RETHINKING INNOVATION: THE KNOWLEDGE SPILL OVER STRATEGIC ENTREPRENEURSHIP

IN MICRO AND SMALL FIRMS IN NIGERIA.

BY

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Declaration of Originality

I hereby declare that this thesis is my original work submitted in fulfilment of award of doctoral degree. No portion of the work has been submitted in support of an application for another degree.

Dedication

Entrepreneurs and small business owners toiling and striving to survive in developing countries' inclement ecosystem.

Abstract

Rethinking innovation: Knowledge Spillover Strategic Entrepreneurship in Micro and Small Firms in Nigeria

The interest in innovation in the past decades as a means of economic development has been amply demonstrated by both government and international agencies. Similarly, there are bourgeoning literature and research studies focusing on this theme. However, the dominant narratives of innovation, owing to the origin of the concept and its research discussion is technological. Thus, innovation presented in the literature is that of radical product from cutting edge innovation, minted in the advanced world. This portrayal of innovation which has become global standard of measurement however, unwittingly stripes the concept of its contextual influence and thus sometimes applied to developing countries, a radically different context. This thesis challenges the dominant narrative and the resultant conceptualisation of innovation which arises from focus on big firms in advanced countries. Employing knowledge spillover theory of strategic entrepreneurship and using case study of selected micro and small firms in Nigeria, the study contextualises (i.e consider what is innovative to be context dependent) innovation, stripped of its contextual origin, to small firms in Nigeria. The study adds to knowledge on innovation and its linkage with development. Furthermore, drawing on robust evidence, the study suggests rethinking innovation as a necessary step towards improving firm level performance for sustainable growth, inclusion and local economic development.

Key words: Rethinking, knowledge spillover, Innovation, Strategic entrepreneurship, Micro and small firm.

Chapter 1: Introduction

1.1 Background

Innovation is critical to technological and economic development judging by the experiences of the developed countries of Europe and America. Innovation opens the leeway to new technology adoption by firms with a view to catching up with prevalent technology frontier for sustainable economic growth and development (De Mel, McKenzie & Woodruff, 2009). The economic and technological contributions of innovation to national development have extensively been discussed theoretically and empirically in a number of studies (Mytelka, 2000; Mytelka and Farinelli, 2000; Wong et al., 2005; Longenecker et al., 2006). Wolf (2006) underscored the importance of innovation in economic development stating that increase in productivity of SMEs is linked with their abilities and capabilities to innovate, adopt new technologies and apply innovative process to local conditions. There are three key mutually reinforcing elements in the innovation process, namely: learning, linkage and investment (Mytelka, 2000). The four main typologies of innovation as conceptualised and developed by the OECD's Oslo Manual are product, process, marketing and organizational innovations (OECD, 2005). Theorists and analysts have written extensively on innovation and technology adoption in the developed context, but studies on innovation in the developing context are few. This study builds on and contributes to the body of work on innovation in developing countries (Crescenzi et al., 2012; Bogliacino, Perani, Pianta and Supino, 2009; Lorenza and Mohammad, 2010; Williams and Woodson, 2012; WIPO, 2011). Even though few innovation studies have been conducted in the developing nations, there has not been empirical study of micro firms. Thus, there exists a considerable gap in the understanding of the concept of innovation at the firm level in the context of developing countries (Dantas and Bell, 2011; Pietrobelli and Rabellotti, 2011). This study provides additional insight into the nature of innovation in micro and small enterprises (MSE) in Nigeria. This study thus answers calls by scholars advocating for more studies on innovation to gain a better understanding of the concept in the developing countries context (Lorenza and Mohammad, 2010; Sirnivas and Sutz, 2008). It has been argued that results of studies carried out in the advanced economy and the resulting models and analytical framework developed may not be suitable to developing countries' context (Edwards et al., 2005; Hobday, 2005). More so,

innovation is seen as a means to overcome resource constraints prevalent in the developing countries (Sirnivas and Sutz, 2008).

Specifically, within the context of sub-Sahara Africa, there has been a strident call for the study of innovation in small firms which takes the peculiar circumstances of this context into account because of their importance to economic development (Munchei and Gamelfort, 2003). It is believed that development of Micro and Small Enterprises (MSEs) helps to alleviate poverty, generate employment and generally promote economic growth and development (Chipika and Wilson, 2006, Robson et al, 2009). Since, data on innovation have come from industrialised economy focusing on big firms with little attention paid to small firms in the developing countries (Hadjimanolis, 2000), the consequence of this is that ‘‘the relevance of the innovation process in firms doing business in developing countries is not always properly acknowledged’’ (Chudnovsky et al. 2006, p. 267). Thus there is considerable gap in knowledge of innovation in developing countries, especially Low Income Developing Countries (LIDC) whereas Tidd et al (1997, 98) suggested that innovation in small firms ‘’ is strongly conditioned by the national and regional context by which it finds itself embedded’’

The need for research in innovation in MSE in Nigeria is particularly crucial because. i) they are the dominant form of firms in sub-Sahara Africa accounting for 95% of business population in sub-Sahara Africa (ADB, 1997). In addition, these organizations have been widely recognised as a cornerstone for economic development. They make significant contributions to development through both job creation and poverty alleviation (de Beer et al, 2013; Kramae-Mbula and Wamae, 2010); ii) they represent a shift from traditional to modern economy. They employ simple skill, machinery, local raw materials and technology in the process of production. They help bring about gradual socio-economic change through employment creation, use of local technology and raw materials, generation of income, promoting local and indigenous entrepreneurship, technological innovation and poverty reduction; iii) as result, the Nigerian federal government has started to pay more attention to this sector of the economy and this reflected in express government policy as contained in vision 20/2020, a vision which seeks Nigerian economy ranking top 20 in the world by the year 2020 (SMEDAN, 2012) .

What prompted this research work is the inquisitiveness to investigate if micro firms in the manufacturing of household products in developing countries innovate, and if they do how do

they innovate? To this end, a preliminary study was carried out to find out from the governmental agency responsible for promoting micro and small firms as well as business membership organizations to suggest micro firms that they consider to be innovative which thus formed the purposeful sample of firms investigated in the study.

Within the field of innovation study, vast majority of studies are dominated by focus on big industries in advanced or industrialised economy. However, few ones exploring innovation in developing countries typically focus on newly industrialised or emerging economies. It is notable that developing countries differ and vary considerably. While there are those that have achieved a level of economic development which is close to industrialised countries, such as for instance South Korea, China and Russia just to mention a few. There are those that are in the poorest economic development, especially and mostly in the African continent. As a result, models and policies from these studies have been skewed in favour of big firms in the industrialised or newly industrialised firms (Edwards et al., 2005; Hobday, 2005). It is regrettable that small firms in the LIDC are not represented in the literature. When the word 'innovation' is mentioned, what readily comes to mind is an object, for example the iPad and the names of companies like Apple and Samsung. There is no doubt that the iPad is an innovation but one that demands high technological achievements which in itself is a product of high standard of education and the deployment of cutting edge research. In developing countries, with grim educational situations, nothing like this happens. So, when one talks of innovation in LIDC, what does it really mean? Or do we contend that innovation does not take place in small firms in developing countries because they are not technologically advanced? If they do, what does it look like?

Taking cognisance of this situation, this study addresses this neglected and ignored context. Thus, the study focuses on micro and small firms in Nigeria and explores the barriers facing these small businesses in the process of innovation within this context.

1.2 Motivation for research

The main motive for this research and for choosing this topic is driven by a strong personal interest in innovation as a means to bring about economic improvement to the poorest/underdeveloped part of the world. It is further inspired by eagerness and burning desire to contribute something meaningful to the toiling small business entrepreneurs struggling to survive in a volatile ecosystem in which they find themselves. Hence, the choice of the topic with the aims to unravel the potentials of Nigerian MSE. Thus, the overarching

desire is to unravel how these small firms could be made to be sustainable. By studying how these micro and small firms innovate, it will put focus on them to improve their innovation capabilities and thereby contributing to producing required goods to the bottom of the pyramid at affordable prices while generating employment for the vast majority of army of unemployed youths roaming about in the society, and ultimately contributing to local economic development.

Secondly, having been given the opportunity to live in both developed and developing countries, one is intrigued by wide difference in living condition in both worlds. In the former, there is wide range of products to meet the needs of people. Almost whatever one dreams of can be produced. In contrast, this is not the case in the latter, where there are limited products and the quality of these products are not so good. Having experienced living in both worlds, one is interested in exploring what innovation looks like in small firms in this context. What further fuelled this urge is incongruence in what one reads in the mainstream innovation literature, which is in a sharp contrast to the reality of lived experience of the context of a developing country where one comes from. This further fuelled led to inquisitiveness to unravel the nature of innovation in micro and small firms in this context.

1.3 Definition of innovation

There are a variety of definitions of innovation. What accounts for this diversity could be a consequence of the fact that the concept is studied within different scholastic communities (Adams, et al, 2006; Damanpour and Scheneider, 2006; Garcia and Calantone, 2002). Therefore, there is no unified definition of innovation (Cooper, 1998; Zairi, 1994,). This infers that it could be defined to suite each of these various disciplines constituting a melting point engaged in innovation studies.

The often quoted definition of innovation is given by Damanpour (1996, 694) who defined it as

Innovation is conceived as a means of changing an organization, either as a response to changes in the external environment or as a pre-emptive action to influence the environment.

Hence, innovation is here broadly defined to encompass a range of types, including new product or service, new process technology, new organization structure or administrative systems, or new plans or program pertaining to organization members.

Innovation is broadly defined here to encompass action and activities by which firms seek to influence the business ecosystem in which they are embedded either by coming out with a product that is new to the environment or by incremental changes to the product in response to feedback from the consumers.

To Baregheh et al (2009), firms operate in a competitive environment that is constantly changing. Thus, any activities embarked upon to keep firms competitive in the marketplace are considered to be an innovation. In a similar vein, McAdam et al (2004) defined innovation as harnessing resources available to firms to cope with constant changes in the business environment. This idea is further supported by some scholars who simply see innovation as idea generation, development and successful implementation (Freel and de Jong, 2009; Smith et al., 2008; Goffin and Mitchell, 2005).

Taking a historical perspective at technological changes overtime, Dossi (1988) inferred that industrial innovation essentially entails employing technological invention to solve human problems. While Hulsheger,et al (2009) see innovation as constituting two processes of idea generation and implementation.

Goswami and Mathew (2005) looked at innovation from several angles which include, inventing a new object, idea generation, improvement on existing item, spreading new ideas, adoption of something new even though it has only been tried elsewhere, doing something in a new way, making a change, attracting innovative personnel into the organization and examining things from new perspectives.

Implicit in the definitions above is the dichotomy between technological and organizational innovations. The former emphasises application of state of the art technology that results in a new product or process of production. The latter is concerned with new administrative or marketing techniques as well as improved internal and external relations (Aubert, 2005). The former is associated with science-based high tech firms, while the latter with low-tech market-niche firms (Tang and Le, 2007).

However, a scholar examined the concept of innovation from a different perspective, especially taking African context into consideration. Atuahene-Gima (2012) defined innovation as something new or beneficial to the organization or customer. Innovation in African context should focus less on technology given the low level of technological development. As he argues (2012,67), ‘’given the relative technological weaknesses of many

companies in Africa compared with their foreign counterparts, the most viable avenues for innovation in Africa may be in the area of management innovations more so than technological innovations''. However, as firms in the developing countries have demonstrated, technical innovation do take place in firms in developing countries. What obscure this innovation is the lens with which innovation is searched or observed in developing countries (Cozzen and Sutz, 2012, 2014; Sirnivas and Sutz, 2008)

This study examines the concept of innovation from micro or firm level. A common definition at firm level is "the adoption of an idea or behaviour, new to the adopting organisation" (Damanpour, 1996:694). Two things are worthy of note from this definition. One, what is considered to be innovation may not necessarily be an object like iPad for instance as it can be deduced from the definition, an idea, an intangible thing could also be. Two, is relativity with respect to newness of the item or product. For instance, an anecdote by Atuahene-Gima (2012) where he argues, that people in China embraced driving instead of the bicycle which was until then the main means of transportation in the 80s can be regarded as innovation.

There is no acceptable single definition of innovation. Empirical measuring and understanding of innovation depends on definition adopted. For instance, Oslo Manual is adopted to guide conduct of empirical survey in the European Union states. Whereas in Latin America, ''Bogota Manual'', which is substantially different from Oslo Manual, is adopted and adapted to the environment. As the originator of Bogota Manual argued, context is critical in how innovation is defined, conceptualised and measured (Sirnivas and Sutz, 2014; Cozzen and Sutz, 2012, 2014)

Furthermore, innovation is also regarded as muti-faceted. It could be conceived as an economic process, just as a solution to a problem without any relevance to economic performance. It could be within or without market relations. Similarly, it could be investigated with respect to impact and results just as it could be studied as a social process (Sirnivas and Sutz, 2014).

Innovation can be defined as the production of new product or service or management of change in an organisation (Damanpour & Aravind, 2011). It is the application of new ideas to create product, process or other organisational activities leading to value addition, or benefit to customer or firm (Greenhalgh and Rogers, 2010).

The definition of innovation is so contentious that "innovation is a widely used concept and the term is variously defined to reflect the particular requirement and characteristic of a specific study" (Damanpour and Evan, 1984). As Goswami and Mathew (2005) opined, it ranges from very specific on technical innovation to broad generalisation which becomes imprecise to measure. Therefore, the definition adopted in this thesis is: "An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption" ((Rogers 2003 :12).

Roger (1998) argues that it is difficult if not impossibility to define innovation which fits all firms.i.e no one cap fits all definitions. Implicit in the statement is that definition has to take into consideration different contexts, - environment, size, location etc

1.4 Aim of the study

This study is exploratory in nature and it highlights the dearth of empirical study on innovation in LIDC. It evidences empirical and lived experience of innovation in micro and small firms in manufacturing of household products. The ultimate aim is for the result of this study to inform policy decision to improve the innovation capabilities of MSE in Nigeria.

1.5 Objectives of the study

In order to achieve the aim stated above, and based on the gap in knowledge identified through the review of relevant literature, the following are the objectives of this study:

To empirically investigate how micro and small firms in Nigeria innovate.

To investigate the barrier to innovation in this context.

1.6 Research Questions

The aim of the research is to empirically investigate how Nigerian MSE innovates with a view to informing policy so that MSE can contribute to local economic development. To this effect, two research questions will guide the study: Therefore, the specific research questions that will guide this study are:

How do micro and small firms in Nigeria innovate?

What are the barriers to innovation within this context?

Chapter 2: Literature Review

2.1 Introduction

This chapter discusses the mapping of the field of innovation studies; it then traces the origin of the field and development over time raising some emerging issues especially establishment of clusters for innovation and new technology development. Finally, it discusses innovation and development, the most relevant issue which links innovation with development especially in the developing countries.

2.2 Mapping the field of innovation studies

Innovation in recent times has gained immense popularity among different stakeholders: firms who want to be innovative to be competitive and deliver new products and services, politicians who want to design policy that foster innovation and thus add to their credibility, international organisations who want to mobilise for continental superiority. Thus, there is proliferation of different aspects of innovation just as there are various research institutions devoted to innovation study (Fagerberg, and Verspagen, 2009).

The field of innovation studies is given different names by different authors. Furthermore, the label has changed over time. For instance, at the outset it was called science or research policy, later on policy was dropped due to the narrow connotation it gives, and because some researchers in the field investigate to some aspects other than policy such as management of research and development (R&D), technology or innovation. As time passes by and to accommodate other areas gaining increasing attention the name changed to science, technology and innovation (STI). To do away with clumsiness of STI, it is now simply called innovation, however still encompassing science and technology (Martin, 2012).

As an emerging field, it is difficult to coalesce on a common definition. Basically however, the field broadly focuses on innovation, R&D, technology and science and this is carried out from varied disciplinary backgrounds chiefly economics, policy studies, economic history, organisational and management science and sociology. Fagerberg, Fosaas, and Sapprasert

(2012, 1132) defined the field of innovation studies as ‘’ the scholarly study of how innovation takes place and what the important explanatory factors and economic and social consequences are’’.

Innovation research has extended to the domain of clusters development, because clusters in developed context have been instrumental to product and process innovation. According to Mytelka and Farinelli (2000), clusters development have taken the leap in nurturing and development of innovation. The growing interest in clusters development is premised on their potential in accelerating business competitiveness through spatial agglomerations of high-tech enterprises and related supplier and service industries as the small and medium-sized enterprises (SMEs) operating in most clusters have to engage in a continuous process of innovation. Clusters have contributed immensely to creating knowledge-intensity of production which covers a broad spectrum of traditional industries from the shrimp and salmon fisheries in the Philippines, Norway and Chile, the forestry and flower enterprises in Kenya and Colombia, to the furniture, textile and clothing firms in Denmark, Italy, Taiwan and Thailand. Furthermore, clusters have triggered the emergence of innovation-based competition across the globe, thereby removing the traditional barriers to trade and investment in the global economy. Is a cluster really a driver of innovative performance? Giuliani and Bell (2005) examined this proposition by investigating the influence of individual firms’ absorptive capacities on the functioning of the intra-cluster knowledge system and its interconnection with extra-cluster knowledge. It was found that innovative knowledge is not evenly shared or diffused among all the firms in the clusters, rather innovative knowledge flows within a core group of firms with advanced absorptive capacities. In other words, some advantaged firms are technological gatekeepers, while others are isolated firms within the clusters investigated.

2.3 Clusters and Innovation Development

Innovations across the globe have been largely simulated by industrial clusters. From the perspective of Boja (2011), cluster is described as a geographical area with competitive advantage where firms simultaneously mutually collaborate and compete to gain economic advantages which are not readily available in other regions. It is a geographical concentration of interrelated small and large firms in the same value chain, which together collaborate to promote technological development, wealth creation, regional competiveness and export of goods and services for long-term relationships (Raimi et al., 2016). A number of clusters in

different parts of the world played leading role in technological progress, new innovations and economic prosperity of industrial locations such as Silicon Valley in California, US, Route 128 in Boston, US, Bangalore in India and Hsinchu Science Park in Taiwan (Cai, Todo, and Zhou, 2007; Raimi et al. 2016). Establishment of clusters by the public and private sectors have functionally fast-tracked the novel technological progress of America, Europe and emerging economies like Brazil, Russia, India and China (Raimi et al., 2016). To boost the capabilities of the Nigerian SMEs with regards to innovations and new technologies development, the Federal Government approved the establishment of 9,555 industrial clusters across the country on the basis of comparative advantage and natural resource endowment in the identified industrial districts. These would be managed in collaboration with the state and local governments, non-governmental organisations (NGOs), local development partners, financial institution and multinational companies (Amaefule, 2012).

The inherent benefits of clusters development include among others reduced operational costs, emergence of new firms otherwise called spin-offs, emergence of new innovations, affordable technologies, increased specialisation/division of labour among participating firms and enhanced collaboration in the clusters, joint usage of infrastructure and knowledge-sharing for greater competitiveness in the market domain (Porter 1998; Ellison and Glaeser, 1999). More succinctly, when firms operate in clusters, it is believed that such clustering would offer unique learning and innovation opportunities to all operating firms to engage in the wide array of domestic linkages between users and producers, the knowledge producing sector (universities and R&D institutes) and the goods and services producing sectors of an economy (Mytelka and Farinelli, 2000). Clustering of firms for collaborative knowledge adoption and innovation could take the forms of vertical and horizontal collaborations. The vertical collaboration for innovation is a form of relationships, among different users and producers to embrace innovation for the benefit of cost reduction, risk pooling and information and communication sharing. Horizontal collaboration innovation on the other hand takes place among firms in the same sector for the benefit of yield 'collective efficiencies' (Mytelka and Farinelli, 2000).

Clusters could be informally or formally organized. The informal clusters are the commonest forms in developing countries because informal clustering attracts small firms with low level technological capabilities and weak management capabilities. The degree of innovations and new technologies in informal clusters are low compared to the formal or organised clusters. Workers in informal clusters are low skilled, lacking continuous learning required for skills

upgrading. Consequently, investment in new process technology, state-of-the-art machinery and equipment, product quality, product diversification and development of exports markets are not well harnessed. On the other hand, the formal clusters are established by firms and other players as a process of collective activity, driven by joint provision of infrastructure and support services to help solve common problems. Unlike the informal cluster, this collaboration makes them more innovative and efficient. The organised ones have over time improved their industrial training and apprenticeship and have better technological capability and the degree of cooperation and collaborative networking is higher (Mytelka and Farinelli, 2000).

There are seven cluster typologies across the globe, namely: (a) Sectoral clusters, (b) High-tech Clusters, (c) Historic Know-how-based clusters, (d) Factor endowment clusters, (e) Horizontal clusters, (f) Vertical clusters (g) Low-cost manufacturing clusters and (h) Knowledge services clusters. Of these seven types, the High-tech and Knowledge services clusters are beehives of innovations, as they are supported by research institutions and specialised universities, while knowledge services clusters are established as collaborative linkages with institutions that provide low-cost engineers, unhindered access to other cheap experts/professionals, and low-cost consultancy fees from knowledge-based institutions. Few examples of the high-tech clusters are Silicon Valley, the East London Tech City or Paris-Saclay and several other locations in Germany and France (Raimi et al., 2016).

2.3 Developments in the field

Adequate discussion of innovation cannot be made without the mention of Schumpeter (1934) for he is regarded as the father of innovation. He had the rare insights which recognise innovation, entrepreneurial activities and R&D as crucial to economic development (Fagerberg et al, 2012).

In his magnum opus, “The theory of economic development”, published in English in 1934, he referred to innovation as a ‘source of energy’ and manner in which new product and services displayed existing one as ‘creative destruction’. He detailed in the book how innovative individuals whom he called ‘entrepreneurs’ and their interaction with the environment bring about long run social and economic change. His later life, witnessed the extension of this approach to large organisation employing R&D to remain competitive (Schumpeter, 1934,1942).

However, this great insight linking innovation to long run social and economic growth was overlooked by most economists at the time. It was only after his death economists began to revisit his ideas. The resurgence started first in the US during the era of cold war having realised that to maintain military supremacy depend on technological advancement. Subsequently, the subject area witnessed increased attention after the Second World War due to efforts to boost military prowess through R&D and innovation (Fagerberg et al, 2012).

Thus, this lead to the establishment, among other initiatives, of Research and Development (RAND) Corporation by the US military to promote technological advancement in the military in order to sustain US military prowess. However, this spilled over to non military setup. It is of not to state that scholars who later exacted dominant influence in innovation studies through their publications were associated with and conducted researcher in RAND. (Fagerberg et al, 2012; Fagerberg, and Verspagen,2009)

The spread of innovation study into Europe could not be without mention of Science Policy Research Unit (SPRU), University of Sussex, United Kingdom. The centre brought together multi disciplinary research staff, developing its own curriculum for Master's and PhD programmes, a model later copied by other European countries. Among many projects conducted in this centre, SAPPHO, which investigated factors responsible for success and failure innovation, stands out. Many initiatives coming from this centre which led to promotion of innovation studies include project (eg SAPPHO), publications (eg Research Policy and Industrial and Corporate Change) and professional associations (eg International Schumpeter Society (ISS) and the Danish Research Unit for Industrial Dynamics (DRUID) (Fagerberg, and Verspagen,2009; Martin, 2012).

2.4 Innovation studies: Disciplinary influence

The discipline with the most influence in the early formative years of innovation is economics, although by the middle of the century there were contribution from other disciplines such as sociology, management, and organisational studies. Thus, from the outset the field had shown multidisciplinary nature. Although the field started largely on a fragmented note with each discipline pursing its own course, this was to change in the 80s with the coming of a book by Nelson and Winter in 1982 expounding the theory of evolutionary economics. This signifies, on one hand the deep influence of economics, and on the other hand, a rallying point of other disciplines coalescing around the theory to forge a common ground (Fagerberg et al, 2012; Martin,2012).

Nelson and Winter (1982) in their seminar book, ‘’An Evolutionary Theory of Economic Development’’, posit that technological changes and innovation are crucial to economic growth and development. In this book the authors argued, technological changes and innovation are intertwined and both are crucial to economic development. The process of technological changes and innovation leads to competition in generating new product and services on the basis of which firms compete. What they call ‘routines’, pattern of action within the firm have considerable influence on production of new products and services while the market act as selection mechanism (Martin,2012).

Economic historian on their part focused on influence of technology and innovation on economic growth and development. A pioneer work in this regard is Rosenberg (1982) who examined the ‘black box’ of innovation by revealing how technology impact productivity, learning process of technological changes, transfer of technology and governmental policy effect of technology.

Another strand in the early development of innovation studies was from Sociologists whose focus was on spread of innovation in agriculture sector. The work of sociologist in the field on innovation centred on diffusion of innovation. An influential scholar who has written extensively in this area is Rogers (1962 and 2003).

Management field in its contribution examined the management of innovation. Kline and Rosenberg (1986)’s work is considered influential in this regard. They argue for moving beyond linear model of innovation, which sees innovation resulting from R&D in linear model innovation was erroneously thought to have emanated from applied science. This belief held that there exists a sequence, which is well defined through which innovation occurs. The main criticism of linear model is that it generalises innovation stages that hold for only few innovations by assuming that innovation results solely from scientific breakthrough. Another criticism is the disregard of feedback loop occurring during the process of innovation. One of the implications of their findings is that innovation should not be limited to only radically new products but also small changes that take place over time because such have impact on long run technological and economic development. Another is the argument that other significant contributors to innovation other than R&D such as experimentation, exploration of new market, design and engineering should not be neglected. Another area focused by management researchers’ concerns product innovation and development. For

instance Henderson and Clark (1990), in departure from common classification of innovation as radical or incremental, introduced architectural innovation (Martin, 2012).

Early innovation studies focused on technological innovation with organisation innovation coming up later in the development of the field with entrance of organisational studies discipline. The scholars from organisational studies called attention to the impact of organisational factors on innovation and vice versa. From organisational studies came resource-based view of firms, in contrast to transaction cost theory, which was in vogue then. This posits that innovation gives firms competitive advantage (Grant, 1991, 1996). Other contributors include Cohen and Levinthal's (1990) seminal paper about concept of absorptive capacity and Leonard-Barton (1992) core capability and core rigidity. Important concepts evolving from organisation studies include organisational learning (Argyris and Schön, 1978), intelligent enterprise (Quinn, 1992), relationship between organisational learning and 'communities of practice' (Brown and Duguid, 1991). Recently, focus is on knowledge management with studies linking ability to develop and manage knowledge effectively with innovation (Drucker, 1993; Nonaka, 1994).

2.5 Innovation studies: Analytical frameworks and level of analysis

Different frames of analysis emerged in innovation studies some of which include: National Innovation System (NIS) which became influential both within and outside academic cycles as seen in its wide embrace by international organisations such as OECD. Another is Porter (1990) in his book, "The Competitive Advantage of Nations", that focuses on how factors in the domestic environment interact to bring about innovation and development. Notable is also Pavitt (1984) who in his empirical study identified innovation activities taking place in different sectors and industries. Another framework is the architectural innovation concept by Henderson and Clark (1990).

Tracing the history of the field of innovation studies Fagerberg et al, (2012) classified the development into three eras. The first era, corresponding to the period between 1950 -1969, classified as early stage which is marked by focus on resource allocation to R&D for development. The second era which correspond to the period 1970 – 1989 known as growth stage witnessed collaboration between scholars from the US and Europe. This period also coincided with the publication of two influential texts, one by Freeman and the other by Nelson and Winter. The third era, 1990 – 2008, matured stage was marked by shift in focus from micro to macro level with more attention paid to the entire economy, influence of

institutional environments on innovation and policy to foster innovation and its diffusion (Fagerberg et al, 2012).

The third era also witnessed the emergence of system of innovation and its variants, regional, sectoral and technological, which underscore the importance of various economic agents intermingling in the process of innovation and economic development. Innovation system or national system of innovation (NIS) examines the interactions among all these agents with a view to fostering innovation within national boundary. Coming at the heels of NIS is the concept of 'Triple Helix' developed by Etzkowitz and Leydesdorff [2000]. The authors contend that symbiotic relation among university, business and government becomes important as economy become knowledge economy. Due to dynamic technological changes, firms now emphasise learning through networks and collaboration culminating in Chesbrough's (2003) open innovation and von Hippel's (2005) democratized innovation (Fagerberg et al, (2012; Martin, 2012).

There are two main streams in innovation studies: one focuses on micro and the other on macro level. Micro level examines innovation at firm's level and scholars in the field of business and management often take this path. Macro level looks at the general influence of technology and innovation of social and economic change with scholars mainly from economics in favour of pursing this endeavour. However, it is noteworthy that for the two streams the scholars are based essentially in advanced countries.

2.6 Innovation in developing countries

Literature regarding innovation is dominated by a Western perspective where the concept and its academic discussions originated. Because of this dominance innovation is often conceptualized as emanating from certain inputs (e.g R&D) and assuming the availability of certain resources (e.g skilled personnel and financial resources) - thereby implying a universal trajectory of innovation (Chipika and Wilson, 2006; Robson et al, 2009; Srinivas and Sutz, 2008).

However, innovation that take place in developing countries is of different kind; it is gradual and incremental (Jensen, et al, 2007; Lastres, 2003). Using theoretical lens developed from the West to examine this concept in the South inevitably makes this innovation ''invisible'' (Srinivas and Sutz, 2008). As Sull and Ruelas-Gossi argued in the Financial Times of 24 September 2004 "It is often assumed that innovation requires abundant resources, but as

companies from developing countries have shown, creativity and a commitment to solving customer problems can be just as powerful a force."

Innovation in developing countries, even though not high-tech, need to be studied extensively as it was done in the case of mainstream innovation in the West (Srinivas and Sutz, 2008). Understanding innovation as context dependent helps developing countries evaluate its peculiar characteristics (i.e cultural, socio-economic and developmental trajectories) to design specific strategy and mode of development (Arocena and Sutz, 2003) because there is a widely held assumption that innovation contributes to economic development (Lundvall et al, 2011). The new evolutionary growth theory advances that technology, firm and industry structure as well as supporting government institutions are the most crucial factors for development, either in the advanced or developing countries (Nelson, 2011).

Innovation is context-dependent. It is the process by which firms gain mastery over conception and production of goods and services that is new even if it is only to the firm. Thus, in the developing countries environment, which are regarded as ''technology follower'', innovation is essentially continuous improvement and incremental upgrading of facilities. It entails adding value which meets the need of the local environment. Innovation is the means by which SMEs survive in the complex and competitive business environment in the developing countries (Chipika and Wilson, 2006)

Aubert (2005) argued that innovation should be viewed as something new to developing countries' context. He identified, in relation to global context, three forms of innovations. The first, he termed 'technological adoption'. This entails local improvement of adopted technology. The second is 'technology adaptation', the adapting of existing technology to local situation. While the third he labelled 'technology creation'. This entails creation and manufacturing of technology recognised internationally.

While the often used indices of innovation in advanced economy is R&D, patent (even though patent is not useful until commercialized) indicating their technological advanced nature, in the less developed economy, innovation essentially entails the extent to which firms provide solution to critical organizational and/or customer problem (Atuahene-Gima, 2012). Thus, rather than chase high technological attainment, the preserve of advanced nation, firms in the developing economy, considering their level of development, should focus on functionality or solution to local problems by conceptualizing and producing goods and services which meet customers' need. Technology is not an end in itself, but a means to

an end, which ultimately is the satisfaction of customer. He asserted that creativity, which is generation of new ideas, is only meaningful if and only if it results in product and services. He further argued that product innovation needs to be complemented with appropriate marketing, branding, and distribution innovations for it to make meaningful contribution to the organizational success. More importantly, creating an organizational culture which promotes new values across the entire phases of the organization citing apple, Samsung and such other firms known for their innovativeness as examples.

As it has been argued by scholars (Atuahene-Gima, 2012; Aubert, 2005; Chipika and Wilson, 2006), examining innovation from developing countries context requires different lens from advanced countries due to their low technological level of development. As such, innovation should be discussed taking into consideration resources, capabilities and level of technological development. Innovation climate in developing countries is hampered by low educational level, poor business climate and lack of infrastructural facilities.

It is generally agreed that the study of this concept differs with respect to different contexts (Hadjimanolis, 2000). Robson et al, (2009) also argued that the relevance of innovation to developing countries is not properly accounted for using models and theories from advanced countries. Mahemba and De Bruijn (2003) identified two types of innovation processes. The first is innovation generation, which requires technological prowess, heavy R&D expenditure and skilled workforce. This is the type of innovation that occurs in the advanced and industrialized countries. The second is innovation adoption which is essentially catching up with advanced nations through reverse engineering and adoption of technology to local context. This is the type that occurrs in developing countries. The catch-up strategy propelled the newly industrialized countries of the Far East, often referred to as 'Asian Tigers' (i.e. Singapore, Taiwan, Malaysia, Indonesia and South Korea), into their present state, prompting Adeboye (1997) to suggest that SSA should take the path of the so-called Asian Tigers in their quest for technological advancement.

However, not all nations follow the same path to industrialization and technological advancement (Srinivas and Sutz, 2008). Although, some scholars have argued that imitation or catch-up may not bring the latter at par with the former (Silveira, 2001). It must be noted however that mechanical accumulation of technology without factoring in the idiosyncratic features of each State may be counterproductive (Srinivas and Sutz, 2008).

Adeboye (1997) identified three models of innovation. First, the US model which is characterised by heavy investment on R&D focusing on invention and commercialization of high-tech products the by-product of which is the major contribution to knowledge and technological innovations. Proxies for measuring innovation in this model are R&D investment and patents. The main sources of innovations are universities, research centres and laboratories.

The second is the European model which derived its unique features from technical, scientific and vocational training, exemplified by German educational system. In addition, development of tacit and broad skills from further training and hands-on experience. Unlike in the US model, innovation is not R&D-driven; some of the firms do not have in-house R&Ds. Rather, innovations emerged from cluster of technical entrepreneurs in conjunction with a well trained workforce that has passed through apprenticeship. In this model, innovation is targeted at changing customer needs. Social trust which results from shared value enables easy transfer of technology from one firm to another even across borders.

The third is the development-driven model which is characterised by burning desire and determination to develop technologically, exemplified by the so-called Asian Tigers. The driving force of this model include active State participation which entails long term orientation and focus as well as investment in development of education, encouragement of FDI (Foreign Direct Investment), R&D targeted at mastery and imitation with a view to developing own technology. It is this strategy that propelled these countries into their present state (Adeboye, 1997).

The author opined that neither the US nor the European models of innovation is recommended for developing countries, especially, those from SSA due to their peculiar circumstance. These are countries designated as the poorest in the world confronted with such challenges as poor education facilities and enrolment, lack of infrastructural facilities, lack of cooperation between firms and research institutions, lack of R&D investment and absence of designed National Innovation System (NIS)(Adeboye, 1997; Hadjimanolis, 2000).

The author therefore recommended the third model of innovation for developing countries, especially those of SSA in dire need of development. Development-driven innovation model entails encouraging, promoting, supporting and harnessing technological innovation for developmental goal. The model emphasises technological acquisition through transfer from the advanced and industrialized nations, adapting the technology to suite developing

countries context and embarking on incremental improvement over time such that it becomes innovation in a new context. It is geared towards understanding, mastery and reinventing to suit the particular context.

Shrivastava, (1984, 23) contends that ‘’technological innovation in the context of developing countries needs to be examined from the perspective of both overall socio-economic development and individual firm performance in global market’‘. Underlining the sharp contrast between firms in developed and developing countries, he argued using India as a case study, that these firms are providing basic needs to the poverty ridden populace and are quite popular. They are neither aspiring to be market leader nor are they taken in by cutting edge and high tech slogan of the advanced nations. These firms provide consumable household products– pomade, toothpaste, cosmetics, and soap. Technological innovation required in this arena is to make incremental improvement on the product, reflecting needs and desire of consumer, and thereby make sufficient profit to keep the business going.

The author distinguished between traditional and modern sector in terms of technological innovation in the developing countries, each requiring different capability. The traditional sector consists of firms with unskilled labour force using low level technology to produce agricultural and household products. The strategy for such firms is, as he suggests, to ‘’indigenize’’ technology for local adaptation. The modern sector can embark on transformative innovation which entails employing better technology over crude one being presently employed in the production of household products. For example, the design and manufacturing of machine for edible oil as against the traditional method of using animal (bullock), timber and stone.

