

**Developing a framework to improve SME
participation in public procurement: an investigation
into NHS Trusts in the North West of England.**

By

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DEDICATION

I am dedicating this thesis to the God Almighty who, in his infinite mercies, has granted me the grace to start and complete this PhD thesis in good health.

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DECLARATION

I hereby certify that no portion of the research reported in this thesis has been submitted for a degree or another form of qualification either in the University of Salford or other institutions of higher learning. Therefore, this thesis is 100% a product of my own research work and due reference have been made to articles/publications of other authors which were used herein.

Temidayo Akenroye

ABSTRACT

The aim of this study is to develop a framework that can be adopted to help improve the participation of SMEs in public procurement. This research was carried out using a critical review of the relevant literature, analysis of data from a survey of SME owners/managers, development of a framework through the constructive research approach, a preliminary validation process and finally, the modification of the framework. First, six key policy measures being adopted to facilitate SMEs in public procurement in the UK were identified from the literature and then evaluated through a cross-sectional survey amongst SMEs competing for public contracts within National Health Service (NHS) trusts across the North West of England.

The findings suggest that most SMEs have awareness and a marginally positive attitude towards policy measures, but evidence from the study also indicates that SME participation in public procurement is far from improving. Furthermore, the research discovered some issues and concerns raised by SMEs about the policy measures, which have been addressed and considered towards the development of the proposed framework to improve SME participation in public procurement. Therefore, it is concluded from the findings of this research that, while the policy measures being implemented in the UK are necessary, they do exhibit some limitation, which makes them inadequate to effectively address the issues of SMEs under-representation in public procurement markets.

Consequently, a framework was developed based on data collected from the survey and findings from the literature review, to provide broader view of the approaches that might help to improve the participation of SMEs in public procurement. The proposed framework contends that collective actions from diverse stakeholders such as the government, public buyers, policy makers, large business and small businesses themselves, are needed to improve SME participation. Finally, the proposed framework has been tested (preliminarily) through a focus group discussion and found to be feasible and useful.

Key words: **Public procurement, SME participation, policy support measures, United Kingdom.**

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GLOSSARY OF TERMS

For clarity, the important terms used in this report have been defined:

Key Terms	Definitions	Source
SMEs	Refers to Small and Medium Enterprises (SMEs). In the UK context, SMEs are businesses with fewer than 250 employees. For this study, the UK definition of SME is used, because data could be collected only from SMEs competing for contract opportunities in public sector organisations in the UK.	FSB (2017) Thomassen <i>et al</i> (2014) Loader (2013)
Public sector	Consists of governments and all publicly funded organisations, agencies, enterprises, and other entities engaged in delivering programs for the public	Dube and Danescu (2011). GoV.UK (n.d)
Public procurement	Refers to the process by which public authorities such as government bodies or departments, acquire goods, services or works from companies.	Walker and Preuss (2008) European Commission (n.d ¹) Walker and Brammer (2013) Prier, Schwerin and McCue (2016)
Policy	Described as measures to implement government plans or schemes Some scholars have used the terms policy and measures collectively.	Kochenkova, Grimaldi and Munari (2016) Moser and Mußhoff (2016) Kochenkova, Grimaldi and Munari (2016),
Policy Measures	Refers to the various governments' actions, schemes, and interventions or programmes to address the challenges facing SMEs in public procurement. These include practices implemented by public organisations to increase SMEs access to contract opportunities and to make it easier for them to participate in the procurement processes.	Preuss and Walker (2011) Flynn (2016) Flynn and Davis (2015) Loader (2013)
SME-friendly policies	used interchangeably with the term “policy measures” and “SME-friendly procurement policies”	Flynn and Davis (2015) Loader (2018)
Approaches (verb)	Refers to actions or ways to deal with a situation/problem, such as the recommended approaches to improve SME participation in public procurement - as used in this thesis.	Cambridge Dictionary (n.d.) García-Mireles et al (2015)
Cabinet Office	Refers to the corporate headquarters of the UK government, supported by 19 agencies and public bodies.	Cabinet Office (n.d ²)

¹EU definition of public procurement - http://ec.europa.eu/growth/single-market/public-procurement/index_en.htm

² Cabinet Office - <https://www.gov.uk/government/organisations/cabinet-office>

Impact	Means to have an influence on something	Cambridge Dictionary (n.d. ³) Rostek (2015) Glas and Eßig, 2018
Tender documentation	Refers to the paperwork accompanying an invitation to tender.	Cabinet Office (2011) Laryea (2011)
Tender/Bid	denotes a submission made by a potential supplier in response to a call for bids by public organisations	Europe Economics, (2011).
Tendering experience/ Public tendering experience	Denotes the number of years a firm has been bidding for public sector contracts.	Tammi et al (2014) Flynn and Davis (2016a) Akenroye and Aju (2013a)
NHS	National Health Service; a public-sector body providing healthcare services to people living in the United Kingdom	Choices, N. H. S. (2013)

³ Cambridge Dictionary Online - <http://dictionary.cambridge.org/dictionary/english/impact>

CHAPTER 1

1.0. Introduction and statement of problem

This chapter provides the background of the study, statement of problem, research rationale, research aim, research context and the key terms. Key sections of this chapter are discussed below.

