consider the following;</p> <ul style="list-style-type: none"> <li>✓ What are the various components of the institutional framework?</li> <li>✓ Are the three tiers of government represented by Planning Authorities in subdivisions?</li> <li>✓ Are they interlinked with a single goal?</li> <li>✓ Are the Planning Authorities or organisations related to each other throughout all the levels?</li> <li>✓ Are the Planning Authorities interlinked with other Planning Authorities in terms of the goal of ensuring controlled urban development?</li> <li>✓ What is the size of each of the Planning Authorities?</li> <li>✓ Does the administrative structure encourage the effectiveness of the Planning Authorities?</li> <li>✓ What is the level of bureaucracy in the Planning Authorities?</li> <li>✓ What are the PLs that are being considered in Planning Authorities?</li> <li>✓ Do the components operate as sub units of a system? In other words are they coordinated to operate as one?</li> <li>✓ Is there a flow of information from one component to another?</li> </ul>

	<p style="text-align: center;"><b>Institutional Framework</b></p>  <p>The institutional framework is greatly affected by constraints such as culture, finance, legal, institutional, political, physical, analytical and knowledge.</p>
<p style="text-align: center;"><b>Factor 2</b></p> <p><b>Determine the effectiveness of the urban planning system</b></p>	<p>To develop an Spatial Planning Framework document guide that would bring about an improvement in urban development and management it is very important to consider the following;</p> <ul style="list-style-type: none"> <li>✚ The urban governance overseeing the Planning Authorities <ul style="list-style-type: none"> <li>✓ Adequate funding</li> <li>✓ Adequate man power</li> </ul> </li> <li>✚ The urban management which supervises the Planning Authorities <ul style="list-style-type: none"> <li>✓ At state and</li> <li>✓ Local government level</li> </ul> </li> <li>✚ The Operational aspects of the Planning Authorities <ul style="list-style-type: none"> <li>✓ Bureaucratic bottlenecks</li> <li>✓ Size of the PA.</li> </ul> </li> <li>✚ The Laws and Ordinances used by the planners to control development. <ul style="list-style-type: none"> <li>✓ Obsolete document such as the 1992 URP law and</li> <li>✓ Land the Used Act, 1978.</li> </ul> </li> </ul>

<p><b>Factor 3</b></p> <p><b>Determining the measures for effectiveness in the urban planning system</b></p>	<p>To examine the Urban Planning System that would help to bring about effectiveness in the system it is necessary to consider the following;</p> <ul style="list-style-type: none"> <li>✓ The nomenclature of the Planning Authorities</li> <li>✓ The funding sources of the Planning Authorities</li> <li>✓ The number of qualified personnel in each of the Planning Authorities</li> <li>✓ The planning legislations used to contend with the task of development control.....</li> </ul> <p style="text-align: center;"></p> <p>Based on the above, for an effective urban planning system;</p> <ul style="list-style-type: none"> <li>+ The Planning Authorities have a different nomenclature for formulating, design and implementing policies and plans it is possible to allow the Planning Authorities to do that.</li> <li>+ Two sources of funding are available for all the Planning Authorities because each PA at any level may have their funds made available from the government and additional revenue collected through the various forms of fees e.g. property rates, ground rents, C of O, R of O and condonation fees etc..</li> <li>+ There is always room for training and retraining for planners to achieve development control which translates into controlled urban development and management.</li> </ul>
<p><b>Factor 4</b></p> <p><b>Determining the application of spatial planning</b></p>	<p>To determine the application of Spatial Planning Framework, that would bring about controlled Urban Development and Management in Jos Metropolis it is necessary to consider the following;</p> <ul style="list-style-type: none"> <li>+ Dynamics and timing of the policy to be considered</li> <li>+ The urban sustainability of Jos Metropolis which considers social, economic and environmental variables</li> <li>+ Climate change and measures for mitigation for a vulnerable population</li> <li>+ Collaboration, integration and joined up thinking</li> <li>+ Positive and evidence based knowledge, involving the stakeholders, to gain more inside information into the problem and</li> <li>+ Outcomes and delivery.....</li> </ul> <p style="text-align: center;"></p> <p>These are the characteristics of the Spatial Planning approach</p> <ul style="list-style-type: none"> <li>+ Drawing on the experience of the GLA in the use of spatial planning it is clear that there exists an institutional framework which has components that are coordinated and functional with a flow of information from one point to another.</li> <li>+ Population is never static, especially in the study region; hence, the dynamics of policy are very important to the constant need for adjustments to meet the needs of the region.</li> <li>+ Presently, to address urban sustainability is very simple as the National Poverty Eradication Programme is already established and</li> </ul>

	<p>it can be introduced into the policy/plan.</p> <ul style="list-style-type: none"> <li>✚ The data about the variables for climate change which are temperature and rainfall are readily available from the many weather stations within and outside the metropolis.</li> <li>✚ There could be linkage within and between many key areas such as the Lands Section (LUA, 1978, 1992 URP Law, NHP, 2006, NAPEP etc) to take advantage of what is available. Land is available but the land law of 1978 is obsolete and out dated but it is very important because development cannot take place in a vacuum. The spatial plan can incorporate this law into its preparation.</li> </ul>
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### 3: Implementation of the factors

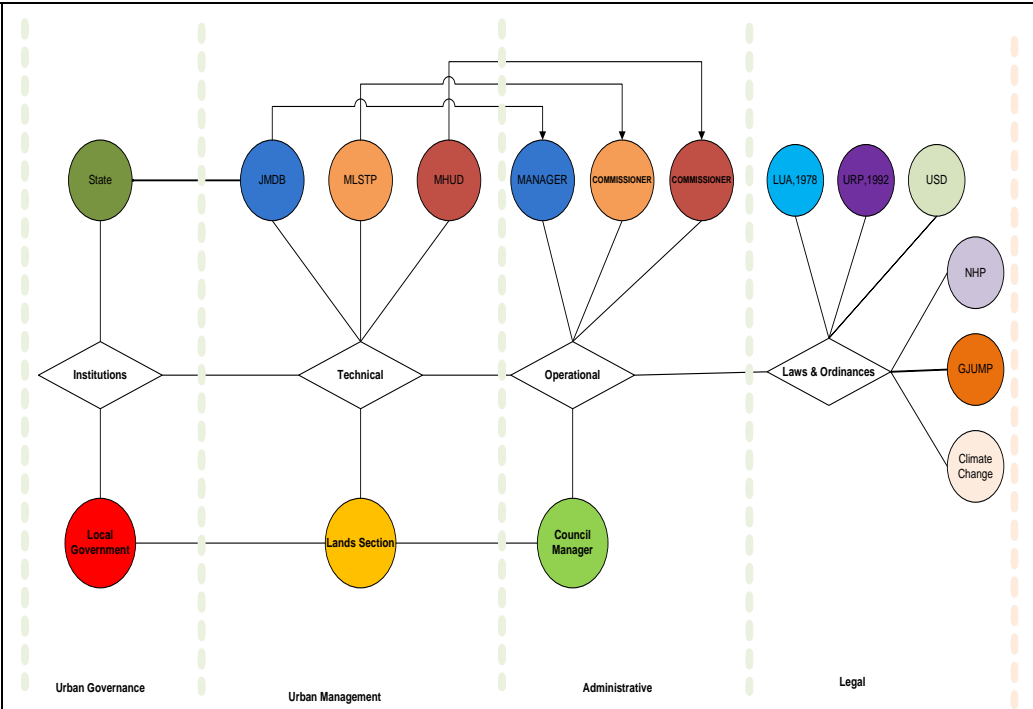
✚ <b>What are the salient factors?</b>	
<b>3.1 How should the funding for the Planning Authorities be used?</b>	<p>Funding from every tier of government goes to the Planning Authorities at the same level hence, each PA receives its allocation of resources and uses it for salaries and the remainder is used for running the office, and purchasing equipment for various sections of the PA.</p> <p>Funding should be done in phases to enable the funding body to make provision on a regular basis.</p> <ul style="list-style-type: none"> <li>✚ The funds should be used for training, purchase of equipment, maintenance and refurbishment of old structures that may be required for the implementation of spatial planning.</li> </ul>
<b>3.2 How does the guidance document have an impact on spatial planning?</b>	<p>The guidance impacts on the following areas;</p> <p><b>Urban governance:</b> this is characterised by the tiers of government overseeing the activities of the Planning Authorities. In this case only the State and the Local government have a direct link with the Planning Authorities. The State oversees the JMDB as a Board, MLSTP as a Ministry, MHUD as a Ministry, while the Local Government sees the Lands Section as a unit that oversees the processes and procedures relating to planning. At this point the policy is initiated and the necessary support is fashioned from the various Planning Authorities to empower them to control Urban Development and Management.</p> <ul style="list-style-type: none"> <li>✚ <b>Urban management:</b> management through the Planning Authorities which includes 2 Ministries, 1 Board and the Lands Section in the 6 local governments within Jos Metropolis. At this juncture the Planning Authorities are empowered to use development control measures to ensure proportional development and management within their jurisdiction. The guidance will help as it is a comprehensive, timely and robust tool in the hands of the planning authorities.</li> <li>✚ <b>Operational:</b> As part of the Urban Planning System the administration of the Planning Authorities coordinates and determines how the procedures and processes are to be carried out to allow the plans to be implemented through well-timed phases to meet the target aim. It could be termed the engine room of the Planning Authorities and makes it easier for the implementation of the Spatial Planning.</li> <li>✚ <b>Planning legislation:</b> these are the documents used to carry out the procedures and processes in the Planning Authorities. The guidance document has turned into a multiple use tool due to its robustness, timeliness and gives space for collaboration and inclusion of other legislation. It accommodates a large amount of planning legislation for instance, LUA, 1978, URP, 1992, NHP, 2006, NAPEP and sustainable urban programmes</li> </ul>

#### Factor 1

	<p>just to mention but a few. The nature of Spatial Planning accommodates the consideration of multiple legislations.</p>
<p><b>Having a coordinated and functional institutional framework</b></p> <p>* Evaluate the existing framework to see if there is a need for coordination and linkage and to see how the various components exist. Make necessary suggestions on how to create a link between the components. Monitoring how the components function and identify the problems and discuss with the Planning Authorities and planners</p>	<p>The institutional planning framework is required to ensure a coordinated and functional spatial planning framework. To develop this framework the institutions at state and local government level related to the organisations which harness all the town planning departments in the State Ministries and Boards, as well as the Lands Section, in the Local Government link together the administrative structures which are either the commission in the two ministries or the council and manager system in the board and the lands section using the planning legislations.</p> <p>The institutional framework assists in the flow of information from one point to another and enables the system to function very well and limits the impact of the constraints that affect the various components. It helps to filter the negative impacts of the various components and it can be seen as follows;</p> <div style="text-align: center;"> <p><b>Institutional Framework</b></p> </div> <p><b>1. Rationale for Planning Authorities &amp; Planners</b></p> <p>This would boost the performance of the Planning Authorities and the planners because it will serve as a road map to point the planning processes</p>

<p>within the region on how to ameliorate the problem of constraints</p>	<p>and procedures in the right direction. The entire system would operate under one umbrella making it possible for effective coordination between the Planning Authorities, with one central administration and having the same legislation that is comprehensive, robust and evidence based to bring about the expected urban development and management.</p> <ul style="list-style-type: none"> <li>✚ The funding that is given to the different Planning Authorities would be controlled by one central body. The needs of the various sections are easily met as they will eventually meet the target of the Planning Authorities with one central pool where the government grants and other sources of revenue are collected and subsequently used for the common goal of controlling urban development and management.</li> <li>✚ It can be seen as an opportunity for the various Planning Authorities and planners to collaborate as a single organisation which then becomes a central specialist organisation on the general processes and procedures involved in the preparation of spatial plans.</li> <li>✚ Planners from the numerous Planning Authorities would be trained on how to implement the plans and ensure the building of capacity on how to prepare, implement and manage urban development and management in the metropolis. The suggestions of the planners are subsequently incorporated into the modifications of the plan which can rescue the worst case scenarios.</li> <li>✚ Make a case for regular meetings with the entire team of planners drawn from the numerous planning authorities within the metropolis.</li> </ul>
<p><b>Factor 2</b></p> <p><b>Develop an effective urban planning system</b></p> <p>* It is important to regularly analyse the effectiveness of the urban planning system to</p>	<p>There are different targets for the implementation and adoption of a robust, comprehensive and flexible planning approach to bring about a controlled urban development and management through the following;</p> <ul style="list-style-type: none"> <li>✚ The tier of government in charge of the Planning Authorities should be a constant, provide adequate funding and create awareness about development control by allowing the stakeholders within the regions to effectively communicate with the public.</li> <li>✚ The technical aspect of development control which is the enforcement of controls such as height, space and density control should be strictly adhered to, effective planned zoning will also help as building lines are easily neglected leading to litigation. Adopting and implementing development control standards by the experts is very important and also adopting spatial planning to support development control.</li> <li>✚ Enhancing the capability of the Planning Authorities administrative system which could be either the commission or council-manager system that operates within the operational provision instated to tackle the urban development and management programme.</li> <li>✚ The laws and ordinances such as the LUA, 1978, 1992 URP, NHP, 2006, NAPEP and the spatial plan in operation etc., have to be up to date.</li> </ul>

identify the constraints that affect each component. For instance, the components could be more effective, independent of the complete system. But with strong linkage the system could be more effective.



Effectiveness of The Urban Planning System

Compared with the GLA who use the spatial planning approach for achieving controlled urban development and management.

It is characterised by the following; dynamic and timely, inclusive and effective community engagement, collaborative, integrative and joined up. Positive and evidence based, outcomes and delivery as well as urban sustainability and climate change.



The Planning Authorities are bureaucratic and the planners that work in the Planning Authorities are bureaucrats using bureaucracy to bring about controlled development in urban areas. Too much bureaucracy has affected the performance of the Planning Authorities and the processes and procedures employed to ensure development control within the jurisdiction.

### The need for centrality

- ✚ The opinions and views of the planners from the various Planning Authorities along with their suggestions of various the objectives for creating a well functioning system should be taken and harnessed together to create a central goal.
- ✚ Draft a spatial plan derived from the opinions and views of the planners and Planning Authorities to develop a centralised plan involving all the Planning Authorities and the planners.
- ✚ The responsibilities for each planner are assigned and a work schedule is allocated to all the planners within the metropolis for immediate action.
- ✚ The mode of operation is made known to the Planning Authorities and



	<p>planners creating an opportunity for the planners to interact with other planners and other Planning Authorities.</p> <p>Meetings could be held periodically to give updates and a way forward in the process and procedures of planning in the region.</p> <p><b>The need to reduced bureaucracy</b></p> <ul style="list-style-type: none"> <li>✚ Operate an open door policy and management by involving the public and other stakeholders. Planners and Planning Authorities should be seen working with the people not working for the people.</li> <li>✚ Develop a framework for communication between the public, Planning Authorities and planners.</li> <li>✚ Building trust in the public is very vital for the Planning Authorities and planners to operate very well in the metropolis.</li> <li>✚ Encourage the Planning Authorities and Planners to use the media available to obtain information from the public and to confirm by both written and verbal communication.</li> </ul> <p>✚ By having a central organising body the monopoly of a number of Planning Authorities and planners in the metropolis will be broken and they can channel their efforts into achieving Urban Development and Management.</p> <p><b>The need to reduced complexity</b></p> <ul style="list-style-type: none"> <li>✚ There are nine Planning Authorities with similar roles, functions and responsibilities, these could be used to reduce complexity, for instance, the six Lands Sections in the local governments within the metropolis could be considered as implementation authorities, the Development Board as a development control authority while the remaining two ministries could act as policy formulation authorities.</li> <li>✚ The span of control of the Planning Authorities and Planners could be reduced through zoning within the metropolis; this will speed up the rate of decision making and enhance urban development and management.</li> <li>✚ Team work helps to reduce misunderstanding, planning is best achieved through team work; collaboration and integration is vital as it helps subsystems to function well as coordination is encouraged at this point.</li> </ul>
<p><b>Factor 3</b></p> <p><b>Develop the measures of effectiveness of the urban planning system</b></p>	<p>The measure of effectiveness in the urban planning system is gauged by the performance of the various components of the system which include; institutions, technical, operational and laws and ordinances. To fill the gap in the implementation of the spatial planning framework and achieve the targeted goal, there is the need for the following;</p> <ul style="list-style-type: none"> <li>✚ Develop a network of the Planning Authorities working for a common goal and operating under an umbrella planning authority, where the governance, management, administration and legislation are uniform.</li> <li>✚ Develop a good working relationship between the Planning Authorities and planners</li> <li>✚ Develop capacity by training and retraining planners for the Planning Authorities in the areas of spatial planning and related fields.</li> <li>✚ Develop a mechanism to address the problem of delay in the processes and procedures by addressing the problems identified.</li> </ul>



	<p>✚ Develop a timely intervention to address the problems identified within the region.</p> <p>Based on the above training is required to build an effective urban planning system for controlling Urban Development and Management in Jos Metropolis.</p> <p><b>a. Implement 5 day training courses for Planning Authorities &amp; planners</b></p> <p>The training is designed to improve the skills of Planning Authorities and planners in the preparation, implementation and management of Spatial Planning to bring about controlled Urban Development and Management in Jos Metropolis.</p> <p>✚ Improve the level of awareness</p> <p>It helps the planners to insist on the involvement of stakeholders in the preparation and implementation process. After the involvement of the stakeholders it makes it easier for the remaining public to be aware of the development control efforts made by planners through the Planning Authorities.</p> <p>✚ Improve the level of effectiveness</p> <p>The effective use of zoning and building regulations and their application as stipulated standards will help planners, Planning Authorities and the public. It would help to increase the man power capacity to ensure strict compliance with development control by Spatial Planning.</p> <p>✚ Improve coordination</p> <p>The consideration of a coordinated administrative machinery of operations in the metropolis linking different ministries, departments and sections could bring about sustainability and climate change.</p> <p>✚ Improve on the Planning Legislations</p> <p>An array of different laws and ordinances could be integrated to help bring about controlled development and management, this could include the LUA, 1978, 1992 URP law, NHP, 2006, NAPEP and spatial plan or master plan etc</p> <p>After training and improvement staff would be able to learn on the job as challenges arise because of the situational and interventionist approach of Spatial Planning. But most importantly computer training is vital as well as the use of software to help facilitate their schedule of duties such as; preparation of contract bids, certification of payment, C of O, R of O, minutes of meetings about projects on spatial plans and many more.</p>
<p><b>Factor 4</b></p> <p><b>Application of spatial planning</b></p>	<p>Spatial Planning has enormous potential as a strategic planning tool for addressing the problem of Urban Development and Management in Jos Metropolis Nigeria. It has a tendency to influence development in the north central geo political region of Nigeria.</p> <p>Spatial Planning can be applied in the region in the following ways;</p> <p><b>a. The organisation of space at various levels and as a new instrument of practice</b></p> <p>The consideration of Spatial Planning as the main planning approach adopted in the region would go a long way to ensuring that spaces within the</p>

metropolis are under control and it can bring about proportional Urban Development and Management. The state and local government are under one umbrella and Spatial Planning is the planning approach adopted or

**b. Combination of many ideas**

The Spatial Planning guidance document has the characteristic of integration and intervention which allows for a good combination of issues with short, medium and long term actions. It also has the ability to promote the assets for development (capacity & resources- staffing, expertise, experience and funding). These makes it multidisciplinary, multi-faceted and multidimensional.