Innovation climate in developing countries is clearly different from that of advanced countries. Thus, the standard developed in advanced countries should not be used to measure or look for innovation in developing countries. For instance, in advanced countries, innovation is measured by such items as patent or R&D. However, considering the educational situation, it is clearly infeasible to use this measure to gauge innovation. Educational levels are very low in developing countries and that accounts for the reason why the level of industrialization is equally low for there exists direct correlation between educational attainment and industrialization. Pre-industrial era is dominated by low demand for literacy, industrial era is marked by skill requirement which entails considerable

education. The new era or knowledge economy requires high literacy from large section of the population. Education enables flexibility of work force. (Aubert, 2005)

Another factor which relates to innovation and thus marks out developing countries from advanced ones is governance. This has bearing on quality of business environment. For instance, in developing countries, entrepreneurs are coerced into paying various fees before they are established and they face constant harassments from law enforcement agents. Infrastructural facilities constitute another factor which distinguishes business environment of developing countries. Telephone penetration is poor, internet accessibility is even poorer. Poor road network, poor water availability and poor sanitary system are features of developing countries. The barriers to innovation facing SMEs in Cyprus was investigated and found that barriers to innovation in the developing context were not different from those facing SMEs in industrialized countries. The major barriers are supply of finance, access to skilled labour, peculiar environment constraints and ineffective role of Government policies (Hadjimanolis, 1999). Another study by Hadjimanolis (2000) investigated the factor affecting small firms in Cyprus, a small developing country. Using questionnaire instrument administered to 140 manufacturing small and medium sized firms, the study found the major factors affecting SMEs innovation as strategy, expenditure on R&D, co-operation with external technology providers, use of technological information sources and overall performance of the firm, while environmental variables such intensity of competition were not barriers to innovation.

Finance is critical to innovation and new technology adoption as unveiled in the study above. The long-standing theory that the growth of small firms is significantly constrained by the quantity of internal finance was empirically examined by Carpenter and Petersen (2002). Using a panel of over 1, 600 small firms, it was confirmed on the basis of the responses from the firms surveyed that the growth of firms is constrained by internal finance.Besides, the constraint of lack of technical support as reflected in poor metrology, quality control and standard is another factor which marks out developing countries (Aubert, 2005).

Srinivas and Sutz (2008, 129) aptly described the misconception in research on innovation in developing countries when they contend that ‘‘technological innovation is a contextual process whose relevance should be assessed depending on the socio-economic condition it is embedded in. Without this, technology-led economic policies (of catch-up varieties) are

unlikely to meet the needs of most people, especially in countries where innovation and poverty reside side by side''.

The study of innovation which started on a historical note (i.e looking at how innovations take place), has now assumed economic dimensions (i.e it is now being studied to fast-track development/ it is now development-driven). Thus, mechanical accumulation of technology without studying the trajectories or developmental stage of each State may be counterproductive (Srinivas and Sutz, 2008).

Theories and models developed with respect to the concept of innovation are derived from the study of large firms in advanced countries (Robson et al, 2009). These theories and models are laden with some assumptions which make their application to another context (developing countries) impracticable in view of their developmental level. Some of the assumptions implicit in the theories include:

Universal concept of technological innovation without taking note of developing nations;

Link innovation with input resource of a particular kind – e.g R&D and patent;

Measure output of innovation of the basis of novelty/radicalness to the world;

Availability of finance – e.g venture capital;

Availability of highly skilled personnel; and

Availability of eager customers able and willing to try out novel products.

Innovation is a desirable activity, but access to innovation is constrained by the wave of globalisation in developing countries. Ernst (2002) theoretically investigated the disruptive changes that globalization imposes on innovation systems in developing countries on the strength of three propositions. In the final analysis, it was established that the developing countries must blend diverse international and domestic sources of knowledge to redress the present weakness in adopting innovation systems for production. Secondly, the developing countries must leverage a greater variety of international knowledge linkage through globalization to reduce the poor level of innovation. Thirdly, it was established that globalization embeds organizational innovation in the forms of spread of global production networks, systemic integration, and creation of new opportunities for international knowledge diffusion.

What is overlooked, however, is that each nation has its idiosyncratic way of innovating. Discounting the huge gap between learning and trajectories of development between advanced and developing countries, common error is committed when concept is taken wholesale from advanced nation and implanted in a study in developing countries without reckoning with the contextual difference. This is what the scholars referred to as ‘’over correctness in language of innovation research’’ (Srinivas and Sutz, 2008, 131).

In Thailand, using a case study, Intarakumnerd, Chairatana and Tangchitpiboon, (2002) examined the national innovation system (NIS) in Thailand with a view to understanding why the country is less successful in technological catching-up relative to developed countries. It found out that Thailand was less success in innovation because the development level of Thailand with regards to innovation (product and process) has no link to its economic structural development level as the country transited from agrarian to an industrial economy. In other words, the country is conservative with regards to innovation and new technology adoption.

This is what this researcher found out in its study of dynamic capabilities in SMEs in Nigeria. The concept of dynamic capabilities according to the literature is focused on renewal and reconfiguration of what in strategic management is called (VRIN) assets to cope with changing environment (Eisenhardt and Martin, 2000; Teece et al, 1997). VRIN stands for valuable, rare, inimitable and non-substitutable assets. Firms in advanced countries aim at gaining global competitive advantage by constantly renewing and reconfiguring the three capital assets: technological capital, knowledge-base and tangible assets. However, interview with small scale entrepreneurs in Nigeria revealed that dynamic capabilities exercised in SMEs are somewhat different from what is discussed in the literature.

This is not surprising considering the context of developing countries that lack basic infrastructure which are taken for granted in advanced countries, especially power generation such that each firm has to generate its own power to run its operations. In addition there is lack of support by government for SMEs in developing countries. Bureaucracy and endemic corruption cripple public sector thus stunting the growth of SMEs. (Fadahunsi and Rosa, 2002). The entrepreneurs running these firms generally have low educational background and low technical skills. For instance, unlike in the advanced nations that possess VRIN assets, what the entrepreneurs interviewed in the study considered to be their most valuable asset is people that work for them. This refers to labour input in the production of basic

household product which they produce. In addition, these small firms neither conduct formal market research nor have any enduring relationship with research institutions.

The firms survive in the harsh business environment by plotting various marketing strategies to get their products accepted in the market. They are low-tech firms employing simple technology in production and targeting people at the lowest rung of economic ladder. Faced with competition from big players (MNC) and cheap imported products from South East Asia, they came out with small units priced cheaply so that the segment of the market they focused on (low end) will be able to afford their products. Their dynamic capabilities therefore reflected their context and it is manifested in identifying a niche in the market, producing quality goods (which meet the standard of the socio-economic environment) and using marketing strategies, jamboree-like road shows that move from corner to corner of the streets with a view to persuading their customers to remain loyal (Akosile, 2010).

A cursory look at innovation will reveal that there are two parts to innovating; problem definition and solution. Problem definition is contextualized just as the solution part. The defining is driven by demand and constraint of a particular context, just as, the solution to the problems.

For example, Nikola Tesla dreamt of wireless electric, it was realised by Marin Soljacic, an Associate Professor at Physics Department, Massachusetts Institute of Technology (MIT). What prompted this discovery was persistent disturbance by mobile phone low on battery which emits loud regular beep (Higginbotham, 2012).

Using cutting edge facilities available at MIT, he was able to invent a device that can charge mobile phone even though the invention is yet to be mass-produced because it is still going through fine-tuning. But the potentials are huge when it eventually becomes available commercially. As one of the promoters enthused ‘’Anything with a cord on it, anything that uses a disposable or rechargeable battery – all of those are candidates for wireless’’ (Higginbotham, 2012, 134).

The point being made here is that, using the facilities at his disposal, he was able to come up with a solution to a nagging problem. It is doubtful if any individual from a developing country, no matter his ingenuity but without such facilities, will able to achieve a similar feat. In a similar vein, though in a different context, a simple device ‘’ghani’’ made of local timber, mortal and stone which is used to simultaneously disintegrate, cook and extract oil in

Indian local communities was invented. This simple tool is also an innovation over traditional method of processing oil which succeeded in increasing production of edible oil in India (Shrivastava, 1984). They both achieve the same objective: solution to problem on hand. They both innovate but in different ways. While one does using a state-of-the-art technology to bring about a novelty, the other adapts existing device to a given context.

Thus, in its simplistic form, innovation is what results from deploying resources to solve a problem (Srinivas and Sutz, 2008). What drives innovation is necessity, as the saying goes; necessity is the mother of invention (read innovation). In developing countries as well, they are faced with problems, which require invention (innovation) that they devised solutions to ingenuously. However, the tool with which they solve their problems, owing to their level of technological advancement and which are not of high-tech in nature, differ radically.

Innovation for a long time has been a source of transformation of nations. It is acknowledged to be important to growth and development. Research indicates that innovation in advanced economies accounts for substantial increase in growth and productivity while at firms level those that are innovative are found to perform better. For big multinational firms, it enables them to keep up with competition. It also enables firms provide solutions to economic and social challenges facing the world. But little is known about effect of innovation on broad economy growth in developing countries. Countries in the Asian continent have, however, demonstrated through incremental innovation growth and economic development (WIPO, 2011).

Nevertheless, innovation has been evolving from its early conception over the last few years. One of the changes is reflected in the humongous investment of firms in intangible assets, which will give them an edge in innovative activities. Another is the increasing collaboration between firms in producing new products and services, a term referred to as open innovation. Additional factors responsible for these changes include much more synergy between research institutions and industry that aim at translating research into product and availability of platforms and intermediaries for exchange of ideas and collaboration for producing new products (WIPO, 2011).

Science and technology have played a prominent role in defining innovation from the time in the past because they have been used as vehicles for accelerating development. However, the ecosystem of innovation differs in developing countries because it suffers from challenges of capital and infrastructural factors that are taken for granted in the developed economy. This

observation necessitates that concepts and theories developed from advanced countries should not be imported verbatim into the study of innovation in this context (William and Woodson, 2012). The benefits of innovation on economic development is colossal that notwithstanding. This presumption was investigated using cross-sectional data on the 37 countries compiled by GEM 2002. Impact of innovation on four types of entrepreneurial activities as measured by GEM Total Entrepreneurial Activity (TEA) rates was examined (high growth potential TEA, necessity TEA, opportunity TEA and overall TEA). It was found that only high growth potential entrepreneurship has a significant impact on economic growth, an indication that fast growing innovative firms accounted for majority of the new job creation stimulated by the SMEs in developed countries (Wong, Ho & Autio, 2005).

The renewed attention on innovation in developing countries is due to the fact that technological activities are regarded as important to bringing about industrialisation and economic development in the developing world. Efforts are geared towards imitating the 'first world' considered to have technology trailblazer, capital equipment and production techniques that enable production of new goods and processes. Furthermore, in developing countries local innovations, which bring about economic and social benefits as a result of incremental innovation in the developing countries' context is now considered as important as the cutting edge state of the art innovation in the advanced economies (Bogliacino et al, 2009).

However, there has been changing understanding of what innovation is over the last decade. Initially, the focus was on R&D and science and technology (ST) producing state of the art radical products. This is characterised by in house R&D with collaboration with research institutes with highly skilled manpower. This conception of innovation sees technological breakthrough as the frontier of advanced economy while developing countries were regarded as passively adopting imported technology. In recent times, emphasis has shifted to capacity to absorb and reconfigure new technology. In addition, non-technological innovation – organisational, marketing - has gained prominence in both advanced and developing countries. Furthermore, there is renewed interest on how incremental innovation enhances growth in developing countries. Thus, scholars have recognised over emphasis on frontier or original innovation and the need to pay attention to local innovations or innovation at grassroots (WIPO, 2011).

2.7 Measuring innovation in developing countries

The EU pioneered the measure of innovation by developing a survey called Oslo manual. Since the development of this standardised methodology, four surveys have been carried out; these have been embraced to become international standards. In Latin America a version amenable to developing countries was developed and called Bogota manual. This is an imitation due to the view that Oslo manual is considered skewed in favour of 'first world' and only appropriate for advanced countries. However, developing countries' context differs because it is characterised by no R&D, different and complex technological adaptation and weak interaction. Latin American scholars from their studies realised the lack of basic capabilities required for technological exploitations.

Other developing countries have been adopting the instrument developed in advanced counties. However, this instrument does not fit perfectly the reality of innovation in developing countries, more so at small firms' level. A large part of their innovation activities may not be captured using survey instrument developed from advanced economies and big firms (Chudnovsky et al. 2006; Hausman, 2005).

Debate over innovation measurement has not abated even in Europe where the survey originated let alone in developing countries where it is now being applied. Two major problems arise with respect to measurement in developing countries. The nature of the context, i.e. backwardness in education, creates a wide gap between these countries and advanced countries, with much emphasis put on local knowledge generation and capabilities rather than external knowledge exploitation. For instance, in Latin America, the manual focus was more on training activity technological acquisition and organisational innovation. Secondly, most surveys conducted in the developing countries took samples mostly from large firms resulting in non coverage of small and medium enterprises which incidentally represent large population of business efforts in the context under study. This has, therefore, lead to inability to truly understand the actual process of generating and diffusing knowledge outside big firms (Bogliacino et al, 2009).

From the study of the large number of developing countries cutting across Europe, Latin America, Asia and Africa, Bogliacino et al, (2009) concluded that innovation patterns in developing countries differs considerable from that of advanced countries. The process in the advanced countries focus on building high R&D capability and strong technological infrastructure for enhancing knowledge and competence to continue to remain in the frontier.

In the developing countries, the process entails technology and machinery acquisition and imitation of products and processes from foreign countries. However, International organisations - World Bank, UNIDO, UNDP- promoting development especially in the developing countries innocently adopt this measure and uncritically apply this perspective in the study of technology in development.

In addition, developing countries lack a coherent system which enables interlinkages among different elements, such as education sector, research, production system and financial sector, which bring about development. Not only is there lack, but also, the quality of these different elements are abysmally low. Furthermore, the study revealed that the main challenge of innovation in this context is finance. The non-availability of a robust financial system and its linkage with production system prepared to fund innovation activities was identified as the bane of innovation in developing countries. Although finance is often identified as a challenge in developed countries as well, but the dimension is different (Bogliacino et al, 2009).

Evidence shows that empirical study of innovation in developing countries have been based mainly on using of traditional indicators. It is noteworthy that these indicators are the ones developed in a different context (developed) which are radically different from the indicators in their own context (developing).

With regard to measuring innovation, another challenge scholars are confronted with is how to measure novelty or something new. Another dimension to the challenge is defining what is ‘’new’’. For instance, ‘new’ could refer to new to the world, country, market or the firm. Furthermore, for it to be considered ‘new’, will it have to be radical or incremental? All these are challenges facing measuring innovation across board (Smith, 2004).

2.8 Innovation and development

If innovation is important to development, it means it is as relevant to developing countries as much as it is to developed countries. As Metcalfe and Ramlogan, (2008) argued that no discussion of innovation in developing countries will be complete without linking it with development. There is a connection between innovation and development in developing countries especially after the fiasco of neoliberlism, which preached liberalisation, privatization and deregulation.

A view of innovation equates it with brand new, state of the art, sophisticated and scientifically minted product, made by highly skilled employees in R&D oriented firms and designed for the wellbeing of customers. This is innovation made in ‘’the first world’’. This is a narrow view of innovation (Fagerberg, Srholec, and Verspagen, 2010).

Another way of seeing innovation goes beyond made in the ‘first world’. This perspective, considered a broader view, sees innovation as economic endeavour leading to the production of new or improved products, processes or way of doing things. Should innovation be seen from this broader perspective, then it is relevant to all economies, developed or not (Kline and Rosenberg, 1986; Bell and Pavitt, 1993). What is often missed out in adopting a narrow view is that focus is only on technologically minted products as described above which leaves out salient but critically important other areas like marketing, distribution and logistics. This explains the overlook of innovation in the so-called low-tech industries, the resultant effect of which can be phenomenal (von Tunzelmann and Acha 2004). Incremental changes in local context is also considered to be innovation notwithstanding negligible or no contribution to global arena, although this type of innovation may not be eye catching, their social and economic significance is comparable to ‘first world’ type (Fagerberg, et al. 2004).

Our understanding of innovation and its theories comes primarily from literature from advanced countries from where the research originated. Thus, it is easy to dismiss the notion that industrial innovation exists in developing countries, especially Sub Sahara Africa, the most technologically backward of the developing countries. However, as literature from Latin America and South East Asia have shown, widening the concept to include incremental technical changes, which is as important as radical innovation that occurs in the advanced economies. The study therefore revealed incremental innovation at the shop floor level. Even though not premised on cutting edge R&D, some of the innovations were crucial to survival of organisations. This confirms the assertion that technical change is not limited to R&D but can be sought from a wide range of sources including production line and machine shops (Oyelaran-Oyeyinka, et al, 1996).

Innovation driven growth is now as important in advanced countries as it is in developing countries. Limited literature on innovation in developing countries revealed some characteristics: low level of S&T activities, governmentally established organisations are the only research institutions, weak technological capabilities, weak absorptive capacity in the industries, little or no linkages and lack of policy and institutional structures to enhance

innovation. Despite all these failings, it is agreed upon that innovation takes place differently. Some of the terms that have been employed to capture sources and kinds of innovation in this context include grassroots, inclusive, base of the pyramid and frugal; these terms are, however, not meaning exactly the same thing. Innovation in this setting comes in various forms such as production of low cost goods targeted at the poor people or application of local knowledge in solving grassroots problems. Research indicates that there is more of imitation and adaptation than radical new to the world innovations in this context (de Beer et al, 2013).

2.9 Technological advancement and development

The link between technological advancement and the process of development has engaged the attention of shades of scholars such as historical perspective (Abramovitz, 1986) , neoclassical (Keller, 2004), evolutionary cum neo-schumpetarian (Freeman and Louca, 2001) and industrialization angle (Lall, 1992). Although they are have some differences but they all converge on the point that developmental process is rooted in growth of productivity rather than mere accumulation of factors, implying that they all accept technological changes and ensure sustainable productivity growth. However, technology, measured by using R&D and patent from these studies have been examined in a way not relevant to developing countries (Bogliacino, et al, 2009).

For a long time the question of how technology and innovation influence economic development has been polemical dating back to Veblin (Fagerberg and Godinho, 2004). Writing about Germany's industrialization, he opined that developing countries' technological and economic catch up need to follow the trajectory of developed countries. The neoclassical economist share similar view about developing countries catching up with the frontier with their conception of technology (knowledge) as a 'public good'. This implies that this 'good' is freely available to anyone to make use of. Thus, catch up is seen as a matter of time when the market mechanism naturally brings it to be. However, some other writers, for instance Gerschenkron (1962) and Ames and Rosenberg (1963), inspired by earlier work of Schumpeter (1943) were not so confident of convergence as neoclassical economists had claimed (Fagerberg et al, 2010).

The starting point for understanding the relationship between innovations and development is a peep at neoclassical economic theory which views technology as a public good freely available to everyone anywhere thus becoming equilibrium in the global arena. However, empirical evidence did not support this thesis thereby necessitating a look elsewhere.

According to this perspective, developing countries are expected to grow faster than advanced countries since their capital-labour ratio is low. This situation expectedly will result in higher return to capital which will in turn lead to higher rate of capital accumulation and which will ultimately lead to higher per capital growth. In addition, since capital is attracted to places where prospect of higher profit is high, there is every likelihood that capital will move to these developing countries thus obliterating the income gap between the developing and the developed world.

However, as empirical evidence showed that the state of things was not to be. Furthermore, convergence, a key aspect of the theory, failed to materialise as it became apparent that rather than converge, as Landes (1998) had demonstrated, there is a significant difference in income between rich and poor countries over the last two and half centuries.

The question to ask at this point is why did this prediction fail? Providing answer to the posed question demands a scrutiny of the concept of knowledge from neoclassical perspective. Knowledge could be theoretical or practical. The former refers to a thorough understanding of object of interest while the later pertains to knowing cause-effect relationship practically proven to be right. The state of knowing, both theoretical and practical, could be obtained through search, training, learning or observing. The relevant knowledge in this case is technological knowledge which pertains to production and distribution of goods and services. Technological knowledge entails the physical process that is the 'hardware', and the embodied knowledge of organising to get desired result, the 'software'.

Veblin (1915) regarded as a pioneer scholar in catch up analysis, in his analysis of Germany catching up with the then advanced economy, United Kingdom, argued that in contrast to the previous condition, knowledge can now be easily codified and transmitted. Thus, he opined, catch up should now be easy on the basis of which he predicted catch up of other European countries like France, Italy and Russia. It is this notion of technology adopted by neoclassical economists that makes them contend that knowledge is freely available to everyone everywhere. Should this be the case ultimately ever country will reach equilibrium where growth and development will be the same. As a result, knowledge (technology) could not be used as explanation for the differences in growth and development. However, what reality later showed was that whenever knowledge was created, either through learning or research/R&D, it contained certain characteristics which embedded it to the environment where it was created thus making it difficult for easy transfer. Thus in departure from

classical neoclassical economists, there emerged a new perspective which argues that knowledge is 'sticky'. That is, it is deeply rooted in idiosyncratic features of firms and as a result not easily transferable. This is the new growth theory which therefore concluded that catch up is not automatic but requires lots of striving to build necessary and required capabilities needed for economic transformation.

Building on the foregoing, an economic historian, Gerschenkron (1962), argued that although there were great opportunities for countries coming behind the frontiers to close the gap but not without some challenges. Using the case of Germany catching up with UK as an example, he argued that at the time Germany was making attempt to catch up with UK, the nature of technology had moved from labour intensive and low to capital intensive and large scale thereby requiring new institutional instrument to contend with the challenge. As a result, Germany had to evolve investment banks as a vehicle for mobilising required financial resources, the likes of which were not available anywhere before then, to drive development in view of the situation at the time (implies, different instruments for different epochs)

Shin (1996) drawing insight from Gerschenkron's work noted that principles with general applicability to catch up situation could be drawn. One is that new instruments or capability may be required for countries trying to catch up as Germany's examples has demonstrated by developing investment bank to mobilise finance crucial for development in view of the nature of challenge – capital intensive, large scale operations - it had to cope with at the time. Two, the nature of capability required will be contingent on the situation prevailing at the time. That is, capability required will vary or change as the situation changes. For instance, capability required by Germany for catch up differs from that required by Japan, just as that required by newly industrialised countries of South Korea and Singapore. It will generally be contingent on time/period, industry, sector or level of development.

Another notable scholar who wrote on catch up is Abramovitz (1986, 1994). He defined catch up thus: "This is a potential that reflects these countries' greater opportunity to advance by borrowing and adapting the best practice technology and organization of more productive economies" (Abramovitz 1994b, p. 87).

Abramovitz underlined two factors as important to catching up: technology congruence and social capability. The former refers to the extent to which the catching up country has similar characteristics such as factors supply, market size with the country it wants to catch up with. The latter is a broad concept which includes education, especially technical education,

infrastructure such as financial system, honesty and trust, experience of managing large organisation, government stability and strict enforcement of rules and regulations.

A similar concept that has become important and widely used in catch up literature is absorptive capacity. Although the term is not completely new as it has been applied in development economics to refer to the ability to absorb new investments. But as the world gradually moved to become knowledge economy, knowledge being the pivot element for growth and development, it is increasingly now being applied to knowledge. Rostow (1980) defined it as the extent to which existing and emerging relevant knowledge is absorbed. The rate of absorption will be contingent on availability of skilled manpower and capital. He further contended that countries that build stock of skilled manpower, technical and entrepreneurs, stand a better chance of appropriating knowledge within and outside.

This concept is applied to firm level by Cohen and Levinthal (1990, 128) in their widely cited paper in which they define it as "the ability of a firm to recognize the value of new, external information, assimilate it and apply it to commercial ends". This definition became widely adopted. Implicit in the definition is that absorptive capacity depends on prior knowledge which results from previous cumulative efforts in R&D. The authors observed that as a result of the cumulative nature of knowledge stock held by the firms, there is tendency of path dependency in which firm locks itself up by refusing external knowledge to flow into the organisation. To prevent this requires firm to keep a diversified knowledge base and to maintain linkage with external knowledge base. Although Cohen and Levinthal study was in respect of firm, the same principle applies to countries.

While the above authors analyse catch up using Europe as a focus, other catch up literature using the experience of newly industrialised countries in Asia have emerged. Particularly, there is a large body of work on Korea, a country whose rapid movement from poor to industrialised country has been documented by Kim (1980). In his study of meteoric rise of Korea, he identified technological capability as a crucial factor to explain this rise. He defined technological capability as "the ability to make effective use of technological knowledge in efforts to assimilate, use, adapt and change existing technologies.'' (Kim, 1997, 4). Kim's analysis in his study of Korean electronics firms indicated how they moved from importer of technology to adapting and bringing about incremental improvement to technological innovation, which competes at global level.

Therefore, in order to move up the ladder of innovation, countries need to develop appropriate level of technological capabilities. In this respect, technological capabilities have been subdivided into production, investment and innovation capabilities. Production capability is required to efficiently operate production facilities and adapt appropriately to changing circumstances. Investment capability is required to create new production facilities and reflect changing situations in the design. Innovation capability is needed for creation of new technology which delivers state of the art product and services.

Lall (1992) in application of the concept of technological capability to nations refered to it as national technological capability. He subdivided it into three: ability to mobilise requisite financial resources for economic development, development of skilled manpower which included emphasis on education generally and specifically on technical and managerial skills and finally concerted efforts geared towards developing R&D, patent and technical personnel. In addition, he added that efforts need to be made towards acquisition of technological knowhow through importation or foreign direct investment (FDI). Furthermore, there is the need to provide institutional frameworks such as enforcement of rules and regulations, which encourage and promote economic activities.

Fagerberg and Verspagen (2002) in their analysis emphasise the importance of innovation for development and underscore the need for developing countries to enact appropriate policies targeted at accelerating development.

This insight that technological factors and social factors in combination exact influence on economic growth and development suggests a broader or holistic look at various factors influencing development, hence, systems approach to ability of nations to employ technology or innovation for development. Edquist (2004, p. 182), defined national systems of innovation as “all important economic, social, political, organizational, institutional, and other factors that influence the development, diffusion, and use of innovations”.

The term was first employed by Freeman (1987) in his analysis of how Japan climbed the ladder of economic development. It later grew to become a popular analytical tool. International organisations such as OECD, the EU and the UN lend their support by providing data that assisted. However, application of this concept to developing countries is still emerging.

The new growth theory posits that difference in knowledge accumulated within the country could be used to explain difference in economic development. New knowledge created from outside faces impediments in seeping through, either through legal means such as IPR or informal means, thus countries desirous of catching up should be open to trade and FDI. However, empirical evidence does not support this view. Result from countries recently exiting from low development shows that openness, measured by imports, FDI, and license payment from abroad, do not show any significant influence on their growth and development.

Since it has been recognised as the previous section amply demonstrated that capability is crucial for development, especially for developing countries, how has this concept been approached in empirical literature? This is a challenge that scholars are grappling with. For instance, if patent is adopted as a measure of a nation's "innovative capacity" as suggested by Furman et al. (2002) and Furman and Hayes (2004), in the first instance, this leaves out incremental innovations, the bulk of innovation globally, not even only in developing countries but also world-wide because they are patentable. Secondly, patents are obtained for invention and not innovation. It is generally accepted that invention remains that and not until it is commercialised does it become innovation. Furthermore, some industries are more intensive in the use of invention than others. Moreover, developing countries will be disadvantaged due to institutional factors such as cost and poor domestic IP regime, hence screening out some inventions from such countries. This prompts some scholars to suggest using some other information apart from patent. Other measures suggested are: science, research and innovation; openness; production quality and standards; ICT infrastructure; finance; skills; quality of governance and social values.

Science, research and innovation that measure levels of scientific research and publications, R&D expenditure which shows resources incurred in developing new product or processes and innovation count. Openness is used to determine the extent of accommodation to trade, foreign direct investment, immigration, collaboration with foreign partners, licensing of technology and research cooperation with external firms. Production quality and standard measure international certifications such as international standard organisation (ISO), the level of adoption of total quality of management (TQM), adoption of lean production and just-in-time practices. ICT infrastructure determines the extent of telecommunication infrastructure available and access to computer and internet. Finance measures extent of development of stock market, ease of accessing bank credit, availability of venture capitalist

and investor angels. Skills are determined by the enrolment in and quality of primary, secondary and tertiary education, quality of managerial and technical skills available. Quality of governance measures level of corruption, the judiciary independence, property rights, rule of law and the extent to which business environment is friendly. Finally, social value measures how wide spread trust is in the society, tolerance, altruism, civic activities and generally disposition towards science and technology. However, that it is also fraught with its challenges as the countries concerned are often lacking data covering these wide data sources.

2.10 Innovation at firm level in developing countries

While the previous section looked at the innovation at macro level, this section examines innovation at the micro level, i.e. innovation activities performed at firm level. It is established in the literature that firms in developing countries passively adopt imported technology. However, research revealed that to work effectively, the imported technology needs to be fitted to the context of developing countries and this is where innovation comes in; to retrofit the imported machines to condition in the developing countries since it is different from the environment from which the machines were imported. These seemingly minor or incremental changes to the foreign technology that make them adaptable to developing countries' situation constitute substantial economic significance especially if it is factored in that basic production capabilities are lacking. While firms in advanced economies innovate through R&D, the focus of innovation in firms in developing countries is on maintenance engineering and quality control (Bell and Pavit, 1993; Oyelara-Oyelakin et al, 1997). Although innovation in R&D is important, as Kim (1980) argued, this is only required at the later stage of development.

In Europe and some other countries that have adopted the standard survey method with which innovation is measured at firm level, innovation is defined as "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations" (OECD, 2005, p. 46). This definition is broad to encompass incremental innovation common in developing countries. However, the flip side to it is that due to consideration for context, comparatively what constitutes innovation in one context (developing) may not be in another context (developed). Also as Bogliacino et al, (2009) concluded after studying innovation patterns in developing countries, the concept differs considerable from that of advanced countries. The process in the advanced countries focuses on building high R&D

capability and strong technological infrastructure for enhancing knowledge and competence to continue to remain in the frontier while in the developing countries, the process entails technology and machinery acquisition and imitation of products and processes from foreign countries.

2.11 Manufacturing MSE in Nigeria.

The context of this study is manufacturing micro and small enterprises (MSE). It is therefore important to examine this sector in the Nigerian context. MSEs play crucial role in the Nigerian economy because they represent a shift from traditional to modern economy. They employ simple skill, machinery, local raw materials and technology in the process production. They help bring about gradual socio-economic change through employment creation, use of local technology and raw materials, generation of income, employment creation, promoting local and indigenous entrepreneurship, technological innovation and poverty reduction. As result, the Nigerian federal government has started to pay more attention to this sector of the economy. Measures taken in this regard include: creation of enabling environment, liberalization and deregulation (SMEDAN, 2012).

2.1.1 Definition of MSMEs

Using two factors, number of people employed and net assets excluding land and building, micro, small and medium enterprises are defined as shown in table 2.0 below:

Table 2.0: Micro Small and Medium Enterprises Characteristics (Source: SMEDAN, 2012)

S/N	Size Category	Employment	Assets (=N= Million) (excl. land and buildings)
1	Micro enterprises	Less than 10	Less than 5
2	Small enterprises	10 to 49	5 to less than 50
3	Medium enterprises	50 to 199	50 to less than 500

Micro - firms with total assets (excluding land and buildings) less than Five Million Naira with a workforce not exceeding ten employees.

Small - firms with total assets (excluding land and building) above Five Million Naira but not exceeding Fifty Million Naira with a total workforce of above ten, but not exceeding forty-nine employees.

Medium - firms whose total assets (excluding land and building) are above Fifty Million Naira, but not exceeding Five Hundred Million Naira with a total workforce of between 50 and 199 employees.

Should conflict arise in the classification, it is resolved in favour of employment, i.e if, for instance, a firm has 8 million naira but 9 employees, it is classified as micro.

SMEs have been identified as a sector that plays a crucial role in Nigeria's bid to become and named vision 20-2020, a cardinal programme of the federal government to usher Nigeria into the league of twenty largest economies in the world. To this end, a combination of microfiancne, regulatory and supervisory programmes have been outlined to promote SMEs in Nigeria such as The Youth Enterprise with Innovation in Nigeria (You WiN!), counterpart funding by Bank of Industry (BoI), SME guarantee scheme, SME equity investment schemes, etc.

SMEs are seen as the bedrock of economic development especially in developing economies. They serve as a means of providing job opportunities as well as providing a wide range of goods and services. Thus, given necessary incentives and policies to promote and develop entrepreneurship, they could ensure national prosperity and makes the nation competitive in the committee of nations (Benzing, Chu and Kara, 2009; Zahra, 1999).

The importance of SMEs to the economy cannot be over emphasized. They help stem rural-urban migration by providing local employment opportunities which prevent unemployed rural dwellers from crowding the cities. In addition, SMEs due to their size and closeness to consumers are flexible and are able to promptly respond to changing demands and needs (Biggeri, Gambelli, and Phillips, 1999).

However, at the lower end of SME is a group referred to as 'informal' or 'micro enterprises' (ME) (Oyelaran-Oyeyinka, 2007). The International Labour Organization (ILO) defined the 'informal sector' as comprising petty business without registration or micro enterprises operating low on the economic ladder. They are operated by individuals or households and often do not have contractual relationships with banks, suppliers and other stakeholders. The informal sector constitutes a major source of employment in developing countries. It is

asserted, according to the World Bank that between one-third and three-quarters of employment is generated in this sector in developing economies. Most operators in the sector embark on business as a last resort to earn their livelihood. In West Africa, the sector accounts for 80% of enterprises and generate 50% and 20% of employment and GDP respectively (ILO 2000).

In Nigeria, the traditional MSMEs manufacture products targeted at people at the lowest rung of the economic ladder. The sector is characterised by low technology, intense use of unskilled labour and produces mainly household products such as soap, detergent, toiletries, powder, juice, drinks, etc. As a result, they are often confronted with challenges of limited financial, human and material resources (Lemos, Arroio, and Lastres, 2003)

Small and Medium Enterprises (SMEs) are the dominant form of firms in sub-Sahara Africa accounting for 95% of business population in sub-Sahara Africa (ADB, 1997). In addition, these organizations have been widely recognised as cornerstone to economic development. They make significant contributions to development through both job creation and poverty alleviation (ADB, 1997). One of the routes by which SMEs can develop and grow is by innovating. Innovation is regarded as a key factor for economic growth and development and is particularly important within developing countries. Firms in developing economies must innovate to develop and be sustainable in the rapidly changing environment which characterises developing countries (Forbes and Wield, 2002).

Having recognised the importance of MSEs to economic growth and the importance of innovation to the development of SMEs, there is a need to unravel the innovation process that is held within SMEs especially in developing countries.

2.12 Analytical framework

A new stream of study in innovation, System of Innovation (SI), championed by Christopher Freeman, Bengt-Ake Lundvall and Richard Nelson evolved in the late ‘80s as a departure from mainstream study of innovation (Freeman, 1987; Freeman and Lundvall, 1988; Lundvall, 1985; Nelson and Winter, 1982). Freeman introduced the concept in his study of Japan (Freeman, 1987), Lundvall further developed it using historical-empirical study of Denmark (Lundvall, 1992) while Nelson consolidated the concept in an edited book detailing studies of National System of Innovation (NSI) (Nelson, 1993; Lundvall, 2011)

System of Innovation (SI) is a framework distinguished by characterising innovation as interactive, emphasises the importance and complementarities of variants of innovation (i.e radical, incremental, technical, organizational or operational, etc) as well as reflecting cultural and developmental trajectories of each nation (Cassiolato et al, 2012).

Even though developed in the advanced countries, the approach is specifically relevant to developing countries concerning recent assumptions in development that link innovation with development. This thinking contends that, one, capabilities rather than resource endowment is now considered more important in driving development. Two, there is increasing focus on knowledge as a crucial element of development, especially with the world economy being knowledge-driven. Third, institution is now understood to be an important foundation for development (Johnson et al, 2003).