1.1 Background of the study

In May 2010, a policy articulating the UK government's intention to increase the value of public sector contracts to SME suppliers was introduced (Cabinet Office, 2010). The government set a target of 25% of public sector procurement spending to reach SMEs by 2015 (Department for Business Innovation and Skills, 2013). In 2014, the Cabinet Office announced that the target had been exceeded because 27% of public contracts (by value) were awarded to SMEs (Booth, 2015). Afterwards, a new target was set in August 2015 to increase government spending with SMEs to 33% by 2020 (National Audit Office, 2016). The end date of this target has also been revised upward to year 2022 (Home Office, 2018).

However, despite these new targets, government spending (direct and indirect) with SMEs has been declining. For example, recent data published by the UK government (Cabinet Office, 2017; Cabinet Office, 2018a) show that public sector spending with SMEs fell to 24% in 2015/16 and 22.5% in 2016/17, respectively. If this trend persists, the government will be off-track for 2022 target of public spending with small business suppliers. Therefore, in consideration of the foregoing, there is a need for further investigation why government is falling short of its target to increase procurement spending with SMEs.

The decline in percentage of contracts awarded for two consecutive years suggests that SMEs are still underrepresentation in the UK's public procurement market. This is a problem that needs to be addressed because SMEs make a significant contribution to the UK economic with a combined turnover of £1.8 trillion (Rhodes, 2017). SMEs also accounted for 47% of all private sector turnovers and contributed more than half

(60%) of all private sector employment in the UK (Federation of Small Businesses, 2017). This is another major rationale for the current study that seeks to examine ways to further improve SME participation and success in public procurement, because what the government proposes to spend with small business by 2022 (i.e. 33%), is lower than their overall contributions to the national economy.

Another prominent issue emerging from the literature is that SMEs face various barriers which hinder them from participating effectively in public procurement (e.g. Glover, 2008; Flynn, McDevitt and Davis, 2013; Loader and Norton, 2015; Loader, 2011, 2013; Pickernell et al., 2011). The UK government has adopted a number of policy measures to address these barriers with the intention of facilitating SME participation in public procurement, such as:

1. **Elimination of Pre-Qualification Questionnaire (PQQ)** for smaller contracts to remove stringent requirements and administrative burdens of public procurement bidding process.
2. The introduction of **prompt payment** regulation to speed up payments to suppliers, ensuring that all contractors are paid within 30days of receipt of invoice.
3. **Division of contracts into smaller** lots to attract SME suppliers.
4. Establishment of **contracts finder** as an online portal dedicated for advertisements of tender opportunities across the public organisations in the UK.
5. Regulation directing all public organisations in the UK to accept **consortium bidding** from SMEs collaborating with others.
6. The use of **subcontracting** to link SMEs to contract opportunities in the public sector

1.2. Problem statement

Despite the publication of the above-mentioned policy measures, the latest available data shows that SMEs are under-represented in the public procurement markets (Federation of Small Businesses, 2017; Flynn and Davis, 2016a; Loader, 2018). Similarly, there has only been limited literature that has evaluated the existing policy measures to determine their effectiveness in helping SMEs to improve participation in public procurement. Therefore, an empirical assessment of key policy measures adopted by the UK government to support SMEs in this respect is necessary to ensure that they remain relevant and effective.

Furthermore, existing literature (see further details in 2.6.4.1 – 2.6.4.6) appears to have placed little emphasis on the need for a framework that can be adopted to help improve SME participation in public procurement, in general. As more and more studies (e.g. Flynn and Davis, 2016a; Loader, 2013; Tammi, Saastamoinen and Reijonen, 2014; Reijonen, Tammi and Saastamoinen, 2014) create an awareness of internal firm factors in addressing the under-representation of SMEs in public procurement markets, there is a need for a framework to be developed to help public sector organisations and policy makers to examine their existing SME-friendly procurement policy and identify areas for improvement.

More recently, researchers (e.g. Glas and Eßig, 2018; Loader, 2018) have called for further academic evaluation of SME-friendly public procurement policies, including the need to develop better methods of evaluating policy outcomes. Therefore, as the starting point in highlighting the academic rationale for this present study, a comprehensive literature review was conducted in Chapter 2 to identify key policy measures to promote SME participation in public procurement in the UK. Table 1.0 provides a summary of key research gaps in the literature and how the current study intends to address them through specific research objectives.

1.3. Research aim

The aim of this research is to develop a framework that can help increase SME participation in public procurement, using the NHS Trusts in North West England as case study. To examine this aim, the study starts by analysing key policy measures

adopted by UK government to support SMEs in public procurement (a more detailed discussion of these policy measures is provided in section 2.6.4). The policy measures were examined to determine whether they were of sufficient importance to SMEs regarding public procurement participation. It is important for SMEs to share their viewpoints about these policy measures as the target audience or key beneficiaries.