**c. Involvement of stakeholders and becoming more active in planning e.g. community engagement**

The Spatial Planning guidance document has the capacity for inclusion of stakeholders in the planning process to enhance effective community engagement for regulating the development, management and use of land and the protection of resources bringing about sustainable development.

**d. Influence, generate and resolve the environmental quality**

The Spatial Planning guidance document would serve as a tool that would influence, generate and resolve the problem of environmental quality within the metropolise.

**e. To solve local development framework problems**

The Spatial Planning guidance document would serve as a solution to the local development framework for Urban Development and Management in Jos Metropolis. This remains a major problem in the region. The SCP observed that the absence of a framework, NHP, 2006 has also reiterated the same issues of a major lack in the topic under discussion as it relates to Physical Planning problems in the study area.

**f. Bringing about integration of policies for the development of the metropolis**

Differing policies and programmes can influence the ability of others to function e.g. the land use act and spatial planning has not been encouraged in the past. The lack of coordination between policy sectors is widely observed and the aim of better 'policy integration' is at heart of planning reform, as Spatial Planning is being considered. Whilst there are best practice examples of area-based coordination of policy and action; for instance in environmental management and regeneration and urban development, amongst other sections there is a lack of initiative to 'join-up' policies especially at local government level.

In particular the potential to join up sectoral activity, both public and private (such as environment, transport, health and education), in the way that they impact on particular locations such as neighbourhood communities, or urban and regional areas would be realised. Town planning officers tend to have little experience of working with other sectors on how their policy processes are working. The level of decision making from local and state governments to national government lacks the joined-up thinking of national government and has led to inconsistencies. The local planning section has not taken on a leadership role in joined-up working models and has concentrated instead on the narrow task of land use regulation. It has generally lacked corporate

	<p>support for a wider coordinating role and other sectors have not looked to the planning section to do this job.</p> <p>This could be considered to be a positive model for how spatial planning strategies can coordinate the impact of policies in particular places, in this case Jos Metropolis, Nigeria.</p> <p><b>g. A guide to regulate change</b>  The Spatial Planning guidance document would serve as a guide to regulate changes in land use rights in any given geographical area and can guide public investment in infrastructure. Changing market dynamics in the provision of facilities, utilities and services (infrastructure) could give rise to radical changes in the distribution patterns of these functions and, hence, in the spatial structure of the metropolis generating many abandoned and underused brownfields (derelict mine ponds) in most part of Jos Metropolis.</p> <p><b>h. Strategic thinking in planning</b>  The Spatial Planning guidance document would be used to broaden the scope of the spatial planning concept and town planning strategic practices within and outside Jos Metropolis to help in ensuring controlled urban development and management. It also, through the introduction of strategic growth points, can be considered through governance and management.</p> <p><b>i. Tackling Climate Change</b>  The introduction of climate change variables into the Spatial Plan for vulnerable groups so as to mitigate its negative impact on the inhabitants of the metropolis and also relate how it has impinge on the development and management of the region as well as other associated climate change problems arising from it as it relates to physical planning at various levels and scales.</p>
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Consequently, this chapter seeks to develop a spatial planning framework, develop and validate a guidance document for implementation of Urban Development and Management in Jos Metropolis, Nigeria. The result of analysis and discussions as well as the literature review forms the basis for the development of the framework. It shows that the Spatial Planning Framework and guidance document have been developed for the implementation of Spatial Planning. Given this objective 5 of this research has been addressed.

### 8.3. SUMMARY

This chapter presented a literature review on the development of Spatial Planning Framework. The framework was developed using a systems approach drawing from existing literature- DPP and DCP as well as using the approaches of Chadwick and Wilson, McLoughlin as cited by Hall, (2002) and Ratcliffe, Stubbs & Shephard, (2002). The Urban Planning System was embedded in it to generate a draft strategic Spatial Planning Framework.

A validation framework to evaluate the performance of the framework has also been put into place. The recommendations made were used to develop the guidance document. The guidance document was developed based on the Spatial Planning Framework which was also developed from literature review, components of results of the questionnaire, face-to-face interviews and archive documents.

The guidance documentation for implementation of the Spatial Planning Framework which was design in the form of questions and bullet points has covered the main topics that are needed to implement a Spatial Plan and these topics cover issues for clarification such as what is Spatial Planning, why implement Spatial Planning, what are the criteria for a successful scheme, why is it necessary to implementing Spatial Plan in Jos Metropolis now, And subsequently, implementation issues such as what are the main features of implementing Spatial Planning Framework . Finally, the decision issues such as how implementing the guidance document of Spatial Planning Framework can be funded, how the guidance document can have an impact on planning activities, what are the barriers that prevent the implementation of the an effective Spatial Planning Framework , and how the Planning Authorities and planners can overcome the barriers. It was followed by the application of the Spatial Planning as a strategic planning tool in Nigeria.

This now leads this research into the conclusions and recommendations which will be discussed in the next chapter.









## **CHAPTER 9. CONCLUSIONS, RECOMMENDATIONS AND NEED FOR FUTURE RESEARCH**

### **9.1. INTRODUCTION**

Chapter 8 presented the development of the spatial planning framework (Spatial Planning Framework ), validation and development of a guidance document for spatial planning to ensure controlled urban development and management (Urban Development and Management) in Jos Metropolis, Nigeria (Jos Metropolis Nigeria).

This chapter presents the conclusion and recommendations for the research.

Consequently, the chapter is structured as follows:

-  Research overview and objectives
-  Originality and generalisability of the research.
-  Conclusions from the findings of the research
-  Recommendations of the study
-  Reflection on the problems encountered in conducting the research
-  Research limitations
-  Areas of further research emerging from the study and
-  Benefits of the research

The contribution of this research to theory and practice and further research areas that emerged from this study is also included.

### **9.2. RESEARCH OVERVIEW AND OBJECTIVES**

This study attempted to address the following objectives through five stages which are as follows;

**Objective 1:** To analyse the nature of urbanisation and associated problems in Nigerian cities. The literature review in the area of urbanisation and its associated problems in Jos Metropolis were addressed. It was considered in chapters 2 & 3.

**Objective 2:** To critically analyse the current institutional framework (IF) by identifying the constraints of the urban and regional planning (URP) system in Jos Metropolis Nigeria.

**Objective 3:** To examine the effectiveness of the urban planning system (Urban Planning System) in Jos Metropolis, Nigeria especially in terms of Urban Development and Management.

**Objective 4:** To assess the applicability of spatial planning (Spatial Planning) as a strategic planning tool in Jos Metropolis and

**Objective 5:** To develop a framework and a guidance document for Spatial Planning in Jos Metropolis, Nigeria.

Consequently, the research was guided by the following research questions which were all adequately addressed during the study.

**Q1.** What are the key indicators of social, economic, cultural and demographic characteristics of Jos Metropolis, Nigeria?

**Q2.** What is the current operational institutional framework of the URP system in terms of the current constraints experienced in Jos Metropolis Nigeria?

**Q3.** How effective is the Urban Planning System in applying Spatial Planning as a strategic tool to address urban sprawl (Urban Sprawl) in Jos Metropolis Nigeria?

A comprehensive, mixed-method research methodology, presented in section 4.6, was conducted to achieve the stated aim and objectives.

The research objectives were addressed through the questions and hypothesis which can be seen in Table 4-8 in chapter 4. This now links the discussion to the five stages;

### **Stage 1: Literature Review**

Objective 1 of this research was achieved in chapters 2 and 3. The literature revealed that urbanisation has been defined in different ways due to its multi-disciplinary, multi-dimensional and multi-faceted nature for different disciplines, such as demography and sociology. It is a process of rationalisation and it is closely related to modernisation, globalisation, Macdonalisation, localisation, industrialisation and socialisation amongst others.

The following are causes of global urbanisation;

1. Natural population increase; which accounted for a rise of about 60% in terms of population.
2. Net migration to urban areas, which accounted for a rise of approximately 20%.
3. Reclassification of settlements as towns or their declassification as a result of changes in the nature of economic activities and acquisition of urban characteristics and
4. The extension of town and city boundaries accounting for a further 20% (approximately) contribution.

These occur in both developed and developing regions but are typical of industrial economies (developed).

The consequences of urbanisation include; high level of unemployment, graduate underemployment, general underemployment, poverty, housing problems, urban management and governance problems, shortage of urban facilities, utilities and services as well as environmental problems.

The dimensions of urbanisation can be categorised as; urbanisation, level of urbanisation, over urbanisation, urban primacy, migration and natural increase, job creation and the urban informal sector as well as housing and informal spatial form.

The nature of urbanisation includes; ballooning or expanding without boundaries, mushrooming, dependency on socioeconomic factors, sub-urbanisation harbouring and affecting sections of the urban fringe, counter-urbanisation which is a situation where two or more urban areas converge forming a bigger or enlarged area and ex-urbanisation explaining the character of rural housing which reflects transition and rural based development.

The associated problems eventually translate into urban sprawl characterised by slums, substandard housing, densely populated buildings, high rates of diseases, an over populated urban fringe, amalgamation of individual elements, social ties increased, distressed housing, abandoned buildings and vacant areas. Which is manifested in the number of illegal settlements, late provision of services, settlement on inappropriate sites for instance hills and mountain slopes where facilities and utilities cannot be built and construction of 'self-help' dwellings etc.

Urban sprawl is the outward growth of towns and cities causing them to engulf surrounding villages and countryside. It is the leading edge of urban growth and implies little planning control of land subdivision. This phenomenon is common to developing countries. It is considered to be one of the potential threats to future Urban Development and Management and has a significant impact on infrastructure and the sustainability of cities because if improperly planned urban sprawl also adds to environmental degradation.


The major causes of urban sprawl are largely due to lack of understanding of or ignoring the consequences of unplanned growth in metropolitan areas, smaller cities and towns, amongst others. Hence, there are 4 forms of urban sprawl; a. infrastructure-related urban sprawl, b. urban sprawl in the post-socialist cities, c. decline and urban sprawl and d. urban sprawl based on the development of second homes.

Urban slums called Favelas (Brazil), Barriadas in Latin America, Bidonvilles in Africa, Gecekondu in Turkey and Bustees in Calcutta (India) all these are spatially distinct urban blights that provoke environmental hazards as approximately 40% of the city dwellers live in the urban periphery and in poverty.

**Stage 2: To critically analyse the current institutional framework by identifying the constraints of the urban and regional planning system in Jos Metropolis, Nigeria.**

Objective 2 of this research was achieved in chapter five. The current institutional framework consists of the institutions (three tiers of government; federal, state and local government), organisations (planning authorities), administrative structure and planning legislation (legal) and their respective components. In addition political, cultural, institutional, legal, knowledge, analytical, physical and financial are the constraints which affect the urban and regional system in Jos Metropolis Nigeria.

The results of the study presented in section 5.3 revealed that the different components of institutional framework have been constrained individually and collectively as follows;

-  The institutions are constrained but this is not statistically significant, but interestingly, the institutional framework is unable to control the Urban Development and Management as the flow of information and resources does not have a specific channel within and between the components of the institutional framework, as the constraints are spread across the two tiers of government in the institutional framework.



- ✚ The constraints have affected the Planning Authorities making it impossible for the master plans to be implemented, hence, it agrees with the statistical analysis confirming that the effects of the constraints on the organisations (Planning Authorities) is statistically significant. These challenges have constrained Planning Authorities making it impossible for the Master Plan to be implemented.
- ✚ PL is constrained but is not statistically significant. The Master Plans have not been passed into law to allow for the implementation of the Master Plan and the other planning legislation has not been considered and accommodated in the plan, for a controlled Urban Development and Management within the study area.
- ✚ The administrative structures are constrained but are not statistically significant. The two types of administrative structure identified in the Planning Authorities does not encourage seasoned civil servants (Planners), but politicians who come and go and who do not favour controlled Urban Development and Management within the study area.
- ✚ The theoretical clarification yielded and confirmed theories which include: the theory of urban governance and management which is applicable to Nigeria and is the neo-institutional/institutional deficiency theory, planning practice, theory of constraint and the urban complexity theory.

In addition, the results of the study, presented in section 5.3, revealed that the institutional framework is statistically insignificantly constrained.

### **Stage 3: To examine the effectiveness of the urban planning system in Jos Metropolis, Nigeria especially in terms of urban development and management**

Objective (3) of this research was achieved in chapter 6, the results of the study revealed that:

- ✚ There is a very strong statistical correlation between the institutions (Urban Governance) but there is no effective control of Urban Development and Management due to poor funding, inconsistency in governance, lack of awareness about DC, poor publicity about DC and the non-involvement of stakeholders. This was confirmed when compared with the UK using the GLA as a reference point.
- ✚ There is a very strong statistical correlation between the technical factors (Urban Management) but there is no effective control of Urban Development and Management due to the conflict of functions, roles and responsibilities, encouraged by the planning approach adopted by the Planning Authorities who have similar functions,

responsibilities and roles. The fact that the Planning Authorities lack coordination was confirmed when compared with the UK using the GLA as a reference point.

- ✚ There is a very strong statistical correlation between the operational (administration) factors but there is no effective control of Urban Development and Management due to the inability of Planning Authorities to implement the 1992 URP law which stipulates that there should be Town Planning Departments with at least 3 Town Planners in each local government. The town planners are expected to head the commission system and the council and manager system. The system used to abolish alleged inefficiency in GLA has a top-tier administrative body known as the Great London Authority. It consists of a directly elected executive Mayor of London and a 25 member assembly with powers of scrutiny.
- ✚ There is a strong statistical correlation between the law and ordinance (legal) factors but no effective control of Urban Development and Management due to the fact that the laws and ordinances documents are obsolete and unable to meet present day challenges and also because there is no single regulatory document to coordinate them, the reason being that a master planning approach is in operation. This was confirmed when comparison was made with the GLA in the UK who use a spatial planning approach that is flexible, interventionist in character, coordinated and allows incorporation of policies.

Theories were also validated through the discussions in chapter 6, section 6.4.3.1, relating to institutional deficiency, structuration, institutional theory, urban regime, contingency theory, regulatory theory and systems theory

#### **Stage 4: To assess the applicability of spatial planning as a strategic planning tool in Jos Metropolis**

Objective (4) of this research was achieved in chapter seven, the results of the study revealed that;

- ✚ The implication of the constraints and effectiveness of the urban planning system on Urban Development and Management in Jos Metropolis is that it has created a disparity in the distribution of infrastructure as a result of the adoption of Master Planning in Jos Metropolis. This is also reflected in many cities in Nigeria and most developing countries.

- ✚ The comparison between master planning and spatial planning revealed that the application of both master planning and spatial planning as a strategic tool by the planning authorities is appropriate. However, in the final evaluation ‘The 3rd Way’ was considered to be the best approach using the Blair’s philosophy of adopting what is do-able.
- ✚ The hypothesis was tested and the null hypothesis was accepted stating that: ‘if the Spatial Planning is applied as an Urban Management strategic tool, then the Urban Sprawl conditions in Jos Metropolis can be controlled’. This was based on the fact that Spatial Plan as a strategic planning tool has a higher correlation coefficient than the Master Planning as a strategic tool.
- ✚ A case for the application of Spatial Planning was arrived at by drawing on the experience of the United Kingdom whom, having colonised Nigeria left a structure for planning following Nigeria’s independence in 1960. Reflecting on the far left and the far right and the adoption of ‘The Third Way’ by Giddens (2000), explains the three phases; thesis, anti-thesis and synthesis for both London (Great Britain) and for Jos Metropolis, Nigeria.

The use of Spatial Planning as a strategic tool was considered for application by planners and by Planning Authorities which is reflected in their roles for development, policy and planning across the regions and in the study in Jos Metropolis.

### **Stage 5: To develop a framework, validate it and develop a guidance document for spatial planning in Jos Metropolis, Nigeria.**

Objective 5 was achieved in chapter eight. The framework was developed to demonstrate the interrelation between the components in the main sections derived from the objectives of the research; institutional framework, measure of the components (results) in the urban planning system and strategic tool. The interrelationship between the components has a positive effect on urban development and management in the study area as it has the potential to control development which can then trigger social, economic and political activities which affects the well-being of the inhabitants.

### **9.3. ORIGINALITY AND GENERALISABILITY OF THE RESEARCH**

This research will contribute to existing knowledge in the area of urban and regional planning in the following ways;

The gap in the existing literature, in respect of understanding the integration of urban and regional planning components and establishing a planning philosophy, process and procedure, can be filled. The area is totally new and has little knowledge of planning requirements but has a strong desire for a change in the planning paradigm in Nigeria and most developing countries.

By producing a framework and a guidance document that will provide in-depth knowledge and explanation about factors that have not been considered within the master plan and urban and regional planning which is beneficial to both the Planning Authorities and planners in Jos Metropolis and Nigeria encompasses the following:

- ✚ Avoid the disjointed development control activities employed by the plethora of Planning Authorities within the Metropolis which leads to haphazard growth and development.
- ✚ Achieve proportional and controlled Urban Development and Management in Jos Metropolis which is in accordance with spatial planning.
- ✚ Achieve the desires of the Planning Authorities and planners to control Urban Development and Management by using a comprehensive, robust and flexible tool.
- ✚ The developed framework and guidance document will benefit practicing Town Planners, because they now have other alternatives that can be adopted as a new paradigm in their planning profession, making adjustments in the pattern and tradition of administering planning services in Jos Metropolis, Nigeria and other urban areas.

The outcomes of the study will assist policy makers with new ideas about the changing issues as they relate to the URP problems.