One of the distinguishing features of SI framework is its broader view and definition of innovation. It is conceptualized as continuous, cumulative and incremental diffusion, absorption and use of innovation. In addition, it identified interactive learning taking place in production, procurement and sales as important sources of innovation (Johnson et al, 2003).

The theoretical framework defines innovation as '' the process by which organization master and implement the design, management and production of goods and services that are new to them, irrespective of whether or not they are new to their competitors – domestic or foreign'' (Lastres, 2003, 6)

System of Innovation is a concept used to describe the network of relationship, internal and external, that takes place before innovation come to being, implying that firms do not innovate in isolation but through constant interaction with the environment within which they operate. This framework contends that various activities spanning institutions, infrastructure finance and skills interact at external environment to make innovation possible. National system of innovation is used to denote interdependencies that take place within a spatial space (Lundvall, 1992, Nelson et al, 1993)

The interactions taking place include that with organization such as suppliers, customers, competitors or non firm bodies such as research institutions, government, laboratories. In addition, the institutional influence such as law, rules, norms and routine exacts considerable influence on innovation activities. The term was first used by Freeman who defined it as networks in relation to technology diffusion (Edquist, 2004). A more comprehensive

definition is given by Edquist (1997, 14) as ‘’all important economic, social, political, organizational, institutional and other factors that influence the development, diffusion and use of innovation’’.

The acceptance of NSI was fast and rapid such that international organizations such as OECD, UNCTAD, UNIDO and National government (eg, Sweden) adopt substantially for policy measures to aid innovation (Edquist, 2004).

According to Edquist, (2004), the following constitute the strengths of the approach:

i) Emphasis on learning - innovation essentially entails producing new or combination of knowledge.

ii) Holistic and interdisciplinary approach – unlike mainstream innovation approach, it looks at wide arrays of organizations and institutions as well as social, economic and political contexts, which foster and promote innovation.

iii) Historical and evolutionary perspective – taking its origin from the work of Lundvall 1988 on Danish dairy farms, it is historical. In addition, it contends that there is no optimal system worthy of emulation since each system develops at its own pace and within its own context. However, even though there is no optimal as a model, there is a ‘’good’’ which can be used as a benchmark.

iv) Interdependence and non-linearity – the nature of the system entails interdependent and interrelated parts working harmoniously together toward achieving a unified goal. SI approach emphasises this much. In addition, it departs from belief that innovation takes place in a well defined sequential order but rather, through interaction with various other entities.

v) Goes beyond only product and process - SI approach contends that there is more to innovation than product and process innovation. Thus, the approach beams searchlights on other less emphasised aspects of innovation.

vi) Importance of institution - this approach puts a strong emphasis on institution as a vehicle to promote innovation. The advanced countries of the West and Far East that caught up – Germany and Japan - all pay particular attention to the role institutions played in their technological advancement. Thus, institution is central to the notion of innovation unlike developmental economics that advocates for institutional intervention only when there is a so-called market failure.

The major weakness of the approach, according to Edquist, (2004) concerns conceptual definition of some terms such as institution. This term could refer to institution such as organisations, government or it could mean rules, law, and regulation. To avoid the confusion, the latter is often referred to as hard and the former soft institution.

Another weakness of the approach is the difficulty in drawing boundary of NSI in view of boundary-spanning activities of big multinational firms in knowledge driven economy. In a globalised business world, multinational firms have value chain spanning several countries and, as such, it is difficult to limit the boundary to a nation. However, the systemic nature has been extended beyond national boundaries, in view of nature of knowledge economy, to include sectoral, technological or regional boundaries.

Jensen et al, 2007 identified two routes to innovation emphasising the fact that adopting both routes make a firm more innovative. They are science technology and innovation (STI) and doing, using and interacting (DUI) routes. The former puts a lot emphasis on scientific knowledge and codifications while the latter emphasises interaction with users.

In the advanced countries there is strong inclination to STI mode due to technological advancement and being knowledge economy while developing countries will necessarily be DUI mode. STI employ science and technical knowledge with most of its innovation evolving from laboratories, universities and research centres. On the other hand, DUI is mostly tacit knowledge which is gained by doing and interacting.

In application to innovation system narrow view equates innovation with science and technology while the broad view includes learning and competence building leading to innovation. With respect to developing countries, narrow and broad perspectives of IS can be likened to STI and DUI mode of innovation. The former emphasises science and technology while the latter broad interaction, learning and competence building taking place alongside production and distribution of goods and services. The DUI modes thus becomes more relevant to developing countries' context since they perform less science oriented and R&D activities (Lundvall, Joseph, Chaminade and Vang, 2011).

However, some scholars have argued that developing countries lack a fully formed system consisting of network of interactions among several actors in a geographical location with active contribution of state(Lall, 1999; Viotti, 2002). This is the system in developed and advanced countries. Nevertheless, a perceptive look at developing countries will reveal

absence of this fully formed system, suggestion that no system is really in existence prompting Lall (1992) to suggest that, it is technology system, rather than innovation system.

Similarly, Arocena and Sutz,(2000) contend that there is no fully formed ‘’system’’ with respect to network of interaction in the developing countries. For instance, governmental agencies are created but they are not really effective in promoting innovation.

2.13 Conclusion

Tracing the history of this field of study has revealed two crucial points. One is, its embeddedness in advanced countries ethos due to its origin. As the previous sections have shown, innovation studies are deeply entrenched in the advanced countries of Europe and America and this will certainly have over bearing influence on the concept of innovation and consequently its analytical framework. Institutions, centres, journals and professional associations all reflect the ethos of this advanced context, thus making it unfit for adaption to developing countries' context. This informs the argument by Srinivas and Sutz (2008) that to look for innovation in developing countries requires developing appropriate lens which fits this context. Lorenza and Mohammed (2008) echoed a similar view.

Two is, the shift away from micro to macro level or more precisely, the linking of innovation with development. The essence of innovation studies now is to leverage it for growth and economic development of nations. (Srinivas and Sutz, 2008). Hence, emphasis now is on macro and the importance of system approach, which take a holistic view. This therefore informs the choice of Innovation System as an analytical framework for examining micro and small enterprises in this study.

2.14 Knowledge spill over theory of entrepreneurship (KSTE)

In the field of entrepreneurship, two issues have engaged the attention of researchers: the motivation and impact of entrepreneurship. Thus, attention has been focused on opportunity recognition and process of deciding to act on opportunities. However, in traditional theories entrepreneurship, opportunity is taken as given. Searchlight is beamed on individual characteristics like disposition to autonomy, risk-taking propensity, access to resources – human, social and financial. These factors, it is argued, are responsible for variation in propensity to become entrepreneurs.

In contrast, knowledge spill over theory of entrepreneurship contends that context could induce decision to become an entrepreneur (Acs, Audretsch and Lehmann, 2013).

KSTE throws light on why some people become entrepreneurs due to knowledge spill over why some other people do not. KSTE contend that the source of entrepreneurial opportunity is new knowledge or business idea generated from incumbent firms which is then exploited in a new firm. Knowledge spill overs (KS) are ‘’unintentional flows of knowledge from one network party to another’’ (Ko and Liu 2015: 663). Entrepreneurial opportunity is defined as ‘’ a set of ideas, beliefs and actions that enable the creation of future goods and services in the absence of current markets for them.’’ (Sarasvathy et al. 2003, p. 142)

KSTE argues that by establishing entrepreneurial firms to exploit ideas generated from incumbent firms, this strengthen innovation and improved economic performance (Acts, Audretsch and Lehmann, 2013).

Knowledge spill over strategic entrepreneurship is defined ‘’as unintentional knowledge flows that can be used for strategic purposes to network entities other than the creators for innovative, risk taking, proactive and competitive business reasons’’ (Ferreira, Ratten and Dana, 2017:162). The field of knowledge spill over strategic entrepreneurship addresses how firms employ entrepreneurial action to create new opportunities to gain competitive advantage.

There are considerable empirical research indicating high propensity among employees of small businesses leaving paid employment for self-employment. In the corporate and entrepreneurship literature, three theories have been propounded for the reason why small firms, more than big firms, spawn new businesses. Namely, a self-selection theory, a knowledge spillover model, and a blocked mobility approach. This is known as small firms effect, implying that certain factor in the small firms encourage entrepreneurial efforts on the part of incumbent employees (Gast, Werner and Kraus, 2017).

Self-selection theory argues that individuals who leave paid employment for entrepreneurial business have some innate qualities that predispose them to starting a new firm.

Knowledge spill over model on the other hand contends that employees who benefit from knowledge spilled over from incumbent firms embark on entrepreneurial firms. Three reasons have been advanced as responsible for easy transmission from employee to entrepreneurs. One is that this category of employees are taught the skills and they gain expertise to discern

opportunities, which they leverage on to start their own small firms. Two, the working conditions in small firms are conducive to gaining necessary business experience. Furthermore, in small firms, employees are able to easily access important resources and network, which make it possible for them to expand their networks with suppliers and customer. Three is that small firms provide avenue for employees to gain pro-entrepreneurial attitudes since they relate closely with the owners who become their role models. As role models, entrepreneurs which whom they work and closely interact sometimes provide knowledge, support and encouragement that goad employees into starting their own firms.

The block mobility approach attributes higher probability of employees of small firms starting their own business to low possibility of advancement concerning higher wages and positions. There are some small firms work place characteristics - such as limited advancement and low or poor wages- which make them amenable to those firms' employee to look for other means in the form of switching to a big firm or becoming entrepreneurs (Gast, Werner and Kraus, 2017).

Qian and Acs (2013) argued that Knowledge spill over is important in the knowledge production which is a key determinant of innovation especially in the private sector. In addition, the extent of knowledge spill over determines the stock of public knowledge, which plays a significant role in economic development.

Chapter 3: Research Methodology

3.0. Introduction

The last chapter reviews and synchronises the extant bodies of literature on innovation generally and from the developing economies in particular. The chapter concludes that innovation and the field of innovation studies are heavily influenced by origin. The effect of this is that the metrics of measuring innovation that have become universal and law-like in the study of innovation were developed in advanced countries using big multinational firms. However, these measures are unfit for the context of this study – micro and small firms in developing countries. Thus, this necessitates a study that distances itself from the over ridding western imposed metrics and diving into real-life lived experience of micro and small business in this content.

This chapter thus discusses the methodology adopted in this study to unravel the true nature of innovation in the Nigerian MSEs. Specifically, section 3.1 presents the philosophical underpinning of the study; 3.2 presents the underlying research paradigm that underpins the entire research project. It commences with stating the philosophical discourse and explicating the research paradigm. The reason for the choice of the research paradigm is stated, research design outlined and sampling and case selection discussed. The research setting is explicated, data collection instrument described and finally the issue of research quality assessment is addressed.

3.1. Philosophical Underpinning

Research generally, and in particular social and management sciences, is driven by certain philosophical assumptions underpinning the study. These assumptions influence what is searched for, how it is found, and how it is reported (Crowther and Lancaster, 2009). That is, they underpinned the conduct of a scientific research. Easterby-Smith et al (2012) identify three reasons why it is important to explore knowledge of philosophy with particular reference to a research methodology before conducting the research. **First**, the knowledge of philosophy helps a researcher to clarify his overall research strategy and define specific

methods to be used for the research. **Second**, this knowledge also provides the researcher with a template to evaluate different methodologies and methods and select the most appropriate for his study by identifying the limitations inherent in each of the approaches early in the research. **Third**, it can also enhance the researcher's creativity and innovativeness in research methods' selection or adaptation. Collectively, these assumptions and beliefs are referred to as research philosophy or paradigm and they concern concepts like ontology, epistemology, axiology, and methodology (Collis and Hussey, 2015, Lincoln and Guba, 2013; Lincoln, Lynham and Guba, 2011; Yin, 2011). These concepts and the position of this study on each are discussed in the sub-sections that follows.

3.1.1. Ontology

Ontology is a branch of philosophy concerned with the nature of reality or truth. Scwandt (2007) defines it as perspectives a researcher holds with regards to contributing new knowledge. It refers to the worldview of the researcher with respect to nature of reality (Creswell, 2007). This concerns worldview with respect to the relationship between the researcher and the research issue or participant (Creswell, 2007). The process of inferring what we see from what we know and vice versa (Guba and Lincoln, 2005). Two contrasting views of ontology have been identified in the literature. Lincoln and Guba (2013) like many other scholars classified these views as objectivism and subjectivism.

Objectivism refers to the ontological view that social reality exists as an objective phenomenon independent of man. That is, social reality is external to the social actor and his responsibility is to discover it (Johnson and Christensen, 2008). Subjectivism on the other hand assumes that social realities are created as a consequence of human actions and perception (Bryman & Bell, 2015). However, there are scholars that hold the view that a social reality could be both objective and subjective depending on the context. Saunders et al (2012) refer to this as multiple realities view.

These different ontologies are common phenomena in the innovation literature. While some scholars believe that innovation is an objective reality, some perceive it as a subjective phenomenon; others see it as being either objective or subjective, depending on the context of the research. Although these views are not overtly expressed by most of the studies, the

epistemological position and methodologies adopted by these studies often reveal their ontology. These overtly or covertly expressed positions are often determined by the objectives of the research (Saunders et al, 2016). This present study, which aims to unravel the true nature of innovation in African countries, is better premised on the "multiple reality view". Thus, it is assumed at this stage of the study that innovation can be an objective or a subjective reality. This position determines the epistemological view of the study.

3.1.2. Epistemology

Epistemological question relates to the relationship between the inquirer (researcher) and the researched (Lincoln and Guba, 2013) This entails the process of seeking knowledge and how investigation should be carried out (Scwandt, 2007). It also includes the way inquiry is conducted (Creswell, 2007). Similarly, Blaike (2008) views epistemology as the branch of philosophy that explains the way a researcher studies and justifies knowledge. According to Carter and Little (2007), epistemology exerts three significant influence on the choice of methods for a research. First, it influences the researcher-participant's relationship. That is, should participants be viewed as subjects to be studied or as active contributors? Second, it exerts influence in determining what constitutes rigour in data collection and analysis. Third, it influences the way the research is conceptualised and outcomes communicated to the research audience. As a result of these influences, a researcher's epistemological position is considered foundational to his study and will significantly affect all aspects of the research process (Dillon and Wals 2006).

The main issue in epistemology is whether or not a social reality can and should be studied using the natural science procedures or not. In clarifying this central issue, Bryman and Bell (2015) identified two opposing branches of epistemology- positivism and interpretivism/constructivism and pragmatism, which combines the strength of both. These three epistemologies are often referred to as research paradigm, which are discussed next, are also linked to some specific methodologies. Figure 3.0 below presents the three epistemologies and their respective methodologies as described in the literature.

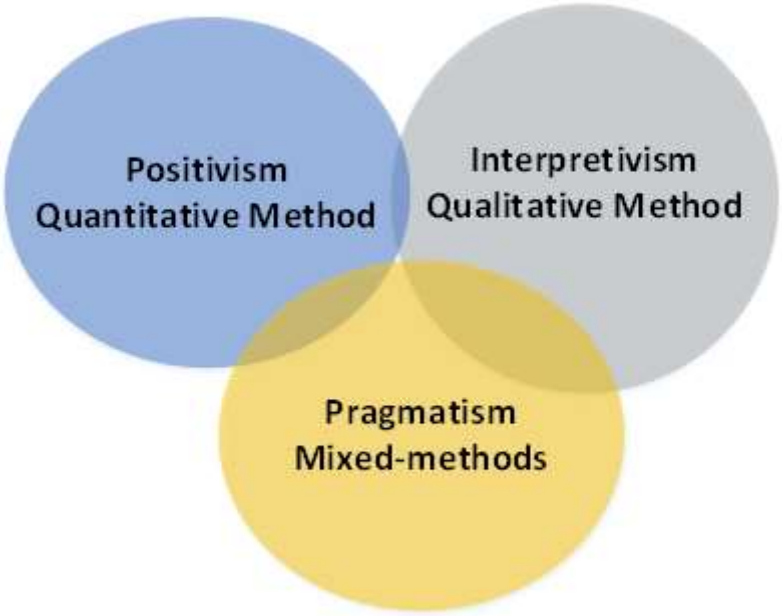


Figure 3.0: Three dominant Epistemologies and Research Methodologies (Source: Author)

3.1.3. Research Paradigm

Paradigm is an underlying philosophical belief a researcher holds (Lincoln, 2005). It is the combination of ontological, epistemological and methodological assumptions guiding inquiry (Denzin and Lincoln, 2005). There are basically three paradigms guiding any research inquiry; positivism, Constructivism or Interpretivism and critical inquiry (Denzin and Lincoln, 2005; Guba and Lincoln, 2005),although a research can be guided by multiple paradigm, for instance Interpretivism and critical inquiry (Lincoln and Guba, 2013).

Positivism is often described as epistemological philosophy of natural science (Saunders et al, 2012). It is an epistemological position that adopts the natural science research methods to the study of social phenomenon (Bryman and Bell, 2015). It sees social phenomenon as an objective and observable reality whose existence can be proved only through the use of scientific methods (Guba and Lincoln, 2005; Merriam, Caffarella and Baumgarner, 2007). This scientific method sees social reality as an observable phenomenon whose existence can only be proved by generating hypotheses from existing theories, testing the hypotheses using scientific means in a value free research environment. The knowledge so obtained from this process is law-like which is applicable to natural order (Lincoln, Lynham and Guba, 2011). Positivism further argues that a researcher should be distanced from what he/she studies and

this is the only way to be objective. Thus, a researcher is completely detached because he/she is only preoccupied with the scientific rigour of his/her researcher and not its impact (Guba and Lincoln, 2005; Lincoln, Lynham and Guba, 2011; Merriam, Caffarella and Baumgarner, 2007). Positivism is referred to as hard science for the belief in core scientific method (Lincoln, Lynham and Guba, 2011; Merriam, 1991). Similarly, Bryman and Bell (2015) summarised positivism into four clear principles. **First**, *principle of phenomenalism*, that is, only phenomena confirmed by human sense can be regarded as true knowledge. **Second**, *principle of deductivism*- true knowledge is confirmed by using existing theories to provide explanations on social realities. **Third**, *principle of objectivism*- the relationship between the researcher and observed phenomenon should be value free. And **fourth**, true knowledge is arrived at by collecting facts about a social reality which can be used to generate laws about the phenomenon.

From the explanations above, positivism epistemology demands that before a researcher can adopt this world view, the phenomenon being studied must be ontologically objective and there must be existing theories that can be used to answer relevant research questions or hypotheses. But this is not the case for this research. Although there are existing theories of innovation as discussed in chapter two , but the main argument of this study is that the concept of innovation as viewed in the West where these theories originated, is significantly different from what constitutes innovation in a typical African and developing economy like Nigeria. As a result of this view of the researcher, the pure scientific enquiry philosophy of positivism that believes in using existing theories to justify knowledge is considered inappropriate for this study. As mentioned above, this researcher views innovation as a subjective reality that is created by the social actors in a given environment. Therefore, a positivist position in its purist form is not considered appropriate for this study.

A further argument against adopting positivism for this study is the criticism against it in the literature. Positivism has been criticised on the following arguments: impossibility of separating researchers from their social contexts in which they exist; difficulty in

understanding social actors without examining their perception of their activities; misleading information of reducing social phenomenon to figures and it may ignore other findings; and there is nothing like value-free in research because researchers usually bring their own values and interests into research (Collis and Hussey, 2015).

The immediate alternative to positivism is **interpretivism** (often used interchangeably with constructionism or subjectivism). Constructivism or Interpretivism holds that reality is socially constructed through interaction and interpretation of meaning collectively developed (Lincoln, Lynham and Guba, 2011). Thus, reality is '' our individual personal reality- the way we think life is and the part we are to play in it is- self created. We put together our own personal reality'' (Guba and Lincoln, 1985, 73). Researchers therefore conduct investigation to understand and interpret phenomenon using joint construction of meaning, life experience or reconstruction with a view to improving practice. According to Collis and Hussey (2015), interpretivism philosophy is underpinned by the belief that social phenomenon is a subjective reality which is shaped by a social actor's perception. That is, realities are socially constructed by the actors and are multiple. Unlike the positivist position of using quantitative methods to provide explanation for causal relationship in social phenomena, the interpretivist philosophy uses qualitative data to explore a complex phenomenon within a context with a view to interpreting the researcher's understanding of it. Knowledge resulting from this experience is thus constructed from experience and interaction with people and the environment (Guba and Lincoln, 2005). ''realities are taken to exist in the form of multiple mental constructions that are socially and experientially based, local, and specific and dependent for their form and content on the persons who hold them'' (Guba, 1990,27). It argues that creation of new knowledge results from interaction between the inquirer and the inquired through the process of co-creation of meaning (Guba and Lincoln, 2005). A researcher cannot therefore remove self from research process because he/she is the research tool. It employs Hermeneutic method, the ''interpretation, recognition and explanation of metaphor and comparing and contrasting dialectics (resolving disagreement through rational discussion) (Guba, 1996). The data collection methods often employed are interview, observation and analysis of text with meaning emerging from interaction between the researcher and the researched in research process (Angen, 2000).

Based on this argument and the researcher's view that innovation in an African setting is significantly different from views of Europe and America, the interpretivist philosophy is adopted for this study. This philosophy enables the researcher to study the social reality in different contexts and understand the local meaning of such reality.

Meanwhile, since the beginning of the 19th century, there has been a growing number of scholars that believed that the differences between positivism and interpretivism philosophies should not be seen as a dichotomy, but as a continuum where the two occupy the extremes and other philosophies sharing their strengths are at the middle. In the social sciences research, the paradigms on this continuum have been narrowed to three--pure positivism, pure interpretivism/ constructionism, and pragmatism (Collis and Hussey, 2015). As discussed earlier, the pure positivists and interpretivism/constructionism purists advocated for quantitative and qualitative approaches respectively. The former believe that social variables should be treated the same way the natural science treats physical realities. Furthermore, they maintain that social realities should be seen as objective phenomena and the relationship between them can be determined using existing theories. The interpretivism/constructionism purists reject the arguments of positivists. These scholars argued that realities are socially constructed and are multiple. They further argue that a value-free and context-free research is not possible and that knowledge flows inductively. Both sides of the debate believe in the supremacy of their arguments over the other and that their philosophies and methodologies are incompatible (Creswell, 2014).

However, pragmatism, which is the third research paradigm in social sciences, believes in the compatibility of the other two paradigms (Creswell, 2014). According to Saunders et al (2012) and Collis and Hussey (2015), pragmatism philosophy contends that there is no one permanent way of carrying out research in social sciences. This paradigm believes that a

study's research question is the most important factor in determining its ontology, epistemology and axiology. Creswell (2014) and Saunders et al (2012) further suggest that where a research question can be better answered by either the qualitative or quantitative approach, then it is adopted and where the two have to be mixed because of the nature of the research question then a mixed-methods research is adopted. Creswell (2014) summarised the pragmatism philosophy as one that is not committed to one particular approach and method; it considers the best way to answer a research question. To Saunders et al (2012), the fundamental assumption in pragmatism is that there are multiple realities as there are many ways of interpreting the world within a social context. However, the nature of this study's research questions is such that can be answered with the interpretivism philosophy stated and explained above.

3.1.4 Justification for choice of Interpretivism/constructivism

Interpretivism, which guides this study, holds that social world is relative of multiple realities co-created and needed to be studied as a whole (Guba and Lincoln, 2013). In contrast to positivism which strives for objective facts, it seeks subjective realities that are co-created and intended to ''replace the scientific notions of explanation, prediction and control with interpretive notions of understanding meaning and actions'' (Carr and Kemmis, 1986:83). This paradigm is ideally suited to understanding the lived experiences of the researched and as such unlike positivism, it does not aim at generalizing. Therefore, knowledge is created rather than discovered (Guba and Lincoln, 2013). The central aim of this study is to provide a deep understanding and insight into "the complex world of lived experience from the point of view of those who live it" (Schwandt, 1994, p. 118)

The nature of the topic and the context of study influence the choice of paradigm. In the industrialised advanced countries from where the discussion of the concept originated, the concept of innovation is well developed and well measured. In fact several innovation studies have been carried out such that the measures have now been standardised. For instance, there is the Community of Innovation Study (CIS) in European Union (Eurosat, 2008). In such environment, since the concept has been standardised any other paradigm other than positivist approach is superfluous. Some empirical studies conducted in developing countries

employed quantitative method by merely uncritically adopting methodology used in studies conducted in the developed countries (Abereijo et al, 2007; Chipika and Wilson, 2006). Some of the studies which employed positivists approach explicitly stated that the result should be taken with caution because, as it claims, "In Africa, there is always the danger that the respondents will provide the answers that they believe that the questioner wishes to hear." (Robson et al, 2009, 340).

To conduct a quantitative study, variables will have to be identified and measured. How does one measure innovation in this context using measures developed in advanced industrialised context? That is why the studies adopting positivist approach will be using lens to search for an invisible concept because lens developed in the advanced countries will not see innovation in developing countries (Srinivas and Sutz, 2008).

The fact is that studies using survey method use predefined measures which leave out variables on interest especially in a different context (George and Bennett, 2005). Thus, under this circumstance, a qualitative study using case study analysis will be more likely to reveal the true nature of innovation in this context.

The inquiry in this study is the nature of innovation in micro and small enterprises in Nigeria, the biggest economy in Africa and the largest country in sub-Sahara Africa (BBC, 2014). The mainstream innovation literature does not represent this context, thus the need for empirical study reflecting the lived reality of the entrepreneurs in this context.

This study responds to calls by scholars, such as (Brannen and Doz, (2010) for greater emphasis on context. Michailova, (2011) also argues that context influences methodological choice. Buchanan and Bryman (2007, 483) explicitly state that ''choice of methods is shaped not only by the research aims, norms of practice, epistemological concerns but also by a combination of organisational, historical, political, ethical, evidential and personally significant characteristics of the field of research''. Qualitative more than quantitative research is regarded as context-sensitive (Poulis, Poulis and Plakoyiannaki, 2013). Craig and Douglas (2001) on their part argue for the need to align choice of methodology with context uniqueness in order to achieve a result that is meaningful, otherwise it could lead to erroneous findings.

3.1.5 Research Approach

Research approach refers to the direction of reasoning adopted by a researcher for a particular study. Three approaches have been identified in the social and management sciences-deductive, inductive, and abductive (Bryman and Bell, 2015 and Saunders et al, 2012). To some scholars, these approaches are tightly related to each of the research philosophies described above, while Bryman and Bell (2015) and Saunders et al (2012) opined that the direction of reasoning is independent of a researcher's philosophy. On the strength of arguments in the literature, it is the opinion of this study that there is a significant relationship between the research approach adopted by a researcher and his research paradigm. This relationship and the approach adopted for this study is explained below.

The deductive approach which is the dominant approach in the natural sciences is associated with the positivists philosophy and possesses some unique characteristics. It is a logic that flows from general to specific (Burney 2008; Gulati, 2009; Snieder and Larner, 2009). It starts with problem definition; formulation of hypothesis from existing theory; expressing this hypothesis in terms of relationships between the variables; testing the hypothesis empirically; eliciting research findings from the empirical test; confirmation or rejection of hypothesis; modifying the theory if necessary; and ends with generalisation of the research finding irrespective of time and context (Ketokivi and Mantere, 2010, Monettee et al, 2005, and Saunders et al, 2012).

Deductive approach is suited for a well-developed field of knowledge with robust theories and clear concepts and variables (Bryman and Bell, 2015). Innovation concept is a well-developed field of research with its own tested theories and principles. However, these theories are developed within economies often referred to as innovation-driven economies which make their application to the present research setting in a factor-driven economy (Porter, 1982) difficult. Again, the objective of this present research involves getting deeper to understand the meaning Nigerian entrepreneurs in the small business sub-sector give to the concepts under investigation. As a result, this approach is not considered appropriate for this study.

As a result of the weakness associated with deductive approach in social and management research which is "its reliance on a strict logic of theory-testing and falsifying hypotheses" (Bryman & Bell, 2015:27) the inductive approach was proposed as immediate alternative. It is a form of reasoning that involves theory development out of observation rather theory

testing. Unlike the deductive approach, its main emphasis is gaining an understanding of the meaning social actors attach to a phenomenon within a context without any intention to generalise. This approach reasons from specific to general in an attempt to find answer to a research question (Burney, 2008 and Lodico et al, 2010). It uses qualitative data for analysis and theory development and it is associated with interpretivism/ constructionism philosophy (Benard, 2000; Goddard and Melville, 2004 and Saunders et al, 2012). Researchers adopting this approach move in the opposite direction to deductive. That is, the study proceeds from observation, pattern making, and theory building (Lancaster, 2005).

This is the approach adopted for this study because it involves theory development on innovation in the Nigerian SMEs without any intention to generalise. However, this approach has also been criticised on the ground that "no amount of empirical data will necessarily enable theory-building" (Bryman and Bell, 2015:27).

As a result of the weaknesses inherent in the deductive and inductive approaches discussed above, a third approach, abductive which combines the strengths of both was introduced as an alternative approach to social and management sciences. Abductive approach is based on the pragmatism philosophy (Johnson and Onwuegbuzie, 2005). It involves the use of multiple methods or mixed-methods to answer a research question which neither of the other two approaches can answer in their purist form. This approach has been suggested by many scholars (for example, Bryman and Bell, 2015, Creswell, 2014, Mantere and Ketokivi, 2013 and Saunders et al, 2015). The nature of this study's research questions does not warrant this approach.

3.2. Methodology

Methodology is the process of seeking knowledge and how investigation should be carried out (Scwandt, 2007), the way inquiry is conducted (Creswell, 2007). A philosophical position with respect to the way we find out knowledge. A researcher investigates a phenomenon by that means. This deals with methods, systems and rules of conducting inquiry.

3.3. Research design

What prompted this study is the urge to find out the nature of innovation in micro and small firms - the inquisitiveness to know if and how these firms innovate. The goal is to explore the lived experience of how small firms innovate in developing countries, especially sub-Sahara Africa. Since there is limited study within this context to fall back on and coupled with the

fact that available literature is skewed in favour of industrialised advanced countries, the researcher commenced with a preliminary study by asking people who interact with small/micro firms in Nigeria to nominate firms that are innovative.

This is in response to scholars advocating consideration for context in management, by focusing on innovation in this particular context, it responds to observation that there is ‘’relative absence of qualitative research aimed explicitly at generating context theories (as opposed to contextualizing quantitative research findings) in the management literature’’ (Bamberger, 2008:842). Qualitative research ‘’ provide thick, detailed descriptions of actual actions in real-life contexts” (Gephart, 2004: 455). This could provide deep insights into role of context which might potentially inform adjustment to or generation of new theory more so when management scholars are reconciling with the fact that theoretical contribution can be made not only with quantitative but also with qualitative studies. Such endeavour will explicate ‘’ how the meanings attached to different organizational phenomena vary across situations, time frames, and social units.’’ (Bamberger, 2008:843).

Thus, this research desists from ‘formulaic’ approach to ‘’offer an intimate feeling (instead of a superior understanding) of the empirical site under investigation’’ (Alvesson and Gabriel, 2013).

It bears mentioning that this study infuses grounded theory methodology right from the outset, as it was felt that it is only this approach that is most appropriate in the circumstance in which the researcher did not know how to go about the research – what question to ask. This approach is adopted in conformity with grounded theory precept in the original formulation by Glazer and Strauss in their book, The Discovery of Grounded Theory, they implore:

“*An effective strategy is, at first, literally to ignore the literature of theory and fact of the area under study, in order to assure that the emergence of categories will not be contaminated by concepts more suited to different areas*” (Glaser and Strauss 1967:37).

Even though the researcher did not ignore literature completely, what was read from the literature at the outset of this research could not connect with his lived environment and that of small/micro enterprises in this particular context. Thus, effectively, the literature was of no use. In fact, the literature has further fuelled his curiosity to really get at the root of the nature

of innovation in this context since there is disconnect between what he reads and what he experiences.

However, the protagonists/inventors of grounded theory also admonish the cultivation of what they call ‘’theoretical sensitivity’’ which they defined as “ability to have theoretical insight into an area of research, combined with an ability to make something of insights.” Although they warned against “preconceived,” “doctrinaire,” or “pet” theories (Glaser and Strauss, 1967:46). In a way the contact with literature is to have broad familiarity with the area to help in constructing a new theory. Thus, in a sense, the contact with the literature, either at the outset or further in the course of the research, could be taken to be an effort to cultivate theoretical sensitivity.

3.3.1 Case selection

One of the notable features of qualitative study is purposeful sampling (Welch et al, 2011).

Four interviews were conducted in the preliminary study with two sets of organizations, SMEDAN (Small and Medium Enterprises Development Agency of Nigeria), a governmental organization established to facilitate and promote the growth of SMEs in Nigeria and, BMOs (Business Membership Organizations). BMOs are different organizations to which SMEs in Nigeria belong. There are three main SMEs BMO in Nigeria; AMEN (Association of Micro Entrepreneurs of Nigeria), NASSI (National Association of Small Scale Industrialists) and NASME (National Association of Small and Medium Entrepreneurs).

The interviews were conducted with SMEDAN, AMEN, NASSI and NASME respectively. The head of SMEDAN in Lagos, the Secretary of AMEN, the Director of membership service of NASSI and the Lagos State Chairman of NASME were thus interviewed representing each organization respectively. The question basically centred on what they understood by innovation and at the end of which they were asked to nominate some innovative small firms. In all, a total of eleven small firms were suggested out of which the researcher selected eight that are in manufacturing industry. The interviews were recorded and transcribed. The time ranged from an hour to an hour and half. To ensure that the SMEs included in the sample have scaled the hurdle of extinction, the researcher had intended to include only those established five years and above, considering the argument that chances of small-business owners making it past the five-year mark are very slim (ILO, 2005). However, two of the SMEs were included, despite their young age, specifically because they received multiple nominations as innovative from preliminary study. All the eight firms were drawn

from three industrial clusters in Lagos, namely Matori, Ikorodu and Odongunyan industrial layouts.

The transcripts of the interviews were analysed and a model emerged from the analysis which depicted how these small firms innovate or what could be deduced as innovation emanating from these small firms. This formed the basis of conducting the second round of field study which asked all the participants in the first field study (except one which was replaced) to confirm the model that emerged from the first field study. In all, a total of 18 interviews were conducted, four from preliminary and seven each from the first and second field studies.

3.3.2 Research setting

The first thing that bears mentioning which also manifested throughout all the venues of the interviews whether in the factory or in the office was very poor power supply. The poor infrastructure – power, telecommunication (even though mobile phones were working, but the services were poor in terms of drop calls, poor network, exploitation by service operators, high charges etc), appalling road network etc are well known.

In all the interviews, there was no single case where there was power supply at the interview venues. One of the interviews held in an office that was extremely hot (African temperature measures an average of 32 degrees) such that the door had to be opened to allow fresh air to come into the office to make it habitable because the interviewee who is the owner either did not consider it economically wise to put on a generator set or did not have (the researcher could not confirm either). It is worth mentioning that there was accompanying interruption from noise filtering in from outside as well as some intruders seizing the opportunity for a chat with the interviewee. In other instances, the noise pollution coming from the generator set was deafening. One of the interviewees emphasised the implication of running on generator set as adding astronomically to production cost. In addition, they often have to bribe the workers in the electricity generating company to ensure power supply even though it is just for few hours in a day.

In another location where the researcher experienced no noise from the ubiquitous generator set due to the fact that the generator set was stationed far away from the interview setting, the incessant loud humming from air conditioners (most offices use air conditioners to cool offices due to high temperature) was a distraction. Most small scale entrepreneurs could not afford a new air conditioner and thus have to recourse to buying fairly used ones with

inherent defects such as loud noise they emit. In all, where the interview recording was not marred by noise from generator sets, it would be loud humming from the air conditioners.

Another common thing was the interruption from the workers to get direction or in some instance the interviewee taking time out to attend to some issues in production. Thus, there was deep involvement of owner in the production process. In all the cases, the owners were the formulators of the recipe of the products (soap, chocolate and wine) and they continuously tweaked to get better result/outcome in reaction to customers' complaints, implying constant interaction with customers. In one instance, the researcher was served with a wine to gauge his feeling about the taste of new formulation which was about to be release to the market.