1.4. Research Questions

This study will address the following research questions in attempting to achieve the research aim:

1. What policy/measures has the UK Government put in place to promote SME participation in public procurement markets, which are important?
2. To what extent are SMEs aware of these policy measures? And are there significant differences between diverse groups of SMEs regarding their level of awareness?
3. What is the attitude of SMEs towards these policy measures in general? And are there significant differences between diverse groups of SMEs regarding their attitudes?
4. What are the issues and limitations in the policy measures currently being implemented in the UK to promote SME participation in public procurement markets?
5. What firm's resources and capabilities can help SMEs improve participation in public procurement and how?
6. How can SMEs' under-representation in public procurement markets be more effectively addressed?

1.5. Research objectives

The following research objectives are formulated so as to address the research questions listed above, for testing the research aim (in section 1.3):

1. To identify and evaluate key policy measures being implemented to support SMEs' public procurement in the UK.
2. To examine SMEs' awareness of key policy measures designed to improve participation in public procurement and to test whether there are significant differences between SME groups (in relation to firm size, firm age, and tendering experience) with regards to their awareness level. It is assumed that if SMEs have good knowledge of the policy measures, they might be able to take advantage of the associated benefits to be derived by improving participation in public procurement.
3. To evaluate SMEs' attitudes towards key policy measures and to determine whether there are significant differences between SME groups (in relation to firm size, firm age, and tendering experience). This can help to understand the perceived ability and potential of the policy measures in helping SMEs to improve participation in public procurement.
4. To examine key issues and concerns about the policy measures in order to discover potential opportunities for improvement in SME participation in public procurement.
5. To examine internal resources and capabilities that serve as a source of competitive advantage for a firm and to find out whether they can help improve SME participation in public procurement, together with the policy measures of the government.
6. To develop and test a framework containing approaches, which could potentially guide policy makers, public organisations and researchers in identifying areas where improvements can be made towards SME participation in public procurement.

Table 1.1 Summary of key research gaps

What are the research gaps?	How the current study hopes to address the research gaps	Corresponding research objective/Chapter
<p>Several research studies and government publications (e.g. Loader and Norton, 2015; Loader, 2015; Loader, 2013; Crossley et al., 2015; Booth, 2015; Smith, 2015; Ballard, 2015; Strömbäck, 2015) have identified key policy measures to promote SME participation in public procurement in the UK. However, none of the studies has examined the level of awareness and attitudes of SMEs towards the policy measures.</p>	<p>The present research will explore SMEs' awareness and attitudes towards six key policy measures</p>	<p>Research objective 2 Research objective 3</p>
<p>Researchers (e.g. Loader and Norton, 2015; Davis and Brady, 2015; Flynn and Davis, 2015) have acknowledged that, SME participation in public procurement is still low despite policy/measures being implemented to address this matter.</p>	<p>Hence, this research will examine key issues and concerns about the policy measures, to determine whether opportunity for improvement exists, which might increase SME participation in public procurement.</p> <p>In addition, the research seeks to develop and validate a framework that can provide guidance for government, policy makers and public organisations to identify the areas for improvement in their approach to increasing SME participation in public procurement</p>	<p>Research objective 4 Research objective 6</p>
<p>According to Flynn and Davis (2014), existing literature on public procurement lack theoretical groundings.</p>	<p>The present research combined two theories, namely institutional theory and resources-based view to explore how SME under-representation in public procurement can be addressed more effectively.</p>	<p>Research objective 6</p>

1.6. Research context

The UK marketplace for public sector contracts serves as the research context and SMEs as the research informants. In 2017, there were 5.7 million businesses in the UK and SMEs accounted for over 99.9% of this population (Rhodes, 2017). Of these

SMEs, 96% are micro-enterprises employing 0-9 employees; 4% are small-enterprises employing 10-49 employees; and 1% are medium-enterprises employing 50-249 employees. However, given that there is no single database that contains details of every SME in the UK (Department for Business Innovation and Skills, 2015), it can be extremely difficult for a researcher to attempt to survey the entire population of small businesses in the country. This is just as Flynn, McDevitt and Davis (2013) said previously that it was difficult to determine, a priori, the sample size of SMEs participating in public procurement.

Therefore, having taken into consideration the above-mentioned limitation and the ease with which data can be accessed for this study, a cross-sectional study was conducted in which the research participants were identified by purposive sampling from lists of firms competing for public contract opportunities within NHS organisations in North West England (see section 5.5 for further details on the sampling techniques). The NHS is one of the largest public-sector institutions with substantial purchasing power in England; it spends over £20 billion every year on procurement of goods, services and works (Department of Health, 2013). Furthermore, a report published by Her Majesty's Treasury shows that about 13.7% of total identifiable expenditure on health services is spent on activities in NHS organisations/trusts in the North West (HM Treasury, 2015b). Therefore, data collected in this research comprises of SMEs competing for contracts in NHS organisations in the North West region of England.

1.7. Potential research contributions

The present study has developed a novel framework that can guide government, policy makers and public organisations to identify areas for improvement in the current approach to improving SME participation in public procurement. The framework presented in Chapter 8 (see figure 8.2) was designed using a constructive research approach and it recommends different but interrelated pathways through which SME participation in public procurement might possibly be improved. With these, the research has potentially contributed to the body of knowledge (see sections 9.4 – 9.4.2 of Chapter 9) for further information on the contributions of this research). Furthermore, the proposed framework presents a broader range of vital factors to consider when using public procurement as a policy tool to develop the small business

sector, which were rarely acknowledged in previous studies in this area. Tables 8.1 – 8.4 provide detailed overviews of the framework components.