Understanding the characteristics of the Spatial Planning approach which reflects its relationship to spatial development was observed in the following way: dynamic and timely policy and decision making, inclusive and effective community engagement and collaboration, integration and ‘joined-up’ thinking, positiveness, evidence-based reasoning, urban sustainable development and climate change and the numerous interventions to address the Urban Development and Management problem.

Discovery of areas that have not been considered in the Master Planning approach, such as, climate change and sustainability, and its relevance and application to cities in developing countries where climate change effects have no mitigation measures in place to ameliorate the suffering of the populace; especially Africa.

The developed guidance document has the potential to assist in the implementation of Spatial Planning as a new approach to planning in Jos Metropolis Nigeria to bring about controlled Urban Development and Management.

#### 9.4. CONCLUSIONS

The conclusions from the research findings are summarised according to objectives as stated in 1.2.4. of this research, such as;

**Objective 1:** The review has succinctly drawn from both developed and developing countries different experiences of urbanisation, urban sprawl, governance and management, Spatial Planning and Master Planning.

- ✚ Urbanisation rates have continued to increase over the years. In Africa, Nigeria has the highest population figures with Abuja at the peak. Jos Metropolis is close to it in population figures; hence, it's experiencing the ripple effect.
- ✚ Nigeria's urbanisation variously termed; ballooning, rapid, mushrooming, dependency, sub-urbanisation and counter- urbanisation are characterized by speed. These are also considered consequences of urbanisation.
- ✚ The causes of urbanisation in Nigeria are the proliferation of states and local governments in the country, as well as changing the country's capital from Lagos to Abuja.
- ✚ Urban sprawl in most urban areas in Nigeria is characterised by slums showing substandard housing, heavily populated dwellings in a poor state of repair which has led to the decline of neighbourhoods into seemingly inevitable decay.
- ✚ Caused by planning and administrative lapses, the influx of illegal occupants and the creation and counter creation of regions for political, social and economic reasons.
- ✚ Spatial Planning is absent in most developing countries due to the stronghold by the traditional Master Planning approach to achieve controlled urban development and its management; this situation is common to most Nigerian cities such as Lagos, Enugu, Kaduna and even Abuja the capital city of the nation.

- ✚ Not all of the Master Plans have been passed into the law. The GJUMP was at the bill stage in 2011 and is still with the Ministry of Justice as at August, 2013.
  
- ✚ The 1978 land use Act makes no provision for; non-compulsory registration of title to land, notarial system which is a group of impartial government officials with the responsibilities for overseeing all land transactions in the state. Approximately 90% of the land is unregistered and registration is only done when land owners have a pressing need for money or want to use the land as collateral.
  
- ✚ Approval and sealing of documents (e.g. EIA reports, site plan reports) are not located within the planning authority, board or department. This is necessitated by the fact that there is no legislation to back up the civil servants or have the right to use seal.
  
- ✚ The following theories were identified and used in the study as well as the verification;
  1. Urbanisation: Modernisation-ecology, dependency theory, distributive coalitions, urban bias theory
  2. Urban sprawl: Land use theory (urban bias theory)
  3. The theory of planning practice, urban complexity theory, contemporary quality, spatial theory of dynamic development, social, societal development, the theory of planning practice, urban complexity theory, theory of constraint, neo-institutional/institutional deficiency theory.
  4. The theory of urban governance and management: The theoretical clarification yielded theories of Master Planning which are applicable in the Nigerian scenario: the neo-institutional/institutional deficiency theory was considered due to its relevance and applicability to the Nigerian system of governance and management of urban areas. In addition was structuration, institutional theory, urban regime, contingency theory, regulatory theory and systems theory
  5. Spatial planning: Contemporary quality, spatial theory of dynamic development, social, societal development, the theory of planning practice and urban complexity theory

**Objective 2:** Identification of the components of the institutional framework and the constraints which determined the implementation of spatial planning in the region.

- ✚ The institutional framework has the following components; institutions (governance), organisations (planning authorities), planning legislation (laws and ordinances) and administrative (structure). The constraints are; political, physical, cultural, analytical, financial, legal, institutional and knowledge.
- ✚ The institutions are constrained but not statistically significant, but interestingly, the institutional framework is unable to control the Urban Development and Management as the flow of information and resources does not have a specific channel within and between the components of the identified institutional framework, as the constraints are spread across the two tiers of the institutional framework.
- ✚ The constraints have affected the Planning Authorities making it impossible for the master plans to be implemented, hence, it agrees with the statistical analysis by confirming that the effects of the constraints on organisations (Planning Authorities) is statistically significant. These challenges have constrained the Planning Authorities making it impossible for the Master Plan to be implemented.
- ✚ PL is constrained but not statistically significant. The Master Plans have not been passed into law to allow for the implementation of the Master Plan and the other planning legislation has not been considered and accommodated in the plan allowing for a controlled Urban Development and Management within the study area.
- ✚ The administrative structures are constrained but not statistically significant. The two types of administrative structure identified for the Planning Authorities does not encourage seasoned civil servant (planners), but politicians who come and go and do not favour controlled Urban Development and Management within the study area.
- ✚ The Spearman Ranks Correlation Coefficient shows that the variables that were considered in the hypothesis, to verify the comparison between Master Planning and Spatial Planning, revealed that the application of Master Planning and Spatial Planning as a strategic tool for the use of Planning Authorities are both appropriate for addressing the Physical Planning problem identified (Urban Development and Management in Jos Metropolis). However, Spatial Planning was more appropriate than Master Planning bearing in mind the peculiarities of Jos Metropolis in terms of Urban Development and Management.
- ✚ The case for implementing Spatial Planning was arrived at by drawing on the international experience of the United Kingdom who colonised Nigeria but left a planning structure following independence in 1960. The transformation of Great Britain and Nigeria having adopted an appropriate planning approach explains the three phases; thesis, anti-thesis and

synthesis for both countries. Blair's philosophy of adopting what is do-able was the basis for the consideration.

- ✚ The theoretical clarification yielded and confirmed theories which include: the theory of urban governance and management which is applicable in Nigeria is the neo-institutional/institutional deficiency theory, planning practice, as well as the urban complexity theory.

**Objective 3:** The effectiveness of the Urban Planning System in Jos Metropolis, Nigeria especially in terms of Urban Development and Management.

- ✚ The level of effectiveness is measured by the performance of each of the components of the Urban Planning System employs. The components include urban governance (institutions), urban management (technical), Administrative (operational) and laws and ordinances (legal).
- ✚ There is a very strong statistical correlation between the institutional factors (Urban Governance) but there is no effective control of Urban Development and Management due to poor funding, inconsistency in governance, lack of awareness about DC, poor publicity about DC and the non-involvement of stakeholders. This was confirmed when compared with the UK using the GLA as a reference point.
- ✚ There is a very strong statistical correlation between the technical factors (Urban Management) but there is no effective control of Urban Development and Management due to the conflict of functions, roles and responsibilities, encouraged by the planning approach adopted by the Planning Authorities who have similar functions, responsibilities and roles. The fact that Planning authorities have no coordination was confirmed when compared with the UK using the GLA as a reference point.
- ✚ There is a very strong statistical correlation between the operational factors (administration) but there is no effective control of Urban Development and Management due to the inability of Planning Authorities to implement the 1992 URP law which stipulates that there should be Town Planning Departments with at least 3 Town Planners in each local government. Town planners are expected to head the commission system and the council and manager system. To abolish alleged inefficiency in the GLA there is a top-tier administrative body of the Great London Authority. It consists of a directly elected executive Mayor of London and a 25 member assembly with powers of scrutiny. There is a strong statistical correlation between the law and ordinance factors (legal) but there is no effective control of Urban Development and Management due to the fact that the laws and



ordinances documents are obsolete and unable to meet present day challenges and also because there is no single document to coordinate the regulations the reason being that a master planning approach is in operation. This was confirmed when comparison was made with the GLA in the UK who use a spatial planning approach that is flexible, interventionist character, coordinated and allows incorporation of policies.

- ✚ Theories were also validated through the discussion in the chapter 6, section 6.4.3.1, relating to institutional deficiency, structuration, institutional theory, urban regime, contingency theory, regulatory theory and systems theory.

**Objective 4:** The assessment of the application of Spatial Planning shows that it could be applied in the following ways;

- ✚ the allocation of resources to achieve adoption, assimilation and improvement of space and place, location and quality, social, economic and environmental changes often as a result of the creation of Spatial Planning to more localised design and organisation in towns, villages and neighbourhoods.
- ✚ The identification of the potential of Spatial Planning, in this research, is in the area of investment and provision of basic infrastructure required for Urban Development and Management in Jos Metropolis Nigeria. This is not readily available in most urban areas in developing countries but can be achieved by the implementation of Spatial Planning.
- ✚ The strategic Spatial Planning tool was considered according to the ten schools of thought; planning, cognitive, environmental, power, enterprise, positioning, cultural, configuration and design and learning schools by observing that all these schools emphasised one aspect or another of Spatial Planning.
- ✚ The consideration of Spatial Planning for use as a strategic tool was examined by planners and by Planning Authorities from the point of view of their roles, functions and responsibilities which are reflected in their roles of development, policy and planning across the region and in this study, Jos Metropolis.
- ✚ The implication of the failure of the UMP approach on the Urban Planning System, as a result of the constraints affecting the Institutional Framework which can then affect the performance of the components of the Urban Planning System, is the consideration of the effectiveness of the Urban Planning System in addressing the Physical Planning problem identified in Jos Metropolis (Urban Development and Management in Jos Metropolis) and in many cities in Nigeria and most developing countries.

**Objective 5:** Developing a framework and a guidance document that will assist planners and Planning Authorities in the implementation of Spatial Planning which helps to control Urban Development and Management in the metropolis.

Furthermore, this research has been able to identify the characteristics of Spatial Planning as follows;

- Dynamic and timely policy and decision making, inclusive and effective community engagement and collaboration, integration and ‘joined-up’ thinking, positiveness, evidence-based reasoning, urban sustainable development and climate change.
- ✚ Identification of factors that encourage and enhance the process and procedures that ensure controlled Urban Development and Management with Planning Authorities as their main target.
- ✚ Identification of the factors that mitigate and lead to duplication of responsibilities, roles and functions of the Planning Authorities.
- ✚ The framework was developed using a systems approach drawn from existing literature, DPP and DCP, as well as the system approaches of Chadwick, Wilson, McLoughlin, all in Hall, (2002) and Ratcliffe, Stubbs & Sheppard, (2002). The framework was validated and modified and the guidance document was developed based on the Spatial Planning Framework.
- ✚ The guidance document for the implementation of the Spatial Planning Framework was designed in the form of question and answer. It was followed by the application for the Spatial Planning Framework to be implemented as a strategic planning tool in Nigeria.

## 9.5. RECOMMENDATIONS

After a comprehensive discussion throughout this research, a number of recommendations have become very pertinent amongst which are;

1. There is need for a comprehensive and all-encompassing institutional framework to facilitate and encourage a centrally controlled Urban Development and Management in Jos Metropolis and its environs within which the Urban Planning System operates. This can be achieved through collaboration, integration and linkage between the government

institutions (3 tiers of government), the planning organisations within the 3 tiers of government (JMDB, MLSTP, MHUD & Lands Sections) and a unified and all-encompassing administrative structure and planning legislations.

Based on the above the following could be acted upon:

- ❖ The Planning Authorities JMDB, MLSTP, MHUD and Lands Sections from the six local government areas should be linked together to operate under the framework to achieve the stated goal of controlled urban development and management in Jos Metropolis.
  - ❖ The Lands Sections should work closely with the Town Planning Departments in each Local Government Areas in Nigeria that were proposed by the 1992 URP Law that has yet to be considered.
  - ❖ The government should provide an enabling environment for the PL to function adequately, even though constraints are not inevitable in both short and long terms.
  - ❖ The hierarchy of the administrative structure should be organised in such a way as to encourage hard work, dedication and commitment, as presently it only encourages mediocrity, laziness and non-compliance with rules; which could best be considered as institutional deficiency.
2. The Urban Planning System has to be effective so as to address the problems of Urban Development and Management in Jos Metropolis, Nigeria. Based on the above the following could be acted upon;
- ❖ The governance of the Planning Authorities should be brought under one umbrella PA to achieve the stated goal of controlled Urban Development and Management in Jos Metropolis.
  - ❖ Urban governance institution is poor and shows that the following Master Plans have yet to be implemented 5, 3 and 4 years (respectively) after preparation; Greater Jos Urban Master Plan (2008-2025), Riyom Master Plan (2009-2019) and the Final Physical Development Plan for Angware (2008-2018). The Urban Management (technical) sections such as the Lands Sections should work closely with the Town Planning Departments in each Local Government Area in Nigeria, as was proposed by the 1992 URP Law, which has yet to be considered. The 'notarial system' should be introduced to enable smooth operation of the processes and procedures of planning activities so as to bring about effectiveness in the system. It is a system where

trustworthy members are employed that allows the Urban Planning System to function effectively.

- ❖ Urban Management (development control goals and measures) is, technically, not effective as it shows that the Master Plans prepared at state level and local government level conflict with each other; at the state level the Greater Jos master plan is prepared for the entire area metropolis, whilst the Riyom and Jos East local government areas within Jos Metropolis all have their Master Plans. The Master Plans in the local government areas were designed without consultation with the State to consider necessary additions, adjustment and corrections. This state of affairs should be avoided due to the following;

- ❖ To abolish alleged inefficiency in the PAs, a top-tier administrative body for centrally coordinating Planning Authorities is proposed. It can be made up of elected executives and members of the House of Assembly with powers of scrutiny.
  - ❖ The administration should avoid high levels of bureaucracy, extending the duration for processing of issues or matters that need urgent attention. The dynamic nature of the population in the area and the rigid Master Planning approach currently in operation has incapacitated the manager-system of administration, making the Urban Planning System ineffective for controlling the Urban Development and Management in Jos Metropolis.
  - ❖ Lack of transparency by public officials in ensuring the transfer of ownership of property in accordance with national laws and with compensation paid only to owners of un-exhausted developments on their land.
3. The government should provide an enabling environment for legislation (laws and ordinances) to function adequately, even though constraints are not inevitable in both the short and long term. In conclusion, the legal documents are obsolete, out-dated and unable to meet present day challenges making the documents ineffective, because if the legislative tools fail to regulate the system becomes obsolete.
  4. There is a need for periodic training and development to ensure good performance by personnel in their roles, functions and responsibilities which is then reflected in their roles for development, policy and planning in the area of spatial planning as it relates to Jos Metropolis. The introduction of Spatial Planning as a strategic tool was determined for application by planners and Planning Authorities.

5. Conflict between the Planning Authorities, in Greater Jos Metropolis, and local government authorities within the Planning Ministries and Board regarding area jurisdiction can be avoided by locating both sections under one functional, umbrella division.
6. There should be Town Planning departments or units in local government areas, with town planners acting as lands officers as their schedule of duties are related and also because the Lands Section should always be involved in the process of the preparation of the master plans because of their proximity to the people.
7. There should be collaboration and integration of all the Planning Authorities and planners in the process of preparing the Master Plan in order to obtain the views and opinions of all the stake holders.
8. In Jos Metropolis, Nigeria there are less than 20 registered and practicing Town Planners. This is grossly inadequate for monitoring and ensuring controlled Urban Development and Management in Jos Metropolis with a population of over 1million people. More planners and other experts in the built environment should be employed. There is general lack of suitably qualified man power in all the Planning Authorities hence, the task of development control, or even handling the implementation of the master plan within their domain, is a problem.
9. The GJUMP bill, 2011 and others still pending in the Ministry of Justice should be passed into law to enable the Planning Authorities and planners to be involved in the implementation of the new Master Plan, or better still the new Spatial Plan proposed by this study.
10. There should be a legislation to back up the right for the seal to be used by civil servants as planners to approve and seal documents that is not within the control of the Planning Authorities.
11. Defective land policies should be corrected as planning cannot take place in a vacuum and will inevitably make it difficult to plan. Hence, the Land Uses Act, 1978 should be amended to avoid the problems of haphazard development.

12. There should be compulsory registration of land titles as over 90% of land is unregistered. Registration is only takes place when land owners are forced to by need for finance or to use the land as collateral.
13. Recruitment should be more rigorous to ensure the right candidate with the right professional qualifications and ethical code to meet the need of the Planning Authorities in addressing the Urban Development and Management and handling the Spatial Planning.
14. Application of the strategic Spatial Planning adopted by the Pas, in terms of their roles, responsibilities and functions, should be based on the laws establishing each of the Planning Authorities.
15. The developed guidance document has the potential to assist Planning Authorities and planners to realise other components of the plans, such as, climate change and sustainability, closely tied to the aim and objectives of ensuring controlled Urban Development and Management, which could anticipate the generation of social, economic and political activities in Jos Metropolis and its environs. It should be incorporated and considered for adoption in Jos Metropolis.

## **9.6. REFLECTIONS ON THE PROBLEMS ENCOUNTERED IN CONDUCTING THE RESEARCH**

Challenges always abound but it is the responsibility of the researcher to face and proffer solutions to the problems. The empirical research started in Nigeria on 11<sup>th</sup> February, 2012 and continued to 2<sup>nd</sup> May, 2012. Face-to-face interviews with Town Planners in nine Planning Authorities were conducted and secondary data from documents, approximately 90, as well as pictures were collected.

A wide range of challenges were observed which included; the number of registered Town Planners in Jos Metropolis, the level of education, political system, the security situation in the region during the period of research, diversity in religious and cultural values, values attached to research, electricity and power failures as well as differences amongst individuals in the study area. This array of problems is common to many developing countries.

Research is not taken seriously in many developing countries, so it was anticipated that many of the respondents would need to be reminded of the dates of appointments etc. In Nigeria, and Jos in particular, due to the security issues prevailing at the time, accessing information for research purposes was considered sensitive and an issue of security. Therefore, only trusted people were allowed to access data about the Planning Authorities. Accessing information about the Planning Authorities was considered to be a violation of privacy and as such a cumbersome and unending bureaucratic process was involved to gain access to the information required because research is not valued and not promoted by the government.

There was difficulty in obtaining information about the Planning Authorities. Hence, a mini-survey form was developed and used to collect primary information about the 9 Planning Authorities to compliment other sources of data about Planning Authorities.

Security problems on ground restricted movements and caused changes in appointments with officials/respondents. Many respondents refused to complete and return the questionnaire even though assurances were given to the respondents and they had only to tick the questionnaire. However, it was very important to reiterate to the respondents that it was voluntary and they should not be under pressure at any point.