The stress of securing interview consent and getting the interviewee to sit down to be interviewed was another. Of all the interviews, only two gave their consent willingly others had one tale or the other behind their consent. With regards to pinning down the interviewee to sit down for interview, it is noteworthy to cite the case of the first interview conducted. The reason for choosing the research participant first was, as a bosom friend, to give the researcher the leeway to have a no hold bar session - ask any question anyhow and seek his opinion in case other participants who the researcher was not so familiar with were not willing to answer such questions. Despite the deep affection and respect he had for the researcher, he cancelled appointments three times before eventually the interview was held due to unforeseen circumstances to which he had to attend. The researcher could not get angry because he quite understood the very stressful conditions under which SMEs operate. Even then, the researcher had to devise a strategy whereby he volunteered to go in the interviewee's vehicle to run all the errands he wanted to run for the day after which the interview was held at 7 pm when we came back together to the office. The researcher had to exercise patience to enable him attend to all the day's task while the interview was conducted as the last task before setting off for home. Thus, the researcher practically spent the whole day with the interviewee observing what the daily activities looked like for a typical entrepreneur. The return journey home took another three hours owing to traffic as a result of road construction. The researcher, and the interviewee, left home at 11 am and got back home at 10pm. But at that, the interviewee dropped off the researcher and he still spent another one hour on the road before he got to his destination at the outskirt of Ikorodu where he has his personal house. Many budding entrepreneurs face this challenge of spending long hours

commuting from home to office/factory because the only means to live in one's own accommodation is to get outside metropolitan Lagos where lands was somewhat affordable.

The discussion while in the interviewee's vehicle centred on various obstacles and impediments facing them and which they have to contend with. Similar experiences were related with the researcher in the discussion off record after the official interview. In any case, the researcher is a living witness to the appalling infrastructural situation in Nigeria. He also incurred a decent amount running generator set to keep his laptop working to enable him do his studies for the period he carried out the field study in Nigeria. Likewise, to keep connected to the internet was expensive and exploitative even though the service was poor. To illustrate the extent of suffering on the road, a journey from Ikorodu to Matori, all within metropolitan Lagos, took two and half hours due to road reconstruction of Ikorodu Road taking place at the period. To keep up with appointment, one has to give a very generous time allowance, a very precious and difficult commodity to an SME owner. These are problems the researcher is very familiar, in fact the reality he lives.

In another instance, it took hours to locate the factory/office at Odogunyan Industrial Estate, site of another interview, due to combination of poor road and heavy traffic. The researcher incurred considerable expenses on recharge of his mobile phone because he had to be continuously calling the interviewee to get direction to the location tucked away in a desolate area of the industrial estate. When eventually the researcher found his way to the venue, the interviewee was full of apology for subjecting the researcher through such stress lamenting that there would not have been any need for the researcher to take the tortuous road had the shorter route been developed. One can imagine the cost and stress the interviewee will be going through conveying materials and finished products to and from the location.

In another instance, the researcher was kept waiting for two hours because the interviewee was held up in traffic. The researcher and the MD were awaiting the arrival of the Marketing Manager who was supposed to be part of the interview. While we were waiting for the interview to commence the MD narrated the harrowing experience they go through from the custom officers to clear their imported raw materials for production; about how state officials routinely come to extort them for money; about how officials from regulatory organization also take their turn. This is on top of incessant power cuts and the need for them to provide their own power source at exorbitant costs, as well as service and maintenance of generator sets at high costs. All these factors escalate the cost of their product. It is a known fact that

the cost of doing business is very high in Nigeria, to the extent that TNCs are now relocating to Ghana, a neighbouring West African country whose infrastructural facilities are much better than those of Nigeria are and there is less corruption. The general feeling the researcher had from the interaction with the entrepreneurs was that they are operating under a very stressful condition.

3.3.3 Case study

Merriam Webster dictionary (2009) defines case as ‘’an intensive analysis of an individual unit (a person or community) stressing developmental factors in relation to the environment’’. It is important to define a ‘bound’ which represents the ‘case’ in the research (Yin, 2003). Cade study is no more than a field study aimed at collecting in-depth data that reflect reality of object of interest (Locke, 2001).

Case study in a strict sense is not a methodology as such but rather a choice of what to study, a setting of boundaries of object of study. Thus, case study could be studied qualitatively, quantitatively or even by mixed methods. It allows in-depth focus which produces rich and detailed data. A crucial feature of a case study is the context; its relationship with the environment. Case study research cut across various discipline in art, humanities and sciences and it is common empirical studies in management research (Flyvbjerg, 2011).

In this research, manufacturing micro and small firm constitute the case study (Yin, 2003). However, multiple case study design was adopted, but not for pandering to positivist criteria (Andrade, 2009; Amis and Silk, 2007; Gioia et al, 2013; O’Reilly et al, 2012), rather to enable deeper understanding of the phenomenon of study. It is noteworthy that the two leading scholars of case study, Yin (2014) and Eisenhardt (1989) have clearly shown in their writing that their philosophical underpinning is positivist as the quotations below indicate (Gioia et al, 2013):

‘the process described here adopts a positivist view of research. That is, the process is directed toward the development of testable hypotheses and theory which are generalizable across settings.’ (Eisenhardt 1989, p. 546).

‘Much of case study research as it is described in this book appears to be oriented toward a realist perspective which assumes the existence of a single reality that is independent of the observer’ (Yin 2014, p. 17)

The researcher was interested in identifying major themes through multiple sources which help to pin down this seemingly elusive concept of innovation in this context (Srinivas and Sutz, 2008). The researcher was prepared to be flexible and adaptive (Eisenhardt, 1989; Yin, 2003), thus was ready to go anywhere to get necessary data which will explicate the concept or phenomenon of interest.

Case study was adopted to generate data for the study. From the pilot study conducted, a number of MSEs were suggested as innovative. These were selected for case study based on the argument that it is

"a research strategy that examines, through the use of a variety of data sources, a phenomenon in its naturalistic context, with the purpose of 'confronting' theory with the empirical world". Piekkari et al. (2009: 569)

A major feature of qualitative study is that no prior hypothesis is formulated but the researcher goes into the field with 'blank' mind to gather data and allow data to 'speak'. Interview transcripts were read over and over again to identify phrases or sentences which were put in categories and themes. Common expressions or sentences were grouped into categories or unfamiliar terms were used as basis for categories (Charmaz, 2011).

In this study, simultaneous data collection and analysis commenced with preliminary study which resulted in a number of small firms being suggested as innovative. A theoretical sample of seven firms was chosen for intensive case study. At the end of the analysis of interview transcripts, a model emerged which depicted innovation in this context. This then formed the basis for embarking on the second field study. Dey (1999, p5) argue that flexibility entails choosing ''individuals to be included in the research, those which provide appropriate comparable data [and might prove valuable] for generating categories". In the second field study, a participant interviewed in the first field study was unreachable. Thus, a substitute was used as a replacement to i) make for the initial seven number and ii) to test out this model with someone 'neutral' i.e someone who did not participate in the first field study as a sort of triangulating the finding. In grounded theory, analysis of previous data determines where to go for the next data (Barney and Glazer, 196; Charmaz, 2014: Locke, 2001). Morse (1984, 228) defines a good participant as '' one who has the knowledge and experience the researcher requires, has the ability to reflect, is articulate, has the time to be interviewed, and is willing to participate in the study".

The main goal of the second round of field study was to confirm if the model represented the modus operandi as such whether it depicted their business and then inquired what constituted innovation in the model, measuring up to constructivist grounded theory approach.

Qualitative study entails subjective search for meaning, inter-subjectivity between the researcher and the researched. This also entails understanding of participants' subjective experience. The goals are to understand the particular context rather than generate law-like explanation (Welch et al, 2011).

Qualitative study approach is adopted because it enables social construction of reality in an interactive and iterative manner going back and forth between data, memo and literature to induce theory. Back and forth between literature and data helps to shape emerging theory.

The research started with the central goal to explore the nature of innovation in the SMEs Nigeria. Owing to lack of empirical evidence to fall on as a guide and lop-sidedness of innovation literature in favour of industrialised advanced countries and MNC, this led to pragmatic step of seeking opinion of people who dealt with MSEs in Nigeria. Thus, conduct of preliminary study in which organizations that interact with these small firms were asked to nominate those that were seen or considered to be innovative with a view to conducting an in-depth case study research to unearth their innovativeness. The first field study revealed a model. This model was confirmed in the second field study where the research participants corroborated the model as representing their innovation activities.

3.3.4 Description of data collection instrument

After reading the literature and coming up with the interview protocol, the researcher presented it before three of his bosom friends, all doctorate degree holders and academics at the University of Lagos, two of which obtained their doctorate degree from the United Kingdom to critique the basis for arriving at the questions. The two who had their doctoral degrees from the United Kingdom are Senior Lecturers from the Insurance and Actuarial Science Department while the third is an Associate Professor and Head of Department of Business Administration and Management. They initially questioned the rationale behind not explicitly mentioning innovation but after explanation by the researcher, they concurred.

The researcher did not explicitly mention innovation in the interview question because he wanted to avoid hyped responses. However, employing semi-structured in-depth interview

approach, the questions tiptoed round their experience over time with a view to sieving out what could be gleaned to be innovation within their context. Not finding any previous study to use as a guide, the interview questions centred on Schumpeter's (1939) classical definition of innovation. His classical definition examined this concept from five areas, namely new product, new methods of production, new source of supply, exploitation of new marker and new ways to organise business (Fagerberg, Mowery and Nelson, 2005). The other main question focused on learning and experiences of SMEs in the business environment. Learning activities takes place in all economies irrespective of stage of economic development (Johnson, 2011; Lundvall and Boras, 1997, Lundvall, 2002).

Observations were also made to complement the interview. Yin (2011) regards observation as a valuable data collection method in case study. All the interviews except one were held at the factory site in order to afford the researcher the opportunity to gain valuable insight. For instance, it enabled the researcher see first-hand what the production and working condition looked like. At the end of the interview, some of the SMEs owners conducted the researcher round the factory. In addition, the pictures of the products were taken.

3.3.5 Transcription

Right at the outset, the researcher, perhaps through serendipity (or Nigerian situation, due to constant strike action embarked upon by the academic union of universities in Nigeria) employed his nephew, an undergraduate student at Ahmadu Bello University as his personal assistant cum research assistant. He drove the researcher to all the interview venues and managed the recordings and transcriptions. The fact that he managed the recording enabled the researcher to concentrate on questioning, measuring reactions and following up appropriately.

He was also saddled with the responsibility of transcribing basically for two reasons. One, he is more adept at the recording device than the researcher is so he would be able to appropriately do a proper transcription, especially with respect to time and audibility. Two, the researcher could not withstand the high decibel of noise accompanying the interview recordings. Three, the researcher, as someone whose interaction with MSEs in Nigeria was ongoing, was already familiar with the experiences that were being recounted; he could feel it, perceive it, it was all too glaring to be missed. The researcher however transcribed two of the seven interviews.

3.4 Research Quality Assessment

The concept of construct validity, internal validity, external validity and reliability is often employed by quantitative research to assess quality of any piece of research. Construct validly measures the correctness or the reliability of the measuring instrument. Internal validity deals with establishing causal relationship between observed and predicted pattern. External validity concerns the extent to which the result can be generalised and reliability demonstrates ability to replicate study (Yin, 2014). These criteria are however inappropriate for assessing qualitative research because of the difference in ontological and epistemological assumptions that underpin the two approaches. To employ these criteria to judge qualitative study is, therefore, misplaced (Gibbert et al, 2008).

The corresponding assessment criteria in qualitative studies are credibility, transferability, dependability and conformability. Credibility refers to corroboration between reality constructed by research participants and researcher's representation of this reality. Transferability pertains to provision of sufficient details to enable reader judge in which similar context findings could be relevant. Dependability addresses provision of enough track and account for changes in the methodology employed and conformability relates to providing audit trails of where data come from and how conclusion is drawn (Bluhm et al, 2011; Guba and Lincoln, 2011).

To enhance the credibility of this research, the researcher presented the interpretation of the results, which was depicted with a model of innovation in this context, to the research participants to corroborate the findings whether it adequately represented them. Transferability was addressed by adopting tick description (Geertz, 1973) of the context of research with a view to determining whether the study's findings could be applicable to a different or new context. Dependability was taken into consideration by explicitly stating the methodology and the basis of choosing it as well as providing information on research design. Conformability is achieved in the study by keeping chain of evidence, use of multiple sources of data collection - interview, observation and archival data, as well as to provide a persuasive account of the study. Even though a reviewer might disagree with conclusion drawn but the factual account presented will be unassailable.

3.5 Reflexivity

Interpretivists recognise the fact that the researcher cannot divulge self from research because he is part of the social world. The main goal of this research is to reflect the lived experience

of SMEs because it is not portrayed in the mainstream innovation literature and that is what guided every step the researcher has taken, that is to paint a picture of innovation of small firms in this context.

3.6 Ethical consideration

This study was conducted following the research ethics of University of Salford's Research Council. Ethical approval was sought by the researcher and approval was given by the research committee. A copy of the approval letter is attached as appendix 5. In more specific terms, there were four main ethical concerns in this study namely: harming participant, informed consent, privacy invasion and deception (Bryman, 2001) and all were observed in this research. First, participants have been granted anonymity and confidentiality. Thus, the report will in no way be linked to them which may lead to harm as a result of their expressed view. Where specific details was given, the consent had been sought and obtained and the revelation will not in any way harm the individuals concerned. Second, prior to conducting the interviews, the consent of the participants had been sought and obtained. In addition, they all filled a form granting their consent. It was also specified in the form and brought to the attention of the research participants that any of them could withdraw his/her consent to participant at any stage of the research process. The interviews were conducted in factories, offices after appointments had been scheduled, and the participants fully consented. Third, the issue discussed was a general one which did not pry into their privacy, and they were at liberty to refuse to answer any question which they felt delved into their privacy. Fourth, the purpose of this study was to explore the nature of innovation in SMEs and this was expressly stated to all the research participants and there was no intention to deviate from this topic. The data was gathered for analysis, and only for this purpose.

3.7 Summary

This section provided a discussion of philosophical underpinnings and research paradigm behind this research. It explicated the choice of case study as methodology adopted and the reason behind it. Finally, it addressed research quality assessment from qualitative perspective.

The next chapter focuses on the analysis of data collected from the specific methods and general methodology described in this chapter.

Chapter 4: Data Analysis

4.0 Introduction

The previous chapter explicated the reason why case study approach was selected as the most suitable in line with research question which requires an in depth examination of how micro and small firms' innovate in this context. The approach enables researcher build in depth knowledge through specific examples of selected cases investigated thereby building theoretical understanding of phenomenal understudied (Yin, 2011).

This work is exploratory. It aims at building explanation of innovation in micro and small firms in developing countries. The outcome of the work is what Yin (2011) referred to as

analytical rather than statistical for generalisation. Thus, selected cases were purposely done to expand and understand innovation in the context studied.

4.1 Brief background of manufacturing micro and small firms in Nigeria chosen as case study

The sections below present brief background of the study, the coding procedures and the analysis of the interview transcripts. Details of each firm is explained in a table included as appendix 4.

4.1.1 Firm 1

The firm started manufacturing and marketing of cold water starch in 2006. The company is situated in Ikorodu Industrial Estate. The founder resigned from the only company which was the monopolist producing cold water starch to establish his own firm thus becoming a rival to his former employer:

The other competing brand was scarce. The same, second month, third month. They woke up to challenge us, it's like ehn before we started, it was only KOMATS that was doing cold water starch. So the thing they were fond of playing on customers' intelligence. So they are not ready, they were creating artificial scarcity, so we quickly came in to tap the opportunity (interview 1)

He seized the opportunity of non-availability of the product in the market to launch his own brand. The firm later introduced two other products, liquid soap and scouring powder, into the market. The company employed six employees and six freelancers who engaged in marketing, making a total of twelve employees' altogether. The interview took an hour and fifteen minutes and it was conducted with the founder/CEO of the firm.

4.1.2 Firm 2

The firm came into existence in 2011 and commenced with the production of liquid washing soap. The founder got the seed grant from the federal government after having won a competitive business plan writing competition, 'You Win'. The firm is situated at Industrial Development Centre located in Ikorodu, an exclusive enclave for small businesses. The firm has nine staff working both factory workers and marketers. She later added stain remover, insecticide, hand sanitizer and recently added mosquito repellent cream to her collection of

the products. There are nine employees altogether. The interview was conducted with the founder/CEO of the firm.

4.1.3 Firm 3

The firm was established in 1990 with the production of wine. The firm later added varieties of alcoholic, non-alcoholic red and white wines. The firm is located at Matori Industrial Estate, Lagos, another exclusive area for small and medium enterprise. The firm has twenty five employees and twelve freelancers. The founder/CEO left one of the multinational firms to establish his own business. He is well regarded in the industry because of his expertise in the brewery industry. The marketing manager said the statement below about him.

For the expertise yeah, they come here. He consults for them, and many of them, believe me it may interest you to know that many of the two leading brands in the sparkling market, in Nigeria today, were eh, formulated and improved upon too, by, by him, and the leading brand is produced by him here for a competitor who is the market, leader in that sector (interview 3)

The interview was conducted with the founder/CEO and the Marketing Manager of the firm.

4.1.4 Firm 4

The firm was established in 1991 and started with the production of chocolates. The firm has its manufacturing and operating base in Matori Industrial Estate, Lagos. It is the only indigenous firm manufacturing chocolates. There are two different products; the premium chocolate sold and consumed by end user and compound chocolate which serves as raw material for industrial use. The interview was conducted with the two children of the founder who are now managing the business.

4.1.5 Firm 5

The firm was established in 2005 and started with the production of chalk but it later introduced two other products, white board marker and crayon. The firm is located at Odogunyan Industrial Estate, Ikorodu, Lagos, another exclusive area for small, medium and large business enterprises. The founder also got the seed grant from the federal government after having won a competitive business plan writing competition, 'You Win'. The interview was conducted with founder/CEO of the firm.

4.1.6 Firm 6

The firm started with the production of body cream in 2003 and later introduced balm for pain and rheumatism as well as various brands of hair cream with all having herbal components. The firm is situated in Ikorodu Industrial Estate. The firm stopped production for about a year due to inability to get the product registered by the regulatory agency, NAFDAC. There were seven employees and six freelancers at the point of interview. The interview was conducted with founder/CEO of the firm.

4.1.7 Firm 7

The firm started operation in 2003 with provision of fumigation service but in 2006 it delved into production of liquid soap, herbal soap and toilet cleaner. The firm is located at Industrial Development Centre, Ikorodu. The staff strength was fifteen full time staff and thirty five part time marketing staff. The interview was conducted with the founder who also doubles as the Managing Director.

4.1.8 Firm 8

The firm was established in 2008 and it started with the production of soap and sanitisers. It later went into the production of other products such as disinfectants and perfume. The firms is located in Odonguyan Industrial Estate in Ikorodu and has a staff strength of five full time and fifteen part time engaged in the marketing of the products. The interview was conducted with the CEO of the firm.

4.2 Coding procedure

One of the cardinal procedures in qualitative data analysis is coding. The study adopted initial coding as suggested by Charmaz (2014). Coding is a ‘’bottom up technique in relation to data’’ (Urquhart, 2001: 105). And Strauss (1987: 27) contends, ‘’ The excellence of the research rests in large part on the excellence of the data’’.

It is worth noting that there is no hard and fast rule with regards to coding (Gioia, 2012; Alvesson, 2013). However, in general the procedure adopted was that labels were assigned to units of meaning. Initial codes were labels attached to chunks of data from the interview transcripts. These are purely descriptive with no interpretation. Then similar initial codes were put into categories. The figure below depicts the procedure followed in progressing from data to emerged categories.

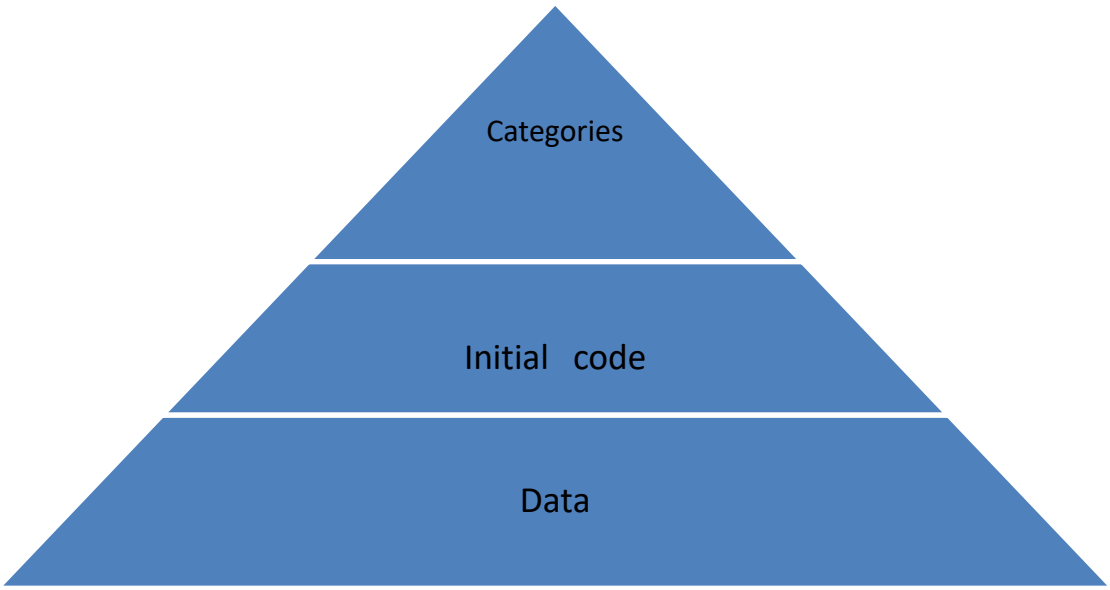


Figure 4.0: Coding Procedure (Source: Author)

Simultaneously whilst coding, memos were written to make meaning of the coding exercise clear and derive categories and theoretical concepts. Glaser, (1987; 83) defined memos as ‘’the theorising write-ups about codes and their relationships as they strike the analyst while coding’’. The combination of coding and analytic procedure is used to generate theory in grounded theory (Glaser and Strauss, 1967)

4.2.1 Initial codes

The rigorous process of making meaning out of the mountain of data generated from interview transcripts started with initial coding. Rather than adopting rigid coding procedure of word for word, sentence for sentence or paragraph by paragraph, with research questions and objectives of the study at the back on mind, codes were formed when complete ideas or related concepts were discerned from a piece of data. To produce initial codes, transcripts were read over and again severally in order to capture what was related and of importance to the research main goal. In order to be mentally immersed, case by case analysis was done. The first code the researcher did was the first interview because it took the longest time. He figured out that it enabled him to cover a lot of grounds. The initial coding for the first case was painstaking and most difficult because it took several days to complete. Coding subsequent cases were less painful since the initial codes had been identified from the first case, it was easier pigeon holing the codes into the boxes already created from the first. However, this did not preclude creating new codes where new data could not fit neatly into existing boxes.

4.2.2 Categories

After the initial coding, the identified codes were compared with one another finding similarities and differences in order to determine emerging categories and their properties. That was iteratively done with each transcript. In all, five categories emerged through constant comparisons some initial codes merged in order to arrive at the five. However, one category emerged the core category. Glaser (1987; 94) urged researchers to discern core category from others and he defined it as one that ‘’accounts for most of variations in a pattern of behaviours’’. What emerges as the core category in this study is the eco system since it has overbearing influence on other categories. Glaser and Strauss (1967) suggest that researchers should continue gathering data until categories are saturated. While theoretical saturation cannot be claimed but it could be sufficiency (Dey, 1999). The second field study was thus employed to extend the properties of the emerged categories in order to reach sufficiency. In grounded theory, researchers hardly reaches complete analysis but reaches saturation when there is enough density in the categories which enables him/her to tell stories (Locke, 2014 note taken at a grounded theory workshop held at University of Leeds). Categories essentially depict how codes relate to one another. They are patterns that are identified or appearing across board.

4.3 Findings from the interviews

In presenting the findings, the narrative style was adopted which did not necessarily follow sequence of events. Direct quotes of participants were used to maintain chains of evidence as well as produce vivid explanation. Efforts are made to show the construction of categories as transparently as possible to enable readers follow the reasoning behind emergent themes. Categories were produced from data through coding process. The section below explains the bottom up process constructing categories from the initial codes generated from the raw data.

The five themes that emerged from inductive data analysis are (i) identification of product to be cloned (ii) Gradual increment or improvement (iii) Tweaking of different formulations (iv) Massive promotion through personal selling and (v) Internal and external ecosystem. They are presented below. In view of the exploratory nature of this research, the section has adopted a thick description (Geertz, 1973). One of the hallmarks of qualitative studies is copious quotations from participants (Andrade, 2009; Gioia et al, 2013).

4.3.1 Identification of product to be cloned

It is noteworthy that in all the firms studied, as expected, none of them had a new to the world product. Of the total of the eight firms, five of them produce broad range of household consumable hygiene products for cleaning and disinfectants. The remaining three produce chalk and white board marker, wine and chocolate. In all the cases, the products were imitation or cloned products of multinational companies or imported products. As one of the participants alluded,

I was going through super markets, trying to see the foreign products, I saw that they were different from our Nigerian products, what did these people do to make their own different? (interview 2)

What thus prompted cloning was the desire to manufacture products that match imported quality with respect to quality, indicating dissatisfaction with existing local variants. The imported products were cloned because they were scarce, not readily available and expensive. One of the participants referring to imported whiteboard markers opined:

….those ones are imported, they are a bit more, one, they are not eh so eh they are very scarce in the market and very expensive, you understand…. (interview 5)

The major incentive for cloning the imported items was their scarcity in the market as well as their relatively high cost in relation to the target market, the people at the lower rung of economic ladder.

The reason for cloning could also be due to awareness created by imported brands and the raising of the consciousness of general masses with respect to hygiene as alluded to by another participant.

in fact what encourages us is the opportunity that exists in the, a, a, a, clean eh, that is, cleaning industry because the opportunities are there wide enough , especially now that eh the consciousness of eh, many Nigerians and including the individuals, eh, using eh, a antiseptic as a form of fighting eh, bacteria and germs, the consciousness has been aroused. So, in fact the market is there already, to empower, we Nigerians to, we, eh, we, credit ah, I mean DETTOL , as already certified the market, so we have to tap into the opportunity. (Interview 7)

The multinational firms with their international brands, like Dettol for instance, have established their presence in the market and raised awareness for hygiene. However, because these products are often beyond the reach of common man due to their relatively high cost, the local ones come in to fill this vacuum.

Similarly, inability of the multinational products to reach remote part of the country due to logistics of distribution exacerbated by poor infrastructure create vacuum which the small firms exploited as the statement below attests.

There is the market there, everybody is constantly working with this hygiene and everybody there, you just wants to look good and everybody wants to be clean, so the mentality now about hygiene is higher than the way it used to be in the olden days. We have a lot of brands that are already in the market, but they can still, there are still places that these brands do not reach maybe because of the roads that are not very good or they feel that the cost of transporting it to one place or the other is much. (interview 2)

As can be deduced from the above quote, multinationals may not be able to reach remote areas with their products due to the fact that it may not be cost effective for them at the end of the day, especially considering the affordability of the poor people living in the remote areas. The other reason why multinationals may find it difficult to reach remote areas is due to poor road networks which then makes the locally cloned substitutes capitalise on this opportunity.

Another participant a manufacturer of wine drinks whose Managing Director has expertise and recognised in the industry to the extent that he produces on contract for his competitors, commented thus:

…already, you know Nigeria will stay and be making, market so the potential will be so huge, that if you are not careful, you will just turn out product per second per second, because you have the expertise. (interview 3)

The participant in the quote above looked at the big Nigerian market with respect to population and argued that if these small firms did not exercise restraint, especially those ones that have the capacity to come up with different innovative products, they may be tempted to come up with series of differentiated products.

Another participant a manufacturer of chalk and white board marker when asked if he had the production capacity to meet the demands of the target market made the statement below:

By the time we were able to, claim that we were able to meet all capacity, then I don't think I will be ranked as a small medium enterprise anymore, that means I must have added cadre to another level, frankly speaking there still a lot of demand we are still unable to meet….(interview 5)

Implicit in the above statement is the fact that there was large market of target group out there but due to resources available to the firm at the moment, it could not satisfy this market and at the same time it did not have resources to upgrade to higher production level.

The target market largely consists of people at the middle and lower rung of the economic ladder. These are the people who cannot afford to buy the multinational products because of the poor level of their income.

We have a product that will do the same thing as mine, that'll cost hundred percent more, another one fifty, some with same pack, and some lesser. Now the ones lesser definitely are not as good quality as mine. So what we try to do, we work at this, the we try and work such that, our product have the same quality with the one, that cost hundred percent more, then try and work as much that we, we package similar almost similar in quality, not similar that we look the same any way, the quality, is similar to those ones that are hundred percent more, yet the price is that low, such that the common man can buy it and feel good. (interview 2)

The participant above identified three categories of products which are substitutes. The costliest refers to the multinational products which are targeted at people at the upper level of economic ladder. The costlier one, the category her product belonged, is target at the people at the middle class and strives to appeal to the upper class. The last category is the poor quality ones. Thus, efforts are made to imbue the cloned product with quality so that it can be attractive to middle-income level that might not be able to afford high price of imported even though it is coveted.

The statement below graphically portrays the characteristic of the target class, the middle class. They are people, generally speaking, below those categorised as rich even though it is difficult to argue that there is middle class in the Nigerian set up.

You know when I was creating this stuff, I was looking like many people, especially in this part of where we are. We find out that we have the average citizens, we have people that, manage to buy, I call them people that manage to buy a bottle of Coke every day and not feel a pinch. Now those are the people we are actually looking out for. People have this mind-set that the rich are far up, the poor are down where they are. Now if you can and they feel these beautiful things are always for the rich, as in no, we can bring this thing to you, say me? hen, my house fit dey scent like this? Sorry that's pidgin, my house can be smelling good like this? We say yes it's affordable, ehen are you sure? You understand, so they start having this mindset of. I am clean. We are okay you understand so that that that's ehm what we trying to work on, so this mind-set that okay ooo we might not have all the money in the world, but we are can have all the things that the rich people have , that makes a house, you

might not have that antic wood, chair, or beautiful things, but your house will smell as good as that extra hot senators house, you understand, so those are the things we are working on (interview 2).

It is worth nothing that the products are fairly easy to produce because the production process is simple, does not require sophisticated machinery. Often times the product is released into the market before securing approval of the regulatory agencies, NAFDAC (National Agency for Food and Drug Administration and Control), the principal agency responsible for approving products in this particular industry. There was a particularly striking experience of a participant whose factory was closed down by NAFDAC but resuscitated thereafter due to strong determination:

Make sure you achieve that your goal, determination matters in whatever you are doing like as I told you that, many failure come ordinarily in the first place, they disqualify it. I had to do again are you getting my point? So when they first stop me for the first time I didn't give up are you getting my point? Until I made sure that I achieved that my, my goal, but I think I thank GOD that I can be able to employ some people now that are working under me (interview 6)

The participant above initially got his factory closed down because he was producing without NAFDAC's approval. However, he bounced back through a dint of hard work and determination. Almost all the participants got the experience in their previous related multinational firms with some even starting their production side by side while still working:

I started working in the Production Department, so from there we started this for the years that I stayed I continued having experiments because later I become the Purchasing Manager. Later we become something like just like the production mana, manager, so I was assisting in production so from there I started grabbing, you know in production the key to production is more you move more you learn, more you move, more you make it practical more you learn so that is what is the production you cannot just fold your hand and say I will not do, more you move more you learn sometimes you are moving with the people sometime with the people you people you will even accept more knowledge how do you to this, so that is what is, even when I was working with a company I have to produce (interview 6)

The participant above related how he started paying attention to how products were made when he was posted to Production Department. He made efforts to obtain as much knowledge as possible from observing and asking questions, with a view to probably starting his own firm which he actually did before leaving the employment.

To some other participants training and interest could be what precipitated their going into cloning multinational products:

I stayed at home one more year, no job, opportunity came for me to learn, I now did, and my background in biochemistry helped me to pre, pro, to produce something different from what the contemporaries produce, because as a biochemist. I understand the interactions between the chemicals and my health, but the ordinary man will just do soap, soap, soap so I was now working on like I was using my background in Chemistry to actually do more (interview 1).

The participant above combined training on how to make soap which she learnt while still looking for paid job, and her educational background as a trained Biochemist to launch into production.

There was however a striking case where a participant who had hitherto been nursing idea of starting his own business capitalised on induced scarcity to launch his competing firm:

It's like ehn before we started, it was only KOMATS that was doing cold water starch. So the thing they were fond of playing on customers intelligence, so they are not ready, they were creating artificial scarcity, so we quickly came in to tap the opportunity, so first month, we sold very well, second month, third month, yes but … they came back to fight us (interview 1)

The participant with the above narration was a member of staff in the only firm that then manufactured cold-water starch. He had been nursing the idea of establishing his own firm even while still working for this firm. What, however, precipitated leaving the firm to start his own was induced scarcity that the firm can afford to stir up since they enjoy monopoly.

It bears mentioning that these small firms go through considerable stress to get approval from regulatory agencies. They conceive of a product either through cloning of imported or MNC or formulation of product imbued with herbal product, they then push the product out into the market and gradually improve on them until they meet the target market taste and then seek approval from the regulating agency. A common thread across all these firms was regular and incremental improvement in the products so cloned.

4.3.2 Gradual increment or improvement

Having overcome the hurdles of identifying products to replicate and mobilising required resources to set up, the next crucial factor is to focus on continuously improvement to meet the taste of the target market. One of the participants who manufactures cold-water starch explains how the product is improved upon in these words:

Yes yes we've tried as much as possible to make it more cold water soluble at least to be able to dissolve in cold water, within three minutes maximum. Yes at least we've been able to work on that and we've been able to work on the fragrances we are using at least to upgrade it, to make it more attractive (interview 1).

Another participant manufacturing chocolate expressed similar sentiments with the narration below:

Hmm, yes I will say there has been improvements, eh for instance our premium chocolates initially we use to experience ehm melting. You know chocolates melt and you know we are in tropical region, so we use to experience ehm, ehm melting, so we had to go back and do some research and come up with the another product it will still melt but not as quickly as our initial product line that's for premium chocolate (interview 4)

Another participant that manufactures ranges of household products, which include liquid detergent, has this to say when asked if there has been improvement on the products:

Drastic improvement, anytime we produce the product, we produce something better than what you had the last time (interview 2).

Perhaps because it is a continuous of circle of producing and pushing to the market to get customers' feedback to gain perfection, this is especially noticeable at the initial stage of product existence as noted by a participant below:

Yes, yes that's what I tell you that you improve every time. If there is any any complaint, because we always tell our customer if there is any complaint, they have to report to us in order to amend the eh, because you cannot claim perfect it's only the public will tell you what is okay, are you getting my point (interview 6)

The above statement indicates that the firms continuously improve their products through the feedback they get from users. Another participant, manufacturer of various ranges of wines, in response to a similar question on product improvement affirms:

Yes, eh, there have been some small changes yes before let me take the example of the cabre that's why it was not the carbonated product, but as we were able to try at least to stay in along with the, leaders (interview 3)

Perceptible from the statement above is effort to match the quality of their product with the cloned product. These firms use the imported or multinational product as threshold to gauge

the quality of their product. Another comprehensive statement below details the mechanics of how these small firms constantly renew themselves to remain competitive in the market:

Yes improvement, in this will, we make sure that eh we do intermittent market survey, One, we look at products that are, emerging products, emerging products in the market, we look at their quality, we go buy them, we see them apart from gaining feedback from people, compare with what in terms of brand, in terms of everything, compare with what we are doing, you understand, because something is eh, there are some, things that appeal to people , the branding. You understand, so we discover, we, we look at that, that ah, okay, ah!, this our package has been for like two three years, okay what do we do to, make it add something to it, to make it a bit look newer, more attractive, see how whatever we can add in addition, to what is there currently, okay oh! In a new pack, in a new terms of you know packaging like branding, and also in terms of the quality, eh the material input, for instance there are some materials we use, that we discovered that eh, when there is any emerging new, even when we discovered there are new materials in the market, we looked at okay. Let's sample this new one, with what we have been using before, let's see if it's going to make any further impact, on it, so we tried to experiment, so if we discovered that we don't need to change from what we have been using, we just leave it if we discovered that there is need to change, then we say okay, let's alter it a bit to One, just to ensure that eh, we maintain that eh the quality used (interview 5).