The government has recently set a new target to direct 33% of its procurement spending to the small business sector by 2020 (National Audit Office, 2016). This provides an opportunity for implementing novel approaches that have the potential to improve SME participation in public procurement. As such, the proposed framework, if implemented, can offer win-win benefits for both small businesses and the government. The SME sector is widely recognised as a proven route to creating employment and jobs for the masses. In the UK, SMEs are vital to economic growth because they account for 47% of turnover and more than half (60%) of all private sector employment in the UK (FSB, 2017). Equally, the public procurement markets present opportunities for SMEs to grow revenue and profits by selling to the government.

Table 1.2 summarises the current research findings and compared them with those obtained in other studies in the same research area.

Table 1.2 Comparing current research findings with previous studies

Aspects examined (focus of analysis)	Previous research findings	Present findings
Awareness of policy measures	<ul style="list-style-type: none"> Based on evidence from literature analysis, Loader (2018) has revealed a low level of awareness of the policy measures amongst the SMEs in the UK. SMEs do not have good knowledge of policies designed to support them in public procurement (Flynn and Davis, 2015) 	<ul style="list-style-type: none"> In the present study, SMEs reported a high awareness of the six policy measures in the following proportion: elimination of PQQ for smaller contracts (60%), prompt payment rule (67.2%), consortium bidding (81.0%), contracts finder (77.4%), division of contracts into lots (77.4%) and subcontracting (82.5%). But they do not demonstrate practical understanding of consortium bidding.
SMEs' experience of and attitudes towards key policy measures	<ul style="list-style-type: none"> SMEs in the Heritage sector prefer to sell directly to public sector than forming a consortium or acting as subcontractors (Loader and Norton, 2015); but did not recognise the underlying causes of the observed reluctance or lack of enthusiasm for subcontracting 	<ul style="list-style-type: none"> The current identified several issues and concerns that can offer explanation for SMEs' lack of enthusiasm for subcontracting as well as consortium bidding
Differences in experience of and attitudes towards key policy measures	<ul style="list-style-type: none"> Firm size was a significant predictor of SMEs' experiences of policy measures (Flynn and Davis, 2015) 	<ul style="list-style-type: none"> Attitudes towards key policy measures were slightly positive, but there are no significant differences after comparing the data from SMEs grouped according to firm size, age and tendering experience.
Potential drawbacks and limitations of key policy measures	<ul style="list-style-type: none"> Government policies and actions for promoting SME participation in public procurement are ineffective (e.g. Kidalov 	<ul style="list-style-type: none"> Identified some issues about the policy measures, that can be improved in order to

	and Snider, 2011; Reis and Cabral, 2015; Stake, 2014)	increase SME participation in public procurement
Impact of SME-friendly policy measures	<ul style="list-style-type: none"> • Firms' experience of SME-friendly policy is not significant in explaining frequency of tendering (Flynn and Davis, 2016a). • Splitting tender into multiple lots does not significantly increase SMEs' success rate in public procurement (Glas and Eßig, 2018) 	<ul style="list-style-type: none"> • The slightly positive attitudes expressed by SMEs about key policy measures; seem not to be reflected in their frequency of participation in public procurement. • The current study identified several issues and concerns, which can help explain why SMEs' success rate in public procurement is not improved despite the division of tenders into lots.
Implementation of key policy measures	<ul style="list-style-type: none"> • Flynn and Davis (2015, 2016a) highlighted the policy-practice gaps of SME-friendly procurement policy - implementation is more "rhetoric" than reality 	<ul style="list-style-type: none"> • Lack of implementation and enforcement of government's policy to support SME in public procurement, combined with non-compliance by public buyers.
Rate of participation in public procurement	<ul style="list-style-type: none"> • Firm size was a significant predictor of SME success rate in public procurement (Flynn, McDevitt and Davis, 2013) 	<ul style="list-style-type: none"> • SME underrepresentation in public procurement becomes more pronounced amongst the micro-sized businesses (i.e. firms with less than 10 employees and an annual turnover below £2 million).
Techniques to improve SME participation rate	<ul style="list-style-type: none"> • SMEs must develop self-help actions to improve participation in public tendering (Loader, 2013), in addition to the existing policy support by government. 	<ul style="list-style-type: none"> • Promoting SME participation in public procurement should be a shared responsibility between government, public organisations, SMEs, prime contractors on public sector jobs, and other relevant stakeholders such as organisations that support small businesses

1.8. Thesis structure

This thesis is prepared and presented in nine chapters. The contents of each chapter in this thesis are shown below:

- **Chapter 1** – Details the background to the study, problem of statement, research rationale, research aim, research context and an overview of research contributions.
- **Chapter 2** – Presents a critical and comprehensive literature review of studies linking public procurement with SMEs and discussions of factors that influence SME participation in public procurement.
- **Chapter 3** – Explains the research methodology, philosophical assumptions underpinning this study, the methods used for data collection and analysis as well as the framework development process.
- **Chapter 4** – Details the theoretical lenses that are relevant to the research problem and provides the basis for the researcher to analyse and interpret the key research findings so that they make sense.
- **Chapter 5** – This chapter details the issues that were considered for the design and implementation of the survey.
- **Chapter 6** – Presents the quantitative findings from the survey conducted.
- **Chapter 7**– Presents the qualitative findings from the survey conducted and identified problem areas about the SME-friendly procurement policy measures.