Another challenge is the non-payment of salaries, which at the time the research was conducted, had not been paid for the past 3 months, and therefore, most respondents were deeply disinterested in the voluntary participation, and hence, after every interview and completion of a questionnaire the researcher gave a small honorarium to ameliorate their distress. Non-payment of salaries for workers makes it difficult for workers to be interested in the study.

Another challenge is the constant failure of electricity which has affected the capture of data using the dictaphone/voice recorder and subsequent battery charging, also downloading the data captured daily and the immediate take off of data entry and analysis etc. The interview and recording session using the dictaphone lasted for 40-60 minutes, which the respondents complained was too long, thus 30 minute interviews were conducted.

Long distances were covered almost daily to get to Planning Authorities and planners involved in the exercise, especially those in the four local government areas within the metropolis. Another problem was that of the low level of understanding of the concepts and context of the research as they were not even involved in the preparation of the master plan,

let alone asking about spatial planning. Hence, detailed explanations take place before conducting the face-to-face interviews and the questionnaire administration.

Finally, the relentless ‘Boko Haram’ attack was very dangerous and makes it difficult to receive the returned questionnaires, make observations and take pictures related to the DC. Hence, the researcher thanks the participants for their contributions to the study. It was a time consuming and difficult task to accomplish in Jos Metropolis.


## **9.7. RESEARCH LIMITATIONS**

No two researchers are exactly the same especially when it is a doctoral research, due to the characteristics of the researcher and the research; hence it is limited by a number of constraints. The study was carried out on only one city in Nigeria (Jos metropolis) due to the peculiarity of the city (the old city was planned with a good grid-system in 1920 and it became a provincial headquarters in 1923) and the uniqueness of the area of study area, ‘Spatial Planning’, which is not a planning approach presently in use in Nigeria.

Doctoral researches have life spans and they are constrained by time and resources; therefore, it becomes very pertinent that all the stages are completed within the ambit of time stipulated for the study. This research is funded by Tetfund, through the University of Jos Nigeria, aimed at capacity building in all tertiary institutions in the country. Thus, all activities, processes and procedures are time bound.

## **9.8. AREAS OF FURTHER RESEARCH EMERGING FROM THIS STUDY**

The subject area is broad; multidisciplinary, multidimensional and multifaceted and the thesis covers an extensive part of urban and regional planning, accordingly many future studies emerging from this research could be advanced as follows;

-  Spatial Planning is unique to most developed and advanced countries and is not common in developing countries, and in addition to the constraints and scope of the study, the extensive research on the concepts that informed the study was restricted to one metropolis in Nigeria (Jos Metropolis). Nevertheless, it would be more edifying to conduct a more rigorous and in-depth study using other cases from Nigeria and some West African countries, in order to increase reliance and dependence in terms of functionality, applicability and accuracy amongst others.



- ✚ The extensive review of relevant and related materials revealed that spatial planning is related to master planning but is different in terms of comprehensiveness, robustness, timeliness, inclusiveness, evidence-based and interventionist amongst others. This has actually put it ahead of master planning which is restricted to only land use.
- ✚ It is closely related to master planning but different in the inclusion of sustainability, climate change, collaboration and its flexibility. Based on the aforementioned, an in-depth investigation is required in terms of training and improvement in the discharge of responsibility in plan preparation and implementation.
- ✚ Frameworks and guidance documents are not commonly used in urban and regional planning to bring about knowledge and to effectively improve and increase the capacity of planners so as to bring about controlled urban development.
- ✚ Preparation and implementation of spatial planning in developing countries involves a large number of Planning Authorities. These Planning Authorities use the same documents and professionals from Federal, State and Local governments and there exists the same professional training by The Town Planners Registration Council of Nigeria (TOPREC) and the Nigerian Institute of Town Planners (NITP).

## **9.9. BENEFIT OF THE RESEARCH**

This study has addressed the need for spatial planning to address urban sprawl conditions and to develop a framework and a guidance document in Jos Metropolis, Nigeria. It is the first such study conducted in Jos Metropolis, Nigeria and West Africa. The development of a framework, its validation and the development of a guidance document for implementing the framework, is the first and only one to be developed for addressing the problems of urban development and management in urban and regional planning as a discipline and profession in Nigeria.

1. The results of the research would assist Planning Authorities and Planners to select an appropriate, comprehensive, robust, evidence-based, all inclusive, timely policy etc, and planning approach for addressing the physical planning problems in Jos Metropolis and other cities in Nigeria and Africa in general.
2. Planning Authorities could become more knowledgeable about the planning process and the procedures for managing rural, urban and metropolis development within their jurisdiction and meeting the aim of having controlled development.

3. Creating awareness and acquiring the needed and necessary information and knowledge about spatial planning and physical planning, which should be of value to Town Planners and managers of the urban environment leading to higher job satisfaction.
4. Gaining an understanding of the characteristics and challenges of urban and regional planning (spatial planning) processes and procedures will assist in the control of urban development and management of urban and rural areas within and outside the metropolis.
5. Identification of the potential challenges of physical planning, from the institutional framework to the urban planning system, will constrain the framework and affect the achievement of an effective urban planning system in Jos Metropolis leading to an improvement in physical planning in the urban and rural areas in Plateau State.

Furthermore, the implications of this research are significant for planners (practitioners), policy makers, academics and researchers as well as for capacity building for those interested in the area of urban and regional planning.

#### **9.9.1. Planners**

- ✓ Professional Town Planners in Nigeria are supposed to be dynamic and adaptive in their approach and to be relevant, but are not because of the planning approach in vogue in the Nigerian planning domain. This would increase their potential, credibility and bring about job satisfaction.
- ✓ Being dogmatic about a specific planning system on which the success of the urban planning practice virtually hinges should not be thought of. Planners in Nigeria should try the third way; the Spatial Planning approach.
- ✓ Town Planners tend to be enthusiastic about urban Master Planning which after being prepared is, inevitably, shelved to gather dust, which is rather unfortunate for it to end up in this way. 'The Master Plan approach is top down, rather than bottom up, and is all inclusive allowing the beneficiaries to have a say and participate in making it easy to implement.
- ✓ Special training relating to Spatial Planning will help to increase the knowledge of employees in how to collect, analyse and use huge data in the field of meteorology for climate change and for social sciences on social and economic variables which will diversify the scope of the planner.

- ✓ The implementation of Spatial Planning helps to equip the town planners to approach new challenges concerning urban and regional issues due to the dynamic nature of the population in most developing countries.

### **9.9.2. Policy Makers**

Policy makers should take into account that the research outcomes of this research will be relevant and applicable to cities in other developing countries in Africa when setting strategic plans as follows;

- ✓ Having new ideas about changing issues as they relate to urban and regional planning problems which form the basis for decision making, due to their accuracy and usefulness.
- ✓ Making policy about an appropriate, comprehensive, robust, evidence-based, all inclusive, timely planning approach to reduce tension and conflict as well as increasing job satisfaction and productivity for Planning Authorities and planners for a controlled urban development and management.
- ✓ Introduction of a new planning approach to help address the physical planning problems and to evolve better strategies in the discipline of urban and regional planning. Spatial planning is an all-encompassing, comprehensive, robust, evidence-based, all inclusive and timely planning approach with an interventionist approach for easy implementation.

### **9.9.3. Academics**

The results of the study revealed that Spatial Planning needs in-depth investigation, as it presents valuable and useful information relating to the nature of urbanisation, urban sprawl, institutional frameworks and their constraints, the effectiveness of the Urban Planning System, the application of spatial planning as a strategic planning tool, the development of the Spatial Planning Framework and guidance document and its implementation to control Urban Development and Management. The implication of the results on Spatial Planning can be applied to housing, transportation and environmental issues amongst others.

### **9.9.4. The researcher**

The research has served as an extensive training period for the researcher, thereby gaining a better understanding of the research process. A wide range of benefits were derived from conducting this research amongst which is the acquisition of the following skills;

- ✓ Skills for carrying out independent research, such as identifying a problem, defining the problem and the ability to plan and execute a research programme appropriately, based on the problem under investigation such as ‘Spatial Planning Framework for Urban Development & Management in Jos Metropolis Nigeria’. In addition, the ability to design data collection instruments such as the face-to-face interview guides, questionnaires, skills to select appropriate and relevant archive documents. The ability to use the instruments designed and the ability to identify and select the relevant and accurate method for analysis of both qualitative and quantitative data generated. Also the aptitude to use NVivo, Excel and SPSS software, draw conclusions and make recommendations.
- ✓ Skills for better communication which include; confidence in presenting papers at conferences and workshops, writing abstracts and papers for journals and conferences as well as computer and software application.
- ✓ Extensive knowledge of research methodology; philosophy, approaches, reasoning, strategies and methods.
- ✓ Skills in the Design of posters, the art of questionnaire design and use of power point as well as Visio.
- ✓ Comprehensive and detailed knowledge of the subject of urban and regional planning (spatial planning, master planning, land use planning, metropolis planning and rural planning amongst others), and underlying concepts such as urbanisation, urban sprawl, urban governance, urban management, theories and assumptions.
- ✓ The ability to critically analyse situations, draw conclusions and make recommendations.
- ✓ Ability to conduct case study research and work within a team of researchers drawing on collaboration with five other Universities based on the Experience in F7P Project Commercial Local Urban Districts (CLUDS).

If offered another opportunity to conduct the research again, the process would be shorter and better.

#### **9.9.5. Capacity Building**

The results of the study will go a long way to assisting in the training and development of more planners to make accurate decision about Physical Planning problems. It helps in diversifying the areas of training for planners for employment in the Planning Authorities and

to increase the numbers of adequately qualified personnel. It also calls for improvement in the performance of personnel in most Planning Authorities to add value to the organisation. .

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## APPENDICES

### APPENDIX A: THE LIST OF JOURNALS AND CONFERENCE PUBLICATIONS BY THE AUTHOR

- ✚ Wapwera, S.D. Parsa, A and Egbu, C (2011). Financing low income housing in Nigeria. *Journal of Financial Management of Property and Construction*. Vol. 16 No. 3, 2011pp. 283-301 q Emerald Group Publishing Limited 1366-4387 DOI
- ✚ Wapwera, S.D. Parsa, A and Egbu, C (2011). Financing low-income housing in Jos Metropolis, Nigeria. International Postgraduate Research Conference (IPGRC) 11-13 September, 2011, Salford , UK. The University of Salford.
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- ✚ Wapwera, S.D., Ali, Parsa and Egbu, C.O (2012). The affordable housing policy in Jos Nigeria: A diminishing dream after 35 years? Being a paper presented during the ERES conference, 13-16 June, 2012. At the Heriot Watts University, Edinburg, Scotland UK.
- ✚ Wapwera, S.D., and Egbu, C.O (2013). Planning Authorities: A Review of Roles, Functions and Responsibilities in Jos Metropolis, Nigeria. Paper accepted for presentation during the International Postgraduate Research Conference (IPGRC) 4-6<sup>th</sup> April, 2013, Salford , UK. The University of Salford.
- ✚ Wapwera, S.D., and Egbu, C.O (2013). Master Planning System: Constraints for Planning Authorities in Jos Metropolis, Nigeria Paper accepted for presentation during the International Postgraduate Research Conference (IPGRC) 4-6<sup>th</sup> April, 2013, Salford, UK. The University of Salford.
- ✚ Wapwera, S.D., and Egbu, C.O (2013). Planning Authorities: A Review of Roles, Functions and Responsibilities in Jos Metropolis, *The Built & Human Environment Review, Volume 6, 2013*.
- ✚ Wapwera, S.D., and Egbu, C.O (2013) Master Planning System: Constraints for Planning Authorities in Jos Metropolis, Nigeria. *The Built & Human Environment Review, Volume 7, 2013*.

## **APPENDIX B: LIST OF DOCUMENTS FOR USED FOR REVIEW**

1. The Nigerian Transportation Master plan, NTM (July, 2006). Federal Ministry of Transport Bukar Dipcharima House, Off 3rd Avenue, Central Business District , P.M.B. 0336, Abuja, Federal Republic of Nigeria.
2. The Executive summary of the Nigerian Transportation Master plan, NTM (July, 2006). Federal Ministry of Transport Bukar Dipcharima House, Off 3rd Avenue, Central Business District , P.M.B. 0336, Abuja, Federal Republic of Nigeria.
3. First NIGERIA VISION 20:2020 IMPLEMENTATION PLAN, Dr. Shamsuddeen Usman OFR Minister of National Planning CWG Inauguration presentation, (13 November 2009).
4. Ministry of mines and steel development : national minerals and metals policy ( 2008)
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6. Mineral Potentials of plateau state : information and service brochure (2008)
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9. Plateau state government of Nigeria; Riyom master plan (2009- 2019).
10. Plateau state government of Nigeria: Jos-east local government council: final physical development plan for Angware 2008-2018.
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13. Improvement of Built-up Areas and development programme for the Jos metropolitan Area, 1980.
14. Nigerian Institute of town planners – plateau state chapter congress meeting held on Wednesday 14<sup>th</sup> March, 2012 at the MLSTP, Jos minutes of meeting.
15. Re: submission of interim report on the greater Jos master plan. Memo of the commission ministry of lands, survey and town planning Jos, 2<sup>nd</sup> May, 2008.
16. Supreme court judgment on urban and regional planning Law, June 13<sup>th</sup> , 2003
17. Regularisation of town planning approvals within the federal government owned lands, schemes and estates in Lagos state. Lagos state government ministry of physical planning notice.
18. Schedule of training plan, for staff of ministry of lands survey and town planning. Jos plateau state.
19. Report of stakeholders forum on the new greater Jos master Plan 12/2/2009
20. Comments and observations made by ministry department agencies, NGO's and professional bodies on the draft final master plan for Jos-Bukuru metropolis submitted by planning consultants, Fola Konsult limited: Compiled and prepared for implementation.
21. Ministry of Housing and Urban Development, Jos staff list as at 31<sup>st</sup> January, 2012.
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25. Development control standards and regulations for Greater Karu Area Planning and development Authority KAPDA. December, 2004.
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30. Federal Government , Poverty eradication efforts 1999-2002, January, 2003
31. Implementation Guidelines for Napep's promise keeper programme (memo)
32. NAPEP Multipartner, micro-finance (Master Plan-MF) Scheme. Joining Hands to defeat poverty in Nigeria.
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34. Plateau state of Nigeria. Government of the Plateau state of Nigeria 2005. Draft recurrent and capital estimates of the government of plateau state of Nigeria 2005 fiscal year. Plateau state home of peace and tourism.
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37. Ministry of Land Survey and Town planning. Plateau state Geographic information system (PLAGIS) Special commissioning handbook, 9<sup>th</sup> October, 2010
38. Development control and the Land use Act 1978. JMDB and Bureau for Lands survey and Town planning (Plateau state in Perspective): By John Benji Gupar (Unpublished L.L B(Hons) project report submitted to faculty of law, university of Jos, Nigeria , April, 2004.
39. A bill for a law to regulate urban and regional planning and for other matters connected therewith, 2011.
40. Report of students industrial work experience scheme at the ministry of Lands survey and town planning Jos Headquarters, By Edward Akila Lohor, November, 2010
41. Processes of Land Documentation in Nasarawa state by Rhoda Samuel Vilo, 2011
42. Federal Republic of Nigeria official Gazette, 2009. Lagos 31<sup>st</sup> December, 1992 Vol, 79
43. Jos metropolitan development board Edit, 1974. Benue –Plateau state of Nigeria Edit No.5 of 1974.
44. A law to make provision for the establishment of the plateau state urban development board law No. 19 of 1982.
45. A field guide manual of plateau state. Compiled and edited by Dunggwom et al, 2009.
46. Report of presidential committee on the review of the 1999 constitution. The constitution of federal republic of Nigeria 1999 (Amendment) Bill, 2001. (incorporating the draft of the proposed amended constitution), Volume II , Feb, 2001.
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48. Federal republic of Nigeria. Plateau state Government. Technical and financial proposal for Jos metropolitan Area Master plan and Detailed land use plan for a selected District, submitted by Fola Konsult LTD. Planners, Engineers, Development Consultants and Estate Managers , July, 2007
49. Jos metropolitan development board. Detailed Design Brief for the preparation of a master plan for the Jos-Bukuru Metropolitan area.
50. Ministerial press Briefing of the federal ministry of Housing and urban development by the honourable minister , Dr Olusegun mimiko on 15<sup>th</sup> December, 2005.

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53. Handing over notes from Hon A .N Dashen outgoing commissioner to Mr. James D. Dalyop permanent secretary MLSTP, Jos, Jos, 25 May, 2011.
54. Re: Request for organisational structure mandate/functions of your ministry/ Department – MHUD Jos 21<sup>st</sup> April, 2011.
55. Physical Development of Urban Nigeria: Emerging Trends and challenges-2007
56. Presidential Address 1969 town and country planning inaugural conference of the Nigerian institute of Town Planners, held at the institute of continuing education centre, university of Lagos. 16-18 , January, 1969.
57. Millennium Development goals and the Nigerian institute of Town Planners : An exploratory thought by Moses O Ajaye at the Nigerian institute of Town Planners conference in Enugu, 16<sup>th</sup>-19<sup>th</sup> November, 2005.
58. Questionnaire for socio-economic survey for the greater Jos master plan plateau state
59. Questionnaire for central area of Jos.The greater Jos master plan plateau state
60. 2006: NPC report : some chapters and also online
61. National award for best practice to improve the living environment. The federal ministry of works , housing and urban development. Year 2010 edition
62. Site and service projects, self-financing housing schemes for low income families. Dar Al-handaseh. Consultants (Shair and Partners) Lagos, Kano, Benin, Ilorin , Jos , kaduna, Maiduguri, Port Harcourt, Sokoto, Yola.
63. Report on special Ministerial conference on Housing and urban development Abuja Nigeria. AMCHUD, Nairobi, Kenya, 3-4<sup>th</sup> April, 2006.
64. The report of stakeholders' forum on 12/2/2009 for the final draft land use report of the new greater Jos master plan.
65. Plateau State Government of Nigeria, Greater Jos Master Plan (2008 – 2025). Fola Konsult Limited, Planners, Engineers and Development Consultants. June, 2009
66. Study on the challenges of fraud to land Administration institutions. United nations New york and geneva, 2011. ECE/HBP/165 United nations economic commission for Europe
67. Greater Jos-Bukuru Master Plan, Doxiadis Nig. Ltd. 1975
68. Samci Report of the Ministry of Lands and Survey, 1985.
69. National Housing Fund Decree, 1992.
70. Da Victor Pam's Committee on JMDB (1999) and White of 2000.
71. Felicia D. Gyang's Preliminary Report of the Review of the Jos Master Plan 2006.
72. National Urban Development Policy, 2006, Fed. Rep. of Nig.