The above statement identified and discussed two dimensions in which these small firms make efforts to level up with multinationals: packaging and quality. They know quite well that the cloned products are better off on these two dimensions, they therefore make considerable strive to make their own product close to them since they know they cannot match the cloned products in these two dimensions.

Another dimension of continuous improvement is reflected in the variation in size as a result of feedback from users as the statement below states:

In fact, when we, we started, we started with, the 125ml per bottle, we found out that is too small, many of our customers they, were demanding for more, so we as time goes on, we now, added eh, 250ml, now we have 1litre to it. Not only that, in the same eh, I think this the, free time we have, direct fix now, of it, we have eh, the wag, that forms in green color, we have the one that comes from a wine colour, so that eh, we have the same, applicable to other products, in fact we give our customers variety to make a choice, depending on what they need so far we meet up their demand (interview 7).

A participant emphasises the importance of continuously being on guard by constant monitoring and improvement by giving an anecdote above; a multinational, which used to be

dominant in the market but has now been relegated due to tough competition from substitutes:

We are still learning, you understand, some of the things we are still doing, now, we are still on the road, so, we still work, like when you came now, some things you asked, we say okay. From there we are able to see how we can, make do, you asked question then, that eh, how do we improve on what we do, we don't just go and sit back that ah, we have gotten there no. What I would say is one of the problem is that eh, sorry to use this example, I think Maclean those days, Maclean is only about the only tooth paste, it got to a point that eh, when you want to call tooth paste, you call it Maclean unknowingly, I think, don't know what happened sha, it just, I don't know whether they slept or whatever (interview 5).

The firms realise that to sustain their presence in the market, they need to embark on continuous improvement to meet the need of the target market. The process of constant and continuous improvement requires trying out and tweaking mainly the raw materials employed in the production of the products.

4.3.3 Tweaking different formulation

Tweaking entails combining different formulations of raw materials to arrive at an acceptable product. There are two types: of raw materials and finished goods. Tweaking of different raw material components to arrive at good quality as well as tweaking of different formulation to arrive at good products. Informal market researcher plays a significant role of helping the tweaking process especially the latter.

One factor that is perceptible and common to almost all the firms is the deep involvement of the owner in the mixing or trying out of different formulae to reach 'right' quality. This could be as a result of preserving the trade secret, in this case the 'right' formulation after series of trial and errors. In response to the question about the most valuable asset of the firm, a participant says:

Yeah I'll say raw material, I'll say raw material, because One, why I say raw material, well I would have said machines, but raw material in the sense that, eh, like Coca Cola now, Coca Cola, what, what, makes it, what make it distinct in the market is, the .. that formula ehen, is still unknown (interview 7).

That is the thing that makes you different from another one no matter ten brands like Coca Cola too no matter how Pepsi or any other brand coca cola will still be different from Pepsi, now no matter what you do no matter how many years you work in that place, you will never know exactly what it is

they do, as time goes on definitely I will, I will shift away, but then I'll know I've gotten somebody else who will already knows how I mix up someone I could trust and even at that still I will still be some step that I will still come in(interview 7).

The heavy involvement of the owner could also be due to possession of expertise in the industry as the case of one of the participants, a wine manufacturer who was trained in a multinational firm but established his own firm afterwards. He is so acknowledged as having expertise in the industry to the extent that competitors outsourced production to his firm.

For the expertise yeah, they come here he consults for them, and many of them believe me it may interest you to know that many of the two leading brands in the sparkling market, in Nigeria today, were eh, formulated and improved upon too, by, by him, and the leading brand is produced by him here for a competitor who is the market, leader in that sector, then the challenger at least help them to get a to set up their own plant (interview 3).

The statement above was made by Marketing Manager referring to the Managing Director/owner. Both the Marketing Manager and the owner were interviewed together.

The tweaking and involvement of the owner could be because of peculiar knowledge such as herbal formulation as in the case of another firm that uses herbal concoction in its product.

You know that you are natural, are you getting my point? You understand all those natural something are you getting my point? When you are in the village you see that whenever you have a problem of something like this maybe your this thing will say go and take something so, so leaf and use, are you getting my point? From there you started grabbing something when you take it first of all, mix it by yourself and use it by yourself and move and give other people to use, to know whether that particular leaf is working that is what I told you about immediately we are testing something we always when we use that thing when we see that this thing is working we first of all use it for a little production and give people to use, people will now give us the result and that will be use it by myself my family will use it, I will see the result of it before I now bring it out that is exactly what we do (interview 6).

The participant above claimed that he got the knowledge of herbal formulation due to his interaction, by paying close attention to elderly ones in the village. He then came to the city and put this knowledge to use in ''modern'' form. The product so produced is given to people to use and the feedback obtained is channelled to tweak until it reaches acceptable standard.

The product of this nature is often tested among trusted friends and members of the family free of charge just to get feedback among trusted allies before releasing to the market.

before you take it inside the market even inside the market still give it to your best customers try and give this thing out, you don't sell it, let them confirm it are you getting my point? You can use any how label attach it to them let them, test it, after testing it then you say that this product is okay are you getting my point? If there is any complaint any amendment they will see it, then you repair it and bring it to them in the market (interview 6).

It is particularly noteworthy that series of trial and error in this case could take a long period to arrive at the 'right' quality. Obviously it is after it has become accepted in the market that approval will be sought from the regulatory agency.

Hmm, then people started selling it as I tell you my relaxer now I give it to many saloon, as a what am intending to make sure that I produce nothing less than the relaxer that is not hot, on the hair you can carry it as long as, you like it, and it will relax well, and it will not pain you it will not cut your hair, it will not give you any skin damage, and that is what I have been researching, and people now are confirming it that is okay, that is very good, and if not, even some people come here to get it without even label, because it take me a time even though it may take me up to a year to get what I want, you understand I always make sure that I make the exact and is like whenever it come out in the public, people will now admire it (interview 6).

In addition to tweaking of different formulations, there is also the tweaking of raw materials because the source of raw materials determines quality as well as the price which ultimately affects the price of the final product.

I could remember, the very first plastic component, we actually, imported, we imported from Germany. When you compare the price with the one imported from china, in fact the variance, was so large, that in fact we have to work very, we have to like, before we were able to, before we could sell those product, and not eh, making loss on them. It took us a very long time, so there after we said that okay, what is important in a marker pen, is One, the, ink, let's make sure that the quality of the ink is very good one, now, instead of us importing from Germany, we also looked at let's see how we also source our own components from where they get theirs too in china (interview 5).

These firms are obsessed with infusing quality into their product because they are competing with multinationals that they admit have superior quality. Nevertheless, they strive to match the quality of the multinational:

if we can give an example, of product like that we have in the market that, eh, okay, okay, hmm, okay I don't know, I may be right or wrong, there's a particular product that I know about, this peak, Peak Milk, Peak Milk, they are under, brands of eh, either liquid or powdered milk, but, when you look at eh they like, they are consistent, with their quality, their brand and everything like that, even though, I

don't know if you prefer that Peak Milk anyway but am talking about myself, but when you look at their brand and things like that, they are consistent (interview 5).

The participant uses product of multinational, Peak Milk, as an example of how he ensures that he is consistent with quality of his product like the product referred to.

The tweaking could as well aim at reaching quality standard that makes the product to appeal to people at the top economic ladder:

So this mind-set that okay ooo we might not have all the money in the world. But we are can have all the things that the rich people have , that makes a house, you might not have that antic wood, chair, or beautiful things, but your house will smell as good as that extra hot senators house, you understand, so those are the things we are working on (interview 2).

Although the people at the upper ladder sometimes look down on local products as a participant alluded to in the statement below:

I have noticed that should I call them the upper class, yes people who have been exposed to foreign products, they tend to look down on our Nigerian product now (interview 2).

As small firms who cannot afford hiring firms for market research, they embark on informal study of trends in the market.

We make sure that eh we do intermittent market survey. One, we look at products that are, emerging products, emerging products in the market, we look at their quality, we go buy them, we see them apart from gaining feedback from people, compare with what in terms of brand, in terms of everything, compare with what we are doing, you understand (interview 5).

In response to question on formal market research, another participant honestly answered:

A market research, no, ah, we did not conduct a market research, the nearest to say, a market research was, the, the sales pattern from the distributors that we are associated with (interview 3).

A participant narrated that some people are specifically saddled with the responsibility of sampling users' views in the market and how the information so obtained can be used to improve the product:

Uh, you, like I I earlier told you that as result of, ah, our eh, guys that are into the research. You understand our research department, what they normally do is that, they go out to find out how the market look like, what are the thing you can do, to add value to the product, and this where innovation comes in (interview 7)

The information gathering to tweak and improve the product takes place on a regular basis. This occurs daily through interaction with people at the channel of distribution such as the wholesalers and the retailers:

Yeah In fact we gather information on daily basis any time we go to, I mean we visit them, we always make them to comment, in fact me what I always do is that, (I ask) is there any problem? So I always expect them to bombard me with series of challenges of problems they are encountering with our products. So on daily basis, we gather information (interview 1)

One dimension of tweaking to renew the product emphasised by almost all the participants was the packaging. Multinationals use quality packaging to differentiate their products.

Okay ehm right now we've worked on our packaging, so it's different, because if you see it, you know it's different, then the quality, considering, because when you say competitors, we have, them in different, cadres, and different category. We have a product that will do the same thing as mine, that will cost hundred percent more. Another one fifty, some with same pack, and some lesser, now the ones lesser definitely are not as good quality as mine. So what we try to do, we work at this, the we try and work such that, our product have the same quality with the one, that cost hundred percent more, then try and work as much that we, we package similar almost similar in quality, not similar that we look the same any way, the quality, is similar to those ones that are hundred percent more, yet the price is that low, such that the common man can buy it (interview 2)

The packaging adds colour to the product, makes it attractive to both existing, and may even help win new customers as the statement below attest:

What people buy is what they see, and packaging is part of what customers are buying. So when you come up with an improved ehn, package, definitely you are, one is bound to win more customers, the market share, there is tendencies that the market share will go up, but people are now, will see you, in another colour, or seeing you, in another way, and any good looking product, will attract more customers (interview 1)

Packaging is also used as a means to bring about a small increase in the price. This is because by improving the packaging to level up to that of multinationals, it gives room to add a little more to the price.

Yes, even it's another avenue to jack up price, when you are coming out in another colour, people will see it as an improvement. So it's an opportunity for one to increase ehn price, definitely any ahm good packaging. Definitely will increase your , if you want to have ehm good, packaging will increase

your cost of production, and the, as long as you are able to do that successfully is an avenue for one to increase price, especially when you are coming up with an improved ehm packaging (interview 1)

The market research acts as a bridge between tweaking and continuous improvement which is further reinforced by feedback from the market:

I think the packaging , turn please (motion to the interviewer to turn around and look at the poster that was behind) this is just four of the recent product we make, that's the liquid wash, that's the stain removal, the air freshener and the germicide. You know as beautiful as they look, maybe because I've looked at them too much, am seeing some adjustments that I could make to make them look better, that's majorly the one am looking at the packaging (interview 2)

Another noteworthy dimension of tweaking is the using of similar raw materials' combination to produce another product:

These small firms have wide array of products to make up for the ones that are not performing well in the market:

Why I started doing so many brands is that, one will definitely make up for the other (interview 2)

Yeah last month, that was introduced in December, so we are okay like that, if I see a need, that is still within like I said the raw materials are interwoven, that's still within the raw material range that I could just use, and it's different slightly different that I could create a brand new start afresh(interview 2)

One reality that became apparent from this study is that packaging and labelling could be used deceptively to attract people at the upper echelon and claim that the product is imported as the narrative below portray:

You know like I said in the system. Nigerians are I think I want to call it mediocre mentality, they don't really believe in themselves they don't believe anything very good can come out of Nigeria , so when you bring something good, they don't see it as they see something made in USA or something, I met someone one time and said why don't you put made in USA, I have an uncle abroad that I'll use the phone number, I said why? Said people will buy it more, truly I saw not too far that's what they use for their own lotion, but I feel we shouldn't do that because Nigerians are the best for Nigeria they know what we need, and how to go it. So that is one, that mentality of foreign product is better than Nigerian products, then ehm majorly that is what I have seen so far, ehm I've seen people who have tried to give us a chance (interview 2)

4.3.4 Massively promote through personal selling

The last stage is personal selling or ‘’street storming’’. There are two categories here. The first is people who are at the lower economic cadre who cannot afford costly substitute. For them they require little persuasion to buy. However, it is the second category, the middle class that requires a little persuasion.

The main strategy of promoting and getting the product accepted by the target market is through personal selling. As it has been noted earlier on, these smalls firms are essentially made up of two department: production and marketing. While the production is important for tweaking and arriving at the ‘right’ quality, which explains the heavy involvement of the owner/Managing Director guarding the formula so arrived at, which now becomes the ‘trade secret’. Marketing is crucial for generating income, keeping the business in continuous existence and withstanding the onslaught of competition from big competing firms.

Thus, there is emphasis of training of the workers that embark on marketing because, unlike production where the owner is actively involved, it is practically impossible for the owner to be everywhere, even though the owners sometimes go out on field work with the workers:

At times I go out with them, before going out, I sit them down lecture them on what marketing is all about(interview 1)

The moment I employ anybody I train, I have to train, and all of them I trained them at lea st groom them to the level at which they are operating today, irrespective of the course they must have undergone at the university (interview 1)

Marketing essentially entails soliciting sales. This concerns the trick of getting the target customer while persuading and attracting potential middle or upper class:

We train them on how to handle the customers, how to sell, marketing, handling the customers, portraying yourself well, portraying the brand well…. now we are working on middle class, now the middle class are not the poor, they are people who they wish they could have more, but they are comfortable (interview 1)

One other crucial aspect of the training is how to ensure cash rather than credit sales since credit sales will incur additional overhead cost. Thus, the salesmen are trained to ensure cash sales as much as possible:

I sit them down lecture them on what marketing is all about, how to solicit for patronage, how to handle rejection from customers, then how to get, money, because it' s one thing for you to sell. It's another thing for you to ask for money, so you have to know how to ask for money, so that you'll not incur more account receivable (interview 1)

It is noteworthy that these firms know the appropriate media to promote their products. Even though they know that they will reach large audience if they use the television medium, they will rather delay that until they become big firms when they can afford it and the brand has become well known:

Yes in the nearest future, we are thinking of going to TV advert, because we are looking at over time now, more people have known the product, more people have tested it. So it's hardly in which you know now, there is hardly any room that'll not say yes, I know them now we know this people, so imagine we don't know about……..so you won't just spend so much money advertising, you'll rather use that money to employ more marketers, go out talk to p eople one on one, share their and from their comments too, you get to improve you understand (interview 2)

Recalling how his competitor, a big organization that can afford to do advertise, tried to fight back on realising that a small firm had emerged trying to snatch the market from them. In this particular case, the product was out of the market due to scarcity created by the big firm. The participant capitalised on the scarcity to start his own and he relates:

Yes they reacted by becoming more aggressive in their publicity, in their advertisement. They've gone on air to advertise the their product, I mean they advertise on radio, on Tv, so just to subdue our company but surprisingly because am a marketing person too. So I concentrated more on the, I mean on the grass roots moving closer to the end users so as they are advertising, and unfortunately for them, they used the wrong media, you understand how many Nigerians, have access to TV? Despite you understand, most people don't have access because of poor power supply, then, the our target audience, are more or less like the people at lower cadre in the economy so perhaps they might not appreciate . They they, they watch TV but they might not really show much interest in watching Tv. So what I had expected them to have done is to do more of street storming which we are doing, you understand we don't spend much but we'll achieve a lot. (interview 1)

There are different dimensions of massive promotion. There is what is called ‘’street storming’. It is a carnival like mobilisation of a number of marketers focusing on a particular location with a view to bringing the product to the awareness of the area.

Street storming is where, I mean getting merchandisers, sales people, then go into the streets door to door selling, so that's what we do so door to door selling will give us access to the end users, they, they, they can ask questions immediately. You know when you advertise on TV fed back might not come immediately. But through street storming they buy, they give you feed back almost immediately…. it's more effective than going on air (interview 1).

They are leveraging on reputation of the cloned product, they have to put up concerted efforts to promote the product in order to gain acceptance from the target market. It seems though that the target market might not be able to afford the price due to general poverty level. Thus, massive promotion is aimed at both bringing the product to the awareness and persuading to buy at the same time:

when we produce, we always go out go with eh my workers or my employees we move round I encourage them, we always move round to make sure that, sometimes we even, dash people to go and use, for them to know, how the effective it is, after using it, they started looking for it (interview 6).

The one that requires most concerted efforts is perhaps that of product with herbal composition. The statement below is a typical description of what is called local advertisement:

That is advertising a product now, is that eh we can start eh you make you just make eh draw your, your diagram or how to move if it is eh ketu area I want to go this week make sure you finish that Ketu area and Mile 12 between that place you move to another place if it is, Agege and Iyana paja you make sure between that week you move Agege and Iyana paja, with your vehicle and if you don't have a vehicle, you can be moving are you getting my point? Although I have a flyer that sometimes we share are you getting my point? And if it is, Mile 2 I will already know, I will do something, to make sure that within that week we go, we always get to week by week are you getting my point? That's how we do it, after that we repeat it again, because immediately after that week what we do is, before we give them a week go and visit after then, before you go back to that place by that time, before you go, many people have used used the product and know how it is they will now started telling their neighbors come this product is very good (interview 6).

There is considerable effort made to wean the product until it is well known. It is likened to a politician canvassing for vote in an election or weaning of baby:

It (the promotion of the product) take a lot of things just like a somebody wanted to rule a, to rule a, nation are you getting my point, it takes you a lot of time, that is from local to state from state, to, to, federal is a is not an easy something is the product……. just like a nursing baby the time that you bath you, the time, the time that you rub him cream the time you the time you breast feed him, just like

that is a body of research and if you did not give her the necessary thing that she need you will see that she'll be lacking. So that is exactly what is in the product, and eh advertising it on locally or, base when there is no much money to advertise in eh television and other places so that is only where our product can, which is where is okay (interview 6).

These small firms often prefer direct sales to end users because it enables instant feedback which helps in refining the product.

You know, when you do direct one on one with the customers you know you hear certain things that you may not even imagine that it could be a complaints, and truly might be (interview 2).

A participant who was initially using wholesaler distribution network discarded this channel for the simple reason that wholesalers stock a number of products so that they will not put a particular focus on any product.

We've boycotted wholesalers and sell directly to retailers…(wholesalers don't) persuade people to pick, they don't have the time because they are dealing with so many products so any one that is fast moving is what they are going to concentrate on. Therefore, when I discovered that, I decided to boycott them and sell directly to the retailers, that will now sell to the end users. You know in any I mean in any given market, we have few of wholesalers and more of retailers. Though it's stressful selling to retailers, because that means you have to break bulk (interview 1).

A strategy they employ to gain market acceptance is penetrating price by charging slightly below the price of competitors, who are usually multinationals or imported, to entice target market to buy:

I remember when we introduced our chalk into the market, the price was a bit lower than the market price, then they sell like, let's say for, am I correct okay, yes they sell like for #430, and we give out a little bit lower #420 or so, we saw it. Okay let's give it a trial, and when they discover that it's even better off, let me tell you now, currently now our price is, is the high. I mean how do I use the, in terms of price now is more they still buy, so it takes time, it's a natural trend, so, it's for you to get acceptance first, then money will come (interview 5).

They also give incentives to distributors in order to encourage them to stock their products as a participant described below:

Enticing them with some, some eh, incentive, mouth watery incentive at the initial stage, to attract them, and eh you know it is natural, they buy, the ones that are imported, they make like #2 margin

and you are giving them, same quality, that will, that they will get like #4 margin, on it, they will market your own first (interview 5).

Also, they do sell on credit as a form of enticing retailers to stock their product even though they face some risks of bad debt:

You know Nigerians workers are not trustworthy, so the issue of credit has been reduced, drastically, so we, we make, a policy, that anybody we are supplying, we must make sure you pay, in cash or at least, you pay 80% percent of the cost of the product (interview 7).

Another means by which channel of distribution is enticed to promote their products is through loyalty scheme:

One of the things we also do is that eh, we like eh we came up with eh what they call it, this eh loyalty scheme, whereby we pay to distributors, so they earn money, earn more money (interview 5).

4.3.5 Business eco system

The hurdles to be innovative start with initial capital for commencing the business. To start up business and expect to get finance is like a camel passing through the eyes of the needle:

I have to be looking for people that can assist financially because it's a bit capital intensive, because no bank will encourage fresh, or start up, we were put down , so I have to rely on people then my own personal savings, so we have to put them together to start the business (interview 1).

Another participant put it this way:

One of the challenge we have is finance, its synonymous to every business in Nigeria, an d reason being that access to finance is usually very ah how do I say it? If not ehm very difficult, because no financial institution, would want to like give facility to start up ,they'll tell you that they want to first see what you are doing, and see the prospect before they can, ahm stick or commit themselves to anything so the little funds (interview 5)

Another participant related his experience in the following words:

We don't find it so easy, you know to start a small medium, a business without finance or support, you know it may be a difficulty and we raised many product and ehm, the product face lack of eh, finance because we are doing it through the market, before we are able to reach this stage (interview 6).

The participant above implies that to main source of capital injection into the business is through surplus generated after deducting overhead. Thus, surplus generated is ploughed back to grow the business which takes ages for the business to expand.

The number one infrastructural headache to these small firms is power supply. It is mentioned by all participants and the researcher is a living witness to it. In all the interviews with the participants, there was no instance where the national grid supplied electricity; rather it was from a generator set, with its accompanying noise, which affected the recording. Actually, the power supply is so irregular and unpredictable that the firms do sometimes do away completely with national grid and rely on a generator set so as not to disrupt the production process as a participant explains below:

is issue of eh power, it's still affecting us, now we are fuelling, with, eh like diesel we use, to empower some of our machines, and is very expensive, and we cannot stop production, mos t especially if we are mixing, we don't use eh NEPA because, it will stop and, give us problem along the line, so you have to power your generator, so how do you do it? We buy the diesel, it affect our cost, so these are some of the challenges, we run on generator, like since yesterday now, we have been running on generator, there, so is a, is a, challenge, we always overcome it through, adding at least a token to the, price of the product because no doubt they might, importation that foreign (interview 7)

This further renders locally produced items less attractive to imported Chinese products; they are even inferior to the one produced locally

We still have to make up with our generator, things like that so, those ordinarily you know drive up production cost, and eh and you return will end up to determine how much the selling price will be and ehm, some of our products here, most of them are like imported from asia, when you consider like, most of them are actually eh manufactured in china, and you know what it is, what they enjoy in ehm china there, one ehm the production cost there is much lower than what we have here in Nigeria, so we have to compete, with eh those ehm, products (interview 5)

To get round power supply problem, some devised the procedure that limits power and employ more labour but might not get the desired result because this specifically has to do with machine that mixes. Another participant argues that machine mixes better than using manual:

We have the machines that we could use manual with it if there's no power, so we are constantly working light or no light (interview 2).

Further investment and growing the business depends solely on ploughing back meagre saving from profit. That explains eagerness to obtain foreign support. The researcher in private discussion outside recording noted that two participants were soliciting his assistance for foreign assistance to enable them expand.

Many participants complained of the desire to embrace high tech, especially packaging (quality wise, they compete with MNC, just require sophisticated packaging to match MNC). When asked why he did not obtain the packaging machine, which will enable him, compete with multinationals, a participant said:

It's finance, finance is the issue, finance is the issue because to get that one needs nothing less than two Million to have the one that can give us better finishing . But presently I don't have the money (interview 1)

The firms do not have any R&D collaboration. As a result, expectation of new to the world product or processes is futile in this environment. In fact, entrepreneurial effort to forge collaboration with research institution was met with frustration due to bureaucratic bottleneck (typical of developing countries):

Yes yes I do market research, part of market research is what I've told you, we went to them to receive some information come back home analyse and ehm work on the information and data rather, then on the, quality I've had cause to go to FIIRO on my own to rub mind with them, and see how best they can help us improve on the quality of our products, but .....Yeah we know it's a civil service thing so am a business man they are not proactive, let me put it that way (interview 1)

Not to talk of excruciating and cruel treatment from regulatory, governmental agencies. All tales of woe outside tape. Frustration galore even with those who did not participate in the study. A participant relates an instance of harassment which is a common occurrence because it was corroborated by another participant:

Because as a result of the harassment of the Kick Against Indiscipline (KAI) even if you have, all the papers with you, they will like to come and exploit one or the other, even when you show them the papers so these are the problems (interview 7)

The case of multiple agencies coming around once weekend is approaching to extort money under flimsy excuses constitute another hindrance to operations in these small firms.

You see all of them coming around for Friday, eh, I think you cannot refuse them, you know, by the time you put those issues together in terms of money, …… ehm, the regulatory they can come, just come on a visit, and when they are going the usual thing is that you have to give them something (interview 3).

A participant off record narrated an incident whereby National Road Safety Commission (NRSC) officials arrested his distribution van on the ground that the tires had expired. He had

to get another bus to convey the items with attendant cost implication. Another complaint relates to indiscriminate tax which did not take cognisance of income, thus amounting to arbitrary imposition:

Okay let's look at the, tax for example, direct they don't look at your case, they don't look at case by case ehm, in their tax regime. They just use eh, rule of the thumb, eh, approach to storm in with that, so even for a particular year you are not, able to even break in, is not easy (interview 3)

In addition to the above identified external constraint, they have to grapple with internal challenges. Quite a number of them complained about staff non-challant attitude to work, pilferage etc. Outside tape, related experience of pilferage, outright abscondment with sales proceeds when on maternity leave:

I just see ehm the youths have a bad work mentality, they don't want to struggle, they just want to sit down, and hope that one condition, or one thing will just, one bonanza or so will just come and they will make it. That's just what I have observed about our young people, our young people and many of them will just prefer to come to the office, write, write and say yes ma, ….at the end of the month they collect something, no matter how small, they don't want to just take that risk, they tell you ah there's sun I don't want to stress myself (interview 3)

4.4 Innovation observed in this context

At firm level, to be innovative is essentially channelling resources from one activity to another more profitable. Entrepreneurs in micro and small firms solely drive the process. This is what is observed in this case.

4.41Incremental innovation

All the respondents confirmed the existence of incremental innovation in the micro and small businesses studied. This comes in forms of improvement in the formulation of products.

'Yes yes we've tried as much as possible to make it more cold water soluble at least to be able to dissolve in cold water, within three minutes maximum, yes at least we've been able to work on that and we've been able to work on the fragrances we are using at least to upgrade it, to make it more attractive' (interview 1)

Yes I will say there has been improvements, eh for instance our premium chocolates initially we use to experience ehm melting, you know chocolates melt and you know we are in tropical region, so we use to experience ehm, ehm melting, so we had to go back and do some

research and come up with the another product it will still melt but not as quickly as our initial product line that's for premium chocolate. (interview 4)

yes that's what I tell you that you improve every time, if there is any complaint, because we always tell our customer if there is any complaint, they have to report to us in order to amend the eh, because you cannot claim perfect it's only the public will tell you what is okay, are you getting my point, we can produce thing that is okay, but when it get to the market before they will now say if they saw that you're the only thing admit your fault. (interview 6)

For instance, to make the product more soluble, it is worth bearing in mind that this is consistent with the context of study as radical or new to the world state of the art products are not expected from this micro and small firms. Product innovations seen here are neither new to the world nor new to the industry rather they are imitation or cloning of imported items. Noteworthy is the fact that idea for improvement comes mainly from the consumer rather than the suppliers as the case may be in the advanced economy. Significant improvement in products could be either of two ways. Formulation of ingredients for production or improvement in packaging, identified as a means of price hike.

The request for improvement often comes from consumer as the statement below indicates:

Yeah In fact we gather information on daily basis any time we go to, I mean we visit them, we always make them to comment, in fact me what I always do is that, is there any problem? So I always expect them to bombard me with series of challenges of problems they are encountering with our products. So on daily basis, we gather information (interview 5)

It could also come from the retailers:

Yeah I mentioned that earlier on by meeting the retailers in the open market, interact with them, gather as many information As possible then come back home to analyse and then, though it's not all the information most of the time that are useful, but we collect as many information as possible, then we come back home, analyse and now improve on those one that we think can help our business (interview 4)

These entrepreneurs introduce herbal content for improvement.

it is an idea that emanated from me based on the value of aloe vera itself in skin replenishment and texture of the skin based on the research I have done; not based on request from people and when we introduced it to the market and told people why it was part of it they purchased it because of the values they derive from it.(interview 14)

Another innovation observed here as fitting this context is the introduction of quality control mechanism, most of the firms interviewed mentioned the institution of this measure in their firm.

Today in business, because, you cannot produce without analyzing, you must analyse what you have produced, because even the product, that, eh, eh, you are producing, you must analize it at the end of the day, otherwise if you have a problem, you can, close, the regulatory agency, they are there, they can go to the market and pick the product, and analyse, and if it give a different result, you are in problem, so the, we always emphasize it on them, and that is one of the criteria, that is the standard, you call it, a standard, operating procedure, maintenance of quality, like the analysis, of the product, both the raw material and the finished product (interview 5)

4.4.2 Process innovation

Process innovation is less evident in the study except with the introduction of hand mixer to enable mixing in the absence of power. However, the respondents noted that hand mixer produces poor mixing unlike electric mixer.

4.4.3 Organisation innovation

The third form of innovation in classical literature observed here is the organisational change. There is evidence of this in the switching from wholesaler to retailer. The interesting thing here is the quality of the product as the moderating factor.

In addition, the firm dispensed with distributors because they often do not promote the product adequately and sell directly to consumers:

'Yes for now, we are better off, because we are at the growing stage, because the product is not known to everybody and we want to give it maximum exposure, so selling to retailers will assist in giving the product, maximum exposure. Though just as I've said it's stressful, then the cost implication definitely will be higher than selling through the wholesalers ehen, but because of the publicity aspect, you understand or the exposure, so we've opted for the retailers' (interview 6)

As a small and young business, the firm could not afford advertising but resorted to ''street storming'' which is a form of organisation innovation:

'Street storming is where, I mean getting merchandisers, sales people, then go into the streets door to door selling, so that's what we do so door to door selling will give us access to the end users, they, they, they can ask questions immediately. You know when you advertise on TV fed back might not come immediately. But through street storming they buy, they give you feed back almost immediately' (interview 12)

Chapter 5: Discussion

5.0 Introduction

The overall aim of this research is to explore how micro and small firms in developing countries innovate. This becomes imperative in view of Western dominance of mainstream literature, from where the research in this field originated, which does not take into consideration developing countries' context, more importantly micro and small firms segment in this context. Thus, to represent this neglected context and highly under researched area, small firms constituted the sample for this study in Nigeria, Sub-Sahara Africa, representing highly differentiated developing countries. To this end, two research questions guided the thesis:

- How do micro and small firm innovate in this context?
- What are the barriers confronting innovation in this context?

Employing inductive thinking process, participants' opinions, deduced from interview transcripts, as well as the researcher's observation and understanding of the terrain were used to throw more light on the research problem: the nature of innovation in micro and small firms in developing countries. The initial codes and the emergent categories were all derived or grounded in data. The model below represents the findings and answers the research questions set out at the beginning of this study. This model explains the process of innovation in this context within the SMEs studied; it is not a predictive but rather an explanatory model

5.1 How do micro and small firms innovate in this context?

With regards to how micro and small firms innovate in the Nigerian context, a total of five themes emerged, namely: (i) identification of product to be cloned, (ii) Gradual increment or improvement, (iii) Tweaking of different formulations, (iv) Massive promotion through personal selling and (v) Internal and external ecosystem. They were presented below. In view of the exploratory nature of this research, the section has adopted a thick description method (Geertz, 1973). These five unique themes are represented in Figure 5.1 below.

5.1.1 Identification of product to be cloned

On the identification of product to be cloned, all the eight firms studied noted that they were not really producing products that were new to the world product, but within the Nigerian context, these products are new. For instance, five of the firms produce a range of household consumable hygiene products for cleaning and disinfectants, while three other firms produce chalk and white board markers, wine and chocolate. When these products are critically evaluated and assessed in terms of novelty and innovation, they could at best be described as imitated and cloned of products of multinational companies in developed countries or imported products found in supermarkets that stock foreign products. The sampled firms were prompted to explore the options of imitation and cloning of products that matched imported quality because the consuming public were dissatisfied with existing local products. The imported products were also cloned because they were expensive and were not readily available. The major incentive for cloning the imported items was therefore to meet the expectation of the consuming public by producing at lower cost, boosting availability and economic returns. Related reason for cloning is associated with the awareness created by imported brands and quest for standards or respect to hygiene. The multinational firms with their international brands like Dettol have established their presence in the market, which has raised awareness for hygiene for ages. Unfortunately, these products are often beyond the

reach of common consuming public because of their relatively high cost, the local ones come in to fill this vacuum. Linked with reasons above, another factor is the inability of the multinational products to reach remote parts of the country due to logistics of distribution exacerbated by poor infrastructure, cost effective, affordability of the poor people living in the remote areas and poor road networks. All these factors make the locally cloned substitutes attractive as viable options.

The Nigerian firms surveyed in this research, leveraged cloned substitutes because of the large market for exotic products. The target market largely consists of people at the middle and lower rung of the economic ladder, who cannot afford to buy the more expensive multinational products. There are three categories of products in the market; the costliest, the costlier and the poor quality. The costliest refers to the multinational products which are targeted at the people at the upper level of economic ladder. These are mainly imported products found in exquisite supermarkets patronised by the well to do in the society. The costlier one, the category the products of the entrepreneurs interviewed in this study belong, is targeted at the people at the middle class and strives to appeal to upper class. The last category is the poor quality ones, despised by both high and middle class. Thus, efforts are made to imbue the cloned product with quality so that it can be attractive to middle income that might not be able to afford high price of imported ones even though it is coveted. It is worth nothing that the products are fairly easy to produce because the production process is simple, does not require sophisticated machinery. Often times the product is released into the market before securing approval of the regulatory agencies, NAFDAC (National Agency for Food and Drug Administration and Control), the principal agency responsible for approving products in this particular industry.

A common thread across all these firms is regular and incremental improvement in the products so cloned. Cooper (1996) had long argued that three cornerstones of successful product development are process, strategy, and resources, but the most critical of the three cornerstone is the need for a high quality new product process that affects performance. A high quality new product process entails an emphasis on up-front homework, product definition, the voice of the customer, tough decision points, a focus on quality of execution, and a flexible process. It is important for firms to overhaul new product processes from mere idea to launch in quest for real product superiority in the market domain. In another study, Oyelaran-Oyeyinka, Laditan and Esubiyi (1996) studied industrial innovation in Sub-Sahara Africa with specific emphasis on Nigerian manufacturing industry, the study found that

product innovation was more prevalent than process innovation in the sectors studied. Furthermore, incremental innovation aimed at correcting technical imbalances was predominant. Adaptive innovation, innovation adapted to the locality rather than radical innovation, new to the world innovation, was the main findings as expected of the context of study.

5.1.2 Gradual increment or improvement

After the hurdles of identifying the product to be cloned by the Nigerian firms interviewed for this research, the firms focused on continuous improvement to meet the taste of the target market and the expectations of the consuming/buying public. Improvement techniques employed by these firms as innovations included adding fragrances, boosting product durability, more additives for lasting experience to elicit more attraction to the product from the consumers. The firms also continuously improved their products through the feedback they got from users. In the area of research and development, the firms investigated do not have a formal research and development unit but use the imported or multinational products as threshold to gauge the quality of their products to enhance their competitiveness in the market.