- **Chapter 8** – This chapter suggests recommendations for addressing the key issues identified in Chapters 6 and 7 with a view towards the framework development to improve SME participation in public procurement markets. The chapter also details the framework validation process.
- **Chapter 9**– Covers the discussions and conclusions for the whole study by linking the research findings with the research objectives. This chapter also presents the contributions and limitations of the study, in addition to recommendations for future research.

1.9. Chapter summary

This chapter sets the background of the study and presented the research aim, research questions and corresponding objectives, which are aligned with the existing gaps in the literature. The chapter also presents the rationale for the research by indicating the need to develop a framework to improve SME participation in public procurement. The significance of the study was discussed to signpost the potential contributions of the research. Furthermore, the chapter has briefly summarised key research findings in table (1) and compared with previous findings. Finally, a description of the thesis contents is presented outlining the issues covered within the chapters.

CHAPTER 2

2.0 Literature review

2.1 Introduction

The purpose of literature review is to appraise report of studies found in the literature about the topic under investigation, and to identify the gaps in the body of knowledge (Jesson et al., 2011). In this study, the literature review section appraises the current body of research about SMEs' participation in public procurement. The research explores the nexus between SME, public procurement and the policy measures adopted by the government to support SMEs in public procurement.

2.2 The literature review techniques

There are two common approaches for conducting a literature review (Aveyard, 2014; Booth et al., 2016):

- 1. Traditional literature review:** - The traditional method of literature review allows the researcher to search for publications in specific sources of interest, although this is a flexible approach and it is reported in a narrative way.
- 2. Systematic literature review:** - A systematic review is methodological in nature as it enables the researcher to collate available evidence and present them in a structured manner (Booth et al., 2016). This approach brings a degree of thoroughness to the literature review process.

The literature review for this study applied the traditional review technique because key aspects of the research focus on public procurement and policy measures targeted at supporting SMEs. This enabled the researcher to source publications on SMEs and public procurement in policy documents, study reports, government publications and peer-reviewed journals. Therefore, while a systematic review might be a robust way to locate relevant studies published in academic journals (Gough and Elbourne, 2002), it is considered less suitable for identifying 'grey literature' (Curran et

al., 2007) that exclusively publish government reports and policy documents, which are pertinent to the present study.

Accordingly, the researcher commences by searching for articles relevant to the study topic or subject areas, such as SMEs and public procurement policies by the UK government, public institutions, the European Commission and other national governments of countries governed by the EU public procurement regulations. Furthermore, the literature search explored theoretical and empirical research articles, which were published in respectable scholarly journals relevant to the research topic. The following databases were searched to gain access to relevant articles held in academic journals: Business Source Complete (EBSCO), ProQuest, Emerald Journals, Science Direct, Gartner Core Research, Scopus, Web of Science and PsycINFO. The articles included in the review increased rapidly as the researcher used one study to find concurrent or prior published studies.

2.3 Definition of concepts

It is important for a researcher to define the concepts used in an academic investigation to help the reader to understand the concepts and how they have been used in the study. This also enables the researcher to clearly communicate their thoughts about the research topic (Flynn, 2016). In this present study, definition of concepts is important because the research cuts across the boundaries of four separate but related themes/concepts:

- Policy measures

- Procurement

- Public sector procurement

- SMEs

In addition, concepts might have country or context specific meanings (Hecló, 1972). Therefore, it is important to identify key concepts of the research and define them

clearly. Otherwise, the lack of clarity in the use of concepts may bring about ambiguous and vague expressions. Sections 2.3.1 – 2.3.3, below, provide a detailed discussion of the above listed concepts.

2.3.1 Defining policy measures

The Business Dictionary defines policy as “the declared objectives that a government or party seeks to achieve and preserve in the interest of national community”⁴. From a public sector’s perspective, policy could mean actions of the government to achieve certain economic or social objectives such as interventions to increase taxes, reduce inflation, increase international trade for economic growth purposes and employment opportunities (Kochenkova, Grimaldi and Munari, 2016; Colebatch, 2002). The terms policy and measures can be used collectively (e.g. Moser and Mußhoff, 2016; Kochenkova, Grimaldi and Munari, 2016) or interchangeably (Hao et al., 2016; Hecló, 1972) to denote a course of action or plan that can help the government to manifest intentions with some specific outcomes. These include regulatory actions to facilitate redistribution of income and wealth creation (Plosila, 2004), similar to those being implemented to increase SME share of public procurement spending.