## **APPENDIX C: LIST OF PLANNING AUTHORITIES INVOLVED IN THE RESEARCH**

1. Jos Metropolitan Development Boards (JMDB) Plateau State Nigeria
2. Ministry of Lands Survey and Town Planning (MLSTP) Plateau State Nigeria
3. Ministry of Housing & Urban Development (MHUD) Plateau State Nigeria
4. Barkin Ladi Local government Area Plateau State Nigeria
5. Bassa Local government Area Plateau State Nigeria
6. Jos East Local government Area Plateau State Nigeria
7. Jos North Local government Area Plateau State Nigeria
8. Jos South Local government Area Plateau State Nigeria
9. Riyom Local government Area Plateau State Nigeria



## **APPENDIX D1: Ethical Approval**

### **Academic Audit and Governance Committee**

#### **College of Science and Technology Research Ethics Panel (CST)**



**To** Samuel Wapwera  
Prof Charles Egbu

**cc:** Prof Mike Kagioglou, Head of School of SOBE

**From** Nathalie Audren Howarth, College Research Support Officer

**Date** 24<sup>th</sup> February 2012

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**Subject:** Approval of your Project by CST

**Project Title:** SPATIAL PLANNING FRAMEWORK FOR URBAN  
DEVELOPMENT AND MANAGEMENT IN JOS METROPOLIS  
NIGERIA

**REP Reference:** CST

Following your responses to the Panel's queries, based on the information you provided, I can confirm that they have no objections on ethical grounds to your project.

If there are any changes to the project and/or its methodology, please inform the Panel as soon as possible.

Regards,

A handwritten signature in black ink, appearing to read "N. Audren", with a long horizontal flourish extending to the right.

Nathalie Audren Howarth  
College Research Support Officer

## APPENDIX D2: CONSENT FORMS (PERSONAL & PLANNING AUTHORITIES)

### PARTICIPANT CONSENT FORM

**Title of Research project: SPATIAL PLANNING FRAMEWORK FOR URBAN DEVELOPMENT AND MANAGEMENT IN JOS METROPOLIS NIGERIA**

**Name and contact addresses of Researcher:** Samuel Wapwera D. School of the Built Environment, College of Science and Technology, Salford University, Salford Greater Manchester, United Kingdom.

Tel: 0044 07424780018 and 00234 8039132101

E-mail: [s.d.wapwera@edu.salford.ac.uk](mailto:s.d.wapwera@edu.salford.ac.uk) , [wakdokw@yahoo.com](mailto:wakdokw@yahoo.com)

**Sponsored:** University of Jos (ETF), Jos Nigeria , West Africa

Please use the check box to the right corner after the statements.

1. I confirm that I have read and understand the information sheet for The above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time , without giving reason. ☐
3. I agree to take part in the above study. ☐
4. I understand that all the information that I give will be used solely for the purpose of this research and will not be revealed to any third party. ☐

*For Researcher's use only:*

Include the following statements if appropriate, or deleted from your consent form: Y /N

✓ I agree to the interview being audio recorded. ☐ ☐

✓ I agree to the use of anonymosed quotes in publications ☐ ☐

Name of Boards, Ministry and Departments: -----

Position of professional: -----

Sign----- Date-----

Name of Field Researcher: -----

Sign----- Date-----

## **APPENDIX E: SAMPLE OF TRANSCRIPT AND MODELS FROM NVIVO ANALYSIS**

### **1: RESPONDENT X18**

#### **SECTION B: OVER ALL INSTITUTIONAL FRAMEWORKS**

2. The general principles of this greater Jos master plan addresses the issues such as the general concepts such as equity and safety, well it is a good concept but the involvement of the ministries in the preparation of the plan was not properly accommodated. Yes we knew about it but we were not adequately involved in the plan preparation. A single plan for the entire metropolis, yes it is a single plan for the entire metropolis and I think it has taken care of all the aspects of development, the land uses (residential, commercial, industrial, institutional, civic and all have been incorporated into it) we are the implementing agency. So we may not be adequately informed about the plan when we start implementing it, because we were not incorporated into the design process, the plan must have taken into consideration the concept of equity and safety because it was developed when the city was experience a lot of crisis. So if it is implemented it would give the city a good outlook efficient effective city. The preparation of the plan as I earlier on said the ministries were not completely involved in it. Yes because the name master plan is a blue print in a vision for the future development for a particular area. It has been development to guide the development of the entire city Bukuru Jos, but now and beyond it covers now up to six local government areas.

3. More problems are arising in Nigeria because at the national planning framework there is no physical planning framework, at the State planning level there is no state physical planning board and at the local government level there is no local planning authority at the local government level, hence there is need for a review to accommodate contemporary challenges.

4. The impact of the master plan on legislative and regulatory activities on the urban areas at federal State and Local levels, you know that this master plan is a legal document, and as a legal document it affects the three tiers of government, without the legal backing you cannot implement it. There is a need for legal backing in order to enforce some of these strategies that have been proposed in the master plan. It is basically a state document because it is not for the development of the entire country so it has little or no impact at the federal level because it is basically for plateau state alone, it cannot be used outside Plateau state so it is restricted to plateau state alone, even in Plateau state it is not all the local governments it is just the metropolis which is just covering only six local governments out of seventeen local governments so it is limited in scope.

5. The planning organisations, agencies and departments of lands in the local Government areas are always involved in the urban economic, social and physical development between the different levels of government it is only partially and between and within the different layers of government it is only done partially. Most of these things are given to consultants.

6. Yes the existing formal institutional set up is adequate for the effective implementation of the proposed greater Jos master plan but there is a serious lack of specific organisations due to the plethora of planning organisations there exist confusion and contradiction in the area coverage in the jurisdiction because there is duplication of functions at most fundamental levels such as at the urban level they have plans which is only at the metropolitan level and at the local government level not all the local governments have plans eg. Riyom and Angware master plans this is fairly done.

## **SECTION C: CONSTRAINTS OF PLANNING PROCEDURES**

7. The stability of the laws and policies have always had material effect on economic activities in both the urban and rural areas hence the regularity of change has always had effects on the economic growth of the areas under consideration. Compliance with the changes by the planning authorities with announced changes is high. There is high level of like accountability to the community because they are adequately informed about the project (master plan). There is no much difference between different levels of government.

8. The provision of infrastructure at different levels of government shows that it is not adequate at all levels while infrastructure efficiency is poor as well as its quality. This is as a result of the overstretching of the old and obsolete infrastructure which is over taken by increase in population accruing as a result of low budget provision and corruption.

9. The provision of security (protection of citizen property) based on the law by the propose greater Jos Master plan as it relates to security and investment with respect to infrastructure was highly considered as it was prepared when the state is passing the period of crisis. Undue political influence could be seen as the inclusion of a number of places into the master plan, release of funds for its preparation and implementation and unnecessary encroachment has always been resolved early before it degenerate and becomes a complex problem.

10. Yes there is so much bureaucracy and bottleneck /red tape in the implementation of the greater Jos master plan. Flexibility of rules and regulations has not changed. The attitude of public officials towards the implementation of the master plan is very bad , it is not encouraging at all as they come up with corrupt practices and these affects their professional competence in the delivery of their services, but they are competent.

11. The following are factors that hinder or makes difficult for master plans to be implemented: Planners working in the urban area are not involved in the process, especially the preparation stage. Plans are not meeting the needs of the urban area due to the fact that there is no clear cut coverage and poor collection of data and information hence data that would be used to address most of the needs. Actual problem on ground not captured especially the existing situation as not captured. The community was not involved in the process of preparation of the master plan.

12. All these documents planners use to carry out their day to day activities in the different planning authorities such as Development control standards , Building standard codes, Construction standards, Development Briefs, Street development Brief, Extensions and House holders development I think there should be improvement about all these documents even though they are the up to date planning standards.

## **SECTION D: EFFECTIVENESS OF URBAN PLANNING SYSTEM IN TERMS OF DEVELOPMENT CONTROL**

13. The plan was adequate for the area of implementation but cannot accommodate present realities. The planning processes were fairly efficient. The changes over the years in the planning system becoming a major problem because it was not very consistent not meeting the objectives of the plans as it was abandoned along the line. Little improvement observed but targets were not met. The plan has failed to improve the quality of the built environment in terms of social, economic and environmental as the targets were not met

14. The factors that determine the success of the proposed greater Jos master plan such as a Content of the plan shows that it was fairly adequate. Governance and management it has been observed that the government has no political will to officially start the implementation of the master plan and hence the management is inadequately done. The numerous planning authorities (planning system) are highly under staffed and do not have the equipments to adequately do their work. The government is providing very little resources and so many planning authorities are in need of more human resources (Poor man power).

15. There are no specific policies in the greater Jos urban master plan to address sustainable development but to achieve socio-economic development there was moderate consideration, environmental protection nothing was put in place so I consider it not secured, provision of infrastructure investment Facilities (Access road, Drainages, Public Toilets) it was moderately considered, Utilities (water, gas , power ) and Services (Health, Education, Religious, Recreational, Civil facilities, Commercial, Sewage and waste disposal) the lack of all these becomes the main issue.

16. The performance of the Greater Jos master plan is (influence) or affected at various levels hence at the National planning framework because planning is holistic and supposed to be, at the state planning framework there is political influence putting in place specific functions by planning authorities such as JMDB, MLSTP, MHUD and at the local planning level there are staff of the MLSTP and planners at the local government carrying planning activities , hence all this affects the Jos metropolis being benefits of the master plan.

#### **SECTION E: URBAN GOVERNANCE AND MANAGEMENT IN JOS METROPOLIS THROUGH THE PLANNING AUTHORITIES:**

17. The experts were partially involved in the preparation of the master plan for instance town planners were actually involved but from the consulting firm that actually bid for preparation the master plan so they participated, estate surveyors and managers were also there considering the fact that when it comes to implementation the valuation of houses that would be demolish becomes very important. Surveyors were also involved, but I am not sure if builders and civil engineers were parts of the experts assembled for the task.

18. The processes of the preparation of this master plan was giving the consulting firm (Fola Consults) was a good attempt to get at the problem, they presented a draft which in itself was a good attempt and observations were made and suggestions were also made by those present at the presentation our the stakeholders, whether this corrections were effected or not no one knows this makes it not to be good. They consulting firm were suppose to come up with another draft for final scrutiny, nothing of such as presented to stakeholders or even the public for criticism and corrections the next thing I heard was that the document was presented to the government. At the final scrutiny very little problem.

19. My view with respect to the area of coverage under the proposed greater Jos master plan concerning the local government areas involved wide and good for development, the area carved into the metropolis are adequate, planning authorities operating at the local government level not very effective need for expansion.

20. The large number of planning organisations (JMDB, MHUD, MLSTP and the SIX sections LANDS IN THE LGA) and planning service provision in Jos metropolis shows that professional town planners are not adequate but competent. The planning documents uses are relevant for the present day challenges and there are still contradictions in many areas. The planning (functions and governance) very relevant. The planning (Jurisdiction and boundary) is very relevant.

21. In my view land issues are handled in relation to plans, Land administration the main way out of this problem that there is need for government to acquire the land and plan the development and handled by the MLSTP. Land development is done according to the plans by individuals and JMDB controls the development. Land issues at the metropolitan level are according to the master plan, handled by the MLSTP, JMDB and the Local government areas involved in the metropolis.

#### **SECTION F: URBAN GOVERNANCE AND MANAGEMENT & APPLICATION MASTER/SPATIAL PLANNING**

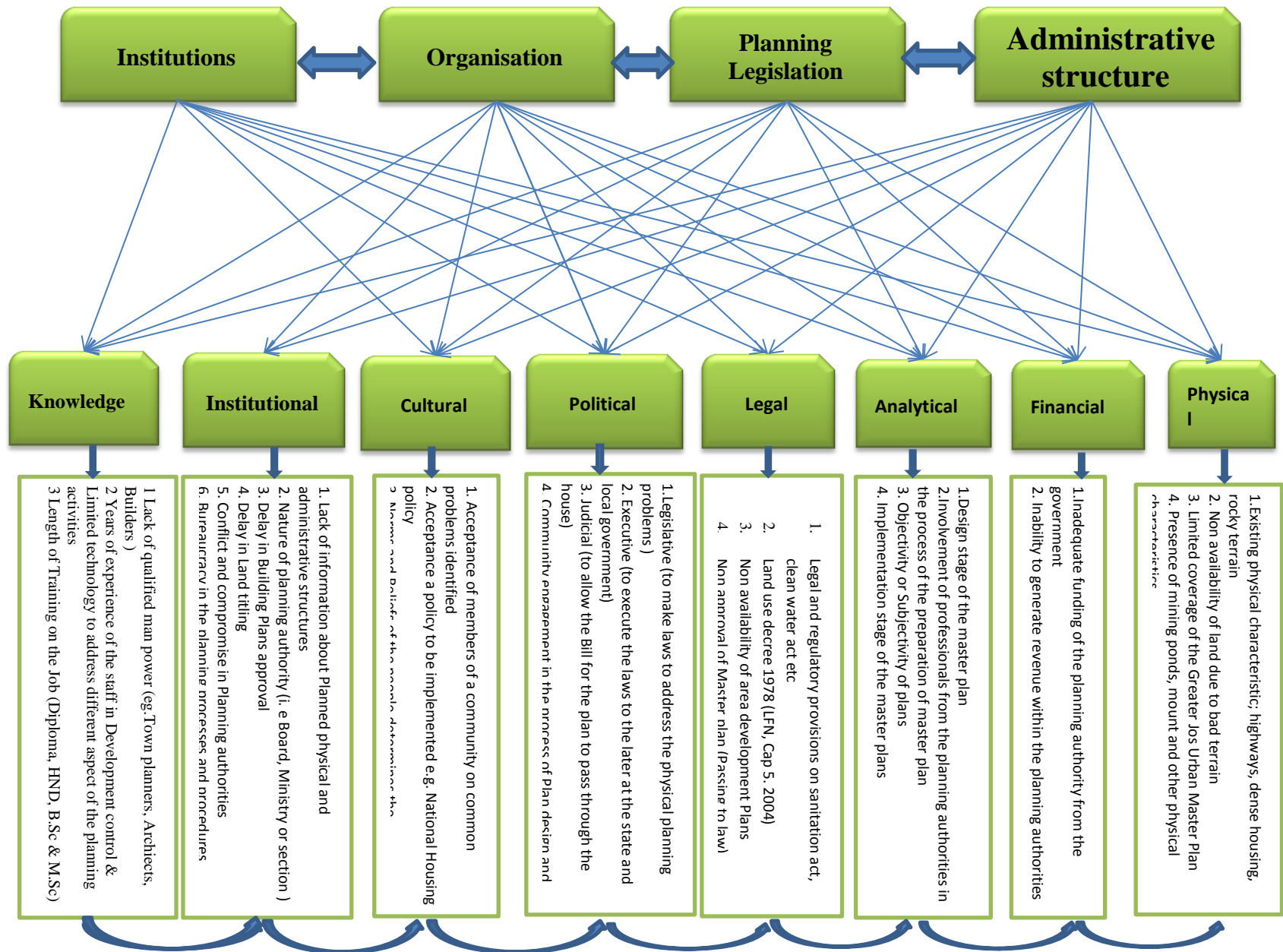
##### **OPEN DISCUSSION:**

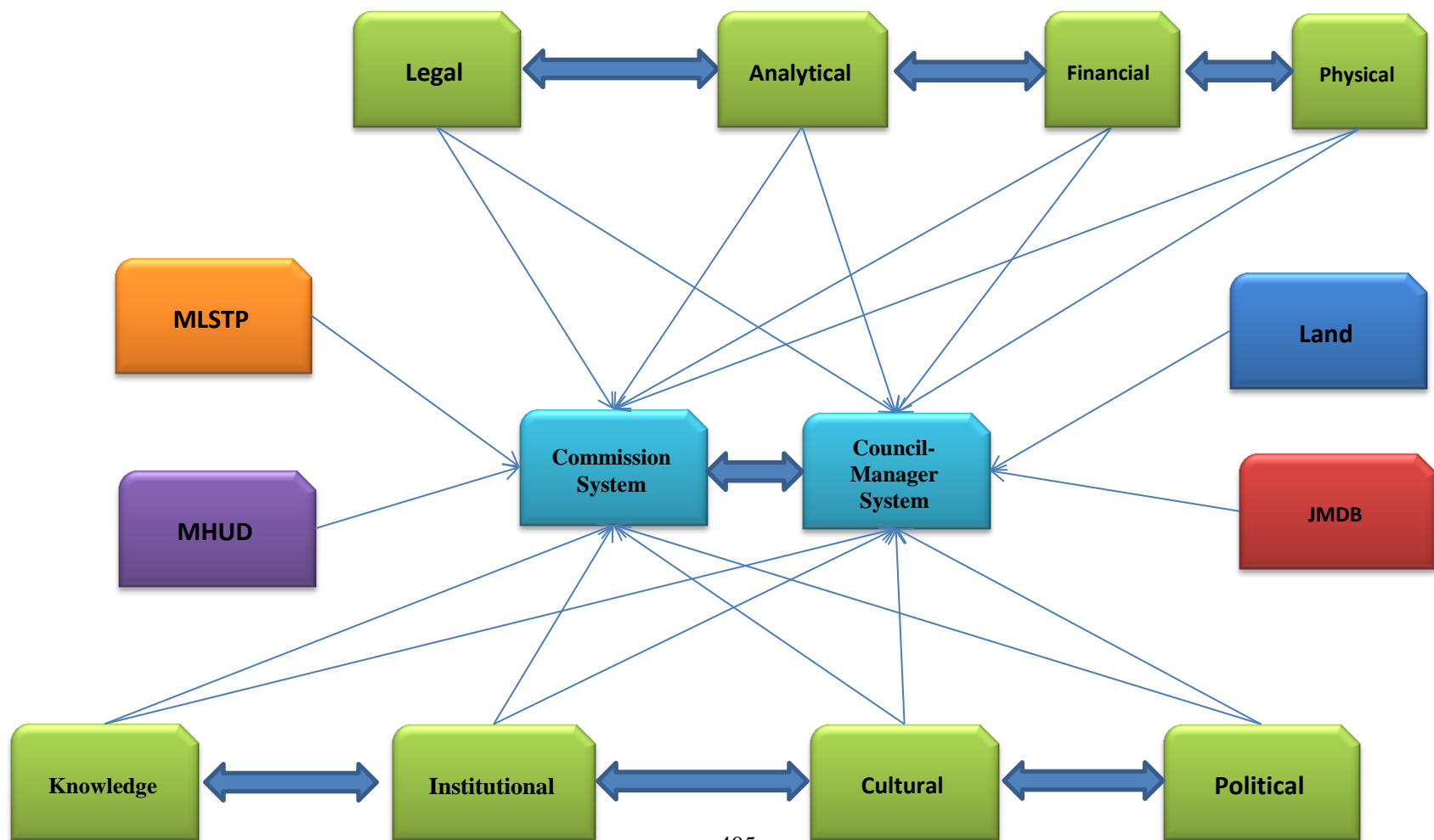
1. Lack of involvement of all the relevant stakeholders, professionals and the public.
2. The public (community) should always be involved
3. The relevant professional bodies must be involved in the processes of master plan preparation.