Besides, other two techniques employed by the Nigerian firms to improve their cloned products are packaging and quality improvement through constant monitoring and improvement. These techniques are necessary to make cloned products closer to the imported brands produced by the multinationals. These techniques have paid-off as some imported products have been relegated to the background because of stiff competition with local brands. The process of constant and continuous improvement requires trying out and tweaking mainly the raw materials employed in the production of the products. The above submission is supported by the empirical works of Abereijo, Ilori, Taiwo and Adegbite (2007), which assessed the ability and competencies of the 100 manufacturing industries operating in the Food and Beverages; Pulp, Paper and Paper Products; and Plastic and Rubber Products industrial sectors' 100 SMEs in Nigeria to innovate. The results revealed that none of the 100 SMEs in Nigeria achieved major innovations that could be considered unique and science-based. It is imperative to mention that only 43% of the selected companies obtained average innovative index, an indication that the predominant innovation type found in all these companies was mostly incremental, while 14% of these SMEs demonstrated some level of originality in their innovative abilities because of the higher academic attainment in the

fields of science or engineering, and relevant working experience in large corporations/multinationals and university/research institutes of the founder/manager.

Product improvement require innovation capability, a term which refers to the ability of the manufacturers to make major improvements and systematic modifications to current techniques, methods, systems and technologies with a view to creating ones that would yield the desired expectations (Romijn and Albaladejo, 2004). Innovative capabilities, especially leveraging firm-specific skills in information communication technology, electronics and core industrial sectors are indispensable to the operation of the core routines of organizations. The firm-specific skills in mechanical engineering is crucial to the automobile industry and biotechnological skill is critical to pharmaceuticals and food industries (Oyelaran-Oyeyinka and Lal, 2006).

5.1.3 Tweaking different formulations

To sustain the process of gradual increment or improvement of products to meet the taste and expectations of the consuming/buying public, the need for tweaking different formulations is imperative. The market research acts as a bridge between tweaking and continuous improvement which is further reinforced by feedback from the market. Tweaking as previously explained entails combining different formulations of raw materials to arrive at an acceptable product. It is series of trial and error that takes a long period to arrive at the 'right' quality after which approval is obtained from the regulatory agency. There are two types: of raw materials and finished goods. Tweaking of different raw material components to arrive at good quality as well as tweaking of different formulations to arrive at good product. Informal market researcher plays significant role of helping the tweaking process especially the latter**.** This stage is necessary and the owners of the firms get directly involved for preserving the products' trade secrets. Apart from the trade secrets, the owners get involved in tweaking because of peculiar knowledge in technical areas like herbal formulation and concoction to get the right products. The tweaking process is also important for reaching quality standard that makes the product to appeal to people at the top economic ladder. The research information required to tweak and improve the product takes place on a regular basis. In manufacturing, the tweaking process is a form of learning. The learning takes the form of a structured research and development (R and D) programmes and other informal and incremental efforts geared towards problem solving and experimentation with a view to stretching production (Abereijo et al., 2007; Romijn, 1999). To gain competitiveness in the harsh market domain, tweaking the rules of economic activities become expedient to reduce

production/economic costs and gain a competitive advantage over other competing firms (Delavallade, 2012).

Tweaking occurs daily through interaction with people at the channel of distribution such as the wholesalers and the retailers. The bigger firms have the financial resources to hire researchers to aid the task of data gathering for tweaking, while small firms that cannot afford hiring firms for market research embark on informal study of trends in the market. Tweaking helps in the choice of packaging. Packaging is also employed as a means to bring about a small increase in the price. This is because by improving the packaging standard to level up to that of multinationals, it gives room to add a little more to the price. The packaging and labelling add colour to the products and makes them attractive to both existing and may even help win new customers. Packaging and labelling could be used deceptively to attract people at the upper echelon with the claim that the product is imported. The trick is to ensure quality package and put a label indicating that the product is made in any of the European countries. The insights from the foregoing discussion is that innovation climate in developing countries is clearly different from that of advanced countries. Owing to the forgoing, it is obvious that the standard designed for measuring innovation in advanced countries would not fit to measure innovation in developing countries' context. For instance, in advanced countries, innovation is measured by such items as patent or R&D. however, considering the educational situation, it is clearly infeasible to use this measure to gauge innovation. Educational levels are very low in developing countries and that accounts for the reason why their level of industrialization is equally low for there exist a direct correlation between educational attainment and industrialization. Pre-industrial era is dominated by low demand for literacy, industrial era is marked by/with skill requirement which entails considerable education. The new era or knowledge economy requires high literacy from the large section of the population since education enables flexibility of work force (Aubert, 2005).

Innovation is a desirable activity, but access to innovation is constrained by the wave of globalisation in developing countries. Ernst (2002) theoretically investigated the disruptive changes that globalization imposes on innovation systems in developing countries on strength of three propositions. In the final analysis, it was established that the developing countries must blend diverse international and domestic sources of knowledge to redress the present weakness in adopting innovation systems for production. Secondly, the developing countries must leverage a greater variety of international knowledge linkage through globalization to reduce the poor level of innovation. Thirdly, it was established that globalization embeds

organizational innovation in the forms of spread of global production networks, systemic integration, and creation of new opportunities for international knowledge diffusion. Indeed innovation is beneficial to economic development, it is colossal. This presumption was investigated using cross-sectional data on the 37 countries compiled by GEM 2002. Impact of innovation on four types of entrepreneurial activities as measured by GEM Total Entrepreneurial Activity (TEA) rates was examined (high growth potential TEA, necessity TEA, opportunity TEA and overall TEA). It was found that only high growth potential entrepreneurship has a significant impact on economic growth, an indication that fast growing innovative firms accounted for majority of the new job creation stimulated by the SMEs in developed countries (Wong & Autio, 2005).

5.1.4 Massive promotion through personal selling

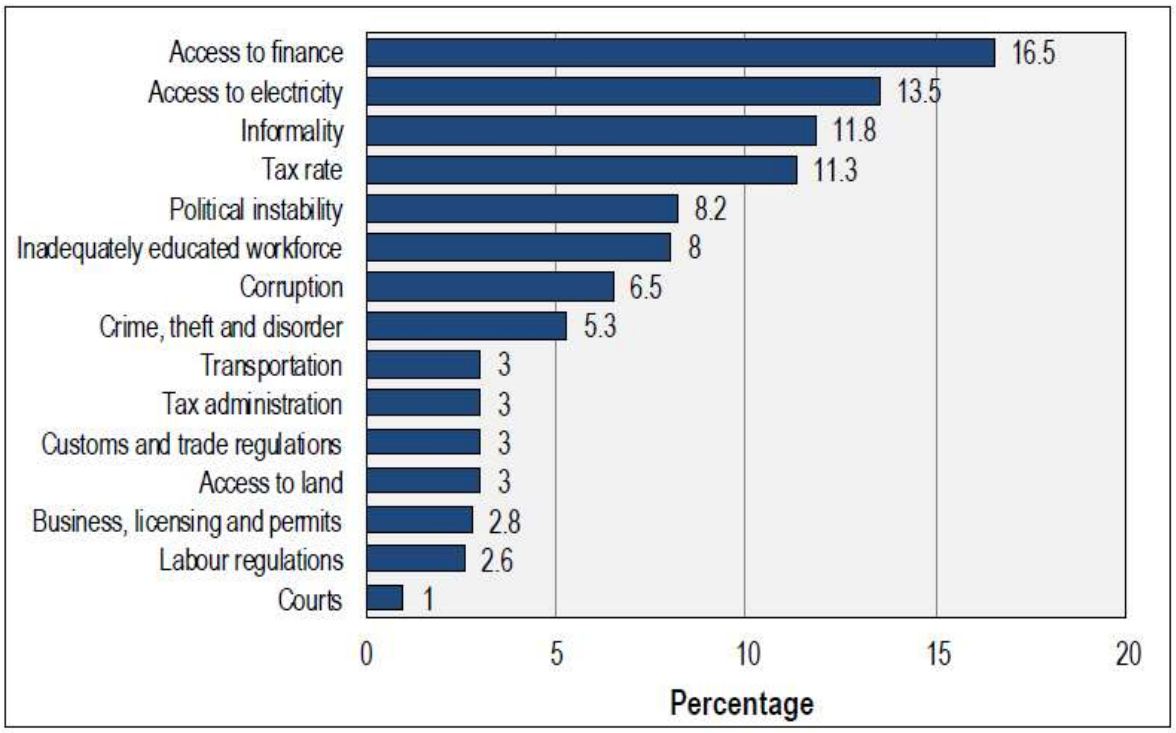
The last stage is personal selling or street storming. It is a carnival like mobilisation of a number marketers focusing on a particular location with a view to bringing the product to the awareness of the area. There are two categories of users targeted by the manufacturers. The first set of people are at the lower economic cadre who cannot afford costly substitutes. For them they require little persuasion to buy. The second category of people are the middle class that requires a little persuasion. The main strategy of promoting and getting the product accepted by the target market is through personal selling. While the production is important for tweaking and arriving at the 'right' quality, the marketing is crucial for generating income, keeping the business in continuous existence and withstanding the onslaught of competition from big competing firms. Considering the importance of economic return on investment on production, the manufacturers place emphasis of training of the workers that embark on marketing because, unlike production where the owner is actively involved, it is practically impossible for the owner to be on field for marketing. This is a task reserved for the workers. Marketing essentially entails soliciting sales with a focus on tricking to get the attention of target customer while persuading and attracting potential middle or upper class. The salespersons are also trained to ensure cash sales as much as possible. These small manufacturing firms also engage appropriate media services to promote their products to reach large audience. Media services are deployed as reactionary measure to repel the advert of big multinational firms of tv and other electronic outlets. The above discussion is supported by the viewpoints of Armstrong, Kotler, Harker and Brennan (2012) that the most critical factor driving marketing strategy is a focus on customer value. Manufacturers and service providers need to pay special attention to customer relationships, the creation of value

and brand equity. The firms interviewed are right in their views that they employ strategy to gain market acceptance through penetrating price by charging slightly below the price of competitors, who are usually multinationals or imported products, to entice target market to buy.

5.2 What are the barriers confronting innovation in this context?

The first barrier to innovative start-up is access to initial capital for commencing the business. For most of the firms interviewed, the main source of capital injection into the business is through surplus generated after deducting overhead. Thus, surplus generated is ploughed back to grow the business which takes ages for the business to expand. Indeed finance is a major constraint to innovation in the developing countries context. As stated in the review of literature, finance is critical to innovation and new technology adoption. The long-standing theory that the growth of small firms is significantly constrained, by the quantity of internal finance was empirically examined by Carpenter and Petersen (2002). Using a panel of over 1, 600 small firms, it was confirmed on the basis of the responses from the firms surveyed that the growth of firms is constrained by internal finance.

Figure 5.1: Major challenges facing small business operations in Sub Sahara Africa (Source: IFC Jobs Study (2013).



The table above identified major constraints confronting small business operations in sub-Sahara Africa. Access to finance ranks highest followed by power supply. This conforms to the findings in this study, which also pinpoint access to finance and access to power supply.

The second barrier to innovation in the Nigerian business ecosystem is infrastructure. The number one infrastructural headache to these small firms is power supply. It is mentioned by all participants and the researcher is a living witness to it. In all the interviews with the participants, there was no instance where electricity was supplied by the national grid; rather it was from generator set with its accompanying noise which affected the recording. As a matter of fact, the power supply is so irregular and unpredictable that the firms do sometimes do away completely with national grid and rely on generator set so as not to disrupt the production process. Nigeria's experience with regards to new technology adoption is similar to Thailand. In Thailand, using a case study, Intarakumnerd, Chairatana and Tangchitpiboon, (2002) examined the national innovation system (NIS) in Thailand with a view to understanding why the country is less successful in technological catching-up relative to developed countries. It found that Thailand was less successful in innovation because the development level of Thailand with regards to innovation (product and process) has no link to its economic structural development level as the country transited from agrarian to an industrial economy. In other words, the country is conservative with regards to innovation and new technology adoption.

Small firms in Nigeria do not have any R&D collaboration with research institutes. Consequently, their products or processes cannot meet the need and expectation of the changing market environment. And, where entrepreneurial efforts are made to forge collaboration with research institutions, the moves are often met with frustration caused by bureaucratic bottleneck (typical of developing countries). In one instance, one of the entrepreneurs interviewed sought to collaborate with a national research institute on local raw materials but the effort was frustrated. R & D collaboration could be functionally developed through clusters development. Furthermore, cluster have triggered the emergence of innovation-based competition across the globe, thereby removing the traditional barriers to trade and investment in the global economy. Giuliani and Bell (2005) provided support for R & D collaboration in clusters. They investigated the influence of individual firms' absorptive capacities on the functioning of the intra-cluster knowledge system and its interconnection with extra-cluster knowledge. It was found that innovative knowledge is not evenly shared or

diffused among all the firms in the clusters. Rather innovative knowledge flows within a core group of firms with advanced absorptive capacities. In other words, some advantaged firms are technological gatekeepers, while others are isolated firms within the clusters investigated.

Related to the barrier above, the firm reported the excruciating and cruel treatment from the government regulatory agencies especially the Internal Revenue Service, which imposes indiscriminate and arbitrary taxes. Consequently, this has negatively affected the quest to innovate and undertake business risk. This allegation of arbitrary tax structure was alluded to by Raimi et al (2011) that the Nigerian tax system has practically imposed negative repercussion on individuals, commerce and industry in terms of employment generation because of the flagrant imposition of multiple taxes by the three levels of government in Nigeria.

Apart from the external constraints discussed above, the selected firms grappled with internal challenges such staff non -challant attitude to work, theft of raw materials, pilferage, outright abscondment with sales proceeds, for example when on maternity leave. Empirical studies provide support from the discussions on barriers to innovation facing SMEs in Nigeria. For instance, the barriers to innovation facing SMEs in Cyprus was investigated and found that barriers to innovation in the developing context were not different from those facing SMEs in industrialized countries. The major barriers are supply of finance, access to skilled labour, peculiar environment constraints and ineffective role of Government policies (Hadjimanolis, 1999). Another study undertaken by Hadjimanolis (2000) investigated the factor affecting small firms in Cyprus, a small developing country. Using questionnaire instrument administered to 140 manufacturing small and medium sized firms, the study found the major factors affecting SMEs innovation as strategy, expenditure on R&D, co-operation with external technology providers, use of technological information sources and overall performance of the firm, while environmental variables such intensity of competition were not barriers to innovation. Whereas in Nigeria all the factors above including intensity of competition are barriers to innovation as enunciated by the firms interviewed. Another recent study found that indigenous entrepreneurs most especially the Nigerian SMEs lost competitive edge to multinational companies because of unequal balance of power, lack of advanced technologies, poor managerial knowledge, low international social networks and inadequate institutional support from the government. The implication of this finding is that for indigenous entrepreneurs to regain their competitive edge with MNCs, the policymakers must address the issues of advanced technologies, managerial knowledge, international social

networks and institutional support that have worked against local SMEs. The effect of the barriers discussed above on business development has been very negative. It was reported that eight hundred and thirty-four (834) manufacturing SMEs shut down their facilities in 2009 (Olubukola, 2013; Raimi, 2015) because of SMEs' inability to cope with the unfriendly harsh business environment. Other socio-economic factors that precipitated failures of 834 SMEs in Nigeria include unstable electricity supply and multiple taxes across the three levels of governance (Oyelola et al., 2013). Another report summarised the failed SMEs across the six geographical zones in Nigeria. 176 SMEs closed down factories in the northern zone; 178 SMEs closed down in the south-east zone; 46 SMEs closed down operations in the south-south zone; and 225 SMEs closed down in the south-west area, and 214 SMEs closed down in Lagos zone (Raimi, 2015). The five major challenges facing SMEs in Nigeria that have attracted global rating and reportage are electricity (63.3%), access to finance (15.55%), transportation (7.49%), access to land (2.85%) and tax rate (2.24%) among others (Business Environment and Enterprise Performance Surveys (2007).

Chapter 6: Summary and Conclusion

6.0 Introduction

This concluding chapter discusses the main findings of the thesis. The chapter gives an overview of the study in relations to previous research works. It presents the summary of the issues discussed in all the chapters based on which conclusions are drawn; the significance of the study is discussed, followed by theoretical contributions. Implications for research, policy and business are presented and finally limitations and suggestions for further studies are outlined.

6.1 Overview of the Study

The aim of this research is to empirically investigate how Nigerian MSE innovates with a view to making suggestions on policy to them, innovate better and contribute to local economic development. In the quest to gather relevant literature to support MSE innovation research, it was discovered that there are few theoretical and empirical studies from the Nigerian developing context. Most previous innovation studies across the globe focused more on large firms in developed countries and emerging economies like India, China, Cyprus and South Africa. The current study is justified because there is paucity of empirical research on MSE's innovation for economic development in Nigeria. The study has empirically broadened the innovation study literature by capturing and documenting the nature of innovation, the associated barriers and innovation capabilities of MSEs within the Nigerian developing context. The study has responded to call by Sirvanas and Sutz, (2008) for conscientious study of innovation in the developing countries.

Guided by the aim of the research as discussed above, the research objectives which underpinned the study are as listed below:

(a) To empirically investigate how micro and small enterprises (MSE) innovate in Nigerian.

(b) To investigate the barrier to innovation in this context.

From the research objectives stated above, research questions were formulated for empirical verification as follows:

a) How do micro and small firms innovate in Nigeria?
b) What are the barriers to innovation within this context?

In pursuance of the research, case study methodology provided the required theoretical grounding for this qualitative research. An inductive research enquiry aimed at generating theory about a phenomenon using iterative process of data collection and analysis was adopted. A major feature of qualitative study is that no prior hypothesis is formulated but the researcher goes into the field with 'blank' mind to gather data and allow data to 'speak'. Interview transcripts are read over and over again to identify phrases or sentences which are put in categories and themes. Common expressions or sentences are grouped into categories or unfamiliar terms are used as basis for categories (Charmaz, 2011).

6.2 Summary of Findings

Research Objective 1: To empirically investigate how micro and small enterprises (MSE) innovate in Nigerian.

Research Question 1: How do SMEs innovate in this context?

Finding 1: Innovation that takes place here is a product of its environment, its context. The study discovered a product innovation, which is essentially imitation of imported goods. Product innovation in this context is driven by specific business need to meet local consumer needs.

Products and services mirror the location in which they are produced. The configuration, design and marketing of products will thus necessarily reflect norms, expectations and facilities available at the location (Molotch, 2002)

Product innovation in this context starts with cloning dictated by the need of the target segment of the society. The five themes induced from the field study and discussed below explains innovation spanning through product conception and the final conversion to revenue through sales. It is noteworthy here the prominent influence of ecosystem.

Innovation appears to be cloning of imported or multinational firms' (henceforth, TNC, Trans National Companies) products and the motivation for this is the high price of imported/TNC goods which is beyond the target class, the people at the bottom of the pyramid that constitute large segment of the population. Thus, innovation in this context is imitation of imported/TNC products. Taking a different context into account, Hobday (2005) argues that imitation can also be called innovation because no perfect imitation. This agrees

with Schumpeter (1934) contention that imitation of product in a new context is somewhat an innovation since there is considerable adaptation of the product to fit into the new context. Cloning provides substitutes for imported goods, which are unaffordable to the target segment of the populace, large segment of people at the lower rung of economic ladder. Thus, by providing products that would otherwise be unavailable to customers due to poverty, this is argued to be innovation, taking context into consideration, as Atuahene-Gima, (2012) contended what is taken be to an innovation is context dependent.

From the responses provided by the interviewed firms, a total of five themes emerged on how product innovation emerge in this context. These are: (i) identification of product to be cloned (ii) Gradual increment or improvement (iii) Tweaking of different formulations (iv) Massive promotion through personal selling and (v) Internal and external ecosystem.

On the identification of product, all the eight firms studied noted that they are not really producing products that are new to the world product, but within the Nigerian context, these products are new.. The sampled firms explored the options of imitation and cloning of products that match imported quality because the consuming public were dissatisfied with existing local products. The imported products are also cloned because they are expensive and are not readily available. The firms surveyed in this research leveraged cloned substitutes because of the large market for their products. The target market largely consists of people at the middle and lower rung of the economic ladder, who cannot afford to buy the more expensive multinational products. The multinational products, which are target at people at the upper level of economic ladder, are regarded as very costly. These micro and small firms therefore conceive of, produce relatively cheaper and affordable ones targeted at the people at the middle class, and strives to appeal to upper class. Thus, efforts are made to imbue the cloned product with quality so that it can be attractive to middle income that might not be able to afford the high price of imported product even though it is coveted. It is worth noting that the products are fairly easy to produce because the production process is simple, does not require sophisticated machinery.

Concerning gradual increment or improvement, the firms interviewed for this research noted they focus on continuous improvement to meet the taste of the target market and the expectations of the consuming/buying public. Improvement techniques employed by these firms as innovations include adding fragrances, boosting product durability, more additives for lasting experience to elicit more attraction to the product from the consumers. The firms

surveyed also replied that they continuously improve their products through the feedback they get from final users. The two techniques employed by the firms interviewed to improve their cloned products are packaging and quality improvement through constant monitoring and improvement. These techniques are necessary to make cloned products closer to the imported brands produced by the multinationals. These techniques have paid-off as some imported products have been relegated to the background because of stiff competition with local brands. The process of constant and continuous improvement requires trying out and tweaking mainly the raw materials employed in the production of the products.

Tweaking different formulations entail combining different formulations of raw materials by the small firms to arrive at an acceptable product. It is series of trial and error which takes a long period to arrive at the 'right' quality before approval is sought from the regulatory agency. There are two types: of raw materials and finished goods. Tweaking of different raw material components to arrive at good quality as well as tweaking of different formulations to arrive at good product. The tweaking process is important for reaching quality standard that makes the product to appeal to people at the top economic ladder. Tweaking occurs daily through interaction with people at the channel of distribution such as the wholesalers and the retailers. The bigger firms have the financial resources to hire researchers to aid task of data gathering for tweaking, while small firms that cannot afford hiring firms for market research embark on informal study of trends in the market. Tweaking helps in the choice of packaging: tweaking of different raw material components to arrive at good quality as well as tweaking of different formulations to arrive at good product. Informal market researcher plays significant role of helping the tweaking process especially the latter. The tweaking of different raw material components to achieve good quality is an iterative process which links with the third element of the model, personal selling. There is a feedback loop which continuously informs subsequent incremental improvement that is brought about from informal market research. Thus, by trying out different formulae to arrive at acceptable standard and at the same time affordable price to the target market, this is argued to be an innovation (Atuahene-Gima, 2012).

The small firms in Nigeria noted that they massively promote their array of innovative products through personal selling in a carnival like mobilisation of a number marketers focusing on a particular location with a view to bringing the product to the awareness of the area. There are two categories of users targeted by the manufacturers. The first set of people are at the lower economic cadre who cannot afford costly substitutes. For them they require

little persuasion to buy. The second category of people are the middle class consumers that require a little persuasion. The main strategy of promoting and getting the product accepted by the target market is through personal selling. While the production is important for tweaking and arriving at the 'right' quality, the marketing is crucial for generating income, keeping the business in continuous existence and withstanding the onslaught of competition from big competing firms. Considering the importance of economic return on investment, the interviewed firms noted that they place emphasis on training of the workers that embark on marketing because, unlike production where the owner is actively involved, it is practically impossible for the owner to be on field for marketing. This is a task reserved for the workers. Marketing essentially entails soliciting sales with a focus on tricking to get the attention of target customer while persuading and attracting potential middle or upper class. Bringing the product to the awareness of the target market employing the means appropriate to this segment, personal selling is essentially saying to the target market ''here is a substitute to the one you cannot afford'' and to the middle class, ''here is something to save you cost''. Thus, by creating customers from people who would otherwise not be able to buy (target market) and by persuading people to buy (middle class), this is argued to be an innovation with regard to this context (Atuahene-Gima, 2012).

Therefore, considering the lived realities in this context as portrayed in the data analysed above, it is not expected that model developed in advanced countries will be relevant in this context. So often we distinguish between developing and developed in various metrics but have failed to do the same in this instance by applying models developed in the west. The main argument here is that infrastructure can be insinuated into virtually all the processes in this context and their consequences – input and output.

This model of innovation represented in the diagram in the previous chapter and explained above is more fitting for micro and small firms in developing countries, the context of study rather than models developed and imported from industrialised advanced countries because it is grounded in the lived world of the participants.

Innovation research from the advanced countries often conceives innovation implicitly as technological. Innovation as conceived from this perspective is essentially new knowledge which government owes it as obligation to make public, hence, heavy government spending on R&D. In addition, government finances innovations in various ways. For instance, research leading to the discovery of internet, which later spurned millions of businesses

globally, was government sponsored. This is the image and portrayal of innovation. However, the researcher's coming from a different context from the above is disillusioned with this conceptualisation of innovation (Arocena and Sutz, 2003; Sirnavas and Sutz, 2008;Cozzen and Sutz, 2012, 2014).

Entrepreneurs the researcher interacted with in this context claim their businesses are innovative likewise the other people interviewed in the preliminary field study– small business regulators and executives of the membership organisation. These entrepreneurs and small business owners create business by taking risk and get margin, which makes them sustain the business, especially considering inclement business ecosystem under which they operate. Devising various means of survival in a volatile environment is innovation in this context it can be argued. Unfortunately, to policymakers designing and supporting innovative activities, these businesses do not comes in their radar as innovative. Hence, no worthwhile attention was given to them.

Finding a need and organising resources to meet the need is innovation in this context. Needs are spatial dependent. As high tech product in the slum will not attract any need, just as low tech product fitting specific environment will conversely do. For instance, Google glasses is an innovation that fit high tech environment just as sachet shampoo is an innovation in a rural area in Bangladesh or India. What often happens is that people decontextualizes when referring to product failing to acknowledge that product is a reflection of its environment. Therefore, a product new to its environment thus reflecting particular circumstance of the environment is an innovation.

Following from the definition of innovation adopted for this thesis as explicated in section 1.6, these products are new to the environment and as such, they are innovation. They are a sort of innovation diffusion since the entrepreneurs as inhabitants recognise the spatial specific needs and organise resources to produce thus contributing to wealth creation and economic growth. Their innovative products respond to specific local markets rather than the global market (Sirnivas, 1998).

These entrepreneurs interact with their local environment and recognise context dependent nature of their products. Thus, they continuously tinker with the products to meet the needs of the target consumer. This constitute incremental innovation in this context. Furthermore, they introduce herbal formulations to make the products appealing to the local target market. It is noteworthy that this practice is fast gaining ground even among multinationals.

The small firms in this study know the target market quite well due to their proximity to this segment and they respond with flexibility. They employ multi-function and multi product strategy to continue to stay in existence and differentiate their products from multinationals whose products are cloned. They employ the advantage of proximity to customer and flexibility as a small firm to get feedback and ensure appropriate changes fast. In addition, the differentiations take note of the specific context (for example, introduction of herbal formulations) and thus becomes a product innovation – a new product in that context.

Research Objective 2: To investigate the barriers to innovation in this context
Research Question 2: What are the barriers to innovation within this context?
Finding 2: Barriers to innovation in this context correspond to obstacles to survival as micro and small firms.

Rigouzzo (2009) observed that: "In spite of the significant contributions made by SMEs to GDP, employment and livelihoods, SSA's SMEs continue to face a plethora of challenges that inhibit their growth and development beyond mere survivalist modes of activity."

Finance constitutes a big barrier to entrepreneurs interviewed in this study. The accessibility of external finance is absolutely a related and important indicator of firm dynamism and development. Rajan and Gleacher (2007) provide the significance of a good operation. Accordingly, finance is required if new and existing firms are to exploit growth and investment opportunities, and to attain a higher stability in size. Furthermore, a firm can carefully obtain a more resourceful productive asset range if the infrastructure of finance is well positioned, and will also be able to organise the firm very well.

According to African Development Bank (2012), SMEs, say that banks normally hesitate in providing long-term lending and working capital facilities, which is the strong need for business development. But recently, 15% of firms in SSA uses banks as a source to finance working capital, whereas only a small proportion, 6% of their working capital requirements, is met with this type of finance.

Another barrier identified by this study is power supply. Presently, Africa is the only continent in which electricity is specified as the most significant hindrance to the firms' ability to innovate and develop. For instance, in the sub-Sahara African countries, 22 per cent of all size classes of enterprises indicated that access to electricity was their biggest

problem (International Labour Organisation (ILO, 2015). Good infrastructure is capable of connecting firms to their customers and suppliers, and allows the use of modern production technologies. On the other hand, lack of infrastructure causes a barrier to productive opportunities and increase costs for firms to transform from SMEs to large multinational corporations.

6.3 Conclusion

Narrative of product innovation presented in the literature is that of radical product from cutting edge innovation, minted in the advanced world. In this context we found out a product innovation born out of specific business need to meet local consumer needs. This innovation has more relevance to the developing world where people are excluded from basic need of life. This is inclusive innovation relevant to the particular context studied.

It bears mentioning that these micro and small firms identified locality specific needs and then develop solution to meet these needs. The entrepreneurs interviewed are residents in the locality and are thus responsive to the local market needs. This is not a case of classical innovation diffusion but rather converting place specific needs into products and services - contextualising innovation. In the preliminary interview with some of the entrepreneurs, when they were asked what constitute innovation in their activities. They aptly pointed out this as innovative – offering something unique and which are of value to the geographical location.

The goal of this thesis is to expand the concept of innovation to include the peculiar context of micro and small firms in developing countries with a view to devising policy to accelerate local economic development.

6.4 Significance of the study

What has been learned from conducting this study is that micro and small firms, even though they are in large quantity in developing countries of which Nigeria, the context of this study, is a part, are neglected in innovation study because of the argument that they do not innovate. However, what has sustained the argument is the lens with which we look for innovation in developing countries.

Definition of innovation which is widely accepted, often quoted, used in empirical studies and promoted to a law-like is by OECD. It defines innovation as "implementation of a new or significantly improved product (good or service), or process, a new marketing method (e.g. a novel product design) or a new organizational method in business practices, workplace organization or external relations" (OECD/Eurostat, 2005; para.146).

Scholars from developing countries adopting this definition make efforts to unsuccessfully adapt it to developing countries by construing "significant improvements" to mean incremental innovation which fits the environment. However, it bears mention that owing to the environment from which the definition was derived – big firms in advanced economies – what is meant is state of the art or new to the world product.

These firms provide vital products to the excluded but they are facing humongous challenges, which are making life difficult for them. Funding being the major constraint identified by the entrepreneurs interviewed. These firms are starved of funds, policies to help them in reality rather than on paper, as is currently the case. This is understandable because little profit squeezed out from the business goes into operating cost, living nothing for scaling up. It bears mentioning that these entrepreneurs have many ideas on how to improve and scale up but funding remains the major constraint to the extent that one of the respondents was soliciting the researcher's connection for external funding. One of the respondents narrated his experience with Bank of Industry (BOI). He needed 40 million naira for scaling up but he was asked to provide collateral that was worth 9 million naira. He sarcastically said that if he were to have such amount of money he would not have approached BOI in the first instance. Furthermore, were he to plough that sum into his business it would have gone far. Thus, there is need for appropriate focus on these firms, the need to be treated as innovation-driven development with commensurate attention as given to R&D, innovation parks, etc.

Infrastructure is a critical factor in the economic development of any nation due to its impact on production process. The quality of infrastructure has significant impact on production and performance of firms in the economy. Its availability and quality is therefore crucial to existence and performance of firms. There is a direct relationship between infrastructure and economic development (Oseni and Pollitt, 2013).

The availability and quality of infrastructure in developing countries is appalling (World Bank, 2013, 2014). Consequently, the poor infrastructural facilities in Nigeria affect negatively on manufacturing process, especially micro and small firms. The appalling

infrastructure state results from a number of factors which included introduction of the Structural Adjustment Progmme (SAP) which led reforms advocating for reduction in government expenditure. This led to continous budgetary cut affecting all spheres of the Nigerian economy (Ogidan 2015). While the manufacturing sector, especially the micro and small business segment is the most affected (Oseni and Pollitt 2013), whereas manufacturing micro and small firms are sensitive to external influence due to their meagre resources (Cissokho and Seck 2013). However, micro and small firms have an important role to play in both attainment of SDG and local economic development (Alvarez and Barney 2014)

Most African nations, Nigeria inclusive, are driven by effective micro and small businesses, which are bedevilled with serious infrastructural challenges (Global Entrepreneurship Monitor 2012; Nwankwo 2012). This also accounts for the reason why many business organisation make provision for generating their power supply for production process due to epileptic supply from the national grid (Owualah and Obokoh 2008). The poor supply of power also accounts for the reason why Sub-Sahara Africa (SSA), Nigeria inclusive are unable to attract direct investments. Liberalisation of economy enables investors choose location for investment that has adequate provision of infrastructure since this lowers production cost and increase accessibility to market (World Bank 2014).

These challenges impose heavy constraints on micro and small firms with the resultant effect on workers by rendering them idle during power outage; materials are spoilt due to inability to feed into production process, loss of considerable output, damage to equipment due to fluctuations in voltage. In effect, it becomes an additional burden which weigh heavily more on micro and small firms more than the big ones. This ultimately leads to increased operational cost, increased business uncertainty, reduced competitiveness and low return on investment. The situation becomes so grave that some MNC are closing businesses and relocating to locations where there are better infrastructural provisions (Adenikinju 2005; Nwankwo, 2000).

6.5 Process of creative complement with knowledge spill over as the underlying mechanism

While the intention of this study was to find out if and how micro and small firms innovate in developing countries' context, the field study revealed knowledge spill overs as a key mechanism that underlies emergence of all the micro and small firms used a case studies in this study.

Schumpeter (1934) was the first to use the term 'creative destruction' in relation to new firms coming on stage destroying the existing ones in the process of innovation. However, in this particular study, new venture emerged to complement rather than displace the incumbents. Through creation of value, according to Schumpeter (1934), new products, services and organisations emerged which supplant incumbent products, services and organisations. In Schumpeterian approach, both creation of new value and destruction of the incumbent are intertwined. Although some scholars argued that net value creation may be considerably low or negative in the long run (Aghion and Howitt, 1992; Ferguson, 1988)

While creative destruction is relevant to the advanced economies, which are essentially knowledge economies, creative compliment through knowledge spillover strategic entrepreneurship as the key mechanism behind the process of creative construction.

However, implicit in Schumpeterian creative destruction approach is the assumption that the value generated by the new entrants exceed value given by the incumbents. The case studies revealed that the value generated by the new entrants do not necessarily exceed the incumbent. In fact, both are focusing on different market segments. While the MNC focus on high and medium, the new entrants focus on the so-called bottom of the pyramid.

The knowledge spill over strategic entrepreneurship

Organisation is viewed as knowledge production and exchange unit (Schulz, 2001). The knowledge-based view of the firm contends that firms differs based on the creation and use of knowledge repository. However, organisations are unable to completely guard their repository of knowledge, hence, private knowledge do leak into the environment, which therefore become opportunity for new entrepreneurial firms. Thus extant organisations are seen as possessing repertoire of under exploited knowledge.

Knowledge spill over generally referred to external benefit accruing to the parties other than the creator. As a result, individuals that see unexploited opportunities may quit to venture into new entrepreneurial firms (Agarwal, Audretsch, and Sarkar,2007).

As demonstrated in the case studies, the creation of new ventures were due to strategic entrepreneurship by employees who discern entrepreneurial opportunities based on business ideas they generated from working as employees.

The process of creative complement

Unlike in Schumpeterian creative destruction, new entrants as seen in the case studies, emerged because they perceived business idea, cloning the relatively expensive MNC product for the people at the lower rung of the economic ladder who would otherwise been unable to afford the MNC' products. Rather than displace the incumbent, these firms complement since they focus on a different market segment.

Thus, in addition to creating growth for individuals (micro), strategic entrepreneurship through the mechanism of knowledge spill over crates growth for nation (macro) at aggregate level. Scholars have long recognised the importance of knowledge spill over in stimulating local economic growth (Romer 1990; Aghion and Howitt, 1992).

Thus, there is the need to promote and encourage this strand of strategic entrepreneurship by providing appropriate policy focus to promote and enhance these micro and small new entrants. because hey create wealth for individuals as well as contribute to local economic growth.