Although the above definitions provide a generic view of what policy is about, they are inadequate to explain government actions to improve participation in public procurement in the UK. For instance, the policies being investigated in this study are not mere set of measures designed by the government (Flynn, 2016), but they are backed by a directive under the UK law to highlight what changes should be made to procurement practices to ensure increased participation of SMEs. Furthermore, the meaning of policy in this study needs to go beyond merely talking about government’s intention to increase spending with small businesses. It includes the codes of practice or initiatives designed to tackle the barriers facing SMEs in public procurement (Loader, 2013, 2018). Therefore, to provide a broader perspective of the concept under investigation in this study, the terms policy and measures will be used collectively.

⁴ Business Dictionary: definition of policy.
<http://www.businessdictionary.com/definition/policy.html>

2.3.2 What is procurement?

Historically, procurement and purchasing were used interchangeably for depicting the process of securing goods, services and works and it involved interactions between suppliers and buyers (Weele, 2000). It has been posited that the nature of organisational procurement involves a “decision-making process during which organizations manifest the need for products and services, to be purchased, identify possible goods and suppliers and then make a choice out of them” (Kotler, 2004: 51). There is general agreement among researchers that procurement consists of a three-stage process namely, pre-tendering preparation, procurement phase and contract negotiation plus awards (Kusi *et al.*, 2014; Patras, 2016). Each of the three stages is characterised by actions that provides avenue for improving SME participation.

The first stage (i.e. pre-tendering preparation) includes approaches by which an organisation establishes its business requirements. This include exploring the options for securing such needs as well as the creation of a project team that decides on the tendering activities. The pre-tendering stage offer some opportunities for maximising the UK policy measures to improve SME participation in public procurement. This is perhaps the stage that public buyers can start to think about increasing SME access to contract information by advertising tender opportunities on the **contracts finder** as directed by the UK’s Public Contracts Regulations (2015). Similarly, the decision to **eliminate the use of PQQs** for small value contacts can be made at the pre-tendering stage to help improve SME ability to meet the specification requirements.

In the second phase of the procurement process, suppliers are invited to express interest in contract opportunities and then a shortlist is drawn up for bid submissions, which are then evaluated to decide on the preferred bidder (Kusi *et al.*, 2014). There are some policy measures which are pertinent in this phase such as the requirement for **dividing contracts into small lots** to attract SMEs, **subcontracting** and **consortium bidding** that allow SMEs to come together to meet the essential criteria for shortlisting suppliers. However, what previous research (Smith and Hobbs, 2001; Loader, 2018; Flynn and Davis, 2016) appear to have overlooked is the public organisations might not be implementing these measures due to administrative inconvenient. For example, managing more than one supplier on a single contract, in the case of consortium bidding, might be time consuming and complicated. This

provides another rationale for examining the potential drawbacks of the SME-friendly policies in the UK.

The third phase of the procurement process involves negotiation with the preferred supplier, which then leads to contract award. This is an important stage that can present a challenge to SMEs if the payments periods to suppliers are too long. Hence, the **prompt payment** policy (Cabinet Office, 2013) becomes pertinent for improving SME participation in procurement. In addition, every public organisation in the UK have the obligation to publish award information on **Contracts Finder** once a contract has been awarded. Ignoring this obligation can have consequences for complying with the EU transparency directive (Europe Economics, 2011) and promoting SME participation in public procurement process. For example, SMEs might want to keep track of the newly awarded contract so that they do not miss out when it is due for re-tendering. This links to another issue that this study seeks to investigate by evaluating the policy measures from SME perspectives.

Although, the discussions above show the link between key stages of procurement process and key policy measures, it is important to note that the current study focuses on SMEs participation in procurement within the public sector. Therefore, ensuring that public organisations make the most of the policy measure for improving SMEs participation in procurement process is critical for testing the aim of this study. The qualitative finding reported in subsequent Chapters 7 and 8 can help to address this issue. In the meantime, the below sections (2.3.2.1) pay attention to defining procurement from the public-sector context.

2.3.2.1 Public procurement

Before discussing public procurement, it is important to define what the public sector is. Essentially, the public sector consists of governments and all publicly funded organisations, agencies, enterprises and other entities engaged in delivering programmes for the public (Dube and Danescu, 2011). In the UK, the public sector includes 11 public corporations, 22 non-ministerial departments, 24 ministerial departments, 75 high profile groups, 372 agencies and other public bodies as well as

the 3 devolved administrations of The Scottish Government, Welsh Government and Northern Ireland Executive⁵.

The UK government spends about £242 billion each year on goods and services (Lang, 2018), which presents opportunities for SMEs to sell to the public-sector organisations. Yet, there has been a significant under-representation of small businesses in the public-sector supply chain (Loader, 2013; Flynn and Davis, 2015), this again, necessitated the adoption of some policy measures that are being investigated in this thesis. Therefore, to explore better ways of improving SME participation in public procurement markets, it is important to understand the different definitions and interpretations that may exist regarding public procurement as a concept.