##### **Recommendation**

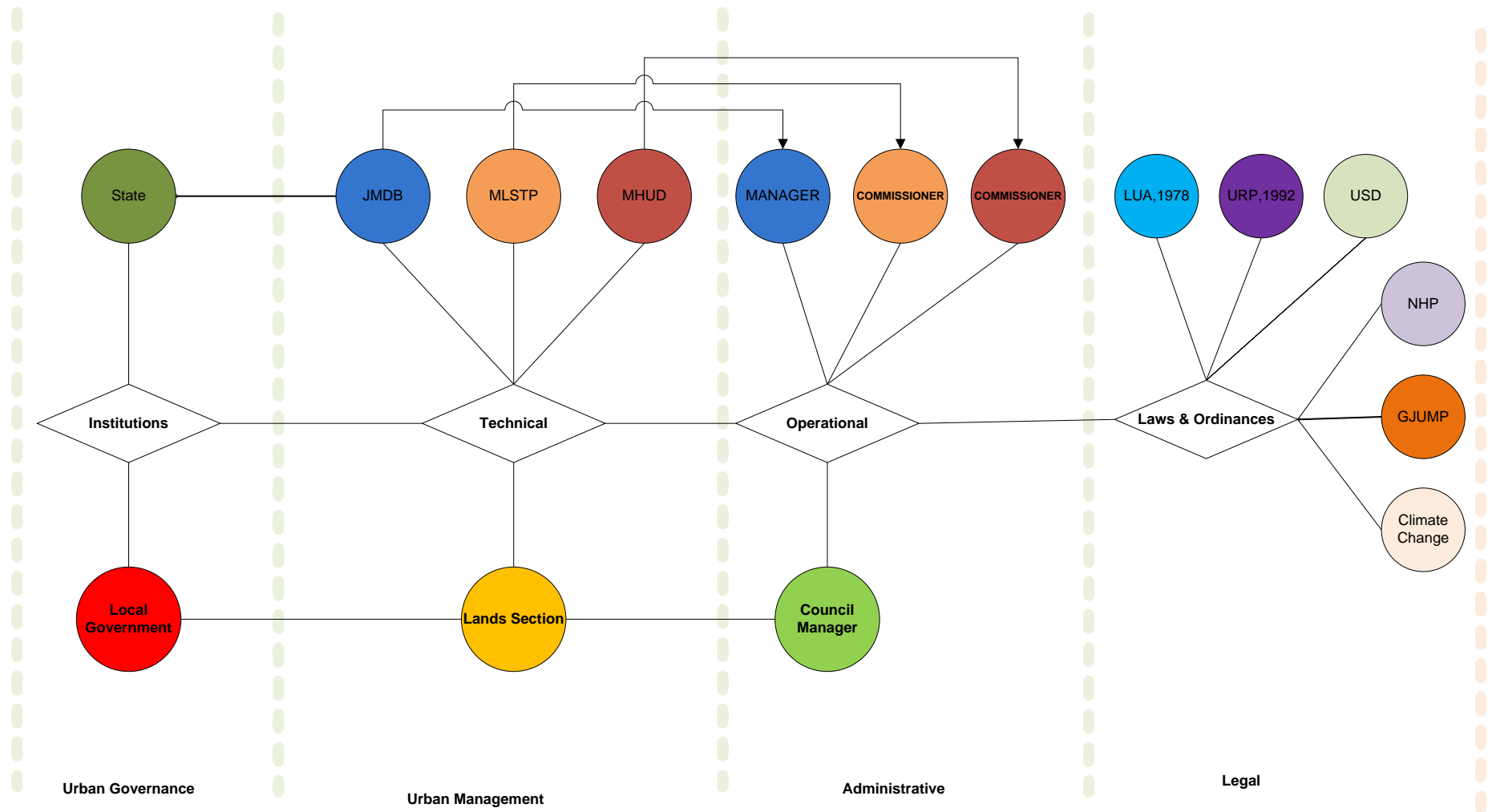
1. There is be a high level of commitment on the part of government at the national, state and local government for an effective implementation of the master plan.

#### **CONTINUATION OF APPENDIX E: MODELS FROM NVIVO ANALYSIS**

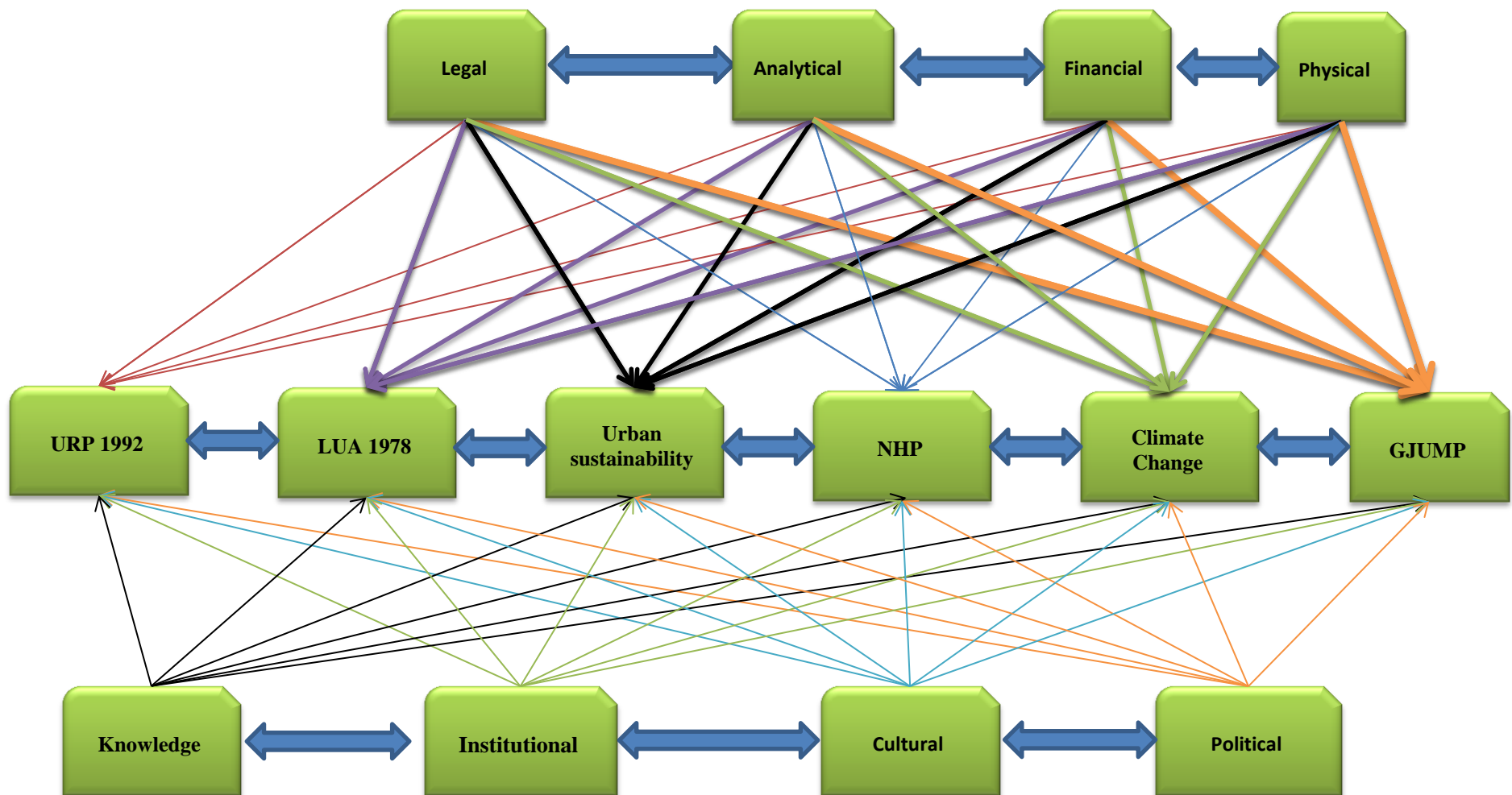








## Effectiveness of The Urban Planning System



## APPENDIX F: SAMPLES OF ANALYSIS OF (Anova F-ratio & Spearman Ranks Correlation coefficient rho)

### Measure of the Extent of Awareness of the Existence of Institutional framework

#### Institutions at 2 tiers

Within-Subjects Factors		Between-Subjects Factors	
Measure: MEASURE_1		N	
InstA	Dependent Variable	Awareness	1.00 11
		2.00	18
		3.00	27
1	InstA1	4.00	17
2	InstA2	5.00	27

#### Multivariate Tests<sup>a</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
InstA	Pillai's Trace	.144	15.940 <sup>b</sup>	1.000	95.000	.000	.144
	Wilks' Lambda	.856	15.940 <sup>b</sup>	1.000	95.000	.000	.144
	Hotelling's Trace	.168	15.940 <sup>b</sup>	1.000	95.000	.000	.144
	Roy's Largest Root	.168	15.940 <sup>b</sup>	1.000	95.000	.000	.144
InstA * InstA3	Pillai's Trace	.041	1.013 <sup>b</sup>	4.000	95.000	.405	.041
	Wilks' Lambda	.959	1.013 <sup>b</sup>	4.000	95.000	.405	.041
	Hotelling's Trace	.043	1.013 <sup>b</sup>	4.000	95.000	.405	.041
	Roy's Largest Root	.043	1.013 <sup>b</sup>	4.000	95.000	.405	.041

a. Design: Intercept + InstA3

Within Subjects Design: InstA

b. Exact statistic

#### Tests of Within-Subjects Effects

Measure: MEASURE\_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
InstA	Sphericity Assumed	7.325	1	7.325	15.940	.000	.144
	Greenhouse-Geisser	7.325	1.000	7.325	15.940	.000	.144
	Huynh-Feldt	7.325	1.000	7.325	15.940	.000	.144
	Lower-bound	7.325	1.000	7.325	15.940	.000	.144
InstA * InstA3	Sphericity Assumed	1.862	4	.466	1.013	.405	.041
	Greenhouse-Geisser	1.862	4.000	.466	1.013	.405	.041
	Huynh-Feldt	1.862	4.000	.466	1.013	.405	.041
	Lower-bound	1.862	4.000	.466	1.013	.405	.041
Error(InstA)	Sphericity Assumed	43.658	95	.460			
	Greenhouse-Geisser	43.658	95.000	.460			
	Huynh-Feldt	43.658	95.000	.460			
	Lower-bound	43.658	95.000	.460			

#### Tests of Between-Subjects Effects

Measure: MEASURE\_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	1876.506	1	1876.506	1012.718	.000	.914
InstA3	136.351	4	34.088	18.397	.000	.436
Error	176.029	95	1.853			

### Organisational/Planning Authorities

#### Within-Subjects Factors

Measure: MEASURE\_1

OrgPA	Dependent Variable	Between-Subjects Factors		
1	OrgPA1		N	
2	OrgPA2	Awareness	1.00	2
3	OrgPA3		2.00	19
			3.00	25
			4.00	19
			5.00	35

**Multivariate Tests<sup>a</sup>**

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
OrgPA	Pillai's Trace	.184	10.604 <sup>b</sup>	2.000	94.000	.000	.184
	Wilks' Lambda	.816	10.604 <sup>b</sup>	2.000	94.000	.000	.184
	Hotelling's Trace	.226	10.604 <sup>b</sup>	2.000	94.000	.000	.184
	Roy's Largest Root	.226	10.604 <sup>b</sup>	2.000	94.000	.000	.184
	Pillai's Trace	.332	4.731	8.000	190.000	.000	.166
OrgPA * OrgPA4	Wilks' Lambda	.687	4.850 <sup>b</sup>	8.000	188.000	.000	.171
	Hotelling's Trace	.427	4.966	8.000	186.000	.000	.176
	Roy's Largest Root	.346	8.210 <sup>c</sup>	4.000	95.000	.000	.257

a. Design: Intercept + OrgPA4

Within Subjects Design: OrgPA

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

**Tests of Within-Subjects Effects**

Measure: MEASURE\_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
OrgPA	Sphericity Assumed	14.083	2	7.042	15.044	.000	.137
	Greenhouse-Geisser	14.083	1.421	9.909	15.044	.000	.137
	Huynh-Feldt	14.083	1.497	9.405	15.044	.000	.137
	Lower-bound	14.083	1.000	14.083	15.044	.000	.137
	Sphericity Assumed	16.979	8	2.122	4.534	.000	.160
OrgPA * OrgPA4	Greenhouse-Geisser	16.979	5.685	2.987	4.534	.000	.160
	Huynh-Feldt	16.979	5.990	2.835	4.534	.000	.160
	Lower-bound	16.979	4.000	4.245	4.534	.002	.160
Error(OrgPA)	Sphericity Assumed	88.934	190	.468			
	Greenhouse-Geisser	88.934	135.020	.659			
	Huynh-Feldt	88.934	142.254	.625			
	Lower-bound	88.934	95.000	.936			

Multivariate Tests <sup>a</sup>							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
PMP1975	Pillai's Trace	.032	1.001 <sup>b</sup>	3.000	92.000	.396	.032
	Wilks' Lambda	<b>.968</b>	<b>1.001<sup>b</sup></b>	<b>3.000</b>	<b>92.000</b>	<b>.396</b>	<b>.032</b>
	Hotelling's Trace	.033	1.001 <sup>b</sup>	3.000	92.000	.396	.032
	Roy's Largest Root	.033	1.001 <sup>b</sup>	3.000	92.000	.396	.032
PMP1975 * CWBEF5	Pillai's Trace	.094	.606	15.000	282.000	.869	.031
	Wilks' Lambda	<b>.909</b>	<b>.598</b>	<b>15.000</b>	<b>254.373</b>	<b>.875</b>	<b>.031</b>
	Hotelling's Trace	.098	.591	15.000	272.000	.881	.032
	Roy's Largest Root	.052	.979 <sup>c</sup>	5.000	94.000	.435	.049
a. Design: Intercept + CWBEF5							
Within Subjects Design: PMP1975							
b. Exact statistic							
c. The statistic is an upper bound on F that yields a lower bound on the significance level.							

APPENDIX : Multivariate Tests <sup>a</sup>							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
GJUMP2008	Pillai's Trace	.057	1.883 <sup>b</sup>	3.000	93.000	.138	.057
	<b>Wilks' Lambda</b>	<b>.943</b>	<b>1.883<sup>b</sup></b>	<b>3.000</b>	<b>93.000</b>	<b>.138</b>	<b>.057</b>
	Hotelling's Trace	.061	1.883 <sup>b</sup>	3.000	93.000	.138	.057
	Roy's Largest Root	.061	1.883 <sup>b</sup>	3.000	93.000	.138	.057
GJUMP2008 * CWBIM5	Pillai's Trace	.298	2.615	12.000	285.000	.003	.099
	<b>Wilks' Lambda</b>	<b>.720</b>	<b>2.711</b>	<b>12.000</b>	<b>246.346</b>	<b>.002</b>	<b>.104</b>
	Hotelling's Trace	.364	2.781	12.000	275.000	.001	.108
	Roy's Largest Root	.281	6.670 <sup>c</sup>	4.000	95.000	.000	.219
a. Design: Intercept + CWBIM5							
Within Subjects Design: GJUMP2008							
b. Exact statistic							
c. The statistic is an upper bound on F that yields a lower bound on the significance level.							

Spatial Planning:		Multivariate Tests <sup>a</sup>					
Effect		Value	F	Hypothesis is df	Error df	Sig.	Partial Eta Squared
SPTOOL	Pillai's Trace	.208	2.883 <sup>b</sup>	8.000	88.000	.007	.208
	<b>Wilks' Lambda</b>	<b>.792</b>	<b>2.883<sup>b</sup></b>	<b>8.000</b>	<b>88.000</b>	<b>.007</b>	<b>.208</b>
	Hotelling's Trace	.262	2.883 <sup>b</sup>	8.000	88.000	.007	.208
	Roy's Largest Root	.262	2.883 <sup>b</sup>	8.000	88.000	.007	.208
SPTOOL * AGCLSP10	Pillai's Trace	.555	1.832	32.000	364.000	.005	.139
	<b>Wilks' Lambda</b>	<b>.526</b>	<b>1.941</b>	<b>32.000</b>	<b>326.123</b>	<b>.002</b>	<b>.148</b>
	Hotelling's Trace	.754	2.039	32.000	346.000	.001	.159
	Roy's Largest Root	.482	5.487 <sup>c</sup>	8.000	91.000	.000	.325
a. Design: Intercept + AGCLSP10 Within Subjects Design: SPTOOL							
b. Exact statistic							
c. The statistic is an upper bound on F that yields a lower bound on the significance level.							

Master Planning :		Multivariate Tests <sup>a</sup>					
Effect		Value	F	Hypothesis is df	Error df	Sig.	Partial Eta Squared
MPTOOL	Pillai's Trace	.147	1.896 <sup>b</sup>	8.000	88.000	.071	.147
	<b>Wilks' Lambda</b>	<b>.853</b>	<b>1.896<sup>b</sup></b>	<b>8.000</b>	<b>88.000</b>	<b>.071</b>	<b>.147</b>
	Hotelling's Trace	.172	1.896 <sup>b</sup>	8.000	88.000	.071	.147
	Roy's Largest Root	.172	1.896 <sup>b</sup>	8.000	88.000	.071	.147
MPTOOL * AGCLAP10	Pillai's Trace	.393	1.240	32.000	364.000	.179	.098
	<b>Wilks' Lambda</b>	<b>.659</b>	<b>1.222</b>	<b>32.000</b>	<b>326.123</b>	<b>.196</b>	<b>.099</b>
	Hotelling's Trace	.445	1.202	32.000	346.000	.214	.100
	Roy's Largest Root	.177	2.013 <sup>c</sup>	8.000	91.000	.053	.150
a. Design: Intercept + AGCLAP10 Within Subjects Design: MPTOOL							
b. Exact statistic							
c. The statistic is an upper bound on F that yields a lower bound on the significance level.							