6.6 Theoretical contribution

Classical innovation literature examines diffusion from, as it has been reiterated continuously in this study, from the point of view of the environment, the context from which innovation studies originated – multinational firms producing state of the art new to the world product. In this particular context, diffusion of innovation is better seen as cloning, gradual improvement until micro and small firms can produce a truly indigenous product. This is the path taken by the newly industrialised firms – start with OEM, imitation then through gradual improvement, were able to produce truly indigenous product. A good example of a firm from the developing country that typifies this stage of development is Lenovo.

What is observed here is 'creative complement' in the sense that new firms are coming up but rather than destroy they complement the existing firms. This is especially crucial for developing countries that are far from the frontier of knowledge. Creative destruction is what takes place at the advanced economies that are in the frontier of knowledge, new knowledge of products and processes supplanting the existing one. Nevertheless, in the developing countries which is far from the frontier of knowledge, no new knowledge but recombination of existing knowledge to produce new to firm products.

Entrepreneurs in this study, in the world of Schumpeter, in interaction with their environment (targeting bottom of the pyramid) come up with low cost product imitation, which serves

target markets, who would otherwise, have been unable to obtain the product since they cannot afford the existing alternative, thus including the excluded. It is on one hand, entrepreneurial adventurism in the classical tradition as envisaged by Schumpeter (1934), and on the other hand inclusive innovation using the parlance of new terminology in innovation studies.

New knowledge or technology takes place at the frontier of knowledge. However incremental or imitative innovation takes place in the developing countries. These firms coming up in the developing countries are targeting the base of the pyramid (Prahalad, 2005) whose alternative products of multinational are beyond their reach. This market consists of billions, thus it is a thriving and growing market as the demography in developing countries shows. This could be a double edge sword that developing countries can use to climb the ladder of development while at the same time achieve social inclusion.

Inclusive innovation is the terminology used to express innovation which entails contextually created innovation, locally or indigenously, which are relevant to developing countries' context. It argues for policy to drive appropriate innovation policy going beyond narrow focus on R&D and technological innovation (Cozzens and Sutz 2012; STEPS Centre 2010).

6.7 Implication for policy

This thesis draws conclusion on implication of rethinking innovation in the perspective enunciated here. The argument is that in order to increase local wealth, which innovation is concerned about, what counts as innovation needs to be redefined to context into account. What counts as innovation commands the attention of policy makers – recognise these firms' activities as innovative and thus give necessary support because of the transformative role they play in the society. This is more likely to contribute to local economic development, especially if done in conjunction with current efforts and attention on R&D and other similar initiatives to promote innovation and consequently, economic development.

In view of the high unemployment and poverty rate in SSA, this thesis argues that in order to produce inclusive and sustainable development and to properly integrate Africa into the world economy, MSEs centred industrialization strategy would be suited in this context.

Furthermore, in order to develop local innovation competences, there is the need to provide opportunity for these small firms to attend international exhibitions to gain exposure which links with global value chain which enables them to develop capabilities.

6.8 Implication for research

Innovation has now been broadened to embrace development. This necessitates rethinking innovation to understand how innovation can better contribute to development and welfare of people, researchers need to factor in the context. Since research into issue often precedes policy formulation, researchers need to widen the concept of innovation to take into consideration contextual factors. Micro and small entrepreneurs are agents not typically considered as crucial to development in orientation towards technology focused development. However, the case studies above hopefully have demonstrated the importance of these agents in contributing to local economic development. These contributions – meeting local consumer needs, generating employment opportunities especially for marginal group, social cohesiveness - are hitherto not recognised and acknowledged. Future research borrowing from this study henceforth needs to accord these agents necessary recognition and acknowledgment.

6.9 Implication for policy

Since research and policy, at least in advanced economy, are intrinsically intertwined, understanding of innovation from the perspective above which is more relevant to developing countries goes a long way to shape various policies aimed at accelerated economic development, inclusion, wellbeing and wealth creation.

Considering the failure of various amalgamation of imported policies borrowed from the west, it is perhaps time to look inward and pay adequate attention to these small firms by allocating them resources. They might perhaps become better through learning by doing over time.

Innovation means creating new territories (for example, by new to the world product) or taking advantage of existing gap (as is the case in this context, serving the neglected, the excluded). The former is relevant to advanced context while the latter, to developing countries' context. This thesis argues that policy to make MSE integral part economic plan is long overdue. This will enable government to put required focus on them with a view to

empowering them with capacity for growth, which will ultimately make them contribute to economic transformation process.

A number of incentives could be provided when MSE-focused policies are enacted. This includes providing access to constant and reliable sources of funding, as the case in the advanced context, for growth and sustainability of MSE. One of the palpable stress and challenges these firms faced, as revealed in the interviews with the entrepreneurs, is raising capital either start up, operational expenses or scaling up. Even though there are policies in place on paper, they need to be given practical effects in order to positively affect small businesses.

6.10 Implication for business

A popular and well discussed view (London and Hart, 2004, London, 2009; Prahalad, 2010, 2012) argued that the poor constitute vast and untapped market as a result of their limited purchasing power. Although this narrative is presented as multinationals contribution to eradicating poverty through market mechanism (Christensen et al, 2001; Hart and Christensen, 2002; London and Hart, 2004; Prahalad, 2010), it has been challenged.

What has been demonstrated in this study is that the micro and small firms capitalise on this by coming up with low price, small quantity product targeted at this vast market in a win-win situation, i.e both for the firms and the consumers. These firms are able to tap into the vast market beyond the reach of multinationals because those in this segment are unable to afford the price. In the same vein, consumers are able to purchase products which otherwise they could not have due to the relatively high and unaffordable price charged by multinationals. Even though multinational are suggested to be in the best position to exploit these new markets (Kanter, 2008), field study experience revealed that a combination of two factors make this unrealistic. Relatively high price of multinational products and infrastructural challenges in the developing countries, increase the cost of reaching this segment of the market with MNC seeking gold at the bottom of the pyramid. It may need to collaborate with these small firms and later acquire them. What is obvious from this study is that MNC cannot compete with these micro and small firms because they cannot reach these grassroots.

6.11 Limitations

This section looks at some limitations of the study. First is, concerning methodology, some comments on how future research could improve on this work. Second is, on generalising the

results of the study bearing in mind the case study approach. In line with case study, the goal was to provide an understanding and not statistical generalisation. As such findings from the study may not be generalised to other sectors. Furthermore, the work has examined relatively small number micro and small firms in only one country among developing countries. However, it is argued that the core conclusion drawn on this study: innovation driven by context, which is driven by specific firms need and inclusive of people who otherwise would have been left out of product innovation, are likely to hold irrespective of the small sample. Third is, comments on inclusive innovation. However, it bears restating that these limitations do no negate the findings from this study, they rather point towards improvement in future research.

Perhaps the most contentious is the definition of innovation in this context which may not align with classical perspective definition of mainstream innovation studies. While the focus in the advanced world is on new to the world product, in recent times the concept has been expanded to include inclusive incremental improvement and general improvement of livelihood of the people at the bottom of the pyramid (Cozzens and Kaplinsky 2009; Cozzens and Sutz 2012).

6.12 Suggestion for further studies

To enable generalisation, future studies should expand to more sectors and more firms. For instance, only one sector is focused on in this thesis, it could be expanded to more sectors and in different developing countries to enhance generalisation of the conclusion reached with respect to this study.

Furthermore, the study revealed strategic entrepreneurship with knowledge spill over as underlying mechanism.

REFERENCES

Abereijo, I.O, Ilori, M.O, Taiwo, K.A and Adegbite, S.A (2007) Assessment of the capabilities for innovation by small and medium industries in Nigeria, African Journal of Business Management, 1:8, 209-217.

Adeboye, T (1997) Models of innovation and sub-Saharan Africa's development tragedy, Technology Analysis & Strategic Management, 9:2, 213-236.

Acs, Z.J, Audretsch, D.B and Lehmann, E.E (2013) The knowledge spill over theory of entrepreneurship, Small Business Economics, 41: 757-774.

Adenikinju, A. (2005) Analysis of the cost of infrastructure failures in a developing economy: The case of the Electricity Sector in Nigeria, AERC Research Paper 148, African Economic Research Consortium, Nairobi.

African Development Bank ADB (1997). Financing Small and Medium Sized Enterprises—Africa in the World Economy. Fostering Private Sector Development in Africa—Economic and Social Statistics on Africa. Oxford University Press, Oxford.

Agarwal,R.,Audretsch,D and Sarkar,M.B.(2007).The process of creative construction: Knowledge spillovers, entrepreneurship, and economic growth. Strategic Entrepreneurship Journal, 1, 263–286.

Aghion, P. and P. Howitt (1992). "A Model of Growth through Creative Destruction." Econometrica 60(2): 323-351.

Akosile, I.O (2010) Dynamic Capabilities in Small and Medium-size Enterprises in Nigeria, unpublished M.Sc. thesis submitted to School of Business, Economics and Law, University of Gothenburg, Sweden.

Alvarez, S. and Barney, J. (2014) 'Entrepreneurial opportunities and poverty alleviation', Entrepreneurship Theory and Practice 38(1), 159–184. http://dx.doi.org/10.1111/ etap.12078

Alvesson, M and Gabriel, Y (2013) Beyond formulaic research: In praise of greater diversity in organizational research and publications, Academy of Management Learning and Education, 12:2, 245-263

Amaefule, E. (2012) FG approves 9,555 industrial clusters. The Punch Newspaper, November 11 Edition. Available: http://www.punchng.com/business/fg-approves-9555-industrial-clusters/(Acceesed: August 4, 2015).

Amis and Silk (2007) The philosophy and politics of quality in qualitative organizational research, Organizational Research Method, 11:3, 456-480.

Andrade, A.D (2009) Interpretive Research aiming at theory building: Adopting and adapting the case study design, The Qualitative Report, 14:1, 42-60

Armbruster, H, Bikfalvi, A, Kinkel, A and Lay, G (2008) Organizational Innovation: Challenges of measuring non-technical innovation in large scale survey, Technovation, 28, 644-657.

Arocena, R. and Sutz, J. (2003): "Knowledge, Innovation and Learning: Systems and Policies in the North and in the South", in Cassiolato, J. Lastres, H & Maciel, M.L. (Editors), Systems of Innovation and Development, Edward Elgar Publishing, UK, pp. 291310.

Atuahene-Gima, K (2012) What is Innovation? African Business, Oct, 66-67

Aubert, J.-E., 2004. Promoting innovation in developing countries: a conceptual framework. Paper No 137779/0-3097, World Bank Institute, New York.

Bamberger, P (2008) Beyond contextualization: Using context theories to narrow micro-macro gap in management research, Academy of Management Journal, 51:5, 839-846

BBC, (2014) Nigeria becomes Africa's biggest economy, British Broadcasting Corporation, http://www.bbc.co.uk/news/business-26913497

Baregheh, A, Rowley, J and Sambrook, A (2009) Towards a multidisciplinary definition of innovation, Management Decision, 47:8, 1323-1339.

Benzing, C, Chu, M.H and Kara, O (2009) 'Entrepreneurship in Turkey: A factor Analysis of Motivations, Success Factors and Problems', Journal of Small Business Management, 47(1): 58-91

Bernard, H.R. (2002) Research Methods in Anthropology: Qualitative and quantitative methods. 3rd edition. AltaMira Press, Walnut Creek, California.

Biggeri, M , Gambelli, D, and Phillips, C (1999) 'Small and Medium Enterprises: Evidence for Chinese TVEs', Journal of International Development, 11(2): 197-219

Blaikie, N. (2000) Designing Social Research, Cambridge: Polity.

Bluhm, D.J., Harman, W., Lee, T.W. and Mitchell, T.R. (2011). Qualitative research in management: a decade of progress. Journal of Management Studies, 48(8), pp. 1866-1891.

Bogliacino, F, Perani, G, Pianta, M and Supino, S (2009) Innovation and Development: The evidence from innovation surveys, Latin America Business Review, 13, 219-261.

Boja, c. (2011) Clusters Models, Factors and Characteristics. International Journal of Economic Practices and Theories, Vol. 1(1), pp. 1-43.

Buchanan, D. A., & Bryman, A. (2007). Contextualizing methods choice in organizational research. Organizational Research Methods, 10, 483–501.

Bryant, A., & Charmaz, K. (2007). Grounded theory in historical perspective: An epistemological account. In A. Bryant & K. Charmaz (Eds.), The SAGE book of grounded theory (pp.31-57). London: Sage.

Bryman A (2001) Social Research Methods. Oxford University Press, Oxford.

Bryman, A., & Bell, E. (2015). *Business research methods*. Oxford University Press, USA.

Burney, S. M. A. (2008) Inductive & Deductive Research Approach. Online Resources.

Available:http://www.drburney.net/INDUCTIVE%20&%20DEDUCTIVE%20RESEARCH %20APPROACH%2006032008.pdf (Accessed: 27 October, 2013)

Cai, H., Todo, Y., & Zhou, L. A. (2007) Do Multinationals' R&D Activities Stimulate Indigenous Entrepreneurship? Evidence from China's" Silicon Valley" (No. w13618). National Bureau of Economic Research.

Carpenter, R. E., & Petersen, B. C. (2002). Is the growth of small firms constrained by internal finance?. Review of Economics and statistics, 84(2), 298-309.

Carter, S. M., & Little, M. (2007). Justifying knowledge, justifying method, taking action:Epistemologies, methodologies, and methods in qualitative research. Qualitative health research, 17(10), 1316-1328.

Cassiolato, J E, Matos, M P, Lastres, H and Marcellino, I (2012) Innovation systems and development: The use of the IS framework along the first ten years of Globelics, Globelics working paper, 2012-01

Charmaz, C (2014) Constructing Grounded Theory, Sage, London.

Charmaz, C (2011) Grounded Theory Methods in Social Justice Research. In N.K. Denzin & Y.S. Lincoln (Eds.), The Sage Handbook of Qualitative Research (pp 359-380). Sage, London.

Charmaz, K. (2010). Studying the experience of chronic illness through grounded theory. In G. Scambler & S. Scambler (Eds.), new directions in the sociology of chronic and disabling conditions: Assaults on the lifeworld (pp. 8-36). London: Palgrave.

Charmaz K., & Henwood, K. (2008). Grounded theory in Psychology. In C. Willig & W, Stainton-Rogers (Eds.), The SAGE handbook of qualitative research in psychology (pp 240-260). London: Sage.

Chipika, S. and G. Wilson (2006). "Enabling technological learning among light engineering SMEs in Zimbabwe through networking." Technovation 26(8): 969-979.

Chudnovsky, D., Lopez, A., & Pupato, G. (2006). Innovation and productivity in developing countries: A study of Argentine manufacturing firms' behaviour (1992–2001). Research Policy, 35, 266–288.

Cissokho, L. and Seck, A., (2013) Electric power outages and the productivity of small and medium enterprises in Senegal, Investment Climate and Business Environment Research Fund Report No. 77/13. TrustAfrica, Dakar.

Clark, D.N (2010) Innovation Management in SMEs: Active innovators in New Zealand, Journal of Small Business and Entrepreneurship, 23:4, 601-619

Cohen, W., Levinthal, D., 1990. Absorptive capacity: a new perspective on learning and innovation. Administrative Science Quarterly 35, 128–152.

Collis, J., & Hussey, R. (2014). *Business research: A practical guide for undergraduate and postgraduate students*. Palgrave macmillan.

Corbin, J. & Strauss, A. L. (1990). Grounded theory research: Procedures, canons and evaluative criteria, Qualitative Sociology, 13, 3-21.

Craig C. S., & Douglas, S. P. (2001). Conducting international marketing research in the twenty-first century. International Marketing Review, 18(1), 80–90.

Crescenzi, R, Rodrı´guez-Pose,A and Storper, M (2012) The Territorial Dynamics of Innovation in China and India, Journal of Economic Geography, 12, 1055-1085.

Creswell, J. W. (2003). Research design: Qualitative, quantitative and mixed method design (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2007). Qualitative inquiry and research design: Choosing among five approaches. Thousand Oaks, CA: Sage.

Creswell, J. W., & Plano Clark, V.L. (2007). Designing and conducting mixed methods research. Thousand Oaks, CA: Sage.

Creswell, J. W., Shope, R., Plano Clark, V.L., & Green, D.O. (2006). How interpretive qualitative research extends mixed methods research. Research in the Schools, 13 (1), 1-11.

Creswell, J.W (2014) Research design: qualitative, quantitative, and mixed methods approaches (4th ed.). thousand Oaks, CA: Sage.

Creswell, J.W. and Plano Clark, V.L. (2007) Designing and Conducting Mixed Methods

Research, Sage, Thousand Oaks, California.

Crotty, M (2003) The Foundations of Social Research: Meaning and Perspectives in the research process, Sage, London.

Crowther, D. and Lancaster, G. (2009), Research Methods: A Concise Introduction to Research in Management and Business Consultancy", Oxford: Elsevier Butterworth-Heinemann.

Danneels, E., Kleinschmidt, E., (2001). Product innovativeness from the firm's perspective: its dimensions and their relation with project selection and performance. The Journal of Product Innovation Management 18, 357–373.

Damanpour, F (1996) Organizational complexity and innovation: Developing and testing multiple contingency models, Management Science, 42:5, 693-716

Damapour, F and Schneider, M (2006) Phases of the adoption of innovation in organization: Effects of environment, organization and top managers, British Journal of Management, 17:3, 215-236

de Beer, J., Kun F. & S. Wunsch-Vincent, 2013. "The informal economy, innovation and intellectual property - Concepts, metrics and policy considerations," WIPO Economic Research Working Papers 10, World Intellectual Property Organization - Economics and Statistics Division. http://www.wipo.int/export/sites/www/econ_stat/en/economics/pdf/wp10.pdf

Denzin, N.K., & Lincoln, Y.S. (Eds.) (1994). Handbook of qualitative research. Thousand Oaks, CA: Sage.

Denzin, N. (1994). The art and politics of interpretation. In N. K. Denzin, & Y. S. Lincoln, (Eds.), Handbook of qualitative research (pp. 500-515). Thousand Oaks, CA: Sage Publications.

De Mel, S., McKenzie, D. J., & Woodruff, C. M. (2009). Innovative firms or innovative owners? Determinants of innovation in micro, small, and medium enterprises. Determinants of Innovation in Micro, Small, and Medium Enterprises. World Bank Policy Research Working Paper Series, pp. 1-32.

Dosi, G (1984) Sources, Procedure and Microeconomics effects of Innovation, Journal of Economic Literature, 27, 1120-1171.

Dunne, C. (2011). The place of the literature review in grounded theory research. International Journal of Social Research Methodology, 14(2), 111-124.

Easterby-Smith, M., Thorpe, R. and Jackson, P. R. (2008), "Management Research", (3rd Edition), Los Angelis: Sage Publication.

Easterby-Smith, M., Thorpe, R., & Jackson, P. R. (2012). *Management research*. Sage.

Edwards, T, Delbridge, R and Munday, M (2005) Understanding innovation in small and medium-sized enterprises: a process manifest, Technovation, 25, 1119-1127

Einwohner, R.L., & Spencer, J.W. (2005). That's how we do things here: The construction of sweatshops and anti-sweatshop activism in two campus communities. Sociological Inquiry, 75(2), 249-272.

Eisenhardt, K.M. (1989). Making fast strategic decisions in high-velocity environments. Academy of Management Journal, 32, 543-76.

Eisenhardt, K. and Martin, J. (2000) 'Dynamic capabilities: what are they?', Strategic Management Journal, 21(10-11): 1105–1121.

Ellison, G., & Glaeser, E. L. (1999) The geographic concentration of industry: does natural advantage explain agglomeration?. American Economic Review, 311-316.

Ernst, D. (2002). Global production networks and the changing geography of innovation systems. Implications for developing countries. Economics of innovation and new technology, 11(6), 497-523.

Fadahunsi, A., and Rosa, P (2002) Entrepreneurship and illegality: Insights from the cross-border trade, Journal of Business Venturing, 17, 397-429

Fagerberg, J., & Verspagen, B. (2009). Innovation studies—The emerging structure of a new scientific field. Research policy, 38(2), 218-233.

Fagerberg, J., Srholec, M., & Verspagen, B. (2010). Innovation and economic development. Handbook of the Economics of Innovation, 2, 833-872.

Fagerberg, J., Fosaas, M., & Sapprasert, K. (2012). Innovation: Exploring the knowledge base. Research policy, 41(7), 1132-1153.

Ferguson, J. 1988. "Vulture Capitalism," The Harvard Business Review, 1988.

Ferreira, J, Ratten, V and Dana, L (2017) Knowledge spillover-based strategic entrepreneurship, International Entrepreneurship Management Journal, 13: 161-167.

Flyvbjerg, B (2011) Case Study. In N.K. Denzin & Y.S. Lincoln (Eds.), The Sage Handbook of Qualitative Research (pp 301-316). Sage, London.

Forbes, N., Wield, D., 2002. From Followers to Leaders: Managing Innovation and Technology. Rutledge, London.

Freeman, C. (1987). "Technology Policy and Economic Performance - Lessons from Japan", London: Frances Pinter.

Freeman, C., and Lundvall, B.-A . (1988) Small Countries Facing the Technological Revolution (London: Pinter Publishers).

Garcia, L., & Quek, F. (1997, May/June). Qualitative research in information systems:

Time to be subjective? Paper presented at the Proceedings of the IFIP TC8 WG 8.2 International Conference on Information Systems and Qualitative Research, Philadelphia, PA.

Garcia, R and Catalone, R (2002) A critical look at technological innovation typology and innovativeness terminology: A literature review, The Journal of Product Innovation Management, 19:2, 110-132.

Gast, J, Werner, A and Kraus, S (2017) Antecedents of the small firm effect: the role of knowledge spillover and blocked mobility for employee entrepreneurial intentions, International Entrepreneurship Management Journal, 13: 277-297.

Geertz, C. (1973). The interpretation of cultures: Selected essays. New York: Basic Books.

Geertz, C. (1988). Works and lives: The anthropologists as author. Cambridge, UK: Polity.

Geertz, C. (1993). Local knowledge: Further essays in interpretive anthropology. London: Fontana.

Gephart, R. P. 2004. Qualitative research and the Academy of Management Journal. Academy of Management Journal, 47: 454–462.

Gioia, D.A, Corley, K.G and Hamilton, L.A (2013) Seeking rigour in qualitative research, Organizational Research Method, 16:1, 16-31.

Giuliani, E., & Bell, M. (2005). The micro-determinants of meso-level learning and innovation: evidence from a Chilean wine cluster. Research policy, 34(1), 47-68.

Gibbert, M, Ruigrok, W and Wicki, B (2008), 'What Passes as a Rigorous Case Study? Strategic Management Journal, 29, 1465-1474.

Glaser, B. G. (1978). Theoretical sensitivity. Mill Valley, CA: Sociology Press.

Glaser, B. G. & Strauss, A. L. (1967). The discovery of grounded theory. Chicago: Aldine.

Goddard, W & Melville, S, (2004) Research Methodology: An Introduction, 2nd edition, Blackwell Publishing.

Gopalakrishnan, A and Damanpour, F (1997) A review of Innovation research in Economics, Sociology and Technology Management, Omega, 25:1, 15-28

Goswami, S and Mathew, M (2005) Defintion of Innovation Revisited: An empirical study on Indian Information Technology Industry, International Journal of Innovation Management, 9:3, 371-383

Guba E.G., &Lincoln, Y.S. (1985). Naturalistic inquiry. Newbury Park, CA: Sage.

Guba, E.G. (1990). The paradigm dialog. Newbury Park, CA: Sage.

Guba E.G., &Lincoln, Y.S. (1994). Competing paradigms in qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), Handbook of qualitative research (pp. 105-117). Thousand Oaks, CA: Sage.

Guba E.G., &Lincoln, Y.S. (2005). Paradigmatic controversies, contradictions and emerging confluences. In N.K. Denzin & Y.S. Lincoln (Eds.), The SAGE handbook of qualitative research (3rd ed., pp. 191-215). Thousand Oaks, CA: Sage.

Guimón de Ros, J., & Agapitova, N. (2013). Why should governments of developing countries invest in R&D and innovation? African Journal of Business Management. 7:12, 899-905

Hadjimanolis, A. (1999). Barriers to innovation for SMEs in a small less developed country (Cyprus). Technovation, 19(9), 561-570.

Hadjimanolis, A (2000) An investigation of innovation antecedents in small firms in the context of small developing country, R&D Management, 30:3, 235-245

Hausman, A (2005) Innovativeness among small businesses: Theory and Proposition for future research, Industrial Marketing Management, 34, 773-782

Henderson, R. and, Clark, K., (1990). Architectural innovation: the reconfiguration of existing product technologies and the failure of established firms. Administrative Science Quarterly 35, 9–30.

Higginbotham, A (2011) Power unwired, Wired, 11:10, 128-137

Hout, T. M., Porter, M. E., & Rudden, E. (1982). How global companies win out. Graduate School of Business Administration, Harvard University

Hulsheger, R, Salgado, F and Anderson, N (2009) Team-Level Predictors of Innovation at work: A comprehensive meta-analysis spanning three decades of research, Journal of Applied Psychology, 94:5, 1128-1145.

Intarakumnerd, P., Chairatana, P. A., & Tangchitpiboon, T. (2002). National innovation system in less successful developing countries: the case of Thailand. Research policy, 31(8), 1445-1457.

International Labour Organization (ILO) (2000) 'Resolution concerning statistics of employment in the informal sector', adopted by the Fifteenth International Conference of Labour Statisticians (January 1993), in Current International Recommendations on Labour Statistics, 2000 edition, ILO, Geneva.

Jensen, M.B., Johnson, B., Lorenz, E., and Lundvall, B.-A . (2007) Forms of knowledge and modes of innovation. Research Policy, 36(5), pp. 680–693.

Johnson, R. B., & Christensen, L. B. (2008) Educational research: Quantitative, qualitative, and mixed approaches (3rd ed.). Thousand Oaks, CA: Sage.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. Educational researcher, 33(7), 14-26.

Johnson, B.; Edquist, C.; Lundvall, B.-Å. (2003) “Economic Development and the National System of Innovation Approach”. Paper presented at the 1st Globelics Conference, Rio de Janeiro, Brazil.

Ketokivi, M. & Mantere, S. (2010) Two Strategies for Inductive Reasoning in Organizational Research. Academy of Management Review, Vol. 35 (2), pp. 315–333.

Kline, S.J., Rosenberg, N., 1986. An overview of innovation. In: Landau, R., Rosenberg, N. (Eds.), The Positive Sum Strategy. National Academy Press, Washington, D.C., pp. 275–305

Ko, W. W., and Liu, G. (2015). Understanding the process of knowledge spillovers: the learning to become social enterprises. Strategic Entrepreneurship Journal, 9, 263–285..

Kramaer-Mbula, E (2014) Country study on innovation, intellectual property and the informal economy: informal manufacturers of home and personal care products in South Africa, World Intellectual Property Organization (WIPO)

Kraemer-Mbula, E., and W. Wamae, (eds) (2010) Innovation and the Development Agenda. Ottawa: OECD/ IDRC.

Lall, S. 1992, "Technological capabilities and industrialization", Research Policy, vol. 37, pp. 276-293.

Lancaster, G. (2005). Research methods in management. Routledge.

Lastres, H (2003) System of Innovation and Development, Paper presented at the first Globelics conference, November 2-5, at Rio de Janeiro, Brazil

Lemos, C, Arroio, A, and Lastres, H (2003) The Brazilian experience in support of small firms: the promotion of local production systems, Paper presented at the first Globalics conference, Rio De Jenero, Argentina.

Lincoln, Y. S. and Guba, E. G. (1985). Naturalistic Inquiry. Beverly Hills, CA: Sage.

Lincoln, Y.S, Lynham, S.A and Guba, E.G (2011) Paradigms and Perspectives in Contention. In N.K. Denzin & Y.S. Lincoln (Eds.), The Sage Handbook of Qualitative Research (pp 91-97). Sage, London.

Lincoln, Y.S and Guba, E.G (2013) The Constructivist Credo, Left Coast Press, California.

Locke, K. (2011). Field Research Practice in Management and Organization Studies: Reclaiming its Tradition of Discovery. Academy of Management Annals, 5:1, 613-652.

Locke, K. (2002) The Grounded Theory Approach to Qualitative Research. " in F. Drasgow & N. Schmitt (Eds.), Measuring and Analyzing Behavior in Organizations: 17-43. San Francisco, CA: Jossey-Bass.

Lodico M. G., T. D. Spaulding and K. H. Voegtle (2010) Methods in Educational Research: From Theory to Practice San Francisco: Jossey-Bass.

Longenecker, J G, C W Moore, J W Petty and L E Palich 2006. Small Business Management: An Entrepreneurial Emphasis. International edition. Mason, OH: Thompson.

Lundvall, B, Johnson, B and Lorenz, E.L (2011) Innovation System and Economic Development, Paper presented at the 9th Globelics Conference, Buenos Aires, Argentina.

Lundvall, B, (2011) Notes on Innovation Systems and Economic Development, Innovation and Development, 1:1, 25-38

Lundvall, B.Å., (1992). National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning. Pinter, London, pp. 275–305.

Mahemba, C. M and De Bruijn, E.J (2003) Innovation Activities among Small and Medium-sized Manufacturing Enterprises in Tanzania, Creativity and Innovation Management, 12:3, 162-174

Mantere, S., & Ketokivi, M. (2013). Reasoning in organization science. Academy of Management Review, 38(1), 70-89.

Massa, S and Testa, S (2008) Innovation and SMEs: Misaligned Perspectives and goals among Entrepreneurs, Academics and Policy makers, Technovation, 28:7, 393-407

McAdam, R, Reid, R.S and Gibson, D (2004) Innovation and Org size in Irish SMEs: An Empirical study, International Journal of Innovation Management, 8: 2, 147–165

McGhee, G., Marland, G. R., & Atkinson, J. (2007). Grounded theory research: literature reviewing and reflexivity. Journal of advanced nursing, 60(3), 334-342.

Merriam, S.B. (1991). How research produces knowledge. In J.M. Peters & P. Jarvis (Eds.), Adult education. San Francisco: Jossey-Bass.

Merriam S.B., Caffarella, R.S., & Baumgarner, L.M. (2007). Learning in adulthood: A comprehensive guide. San Francisco: Jossey-Bass.

Michailova, S. (2011). Contextualizing in international business research: Why do we need more of it and how can we be better at it? Scandinavian Journal of Management, 27(1),129–139.

Mytelka, L., & Farinelli, F. (2000). Local clusters, innovation systems and sustained competitiveness. UNU/INTECH Discussion Paper.

Nelson, R (2011) Economic Development as an Evolutionary Process, Innovation and Development, 1:1, 39-49

Nelson R and Winter S.G (1982). An Evolutionary Theory of Economic Change, Harvard University Press, Cambridge.

Nelson, R. (Ed.). (1993). National Innovation Systems: A Comparative Analysis. New

York, Oxford: Oxford University Press.

Nwankwo, S. (2012) 'Renascent Africa: Rescoping the landscape of international business', Thunderbird International Business Review 5(44), 405–409. http://dx. doi.org/10.1002/tie.21472

Nwankwo, S. (2000) 'Assessing the marketing environment in sub-Saharan Africa: Opportunities and threats analysis', Marketing Intelligence & Planning 18(3), 144–153. http://dx.doi.org/10.1108/02634500010327935.

O'Reilly, K, Paper, D and Marx, S (2012) Demystifying Grounded Theory fro Business Research, Organizational Research Method, 15:2, 274-262

OECD (2005) Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, Third Edition. OECD, Paris

Ogidan, A. (2015) 'Government moves to bridge $2.4 trillion infrastructure funding gap', The Guardian-Business News, 25 February, 2015, Vol. 31, p. 19.

Oseni, M.O. and Pollitt, M.G., (2013) The economic costs of unsupplied electricity: Evidence from backup generation among African firms, Energy Policy Research

http://www.actacommercii.co.za Open Access Group Working Paper 1326, Cambridge Working Papers in Economics 1351, Cambridge University Press, Cambridge

Owualah, S.I. and Obokoh, L.O. (2008) 'Tackling youth restiveness in the Niger Delta Region of Nigeria through entrepreneurship', Journal of Enterprising Communities: People and Places in the Global Economy 2(2), 168–179. http://dx.doi. org/10.1108/17506200810879989

Oyelaran-Oyeyinka, B (Ed) (2007) Small and Medium Enterprises Cluster in Nigeria,

Mosuro Publisher, Ibadan.

Oyelaran-Oyeyinka, B., Laditan, G. O. A., & Esubiyi, A. O. (1996). Industrial innovation in Sub-Saharan Africa: the manufacturing sector in Nigeria. Research Policy, 25(7), 1081-1096.

Parry, K. W. (1998). Grounded theory and social process: A new direction for leadership research, Leadership Quarterly, 9, 85-106.

Porter, M. E. (1998) Clusters and the new economics of competition, Harvard Business Review, Nov/Dec98, Vol. 76 Issue 6, p77,

Poulis, K, Poulis, E and Plakoyiannaki, E (2013) The role of context in case study: An international business perspective, International Business Review, 22, 304-314

Qian, H and Acs, Z.J (2013) An absorptive capacity theory of knowledge spillover entrepreneurshipSmall Business Economics, 40:185–197

Radas, S. and L. Božić (2009). "The antecedents of SME innovativeness in an emerging transition economy,Technovation, 29(6-7): 438-450.

Raimi, L., Peluola, S. B. and Shokunbi, M. O. (2016) Prospects and challenges of managing clusters as entrepreneurship development interventions for sustainable development in Nigeria: a discourse analysis. In: Managing Knowledge and Innovation for Business Sustainability in Africa, Allam Ahmed (Edited): Palgrave MacMillan

Robson, P.A, Haugh, H.M and Obeng, B.A (2009) Entrepreneurship and Innovation in Ghana, Small Business Economics, 32:3, 331-350

Rogers, E., (1962). Diffusion of Innovations. The Free Press, New York.

Rogers, E., (2003). Diffusion of Innovations, 5th ed. The Free Press, New York.

Romer, P. M. (1990). "Endogenous Technological Change." Journal of Political Economy 98(Oct, part 2): 71-102.

Rosenberg, N., 1982. Inside the Black Box: Technology and Economics. Cambridge University Press, New York

Roseno, A., (2005). A four dimensional product innovativeness typology: introducing seven new product project types for the study of innovation management. N. 1, Working paper, Copenhagen Business School.

Ross, J. and Staw, B. M. (1993). Organizational escalation and exit: Lessons from the Shoreham nuclear power plant, Academy of Management Journal, 36(4): 701-732.

Sanders, M, Lewis, P and Thornhill, A (2009) Research Methods for Business Students, Pearson Education Limited,

Sarasvathy, S., Dew, N., Velamuri, R., and Venkataraman, S. (2003). Three views of entrepreneurial opportunity. In Z. Acs & D. Audretsch (Eds.), The international handbook of entrepreneurship (pp. 141–160). Dordrecht: Kluwer.

Saunders, M, Lewis, P., Thornhill, A. (2012) Research Methods for Business Students (eds). Edinburgh Gate, Harlow, England: Pearson Education Limited.

Saunders, M, Lewis, P., Thornhill, A. (2015) Research Methods for Business Students (eds). Edinburgh Gate, Harlow, England: Pearson Education Limited.

Schulz, M. (2001). "The Uncertain Relevance of Newness: Organizational Learning and Knowledge Flow." Academy of Management Journal 44(4): 661-681

Schumpeter, J.A., (1934). The Theory of Economic Development. Harvard University Press, Cambridge, MA

Schumpeter, J.A., (1942). Capitalism, Socialism and Democracy. Harper, New York.

Schwandt, T. A. (1994). Constructivist, interpretivist approaches to human inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (pp. 118- 137). Thousand Oaks, CA: Sage

Schwandt, T.A. (2007). The SAGE dictionary of qualitative inquiry (3rd ed.). Thousand

Schwandt, T. A., Lincoln, Y. S., & Guba, E. G. (2007). Judging interpretations: But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. New directions for evaluation, 2007(114), 11-25.