Public procurement is a relatively new concept in academic research (Flynn, 2016) and there is some ambiguity about its exact meaning (Prier, McCue and Behara, 2010; Edquist and Hommen, 2000) because different definitions of public procurement have emerged over time. For example, Uyarra and Flanagan (2010) defined public procurement as the buying of goods and services by government or public-sector organisations. However, this definition is lacking in scope as it only describes procurement in terms of what is bought or acquired by a public organisation; there is no reference to the process of buying. The definition provided by Walker and Brammer (2009) seems to address this point as they describe public procurement as “how public-sector organisations spend taxpayers’ money on goods and services” (p129). Yet, with such a definition, there is no clarity on what constitute the process of buying in the public sector as opposed to private firms (Prier Schwerin and McCue, 2016).

Unlike the definitions provided in the academic literature, national governments, regional institutions and governing bodies have revealed the key aspects of the public procurement process (e.g. Asian Development Bank, 2011; European Commission, 2014a). For example, the Asian Development Bank enumerates the conditions for

⁵UK Public Sector: <https://www.gov.uk/government/organisations>

describing public procurement practice as; ability to identify the need for procurement, initiating a competitive bidding process that leads to contract award to the supplier with best offer and developing contractual terms that show cost of services/goods and timeline for delivery. Although the above definition takes a broader perspective and offers a more explicit description that recognises key stages of procurement cycle, it does not emphasise the role of law or regulations, which limits its range of relevance when discussing the policy measures that governments use to increase SME participation in public procurement.

Furthermore, European Commission (2014a) describes public procurement as the process (including prescribed measures) through which public organisations in all member countries, including the UK, procure goods, services and works to achieve economic, environmental and social policy outcomes. While this definition is of more relevance to the present study as it touches on the obligations of public organisations about using procurement to achieve socio-economic goals, such as the engaging more with SME suppliers, it missed out in respect of the key stages highlighted by other scholars (e.g. Patras, 2016; Kusi et al., 2014; Kotler, 2004), as previously mentioned.

Considering the foregoing, this study will combine the separate elements of the different definitions reviewed above (Asian Development Bank, 2011; European Commission, 2014; Kusi et al., 2014; Prier, Schwerin and McCue, 2016), to provide a more comprehensive explanation of public procurement as **the process executed by government departments, agencies and public bodies to acquire goods, works and services that are aimed at achieving budgetary goals, desired policy outcomes or definite obligations, in line with prescribed procedures and principles**. This definition encompasses three aspects of public procurement:

1. The first aspect of the definition relates to where public procurement is being conducted. The authorities designated to conduct public procurement are often referred to as public sector organisations, which are instituted to run various governmental services. The directives and regulations guiding public procurement may differ across countries and regions. It is therefore, important for organisations,

which are categorised as public-sector bodies to understand and have access to the policies and laws regarding procurement in their countries⁶.

2. The second aspect relates to the purposes and expected outcomes of the public procurement process. In addition to ensuring accountability in public expenditure, procurement is used as an instrument to achieve the social, environmental, economic and political purposes of the government (Walker and Brammer, 2013; Walker and Brammer, 2012; Arrowsmith, 2010).
3. The third aspect of the definition highlights the importance of a code of practice for the procurement process. Public procurement is usually regulated by laws and policies which specify the techniques and processes to be followed when purchasing goods and services (Murray, 2007).

Notwithstanding all that has been said about the definitions of public procurement, emphasis should be placed upon the laws and principles guiding its practices. This is important because the policy measures under investigation are to be implemented by public organisations in the UK for the benefits of SMEs while complying with the set rules and principles (Arrowsmith, 2010). Therefore, the next sections (2.3.2.2 - 2.3.2.10) will examine how key principles of public procurement can influence SME participation in the process.

2.3.2.2 Key principles of public procurement

The nature of procurement in public sector is essentially built on four key principles, namely non-discrimination, equality, transparency and proportionality (Lundberg et al., 2014). In addition to the above, other common principles of public procurement were identified in the literature (i.e. Jeppesen, 2010; Nicholls and Creegan, 2010; Sanchez-Graells, 2010), such as value for money, competition and efficiency, which are the seven principles which are discussed below:

⁶ Public procurement policy: as a buyer or commissioner of supplies, services and works for the public sector you need to understand and be able to readily access the regulations and policies relating to procurement. <https://www.gov.uk/guidance/public-sector-procurement-policy>

1. Principles of equality
2. Principles of accountability,
3. Principles of transparency,
4. Principles of value for money,
5. Principles of proportionality,
6. Principles of competition
7. Principles of efficiency

2.3.2.3 Principles of equality

The principles of equality require that public organisations conduct procurement process in a fair, just and non-discriminating manner. This is considered as one of the core regulatory and legal objectives of public organisations because it ensures equality of opportunity. However, equality is open to different meanings as it has no singular definition (Dworkin, 2018; Arnaud, 2001). For example, equality has been defined as “the condition of having equal dignity, rank, ability, achievement, or privileges with others; the fact of being on an equal footing” (Murray 1961 *et al*: 253). However, Murray’s definition does not show the scope of applications of equality in practical terms, unlike Miller (2002) who proposed four dimensions for distinguishing this concept as: equality of condition; ontological equality; equality of outcome and equality of opportunity, particularly as it relates to the provision of even playing field for SMEs and large suppliers who compete for public contracts.