### Tests of Between-Subjects Effects

Measure: MEASURE\_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	1326.046	1	1326.046	657.547	.000	.874
OrgPA4	71.804	4	17.951	8.901	.000	.273
Error	191.582	95	2.017			

### Planning Legislation

Within-Subjects Factors		Between-Subjects Factors	
Measure: MEASURE_1			N
PLA	Dependent Variable	1.00	14
		2.00	18
1	PLA1992	Awareness 3.00	24
2	PLAMP	4.00	32
3	PLALU	5.00	12
4	PLASUS		
5	PLAHP		

### Multivariate Tests<sup>a</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
PLA	Pillai's Trace	.024	.576 <sup>b</sup>	4.000	92.000	.680	.024
	Wilks' Lambda	.976	.576 <sup>b</sup>	4.000	92.000	.680	.024
	Hotelling's Trace	.025	.576 <sup>b</sup>	4.000	92.000	.680	.024
	Roy's Largest Root	.025	.576 <sup>b</sup>	4.000	92.000	.680	.024
PLA * PLACC	Pillai's Trace	.363	2.368	16.000	380.000	.002	.091
	Wilks' Lambda	.666	2.510	16.000	281.702	.001	.097
	Hotelling's Trace	.461	2.608	16.000	362.000	.001	.103
	Roy's Largest Root	.352	8.369 <sup>c</sup>	4.000	95.000	.000	.261

a. Design: Intercept + PLACC

Within Subjects Design: PLA

b. Exact statistic



Correlation Coefficient Master Planning			ApproMASTER	ASMP	CTR	CIP	EHS	PAPO	AIDCS	PRI	MSEADC	EUZR	CUMP
Spearman's rho	Infrastructure related Urban Sprawl	rho	1.000	-.003	.028	.205*	.275**	.214*	.382**	.322**	.310**	.231*	.357**
		Sig. (2-tailed)		.979	.779	.040	.006	.033	.000	.001	.002	.021	.000
	Post-socialist City Urban Sprawl	rho	1.000	.059	.065	.255*	.348**	.298**	.278**	.357**	.357**	.221*	.316**
		Sig. (2-tailed)		.561	.523	.010	.000	.003	.005	.000	.000	.027	.001
	Decline & Urban Sprawl	rho	1.000	.072	.102	.301**	.315**	.235*	.302**	.301**	.374**	.282**	.270**
		Sig. (2-tailed)		.475	.313	.002	.001	.019	.002	.002	.000	.005	.007
	Development Based Urban Sprawl	rho	1.000	.067	.120	.233*	.296**	.209*	.313**	.267**	.375**	.394**	.149
		Sig. (2-tailed)		.507	.236	.020	.003	.037	.002	.007	.000	.000	.139
			100	100	100	100	100	100	100	100	100	100	100

Correlation Coefficient Spatial Planning			ApproSPATIAL	ASMP	CTR	CIP	EHS	PAPO	AIDCS	PRI	MSEADC	EUZR	CUMP
Spearman's rho	Infrastructure related Urban Sprawl	rho	1.000	.286**	.325**	.285**	.341**	.303**	.337**	.509**	.254*	.417**	.402**
		Sig. (2-tailed)		.004	.001	.004	.001	.002	.001	.000	.011	.000	.000
	Post-socialist City Urban Sprawl	rho	1.000	.230*	.717**	.501**	.368**	.390**	.444**	.323**	.354**	.386**	.567**
		Sig. (2-tailed)		.022	.000	.000	.000	.000	.000	.001	.000	.000	.000
	Decline & Urban Sprawl	rho	1.000	.252*	.286**	.263**	.324**	.385**	.350**	.433**	.256*	.309**	.374**
		Sig. (2-tailed)		.011	.004	.008	.001	.000	.000	.000	.010	.002	.000
	Development Based Urban Sprawl	rho	1.000	.315**	.299**	.298**	.346**	.386**	.420**	.476**	.312**	.321**	.347**
		Sig. (2-tailed)		.001	.003	.003	.000	.000	.000	.000	.002	.001	.000
			100	100	100	100	100	100	100	100	100	100	100

\*Correlation is significant at the 0.05 level (2-tailed). \*\* Correlation is significant at the 0.01 level (2-tailed).

## APPENDIX G: List of Respondents for Face to Face interviews from Feb- May, 2012

	Respondent name: X1-X30	Position (Job title):	Organisation name: Y1-Y4	Parent company:	What is the core business of your organisation	Date of Interview	Duration of Interview	Venue of Interview:
1	X26	Town planner	Y4	Ministry of Local government Chieftaincy affairs	Land administration	29 <sup>th</sup> March, 2012	32:13 min	Resident of the Respondent
2	X1	Town Planning officer	Y2	Plateau state government	Land Administration and Control	26 <sup>th</sup> March, 2012	40:02 min	Office of respondent
3	X2	Land Officer	Y4	Departments of Works in Barkin Ladi Local Government Area	Land Administration (Civil Service)	2nd April, 2012	52:00min	Office of the Lands officer in B/ladi LGA
4	X3	Town planner	Y4	Ministry of Local government Chieftaincy affairs	Land administration	4 <sup>th</sup> April, 2012	30:00 min	Resident of the Respondent
5	X4	Ag Director of Town Planning and Registered Town planner	Y1	Plateau state government	Physical Development Control	11 <sup>th</sup> April, 2012	50:02 min	Office of the Ag Director town planning (JMDB)
6	X5	Registered Town planner	Y4	Plateau state Private practitioner	Land administration	14 <sup>th</sup> April, 2012	32:13 min	Resident if the Respondent
7	X6	Lands officer	Y4	Local Government service commission	Land administration	15 <sup>th</sup> Feb, 2012	50:12min	officer in Lands section
8	X7	Land officer /Town Planner	Y4	Plateau state local government Service commission	Land administration	3rd April, 2012	30:13 min	Resident of Lands officer
9	X8	Land officer /Town Planner	Y4	Ministry of Local government Chieftaincy affairs	Land administration	28 <sup>th</sup> February, 2012	1:00 min	Office of the Respondent
10	X9	Land officer /Town planner	Y4	Plateau state local government Service commission	Land administration	27 <sup>th</sup> March, 2012	41:00 min	Bassa LGC Secretariat
11	X18	Director of Lands /Planner	Y2	Plateau state government	Land survey and Town planning services	17th March, 2012	1:01 min	office of the Director of Lands
12	X10	Chief Technical Town planning officer	Y1	Plateau state government	Town planning development Control	3rd March, 2012	45:00 min	Office of Town Planner @ JMDB
13	X30	Town planning officer	Y2	Plateau state government	Land survey and Town planning services	12th March, 2012	1:25 min	(MLSTP)
14	X12	Deputy Director Town planning	Y1	Plateau state government / MHUD	Land Development Control	20 <sup>th</sup> April, 2012	56:00 min	JMDB
15	X13	Land officer and Registered Town planner	Y4	Plateau state local government Service commission	Land administration	16 <sup>th</sup> April, 2012	32:13 min	MLSTP
16	X14	Retired and Registered Town planner	Y4	Plateau state government	Town Planning Consultancy	20 <sup>th</sup> April, 2012	1:25 min	Private Planning Firm in Jos
17	X15	Town planner	Y4	Plateau state government	Land Development Control	29 <sup>th</sup> March, 2012	43:36 min	URP Studio University of Jos

18	<b>X16</b>	Town Planner	<b>Y1</b>	Plateau state government	Land Development and control Management	10th April, 2012	1:26 min	Office of respondent
19	<b>X17</b>	Land officer and Registered Town planner	<b>Y1</b>	Plateau state government	Land Development and control	16 <sup>th</sup> April, 2012	32:13 min	Office of the the Board (JMDB)
20	<b>X18</b>	Town planner	<b>Y1</b>	Ministry of Housing and Urban Development	Development Control	14 <sup>th</sup> March, 2012	1:20 min	Office of Town Planning officer@ JMDB
21	<b>X20</b>	Senior Town planning Officer	<b>Y2</b>	Plateau state government	Policy making Body about Lands, survey and Town planning issues.	25 <sup>th</sup> Feb, 2012	50:00 min	office of the Town Planner @MLSTP
22	<b>X21</b>	Town planner	<b>Y1</b>	Ministry of Housing and Urban Development	Development Control	6 <sup>th</sup> March, 2012	57:00 min	Office of Town Planning officer@ JMDB
23	<b>X22</b>	Town planner /Registered Town planner	<b>Y4</b>	Plateau state government	Land Development and control Management	18 <sup>th</sup> February, 2012	1:13 min	Office of Town Planner
24	<b>X19</b>	Deputy Director Town planning	<b>Y2</b>	Plateau state government	Policy making Body about Lands, survey and Town planning issues	15 <sup>th</sup> Feb, 2012	1:00 min	Office of the Deputy Director of Town planning
25		Town Planning officer	<b>Y3</b>	Plateau state government	Land administration	9 <sup>th</sup> March, 2012	1:15 min	MHUD
26	<b>X24</b>	Town planning Officer	<b>Y2</b>	Federal Government of Nigeria	Civil Service	29 <sup>th</sup> March, 2012	42:13 min	Office of Respondent
27	<b>X25</b>	Deputy Director Town Planning	<b>Y3</b>	Plateau state government	Land Development	13 <sup>th</sup> March, 2012	1:15 min	Office of Town planner(MHUD)
28	<b>X27</b>	Director Town planning	<b>Y2</b>	Plateau state government	Policy making Body about Lands, survey and Town planning issues	21 <sup>th</sup> Feb, 2012	1:02min	Office of the respondent
29	<b>X29</b>	Former Director Lands planning	<b>Y2</b>	Plateau state government	Policy making Body about Lands, survey and Town planning issues	21 <sup>th</sup> March, 2012	1:20min	Private Office of the former Director of in the Ministry
30	<b>X28</b>	Private Practitioner	<b>Y1</b>	Plateau state government /Private consulting firm	Consulting and Preparation of Master plan	23 <sup>rd</sup> April, 2012	1:34min	Stee Consult office

Key: **Y1**= JMDB **Y2**=MLSTP **Y3**=MHUD **Y4**=Lands Section in the LGA.

## APPENDIX H: SAMPLE OF SURVEY QUESTIONNAIRE

### SPATIAL PLANNING FRAMEWORK FOR URBAN DEVELOPMENT AND MANAGEMENT IN JOS METROPOLIS NIGERIA



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#### **An Overview of the Survey**

This survey is part of an on-going PhD research at the University of Salford, Manchester. The aim of the research is to carry out an evaluation of the present Greater Jos Master plan (proposed). The research will specifically focus on the proposed Master Plan and a potential adoption of spatial planning for infrastructure provision, investment for development, required to trigger social and economic activities encouraging city growth and development in Greater Jos Metropolis.

This questionnaire is targeted at stake holders/experts/town planners and policy makers in Jos metropolis involved in the implementation of the Greater Jos Master plan. I am interested in your view as a built environment professional. Therefore, your comments are of specific importance to the success of this research. I estimate that it will take 30-45 minutes.

#### **INSTRUCTION:**

-  In the attached questionnaire you are expected to answer all the questions by:
  1. Ticking the appropriate check boxes.
-  If there are questions which you are unwilling or unable to answer, skip them and continue with the remaining questions.
-  The questionnaire is separated into sections 1-4

#### **CONFIDENTIALITY:**

All information provided will be treated with complete confidentiality and your identity and anonymity is guaranteed. The results would only be published in aggregate form and used strictly for the purpose of this research only. Any acknowledgement of you or your organisation will be made subject to your agreement.

**Thank you for your valuable contribution.**

#### **SECTION 1: GENERAL INFORMATION**

*In this section please tick only one box for each of the questions*

Q1. Which category best describes your planning organisation?

Development Board ☐ MLSTP ☐ MHUD ☐ Lands Section in LGA ☐ others Please specify.....

Q2. Please state your current job title:

Town planner ☐ Estate surveyor ☐ Builder/Engineer ☐ Architect ☐ others specify.....

Q3. How long have you been working with your planning authority?

1-5years ☐ 6-10years ☐ 11-15 years ☐ 16-20years ☐ more than 20years

## SECTION 2: OVER ALL INSTITUTIONAL PLANNING FRAMEWORKS

This is the arrangements through which the planning system circulates laws, processes or customs serving to structure political, social, cultural or economic transactions and relationships either from top to bottom or from bottom up in the urban and regional planning system. They may be informal (e.g., social norms, taboos) or formal (e.g. constitutions, property rights regimes), existing at multiple scales (National, State and Local Government) of organization (Planning authorities). Policy makers are involved and linked with community strategic planning, collective efforts toward achieving shared goals, meeting common challenges, and reconciling differences in the system. It is dependent on a good relationship between appropriate planning legislations and an effective administrative framework.

Q4. Please indicate the extent of your awareness of the existence of the following criteria or constructs institutional framework for urban and regional in Jos metropolis?

*1- Not at all aware 2- slightly aware, 3-somewhat aware 4-moderately aware, 5-Highly aware*

	Constructs/ criteria for institutional framework	1	2	3	4	5
	<b>Institutions at the three tiers of Government</b>					
1	National ( constitutions of the federal republic of Nigeria)					
2	State (Property Rights regimes on Houses, land and other physical possessions					
3	Local (Privileges on inheritance on Houses, land and other physical processions)					
	<b>Organisational / Planning Authorities</b>					
4	Jos Metropolitan Development Board (JMDB)					
5	Ministry of Lands Survey and Town Planning (MLSTP)					
6	Ministry of Housing & Urban Development (MHUD)					
7	Lands Section (in the Six Local Government Areas carved into the Metropolis)					
	<b>Planning Legislation</b>					
8	1992 Urban and regional planning laws					
9	Master Plans ( Provision of basic infrastructure)					
10	Land use Decree 1978 (LFN. CAP 5 )					
11	Sustainable development issues(NAPEP, NEEDS, SEEDS, LEEDS)					
12	Housing policies in Jos Metropolis					
13	Climate change and related laws such as Ental protection etc)					
	<b>Administrative Structures</b>					
14	Commission System					
15	Council – Manager System					

Q5. Please indicate the extent to which the following characteristics of the institutional framework are effectively operational / implemented in urban and regional planning system in Jos metropolis?

1- Not at all implemented 2- slightly implemented, 3-somewhat Implemented 4-moderately implemented, 5-Highly Implemented

	Constructs/ criteria for institutional framework	1	2	3	4	5
	<b>Institutions at the three tiers of Government</b>					
1	National ( constitutions of the federal republic of Nigeria)					
2	State (Property Rights regimes on Houses, land and other physical possessions					
3	Local (Privileges on inheritance on Houses, land and other physical processions)					
	<b>Organisational / Planning Authorities</b>					
4	Jos Metropolitan Development Board (JMDB)					
5	Ministry of Lands Survey and Town Planning (MLSTP)					
6	Ministry of Housing & Urban Development (MHUD)					
7	Lands Section (in the Six Local Government Areas carved into the Metropolis)					
	<b>Planning Legislation</b>					
8	1992 Urban and regional planning laws					
9	Master Plans ( Provision of basic infrastructure)					
10	Land use Decree 1978 (LFN. CAP 5 )					
11	Sustainable development issues(NAPEP, NEEDS, SEEDS, LEEDS)					
12	Housing policies in Jos Metropolis					
13	Climate change and related laws such as Ental protection etc)					
	<b>Administrative Structures</b>					
14	Commission System					
15	Council – Manager System					

### SECTION 3: CONSTRAINTS IN THE URBAN PLANNING SYSTEM AND PROCEDURES

A constraint is defined in this study as anything that is preventing the Planning Authorities from achieving their sets goals (e.g. Catchment area, qualified man-power, correct documents, revenue from rates paid and equipment).

Urban planning system (Urban Planning System) is a gamut of all institutions (planning authorities), legal using (regulations development control standards, Building codes, policy, rules and norms etc), operational (administrative structures that ensure the processes) and the technical subsystem that utilises the master plans and the zoning ordinances to realize goals set by city general plans.

6. Please indicate the extent to which the following factors have constraint or act as a constraint to the urban planning system for which your planning agency is involved, using the Likert scale below: 1-Not at all constraint, 2-low level of constraint, 3-medium level of constraint, 4- High level of constraint, 5- very high level of constraint.

	Factors that constraint the Urban planning system and Process for which you are involved.	Institutions (Urban Governance)					Technical (Urban Management)					Operational (Administrative)					Laws & Ordinances (Legal)				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	<b>knowledge</b>																				
1	Lack of qualified man power (eg. Town planners, Architects, Builders )																				
2	Years of experience of the staff in Development control																				
3	Length of Training on the Job (Diploma, HND, B.Sc & M.Sc)																				
4	Supervised learning on the Job to achieve target goals																				
5	Limited technology addressing the planning activities																				
	<b>Institutional</b>																				
5	Lack of information about the physical and administrative structures																				
6	Nature of planning authority (i. e Board, Ministry or section )																				
7	Delay in Planning approval																				
8	Delay in Land titling /Bureaucracy & Embergo on processing of (C of O & R of O)																				
9	Conflict and compromise in Planning authorities																				
	<b>Cultural</b>																				
10	Acceptance of members of a community on common problems identified																				
11	Acceptance a policy to be implemented e.g. National Housing policy																				
12	Norms and Beliefs of the people																				
	<b>Political</b>																				
13	Legislative (to make laws that address the physical planning problems)																				
14	Executive (to execute the laws to the later at the state and local government)																				
15	Judicial (to allow the Bill for the plan to pass through the house)																				
16	Community engagement in the process of Plan design and implementation																				
	<b>Legal</b>																				
17	Legal and regulatory provisions on sanitation act, clean water act etc																				
18	Land use decree 1978 (LFN, Cap 5. 2004)																				
19	Non availability of area development Plans																				
20	Non approval of Master plan (Passing to law)																				
	<b>Analytical</b>																				
21	Design stage of the master plan																				
22	Involvement of professionals from the planning authorities in the process of the preparation of master plan																				
23	Objectivity or Subjectivity of plans																				
24	Implementation stage of the master plans																				
	<b>Financial</b>																				
25	Inadequate funding of the planning authority from the government																				
26	Inability to generate revenue within the planning authorities																				
	<b>Physical</b>																				
27	Existing physical characteristic; highways, dense housing, rocky terrain																				
28	Non availability of land due to bad terrain, unrestricted																				
29	Limited coverage of the Greater Jos Urban Master Plan																				
30	Presence of mining ponds, mount and other physical characteristics																				

#### SECTION 4: EFFECTIVENESS OF URBAN PLANNING SYSTEM IN TERMS OF DEVELOPMENT CONTROL

Effectiveness is defined in this study as the measure of the performance of a person, organization or an institution in achieving the outcomes the organization intends to produce (Planning Authorities, Ministries and Board).