Shkedi, A. (2005). Multiple Case Narrative: A Qualitative Approach to Studying Multiple Populations, Amsterdam: John Benjamins Publishing Company.

Oaks, CA: Sage.

Shrivastava, P (1984) Technological innovation in Developing countries, Columbia Journal of World Business, 23-28

Silveira, D. G (2001) Innovation Diffusion: research agenda for developing economy, Technovation, 21, 767-773

Smelser N.J., & Baltes, P.B. (Eds.) (2001). International encyclopedia of social and behavioural sciences. Elmsford, NY: Pergamon.

Snieder, R & Larner, K. (2009) The Art of Being a Scientist: A Guide for Graduate Students and their Mentors, Cambridge University Press.

Srinivas, S and Sutz, J (2008) Developing countries and Innovation: Searching for a new analytical approach, Technology in Society, 30, 129-140

Strauss, A. L. (1987). Qualitative analysis for social scientists, Cambridge: Cambridge University Press.

Strauss, A. L. & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. Thousand Oaks, CA: Sage Publications.

Strauss, A & Corbin, J. (1994). Grounded theory methodology: An overview. In N.K. Denzin & Y.S. Lincoln (Eds.), Handbook of qualitative research (pp 273-285). Thousand Oaks, CA: Sage.

Strauss, A. L. & Corbin, J. (1998). Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd Edition). Thousand Oaks: Sage

Sull, D.N., Ruelas-Gossi, A. (2004) “The art of innovating in a shoestring”, Financial

Times, September, 24, 10-11.

Teece, D, Pisano, G. and Shuen, A (1997) 'Dynamic capabilities and strategic management', Strategic Management Journal, 18(7): 509–533.

Thompson, V.A (1965) Bureaucracy and innovation, Administrative Science Quarterly, 10, 1-20

Thornberg, R. (2007). Inconsistencies in everyday patterns of school rules. Ethnography and education, 2(3), 401-416

Turner, B. A. (1976). The organizational and interorganizational development of disasters. Administrative Science Quarterly, 21:378-397

Viotti, E.B. 2002, "National Learning Systems - A new approach on technological change in late industrializing economies and evidences from the case of Brazil and South Korea", Technological Forecasting and Social Change, vol. 69, no. 7, pp. 653-680.

Wasserman, J.A., & Clair, J.M. (2010). At home on the street: People, poverty and a hidden culture of homelessness. New York: Lynne Rienner.

Weick, K. E. (1995). What theory is not, theorizing is, Administrative Science Quarterly, 40, 385-390.

Welch, C., Piekkari, R., Plakoyiannaki, E., & Paavilainen-Mäntymäki, E. (2011). Theorising from case studies: Towards a pluralist future for international business research. Journal of International Business Studies, 42(5), 740-762.

Wignaraja, G. (2002). Firm size, technological capabilities market oriented-policies in Mauritius. Oxford Development Studies,30(1), 87-105.

Wolf, Susanna 2006. Encouraging innovation and productivity growth in Africa to create decent jobs. Paper presented at DPRU/TIPS Conference on Accelerated and Shared Growth in South Africa: Determinants, Constraints and Opportunities, held 18–20 October 2006, Johannesburg, South Africa.

Wolfe, R.A (1994) Organizational innovation – review, critique and suggestion for further direction, Journal of Management Studies, 31:3, 405-431

Wong, P. K., Ho, Y. P., & Autio, E. (2005). Entrepreneurship, innovation and economic growth: Evidence from GEM data. Small Business Economics, 24(3), 335-350.

Wong, Poh K, Y P Ho and E Autio 2005. Entrepreneurship, innovation and economic growth: evidence from GEM data. Small Business Economics, 24(3), 335–350.

World Bank (2013) 'Nigeria economic report', viewed 17 February 2014, from http:// documents.worldbank.org/curated/en/2013/05/17708026/nigeria-economicreport.

World Bank (2014) Building integrated markets within the East African Community: EAC opportunities in public-private partnership approaches to the region's infrastructure needs, International Bank for Reconstruction and Development/ World Bank, Washington, DC.

Yin, R.K (1994) Case Study Research: Design and Methods, Sage Publication, London.

Yin, R. K. (2011) Qualitative Research from start to finish, The Guilford Press, London.

Yin, R. K (2012). Case study research: Design and methods. Sage publications.

Yin, R. K. (2014) Qualitative Research from start to finish, The Guilford Press, London.

Zairi, M (1994) Innovation or innovativeness? Result of a benchmarking study, TQM Magazine, 5:3, 10-16

Zollo, M and Winter, S.G (2002) Deliberate Learning and Evolution of Dynamic Capabilities, Organizational Science, 13:3, 339-351

Appendix 1

Innovation in Developing Countries: Unravelling the Potentials of Nigerian SMEs.

Interview Guide

1. Please can you describe briefly how you started the business and what prompted you into going into the business?

2. What are the products you started with? Do you have range of products? Any improvements on the products ? How did you bring about the improvements? How did you come up with idea of a new product? Any feedback of learning from customer or insight from interaction with customer/worker fed into subsequent improvement on product/new product/process?

3. What informs introduction of new product (what makes you create new product)? What drives/motivates introduction of new product/process/organizational structure? How frequently do you introduce new product/improve product?

4. How did you access your market? What informs your decision to go into new markets?

5. Any change to organizational structure? What informs the change?

6. How (what channel) do you distribute your product and why do you choose that channel? Any change?

7. Do you invest in potential of creating in the future? What helps you to create in the future (R&D)? Do you have access to expert skill/ specialist if necessary? How does work promote further acquisition and development of knowledge?

8. What challenges do you face in introduction of new product/ product improvement?

9. What challenges do you face in introduction of new production process?

10. What are the obstacles to accessing (new) market?

11. Any challenge in switching distribution channel?

12. How do you encourage creativity/introduction of newness in your firm (culture of innovation in the firm)?

Appendix 2

Preliminary study

S/N	Name of organisation	Person Interviewed	Duration of interview	Date of interview
1	Small and Medium Enterprises Development Agency of Nigeria (SMEDAN)	Lagos State Coordinator	1 hour 10 minutes	11/04/2013
2	Association of Micro Entrepreneurs of Nigeria (AMEN)	Secretary General	1 hour 12 minutes	20/05/2013
3	National Association of Small Scale Industrialists (NASSI)	Director of membership service	53 minutes	24/05/2013
4	National Association of Small and Medium Entrepreneurs (NASME)	Lagos State Chairman	1 hour 5 minutes	27/05/2013

First field study

S/N	Name of SMEs	Year Established	Person Interviewed	Product Manufactured	Duration of interview	Date of interview
1	Polylat	2006	Owner/MD	Cold water starch, liquid soap and scouring powder	53 minutes	13/11/2013
2	Bridget	2011	Owner/MD	Liquid washing soap	1 hour 14 minutes	11/12/2013
3	Produce Extract	1990	Owner/MD and Marketing Manager	Variety of alcohol and non-alcoholic red and white wines	1 hour 23 minutes	24/01/2014
4	IMIT	1991	Son and Daughter of the owner who are now the managers	chocolate	51 minutes	24/01/2014
5	Angels	2011	Owner/MD	Chalk, white board marker and crayon	1 hour 19 minutes	27/01/2014
6	CU Johnson	2003	Owner/MD	Body cream, hair relaxer	43 minutes	28/01/2014
7	Jubilan	2003	Owner/MD	liquid soap, herbal soap and toilet cleaner	38 minutes	28/01/2014

Second field study

S/N	Name of SMEs	Year Established	Person Interviewed	Product Manufactured	Duration of interview	Date of interview
1	Produce Extract	1990	Owner/MD and Marketing Manager	Variety of alcohol and non-alcoholic red and white wines	50 minutes	17/10/2014
2	IMIT	1991	Son and Daughter of the owner who are now the managers	chocolate	43 minutes	17/10/2014
3	Bridget	2011	Owner/MD	Liquid washing soap	1 hour	21/10/2014
4	Jubilan	2003	Owner/MD	liquid soap, herbal soap and toilet cleaner	45 minutes	22/10/2014
5	Polylat	2006	Owner/MD	Cold water starch, liquid soap and scouring powder	48 minutes	24/10/2014
6	Angels	2011	Owner/MD	Chalk, white board marker and crayon	1 hour	27/10/2014
7	Arcom	2005	Owner/MD	liquid soap, herbal soap and toilet cleaner	43 minutes	28/10/2014

Appendix 3

Key stages in the interview analytical procedure

There is no widely accepted way of qualitative data analysis. The researcher decided to use thematic analysis approach (King and Horrocks, 2010). Themes are relevant and recurrent experiences and perceptions of narrated account of research participant. Three overarching themes (identification of item to clone, tweaking and massive promotion) emerged, using thematic analysis approach suggested by King and Horrocks, (2010). Each of these themes are fully discussed in the thesis. The process of arriving at these themes are described below.

Stage one, full transcriptions of the interviews were made and the researcher was preoccupied with making meaning out of pages of documents so generated. The aim was to extract relevant portions of the text which address the research questions and objectives. Thus, each of text was read over and over again to gain familiarity so that relevant sections could be highlighted for further analysis. To achieve data reduction, the relevant highlighted portion were carved out and put in another word file for further scrutiny. The highlighted portions were given descriptive codes reflecting what was of interest in relation to the research topic. These codes were preliminary comments without interpreting or speculating about perceptions of interviewee. The codes were further reviewed with a view to merging similar or those that overlap. Table below indicated the final list of the codes.

Descriptive codes
Incremental improvements
Use locally fabricated machine
Same raw materials, just tweak to meet the customer needs/ alteration of the process
Target lower economic cadre
No sophisticated advert but door-to-door selling/street selling to get feedback
Direct selling gives exposure to the market
No finance to initially start/ improving d product
No collaboration with suppliers to improve the product
No R& D, just mainly market research
Sophisticated and Machine needed for improved packaging but can't afford it
To improve quality no trust in research but customer/supplier
Cloning foreign brand

Customer satisfaction propel the incremental changes
Careful with escalating cost cos of customer
There is large market to absorb whatever is produced
Direct sales to final customer preferred
Lower/middle class Targeted cos higher in number/easier to persuade
Tweaking of the production process to get different fine qualities
Owner heavily involved in production
Happy with quality, only need improved packaging
No collaboration with R&D
Learning: dealing with customers/lazy youth/ladies
Training basically on how to market the product
Innovation – ability to survive in harsh environment
Produce variety to stay afloat/prompt from customers
Challenges of setting up – finance/power supply/competition with imported (mostly Chinese) products
Tweak to differentiate from the ones in the market
To broaden market share, introduction of more products
Product introduced to compete with imported/incremental improvement over time
Feedback from user to improve
Interaction with customer to tweak
Choice of channel, distribution, determined by quality of product – superior, distributor, else, direct sales
Big market, can't meet the demands
Cut cost to stay competitive by sourcing less critical components from china
Nigerian big market encourages small scale entrepreneurs
Penetration pricing strategy – initially low price, hike price when well known
Valuable assets? – formula to produce/tweak to get the right mix
Informal Market research
Challenges – fake raw materials
Learning : prevent wastage from tweaking
Emphasis on constant improvement
Study of the market (sales pattern) to identify gap

Resource constraint make firm loose market
State tax constraint operation/expansion
Prompt to produce new product sometimes emanate from distributor
Competitive edge - product formulation
In relation to imported brand, operate in a fringe
Bulk buying ties down capital
Informal market survey
Incremental change thru interaction with customer
Emphasis on constant improvement
Challenges -lack of trust employees
Quality advertises the product
Difficulty of raising fund for expansion
Having to contend with approval from regulatory agency
Ride on the success of the first product to introduce another
Continuous improvement
Tweaking to achieve good quality
Learnt from previous employer
Trial and error method to reach perfection
Supernatural inspiration to concoct
Door-to-door selling as advert
Constant interaction with market key
Emphasis on quality and packaging to make difference
Competing with imported/TNC product
Market research to identify gap in the market
Interaction with customer to improve the product
continuous tweaking to improve, meet customer needs
Qualitative product to gain control of the market
challenges – inferior raw material/bank/harassment
Performs laboratory analysis
R&D unit
Quality product to stay afloat competition

At stage two, the descriptive codes developed above were transformed into interpretive codes. Interpretive codes are those that pertain to interpreting interviewees' accounts and experience in relation to research questions and objectives. Descriptive codes that have similar meaning are clustered together into interpretive code and doing this process for all descriptive codes developed earlier. Interpretive codes were later administered to the entire interview transcript. The table below shows extract from interview transcript and the corresponding interpretive codes.

SN	Theme	Evidence/Quote from interview transcripts
1	Incremental improvements/customer satisfaction Sub-theme: tweaking of production process Owner heavily involved in production	I work on this things to make sure it's a positive thing, for my customer, customers satisfaction is always the best for right now because I know I could always make money later, Anita p2 in essence it is the process of production that you alter? Yes not the raw materials, Anita p10 yes I will say there has been improvements, eh for instance our premium chocolates initially we use to experience ehm melting, you know chocolates melt and you know we are in tropical region, so we use to experience ehm, ehm melting, so we had to go back and do some research and come up with the another product it will still melt but not as quickly as our initial product line that's for premium chocolate. Imit P4 as of now the one that is inside the market I didn't have complain now are you getting my point, because all whatever we set to rectify, we will rectify it, and although some everything, we also try it it's only that sometimes eh, sometime we use some of them, the one that we use, people will say that we, is enough some people will say that they like it like that, you know, there is no way you can produce all product, you produce something and everybody in the earth will like it, you must have people that we does not they will not like it, we will, will say that, is not good for their body, let them use it, because we cannot, satisfy everybody what we do is that if out of the hundred about seventy percent like the product that means is okay, so you produce for the seventy percent that love it are you getting my point. CUP4 Yes yes we've tried as much as possible to make it more cold water soluble at least to be able to dissolve in cold water, within

		three minutes maximum, yes at least we've been able to work on that and we've been able to work on the fragrances we are using at least to upgrade it, to make it more attractive. Polylat P2 No no the raw materials, we don't really have issue, because we have standard so we don't really have issue what, be because you know just as I've explained earlier on that we improved we improved during the process you understand still the same raw material but we alter the process to be able to get an improved output. Polylat P4 Yes in improving the products, we I cannot say, because we were, we were doing it with passion, like ehm trying to meet up with customer's ehm dictate, or complain, ah we did not incure much, it's just ehm matter of altering the process, that's what we did. Polylat P9
2	Interaction with customer	it will not be as expensive as those ones that are imported, so, we were able to so, this are some of the improvement that I can really talk about that get feedback from the end users about the quality of the product, then we can then use that to ahm. Legend P4 we also sell directly to some of the schools, so selling, so if, there would be need for us to get feedback, most of the time, we give a call, oh, how is what are your comments? We have a customer care line that we call end users to ask them, what eh what they are thinking about the products? You understand, just like you can just put a call across, a particular school that oh, we are calling from so, so, and so. Legend P5

		in my product now, I know the good side and bad side when is not moving and no work passes it, I know the situation of eh when the thing is lacking and when is lacking, I always eh you know, what I will do I will have to go to market and do research into especially in the market you must see, there's design that eh no, there were something like cosmetics just like a fashion, that it can changes at any day at any time so you you are enable to, issue out you follow it up, know what the market need that time, give it that particular design are you getting my point? So that you make sure that so that you can follow, secondly you price matters when you see that their price in the market, is eh is what the people is not, are cannot be able to afford make sure your own is, a little one that is affordable make your price must be in a it should not be too high, and it should not be too low, are you getting my point? Make sure that it will be affordable to people so it will help your business to, grow all those thing affect you. CUP13 when we, we started, we started with, the 125ml per bottle, we found out that is too small, many of our customers they, were demanding for more, so we as time goes on, we now, added eh, 250ml, now we have 1litre to it, not only that, in the same eh, I think this the, free time we have, direct fix now, of it, we have eh, the wag, that forms in green color, we have the one that comes from a wine color, so that eh, we have the same, applicable to other products, in fact we give our customers variety to make a choice, depending on what we need, so far we meet up their, their demand. Jubilan P4 I operate in the open market, then the feedback from the market have really assisted us in improving on our products. Polylat P2 Yeah In fact we gather information on daily basis any time we go to, I mean we visit them, we always make them to comment, in fact me what I always do is that, is there any problem? So I always expect them to bombard me with series of challenges of problems they are encountering with our products. So on daily basis, we gather information Polylat P3
3	Model of advertising	That is advertising a product now, is that eh we can start eh you make you just make eh draw your, your diagram or how to move

		if it is eh ketu area I want to go this week make sure you finish that Ketu area and Mile 12 between that place you move to another place if it is, Agege and Iyana paja you make sure between that week you move Agege and Iyana paja, with your vehicle and if you don't have a vehicle, you can be moving are you getting my point? Although I have a flyer that sometimes we share are you getting my point? And if it is, Mile 2 I will already know, I will do something, to make sure that within that week we go, we always get to week by week are you getting my point? That's how we do it, after that we repeat it again, because immediately after that week what we do is, before we give them a week go and visit after then, before you go back to that place by that time, before you go, many people have used used the product and know how it is they will now started telling their neighbors come this product is very good. CUP8 you know maybe there is finance you are advertising it, to….. is still help the product but you know, you already have you go locally, but make sure that it touches the people hand, sometime you might advertise and people will not know it are you getting my point, but the best way is to go by locally as, advertising you know go locally and sell, so you make sure that it touches those that are distributor make sure your product touches their hand. CUP9 you have to follow your product up, and make sure, you have the necessary things that you need because there is competition inside the market if you did not follow exempting make sure that there is, availability of the product inside the market before you know other products that is, look similar like that they come out and dominate. CUP10 Yes they reacted by becoming more aggressive in their publicity, in their advertisement. They've gone on air to advertise the their product, I mean they advertise on radio, on Tv, so just to subdue our company but surprisingly because am a marketing person too, so I concentrated more on the, I mean on the grass roots moving closer to the end users so as they are advertising, and

		unfortunately for them, they used the wrong media, you understand how many Nigerians, have access to TV? Despite you understand, most people don't have access because of poor power supply, then, the our target audience, are more or less like the people at lower cadre in the economy so perhaps they might not appreciate. They they, they watch TV but they might not really show much interest in watching Tv. So what I had expected them to have done is to do more of street storming which we are doing, you understand we don't spend much but we'll achieve a lot. Polylat P5 Street storming is where, I mean getting merchandisers, sales people, then go into the streets door to door selling, so that's what we do so door to door selling will give us access to the end users, they, they, they can ask questions immediately. You know when you advertise on TV fed back might not come immediately. But through street storming they buy, they give you feed back almost immediately. Polylat P5
4	Market (informal) research	yes, improvement, in this will, we make sure that eh we do intermittent market survey, One, we look at products that are, emerging products, emerging products in the market, we look at their quality, we go buy them, we see them apart from gaining feedback from people, compare with what in terms of brand, in terms of everything, compare with what we are doing, you understand, because something is eh, there are some, things that appeal to people, the branding, you understand, so we discovered, we, we look at that, that ah, okay, ah, this our package has been for like two three years, okay what do we do to, make it add something to it, to make it a bit look newer, more attractive, see how whatever we can add in addition, to what is there currently, okay oh! In anew pack, in a new terms of you know packaging like branding. Legend P14 A market research, no, ah, we did not conduct a market research, we nearest a party to say, a market research was, the, the sales pattern, from the distributors that we are associated with. Produce P3

		what they normally do is that, they go out to find out how the market look like, what are the thing you can do, to add value to the product, and this where innovation comes in, because when you continue doing something, you need to correct for eh for instance since you remember that this year, some of our soap and our anti, we repackaged it, we repackaged it in, then so to look new, that is to keep our demand afresh, again they could say ah, wow! This one is very good, people have come to, another this thing that, keep them demanding the product, that keep them, retain our customers so we don't do something, so new make sure that each year though, the cost involved we normally make sure that we add something a value, to make our customers happy. Jubilan P4 will be coming out, from demo, we will, that's our department we don't toy with, that research and development, you don't toy with them because they are the life wire of the company, they are the one that initiate ideas, look at how the ideas will work, some ideas and if it work, you'll see the company smile. Jubilan P10 Yeah I mentioned that earlier on by meeting the retailers in the open market, interact with them, gather as many information As possible then come back home to analyse and then, though it's not all the information most of the time that are useful, but we collect as many information as possible, then we come back home, analyse and now improve on those one that we think can help our business. Polylat P10
5	Cloning/imitation foreign/imported brand	I was going through super markets, trying to see the foreign products, I saw that they were different from our Nigerian products, how did these people do to make their own different? Anita p2 because those ones are imported, they are a bit more, one, they are not eh so eh they are very scarce in the market and very

		expensive, you understand so and unlike eh I told you like the magnetic board, those other ones are not the dark board, so that actually lead us to and that of improving, you know eh before we were able to actually discover the exact raw material, it took us a while to we have to experiment with some, some type of eh raw materials at that eh at the initial stage, we didn't really get the exact, so over time, when we, like we did more research into it until we were able to eh then discover exact composition of that eh foreign made, so I can call that more like an improvement. Legend P4 Okay, you see, most of these products are imported, you understand, Nigeria is a place of opportunity, hmm, so these product are not, they are imported so if you can survive and produce and give it to the market, they will definitely buy. Legend P12 when the market was identified and, eh we moved in, competing with the foreign brand which is the Eva, those who had the financial might and the market leaders are the challengers now, saw the opportunity in the market, because they had the resources, they moved in and eh took the market from us, so but if we had the support, of the banks, and even of the government, as well, then that will not be the case, so, is ehm, you just, you just open up a market and you see people come and take it up from you. Produce P5 in fact what encourages us is the opportunity that exist in the, a, a, a, clean eh, that is cleaning industry because the opportunities are there wide enough, especially now that eh the consciousness of eh, many Nigerians and including the individuals, eh, using eh, a antiseptic as a form of fighting eh, bacteria and germs, the consciousness has been aroused so, in fact the market is there already, to empower, we Nigerians to, we, eh, we, credit ah, I mean DETTOL, as already certified the market, so we have to tap into the opportunity. Jubilan P2
6	Large market to absorb	There is the market there, everybody is constantly working with this hygiene and everybody r there, Anita p5

	any product/soci-eco ladder	we have people that, manage to buy, I call them people that manage to buy a bottle of coke every day and not feel a pinch, now those are the people we are actually looking out for, people have this mind set that the rich are far up, the poor are down where they are, now if you can and they feel this beautiful things are always for the rich, as in no, we are bring this thing to you, say me? hen, my house fit dey scent like this? Anita p7 If I claim that we were able to meet all capacity, then I don't think I will be ranked as a small medium enterprise anymore, that means I must have add cadre to another level, frankly speaking there still a lot of demand we are still unable to meet, and I'll tell you factors that are responsible for that is. Legend P8 (, through our research because we have eh, a people that are into mainly for research, we found that eh, as far, as far back as, eh early 60s 70s and 80s, DETTOL and eh, two about three companies have been dominating the market, you understand so as a result of the cost, not many Nigerians are using some of their products, so we happen intuition at least that we have to, come in to reduce our own price, but we have to be of the right quality, to make sure we compete so, what we just into that market as a, result of research, marketing starte, eh, strategy. Jubilan P2
7	Why seen as innovative Sub-theme : produce variety to survive/broad mkt	maybe whatever thing whoever put us on that list, is we have the the drive, the the drive, to survive in a harsh ehm business environment, I think that is it. Anita P21 you will face a lot of challenge that which, is about I told you that we faces, before we you can even produce a stick only that we have determination, what matters I have determined even when the NAFDAC was disturbing us, I determined that even though, if it is my last kobo if it is to borrow, I will try to make sure that I start the product brand, today I thank GOD, that I have eh about

	Prompt from pple/mkt	two to three NAFDAC number. CUP2 if you have a vision of production, any other any single thing that you are doing, you should make effort on it, you should be serious are you getting me? You should not be lazy to follow the you should be slow of I told you that you wanted to you will deny yourself a lot of things you will make sure you are serious to make sure that you advertise it, you may fail, but don't say that don't lose hope, when you are failing are you getting it? Before we started this product we fail a lot before you see us in the stage that we are eh so I always encourage as am saying I'll encourage to be, not to give up, they should be that their vision they make sure, the major important if you are a man, and you have a vision of doing that, you will later, you achieve that vision failure must come, temptation must come, but don't give up, are you understanding? Make sure you achieve that your goal, determination matters in whatever you are doing like as I told you that, many failure come ordinarily in the first place, they disqualify it, I had to do again are you getting my point? So when they first stop me for the first time I didn't give up are you getting my point? Until I made sure that I achieved that my, my goal, but I think I thank GOD. CUP12 then people were like don't you still have stain removals? Look at my floors, I now thought about it, I could do this thing, I started research, I now did it, Anitap24 . if I see a need, that is still within like I said the raw materials are interwoven, that's still within the raw material range that I could just use, and it's different slightly different that I could create a brand new start afresh. Anita p25 if they don't use, if they are not using chalk board, they will definitely use white board, so we'll be able to have, more market share, we'll be able to get more people to, sell our product to, so that's what actually inspired, that. Legend P3

		the distributors, they will ask you, this is the product, how is where they change the product, and for example, in that market that it was obvious, so many it was as result of that gap, that serbina, came into the matter, is almost a market leader it was, Chelsea that was the only product occupying that eh, so, when they disrupt sales that, there is high demand for a particular one, product and those there is, monopoly there they can tell you, okay, the trend is going this way so why don't, you, can you give us something similar. Produce p8
8	Differentiate with quality product/package	is more like dustless, unlike those ones that are, let me just use the word, most of the chalk in the market, there, are made of eh, calcium carbonate, calcium carbonate so we adopted the different, eh so we used calcium sulphate. Legend P2 about the product because we make sure that we produce, a quan, a quality, which eh, eh, enable people having it right from the product, and from there we started raising, relating, to the product I think the time was, nobody uses our product and did not eh come back and give a testimony of that product. CUp1 the only thing that when you are in the market, sometimes try to make a difference, in your packaging and everything and make sure the quality remain like that, even though if the price is coming down, it will not affect you a lot because people are used to the product and know what is high is working, even though you bring out another one, the problem to that one, it will not be that your own because you still remain with your quality and what is killing people is that whenever they bring some product if you started moving they will started reducing the quality, immediately you are reducing the quality and people discover that eh the quality is reducing, it will enable the, it will now make the production, to move again immediately if you continue with your quality and is working as it use to work I want to tell you no matter what you give the customer that they have know the quality, they will still looking for that particular one because they know that is working for them so, it will help you not, to beat I know

		many people will like to, to compete with you to make sure that eh they bring the product down, but if you can be able to remain with your quality, and with your good design and the availability into the market are you getting my point? There is no, way they will, they will take you out of the market. CUP13 We keep, the, we keep on maintaining our quality and that our, formula, that's what keep the production and the, moment you are cleared, or your customers, know you, deviate or you change the formula, or its not up to that quantity, because they are the one that are using it, they will know, and it's going to affect your market, so that one they will think that, ah, the has come in, that is why we make sure that instead of losing our quality, we add to our quality so that any time we come in, they will say ah, yes ah people are improving day by day, and that's what we keep on doing, and that's what, keep our business eh, going. Jubilan P5 it doesn't stay, people buy it, because they know that is working, they are dealing with a product that works is just you test it, and use it and it work for you then, you fall in love with it, so, then, the competition Is not even a challenge, so let me talk, I say is not a problem to us, the only challenge, we are having there is only to meet up the demand, because most of they don't pay, they want for you to produce, so that they use their money. Jubilan P14 Yes the fragrance we use, we use powerful, I mean high grade fragrance than what they do, then you know, with the improvement in the cold water solubility, at least that one made us to stand out, and our packaging too, we have very good packaging and which our customers really appreciate, and we are happy that we have good packaging that can compete with any product even internationally, so because our packaging is of international standard with bar code everything. Polylat P5
9	Product Formulation	why I say raw material, well I would have said machines, but raw material in sense that, eh, like coca cola now, coca cola, what, what, makes it, what make it distinct in the, market is, they are that formula ehen, is still unknown to. Legend P12

		Our, strongest strength, our greatest strength, is on product formulation. Produce P12
10	Challenges : fake r/m Lack of trust Finance for expansion/working capital State (FIIRO) lackadaisical	the quality of the ones that was sold to us before, I don't know along the line, they gave us something that was not, eh, what do you call it, eh, of, as, as terms of the quality, as those ones, we've buying, I now discovered that, what could have caused this, so, I didn't because of eh, that there is a let me just use it like that, because I know, what impact, it can make on our business, so what I did was to like, put it aside,/ because from there, from, from, his, he would have packed it in bundles, like in twenty five, twenty five not knowing, that eh, One of the ones he supplied us, he has removed about five, instead of having it twenty five like that, so, he removed some, so that eh, in order for him to make more money, when I now discovered. Legend P16 but what kills some product is that when you cannot buy a bag or the one that is up to, they end up and buying the one that is, least and when you wanted to produce, it will be a fuck up, you don't get what you want so that means you always go to the distributors, you don't short source run our, so we now avoid eh fake materials. CUP12 okay before we have the staff that will also maybe not be trustworthy, and so we couldn't leave our factory under their care and but you know as an owner you have a meeting you have to do something then you have to leave them so, there should be some one that should be accountable while you are not there. Imit P19 because we already stay in rentage which is where we are still begging eh, the bank and other place if they can support us because the product, is also picking inside the market, you know it is a difficulty time for a company, to, especially the bank, to support this time around without collateral, so is another different eh, something entirely, CU P2

		the quality especially the chemical that we are using, you see that like through the early years when we started the production line, in fact we lost a large sum of money, as a result of substandard eh chemical being supplied to us, but what we do that we learnt that eh, activity, testing of quality, we take them and before we pay. Jubilan P7 It's finance, finance is the issue, finance is the issue because to get that one needs nothing less than two Million to have the one that can give us better finishing. But presently I don't have the Polylat P3 Yes finance majorly I have to be looking for people that can assist financially because it's a bit capital intensive, because no bank will encourage fresh, or start up, we were put down, so I have to rely on people then my own personal savings, so we have to put them together to start the business. Polylat P8 Yes yes I do market research, part of market research is what I've told you, we went to them to receive some information come back home analyse and ehm work on the information and data rather, then on the, quality I've had cause to go to FIIRO on my own to rub mind with them, and see how best they can help us improve on the quality of our products, but unfortunately we were unable to do that. Yes it's bureaucratic bottle neck, the nonchalant attitude, yes nonchalant attitude, so I have to abandon them and remain focused Polylat P11
11	Learning : prevent wastage	the characteristics that eh you learn in a process, for instance now, what we are doing now, some mistakes, we have made along the line, so those mistakes need to be corrected, I don't have to repeat those mistakes, that's part of the experience I have learnt, for instance, let's say I want to like, produce a particular thing now, and eh, because I have not got the exact, eh, specification, I

		have to experiment, there may be wastage, at that point in time, by the time, I've done it, it becomes a standard, such wastage will not re occur again. Legend P17 why I always advise that make a difference and make the label to be everything and packaging to be unique and different from other ones, all those tube eh all those one look eh if it was a lesson that I learnt that it must be unique and be different into the market. CUP14 I've learnt a lot of experience in that area, where people are demanding then the second, our well in fact many experience to marketing strategy how you can penetrate into the market, which time, so that I will now begin to explain it, we have also acquired that is, also in the production line I told you how to identify the right material and the right quantity, we also, eh, learnt eh, on it and also how to, use what you have to get what you need for production, we also have learnt that experience which you can, begin to elaborate it now, it will take almost another two hours, before we finish this interview, I will limit it, so these are some of the especially in the research, you see for a production in, manufacturing firm, we need to stabilize, you must have a right thinking person, that come out with ideas. Jubilan P10
12	Continuous improvement	we are still learning, you understand, some of the things we are still doing, now, we are still on the road, so, we still work, like when you came now, some things you asked, we say okay, from there we are able to see how we can, make do, you asked question then, that eh, how do we improve on what we do, we don't just go and sit back that ah, we have gotten there no, what I would say is one of the problem is that eh, sorry to use this example, I think Ma clean those days, Ma clean is only about the only tooth paste, it got to a point that eh, when you want to call tooth paste, you call it Ma clean, unknowingly, I think, don't know what happened sha, it just, I don't know whether they slept or whatever. Legend P18

		so you see for everything that one just put into the market innovation one must make sure that the least of it is there for the consumers that means the consumers have approved and they like whatever you are bringing in to the market if not it will be not thrive at all before you know it the product will die and that's when some times when you go to the market, and you see a particular product after a while you won't see it in the market again, maybe they just didn't meet the needs and people just stopped buying it. Imit P15 yes that's what I tell you that you improve every time, if there is any complaint, because we always tell our customer if there is any complaint, they have to report to us in order to amend the eh, because you cannot claim perfect it's only the public will tell you what is okay, are you getting my point, we can produce thing that is okay, but when it get to the market before they will now say if they saw that you're the only thing admit your fault. CUP4
13	State tax/extortion	okay let's look at the, tax for example, direct they don't look at your case, they don't look at case by case ehm, in their tax regime, they just use eh, rule of the thumb, eh, approach to storm in with that, so even for a particular year you are not, able to even break in, is not easy to, very concerned so long as, the group have been readily ,dried, in addition, once we start production now, you see all of them coming. Produce P6
14	Ride on success of one to introduce another	make sure you are perfect in one, before you have another one, it was even the perfect people who, see that is perfect it doesn't need to, advertise the second product, because the second product because they know your product is always good. CUP3
15	Learn from previous employer	I started working in the production department, so from there we started this for the years that I stayed I continued having experiments because later I become the purchasing manager, later we become something like just like the production mana, manager, so I was assisting in production so from there I started grabbing, you know in production the key to production is more you move more you learn, more you move, more you make it practical more you learn so that is what is the production you cannot just fold your hand and say I will not do, more you move more you learn sometimes you are moving with the people sometime

		with the people you people you will even accept more knowledge how do you to this, so that is what is, even when I was working with a company I have to produce more, I started giving people, and people was trying aside selling at different place I finally come out, and started my own. CUP4 Yeah, yes yes, yes I was with them now, so I had to resign and start this one. Hem no before then I've been working on, I've been doing under my own hem, underground ehn work, to ensure that I, I mean I became self employed, so but when I discovered that they were creating artificial scarcity, I quickly resigned and ehn face my own business to be able to tap the, ehn the available opportunity, in the market. Polylat P8
16	Trial and error method to reach perfection .ie unlike West where it will be scientifically tested and approved Supernatural angle	you started grabbing something when you take it first of all, mix it by yourself and use it by yourself and move and give other people to use, to know whether that particular leaf is working that is what I told you about immediately we are testing something we always when we use that thing when we see that this thing is working we first of all use it for a little production and give people to use, people will now give us the result and that will be use it by myself my family will use it, I will see the result of it before I now bring it out that is exactly what we do. CUP5 what I told you that when that vision come to you as a manufacturer you first of all test it by yourself are you getting my point, don't rush it straight to the market first, allow people to use it, no matter how it can take you, let people confirm it first, and let people know that say that this is very good, are you getting my point?. CUP6
	Laboratory analysis	we are now including labour vision as a setting up, we realize our, including our finished products, we go for analysis, before we can send it to the market, the same as, our raw materials, we make sure with a we have a, a, we have laboratory, where we test and we find out, and, those ones we have been able to acquire them. Jubilan P8)

		today in business, because, you cannot produce without analyzing, you must analyse what you have produced, because even the product, that, eh, eh, you are producing, you must analize it at the end of the day, otherwise if you have a problem, you can, close, the regulatory agency, they are there, they can go to the market and pick the product, and analyse, and if it give a different result, you are in problem, so the, we always emphasize it on them, and that is one of the criteria, that is the standard, you call it, a standard, operating procedure, maintenance of quality, like the analysis, of the product, both the raw material and the finished product. Jubilan P9

The table above is critical in the analytical procedure adopted because it acts a bridge in the three-stage thematic analytical approach suggested by King and Horrocks, 2010, adopted by this study and that accounts for the reason why the entire process is reproduced in the thesis. The table captures all the relevant extracts and their corresponding interpretive codes from the transcripts of all the seven interviews.

King, N and Horrocks, C (2010) interviews in qualitative research, London, Sage.