Development control is one of the powers exercised by planning authorities over developments within their jurisdiction. It is only the planning authorities that are vested with this power under a country's existing planning laws. It is the process of ensuring that developments are carried out in accordance with approved planning standards.

Q7. In your view, please rate the effectiveness of the urban planning system in terms of development control. 1- Not effective, 2- Sometimes effective, 3- Frequently effective, 4- Mostly effective, 5- Always effective

	Factors that determined the effectiveness of the urban planning system	1	2	3	4	5
	<b>Urban Governance(Institutions)</b>					
1	Adequacy of funding provided by the government					
2	Creating awareness about development control					
3	Consistency in Governance to continue with development control					
4	Participation of major stake holders (broad-based)					
5	Effective Communication from the planning authorities to the public					
	<b>Urban Management (Development control goals &amp; measures) (Technical)</b>					
6	Control (Height , Space, density control)					
7	Effective use of Zoning regulations (Building line regulation)					
8	Adopting and implementing Development control standards					
9	Adequate Skilled Man power to ensure strict compliance to development control					
10	Planning System in use (Master planning ) to support development control					
	<b>Administrative (Operational)</b>					
11	Commission System					
12	Council – Manager System					
13	Coordinated administrative machinery					
14	Framework operates using the plans and policies provided to ensure development control					
15	No strategic planning framework in tackling the physical planning problem					
	<b>Legal (Laws and ordinances)</b>					
16	Development control measures; Zoning regulations, density control, building line regulation, height control act.					
17	Land use decree 1978 (LFN, Cap 5. 2004) Constitution of Nigeria (1999)					
18	1992 Urban and Regional Planning Law					
19	Development control standards					
20	Greater Jos Urban Master plans					

Q8. In your view, please rate the level of adequacy of the following plans in ensuring effective development control in the Jos metropolis. 1-Not adequate, 2-Slightly adequate, 3-moderately adequate, 4- very adequate, 5- highly adequate.

	Adequacy of Master Plans for Development control	1	2	3	4	5
1	Urban master plan (1975)					
2	Greater Jos urban master plan					
3	Angware master plan					
4	Riyom master plan					

Q9. In your view, how effective was the (1975) previous master plan? Please rate the level of effectiveness according to the listed areas, using the Likert scale below. 1- Not effective, 2- Sometimes effective, 3- Frequently effective, 4- very effective, 5- Highly effective **Please Put don't know if applicable**

	Possible Outcome from the 1875 urban Master Plan implementation in Jos Metropolis	1	2	3	4	5
1	Smart growth control in the metropolis					
2	Effective use of land in the metropolis (residential, industrial, commercial etc.)					



3	Provision of infrastructure & Reduction in failed projects in Jos metropolis					
4	Improvement in the Locality (settlements changes roads, construction, schools etc)					
5	Changes in water bodies (conversion of Ponds, streams, rivers etc)					

Q10. Please rate the extent to which you agree with the level of impact of the proposed Greater Jos urban master plan (2008) project in terms of infrastructure provision in Jos metropolis. 1-Strongly Disagree, 2- Disagree, 3-Indifferent, 4-Agree, 5- Strongly Agree

	Possible Outcome from the 2008 Master Plan implementation in Jos Metropolis	1	2	3	4	5	
1	Smart growth control in the metropolis						
2	Effective use of land in the metropolis (residential, industrial, commercial etc.)						
3	Provision of infrastructure & Reduction in failed projects in Jos metropolis						
4	Improvement in the Locality (settlements changes roads, construction, schools etc)						
5	Changes in water bodies (conversion of Ponds, streams, rivers etc)						

## SECTION 5: APPLICATION OF SPATIAL PLANNING AS A STRATEGIC TOOL

Spatial planning (Spatial Plan) is a strategic activity that is concerned with the allocation and management of natural and human resources across space (competing uses for space at various scales), creating value by making places and distributing the activities (social, economic, political and environmental), considering the interaction of different policies and practice for future development of any delineated geographical area and in this case the Jos metropolis, Nigeria.

Strategic tool in this study is defined as an instrument use by the planning authorities in Jos Metropolis to address problems that are concerned with the allocation of resource to achieve the adoption, assimilation and improvement of space and place, location and quality, Social, Economic and Environmental Changes often as a result of the creation of spatial plans to the more localised design and organisation of towns, villages and neighbourhoods.

Q11. Please rate the level of appropriateness of applying master planning as a strategic tool in your planning authorities? *Please rate by ticking the issue that best represent your view. 1-Inappropriate, 2-Slightly inappropriate, 3-Neutral, 4-slightly appropriate, 5-Appropriate*

	Ways of applying (Master Plan) as strategic planning tool	Master Planning System				
		1	2	3	4	5
1	Adopting it for the organisation of space at various levels and as a new instrument of practice					
2	Considerations of a combination of various visions with short term actions					
3	Common promotion of assets for development (capacity & resources- staffing, expertise, experience and funding)					
4	Involvement of stakeholders and becoming more active in planning eg Community					
5	Sustainable framework for regulating the development, management and the use of Land.					
6	A plan for the protection of resources to bring about sustainable development					
7	A tool to influence generate and resolve the environmental quality					
8	Solution to the local development framework problem					
9	Integration of policies for the development of the use of land and other policies and programmes which influence how they function eg the land use act and the master plans.					
10	Applied as a guide to change in land used as rights in any given geographical area, guide public investment infrastructure.					

**COMMENT:** Spatial planning as a strategic tool for urban planning does not exist/ or never implemented in Jos, Nigeria. The question below (Q8, 9 and 10) attempts to obtain your view regarding a situation where spatial planning were to exist/ or implemented.

Q12. Please indicate how appropriate it might be to apply spatial planning as a strategic tool in your planning authority? *Please rate by ticking the issue that best represent your view. 1-Inappropriate, 2-Slightly inappropriate, 3-Neutral, 4-slightly appropriate, 5-Appropriate*

	Ways of applying (Spatial Plan) as strategic planning tool	Spatial Planning System				
		1	2	3	4	5
1	Adopting it for the organisation of space at various levels and as a new instrument of practice					
2	Considerations of a combination of various visions with short term actions					
3	Common promotion of assets for development (capacity & resources- staffing, expertise, experience and funding)					
4	Involvement of stakeholders and becoming more active in planning eg Community					
5	Sustainable framework for regulating the development, management and the use of Land.					
6	A plan for the protection of resources to bring about sustainable development					
7	A tool to influence generate and resolve the environmental quality					
8	Solution the local development framework problem					
9	Integration of policies for the development of the use of land and other policies and programmes which influence how they function eg the land use act and the master plans.					
10	Applied as a guide to change in land used as rights in any given geographical area, guide public investment infrastructure.					

Q13. In your view, please rate the influence of the following individuals on the strategic planning process by using a five-point Likert scale *1- Not influence 2- rarely influenced 3- occasionally 4-often influenced 5-Highly influenced*

	Participate of Individuals/ team	1	2	3	4	5
1	Board of Directors of Planning authorities					
2	Managing Director/Commissioners/ Head of Section					
3	Planning committee, ad hoc					
4	Groups of senior Planning officers /managers,					
5	Groups lower Planning officers/scouts					

Q14. In your view, what degree of consideration do you think your planning authority gives to the following measures of spatial planning as a strategic tool? *Please rate by ticking the issue that best represent your view. 1-Never considered, 2-almost never considered, 3- occasionally considered, 4-frequently considered, 5-almost every time considered.*

	Measures of spatial planning as a strategic Tool	1	2	3	4	5
1	Restriction to spatial structures, urban forms and Land uses					
2	Strategic activities (Mapping, site inspection) & Consistent planning & development					
3	Allocation and management of human and natural resources & Making of places that are valued					
4	Competing uses of space for various scales & Guiding future development					
5	Distribution of activities (Land uses; Agriculture, Residential, Commercial, Industrial)					
6	Interaction of different policies and practices					
7	Infrastructure provision and Long term investment strategy					
8	Policy interventions (land use decree, 1978 with urban and regional planning law 1992)					
9	Development control measures; Zoning regulations, density control, building line regulation, height control etc					
10	Sustainable urban development					
11	Climate change consideration					
12	Positive and evidence base					

13	Dynamic and timely policy in making						
14	Integration and joining up						
15	Inclusive and effective community engagement and collaboration with large number of participants						

Q15. Please rate the extent to which the you agree with the level the following urban management factors using the spatial planning as a tool to control urban sprawl patterns in Jos metropolis. *Please rate by ticking the issue that best represent your view. 1-Strongly Disagree, 2- Disagree, 3-Indifferent, 4-Agree, 5- Strongly Agree*

	Urban Management factors that control Urban sprawl and its related patterns	Infrastructure – related urban sprawl					Post-socialist city Urban sprawl					Decline & Urban sprawl					Development Based urban sprawl				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1	Adequate skilled man-power to ensure strict compliance																				
2	Control (density, space , rate and nature)																				
3	Community infrastructure Provision																				
4	Environmental Health and Sanitation																				
5	Planning authorities and poor organisation																				
6	Adopting and Implementing Development control standards																				
7	Protection of Rights of individuals																				
8	Management support in ensuring adequate development control																				
9	Effective use of zoning regulations (Building line regulation)																				
10	Consistency in urban management policies																				

Respondent name (Optional).....  
 Organisation name (Optional).....  
 Telephone (Optional).....  
 Email Address (Optional).....

## **APPENDIX I: SAMPLE OF FACE TO FACE INTERVIEW GUIDE**

### **SPATIAL PLANNING FRAMEWORK FOR URBAN DEVELOPMENT AND MANAGEMENT IN JOS METROPOLIS NIGERIA**

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Supported by  
University of Jos, Jos Nigeria

#### **AIM:**

The aim of this research is to carry out an assessment of the present Greater Jos Master plan (proposed). The research will specifically focus on the proposed Master Plan and a potential adoption of spatial planning for infrastructure provision, investment for development, required to trigger social and economic activities encouraging city growth and development in Greater Jos Metropolis.

This face-to-face interview is targeted at stake holders/experts/town planners and policy makers in Jos metropolis involved in the implementation of the Greater Jos Master plan. I am interested in your view as a built environment professional. Therefore, your comments are of specific importance to the success of this research. I estimate that it will take 30-45 minutes.

#### **INSTRUCTION:**

-  In the attached questionnaire you are expected to answer the questions by:
  - 2. Providing explanatory comments to a question or
-  You are allowed to use separate sheet of paper if the medium is not convenient.
-  Please continue your comments on a separate sheet if the space is not sufficient.

#### **CONFIDENTIALITY:**

All information provided will be treated with complete confidentiality and your identity and anonymity is guaranteed. The results would only be published in aggregate form and used strictly for the purpose of this research only. Any acknowledgement of you or your organisation will be made subject to your agreement.

**Thank you for your valuable contribution.**

## **SECTION A: AUTHORITY, AGENCY AND DEPARTMENT PROFILE**

**Q1. Please provide the following details on the profile of your Planning Authority**

Respondent name:

Position (Job title):

Name of Planning Authority:

Parent/Affiliate Authority:

Country of origin:

The core Activity of your Planning Authority:

Date of establishment of Planning Authority:

Address:

Tel/fax:

Email:

## **SECTION B: OVER ALL INSTITUTIONAL FRAMEWORK**

The institutional framework is a channel through which the system circulates information either from top to bottom or from bottom up. Policy makers at all levels (National, State and Local Government) are involved in providing advisory roles to the planning authorities to address the spatial problems and to link with community strategic planning which is intended to be a central integrating devised in ensuring the goals were achieved if the planners play their roles. This section has five questions (2-6).

**Q2. What is your view about the general principles of this greater Jos master plan within the known institutional framework?**

**Opinion on:**

General concepts such as equity and safety

A single plan for the entire metropolis

Plan preparation processes

Identification and definition of the role of social and economic activities

Development of local and the urban areas

Formal/ informal settlements within the metropolis

**Q3. What is your view about the national planning framework with more problems rising in Nigeria?**

**Opinion on:**

National planning level

State planning level

Local government level

Others (please specify)

**Q4. What is your opinion on the impact of such a plan on legislative and regulatory activities impacting on the urban area:**

National level

State level and

Local level

**Q5. To what extent are planning authorities, agencies and departments of local Government areas amongst others involved in the urban economic, social and physical development process organise their activities towards achieving the plan.**

**Opinions on**

Organisation between different levels of government

Organisation within different layers of government

**Q6. In your view is the existing formal institutional set up adequate for the effective implementation of**

**the proposed greater Jos master plan?**

**Issues can include:**

Lack of specific organisations (plethora of planning organisations)  
 Confusion or contradiction in the area coverage (Jurisdiction)  
 State level  
 Urban level  
 Local level  
 Others (please specify)

#### **SECTION C: CONSTRAINTS OF PLANNING PROCEDURES**

A constraint is defined in this study as anything that is preventing the Planning Authorities from achieving their sets goals (Area coverage, qualified man power, correct documents, revenue from rates paid and equipment's). This section has six questions (7-12)

**Q7 What is your opinion about the stability of the laws and policies having a effect on economic activities?**

**Opinion on:**

Regularity of change  
 Compliance of authorities with announced changes  
 Accountability to the community in case of change  
 Difference between levels of government  
 Other (please specify)

**Q8. What is your view with respect to government interaction with infrastructure provision at different levels of government?**

**Opinion on:**

Adequacy of Infrastructure  
 Efficiency of Infrastructure and  
 Quality of Infrastructure  
 Others (please specify)

**Q9. What is your view on the provision of security (protection of citizen's property) based on the law by the proposed greater Jos Master plan?**

**Opinion on:**

Security in the provision and investment with respect to infrastructure  
 Undue political influence  
 No unnecessary encroachment  
 Others (please specify)

**Q10. In your view is unnecessary bureaucracy and bottleneck /red tape a major obstacle in implementing the master plan?**

**Opinion on:**

Flexibility of rules and regulations  
 Attitude towards implementation by public officials  
 Competence of public officials  
 Internal constraint  
 External constraint  
 Others (please specify)

**Q11. What are in your opinion some of the hindrances that makes it difficult for the master plans to be implemented?**

**Opinion on:**

- Planners working in the urban area are not involved in the process
- Plans are not meeting the needs of the urban area
- Actual problem on ground not captured.
- Involvement of the community in the process of preparation of plans

**Q12. What is your opinion about the documents used by planners to carry out their day to day activity?**

**Opinion on:**

- Development control standards
- Building standard codes
- Construction standards
- Development Brief
- Street development Brief
- Extensions and House holders development
- Survey reports

**SECTION D: EFFECTIVENESS OF URBAN PLANNING SYSTEM IN TERMS OF DEVELOPMENT CONTROL**

Effectiveness is defined in this study as the measure of the performance of a person, organization or an institution in achieving the outcomes the organization intends to produce (Planning Authorities, Ministries and Board). This section has four questions (13-16)

**Q13. What is your view about the previous master plan achieving its goals?**

**Opinion on:**

Adequacy of Plan

Planning process efficiency

Consistency of the planning system

Meeting its objectives,

Improving the quality of the built environment,

Delivery of targets; social, economic, environmental

Others (please specify)

**Q14. What is your view on the factors that determine the success of the proposed greater Jos Master plan?**

**Opinion on:**

Content of the plan

Governance and management

Planning authorities (planning system)

Resources availability (Human and natural)

Communication

Competence

Ethics (respect, honesty, integrity, equity)

**Q15. What are the specific policies the greater Jos urban master plan has included in achieving Sustainable development in relation to your planning authority and others?**

**Opinion on:**

Economic development

Social development

Environmental protection

Infrastructure investment and provision

Facilities (Access road, Drainages, Public Toilets)

Utilities (water, gas, Electricity)

Services (Health, Education, Religious, Recreational, Civil facilities,

Commercial, Sewage and waste disposal)

Others (Please specify)

**Q16. In your opinion is the performance of the master plans (influence) affected by some factors that could be controlled in Jos metropolis?**

**Opinion on:**

National planning framework

State planning framework  
Local planning framework  
Others (please specify)

**SECTION E: URBAN GOVERNANCE AND MANAGEMENT IN JOS METROPOLIS THROUGH THE PLANNING AUTHORITIES:**

Urban governance and management are complex mechanisms and processes through which institutions exercise political, economic and administrative authority in the management of a state or local through Planning authorities, this impacts on both the effectiveness and the constraints of the planning authorities. This section has five questions 17- 21

**Q17 What is your view about the involvement of experts in the process of the preparation of the Greater Jos master plan?**

**Opinion on:**

Town planners  
Estate surveyors and managers  
Surveyors  
Builders and civil engineers  
Others (please specify)

**Q18. What is your view about plans preparation of the greater Jos urban Master plan?**

**Opinion on:**

Preparation  
Draft  
Correction  
Draft  
Final scrutiny  
Others (please specify)

**Q19. What is your view with respect to the area of coverage under the proposed greater Jos master plan?**

**Opinion on:**

The local government areas involved  
Area carved into the metropolis  
Planning authority operating at the local government level  
Others (please specify)

**Q20. What is your view about the plethora of planning organisations (JMDB, MHUD, MLSTP and SIX DEPARTMENTS OF LANDS IN THE LGA) and planning service provision in Jos metropolis?**

**Opinion on:**

Professional town planner (adequacy and competency)  
Planning Documents use (relevance)  
Planning (functions and governance)  
Planning (Jurisdiction and boundary)  
Others (please specify)

**Q21. What is your view about the how land issues been handled in relation to plans implementation:**

Land administration and management  
Land development  
Land at the metropolitan level  
Others (please specify)



### **OPEN DISCUSSION:**

- ✓ As a professional planner, what would be the key criticism of the current urban master planning system – policy and practice?
- ✓ If you are the major policy maker what would be your key recommendations/suggestion to improve the urban planning system in Nigeria.(policy, plans and implementation).

**I would appreciate any further opinion you might like to add on the impacts of the urban master planning system on the growth and development of your urban areas and recommendations necessary for improving the attractiveness to investors in the future as a result of the adoption of better planning system.**