Therefore, for this study, equality of opportunity could mean actions by public organisations and policy makers to remove any kind of discrimination against suppliers in the public procurement process. This concept has also been referred to as equal treatment and is now a generic principle in procurement practices across different jurisdictions (Flynn, 2016). For example, the UK procurement regulations (2015) seeks to avoid the appearance of bias in favour of firms (irrespective of size), that bid for public contracts. However, it would be unrealistic to expect SMEs with limited resources and capabilities to compete on equal terms with large firm. That is why emphasis on the concept of equal treatment would be insufficient to achieving optimal outcomes in terms of improve SME competitiveness in public procurement.

Alternatively, equity is an alternative consideration for addressing the underrepresentation of SMEs in public procurement markets. Although this concept has been used interchangeably with equality, they each have different meanings. Equity is common in conflict resolution situations and related to objectivity and justice, whereas equality, on the other hand, is connected to the common view that all the parties involved in a relationship/transaction must be given the same treatment (Arnesson, 2001). Notwithstanding the distinction, for the purpose of this study, the concept of equity would seem more favourable consideration than equality given the points mentioned above. This will be an important taken into account towards recommending approaches for improving SME participation in public procurement

Public sector organisations will need to adopt a system of procurement in which SMEs are treated fairly, not just equally like other large firms that bid for contracts. This is because, small firms do not have the same resources and capabilities like larger firms and might need to be given additional support to be successful in public procurement (Rostek, 2015). Although, it has been argued that the absence of both equity and equality can increase anti-social conducts (Van de Bos and Lind, 2002), but equity is likely to increase the chances of SMEs to be treated fairly when bidding for public contracts.

2.3.2.4 Principles of accountability

According to Armstrong (2005), accountability is a norm in public services because employees in government institutions are expected to make themselves available for public scrutiny as at when needed, in addition to taking responsibility for their actions when in office and afterwards. Jeppesen (2010) extends the definition of accountability beyond the point of view of taking responsibility for each decision and action that public officers take. The author argues that organisations are not only required to be held responsible for how much they spend, but through what medium or process the spending occur. This definition applies to the context of public procurement; a process through which the government spends a significant amount of money to acquire goods and services and other utilities for public use, annually.

It is therefore not surprising that accountability has become a common concept in public procurement practice, particularly as part of anti-corruption efforts of the governments (Flynn 2016; Schooner *et al.*, 2008). Beyond just holding public officers responsible, the principles of accountability can help in driving improvements in SME participation in public procurement. For example, the UK government's transparency and accountability agenda (Preuss and Walker, 2011; Public Contracts Regulations, 2015) can be used as a lever for promoting compliance (by public organisations) with the policy measures under investigation. Therefore, recommendations will be made in this thesis on how public managers can held accountable for compliance with policy measures to help facilitate the participation of SMEs.

Furthermore, accountability increases when there is a governance tool that gather and integrates the views of multiple stakeholders in procurement decision making process (UNDP, 2010). This suggests the need for involving and attending to the concerns of all stakeholders (e.g. public buyers, policy makers, SME managers) in establishing a much more collective and inclusive approach for improving SME participation in public procurement. Perhaps, such multi-stakeholder engagement approach can be used to identify a more robust compliance process to track nonconforming behaviour of policy implementation, and sanction offenders appropriately (Beth, 2005), particularly with regards to engaging more with SME suppliers.

2.3.2.5 Principles of transparency

Transparency is a key principle of public practice because it permits citizens to access information about existing laws and regulations, which explains how they are being governed (Midwinter and McGarvey, 2001). Although this definition identifies a key issue about the concept of transparency for instance access to information, but it has limitations. For example, it does not consider information quality, timeliness and accuracy, which was highlighted by Armstrong (2005) who describes transparency beyond the common attributes of information access. In Armstrong's view transparency is effective when individuals and organisations can seek accurate information from the public sector and get response in a timely manner. With regards to the present study, it is important for UK's public organisations to ensure that information about public contract opportunities are timely and accurate on the

contracts finder so that SME can be able to identify tender opportunities more effectively.

Furthermore, transparency is one of the core guiding principles on which the United Kingdom base her public procurement policy (HM Treasury, 2015a) for ensuring that contract information and documentation are made available to potential suppliers, and this in addition facilitates audit trail and the accountability process (UNDP, 2010). This is relevant to this study is various aspects such as in the advertisement of contract opportunities, disclosing the tender evaluation criteria to all prospective bidders and publishing the justification for contract award. It is believed that when a procuring organisation does all the above-mentioned actions, the possibility of corruption can be limited (OECD, 2007). Hence, transparency is important for ensuing easy access to contract information, which can be a challenging task for SMEs with limited resources and time constraints (Rostek, 2015).

Therefore, new approaches to improve transparency would be considered as part of the framework development to improve SMEs participation in procurement. This can help is simplifying the process of searching for and finding contracts. Likewise, there is a connection between transparency and accountability in procurement, and the implication of this on promoting the integrity in public procurement has been acknowledged (OECD, 2007). For example, where there is transparency, regulators can access data for evaluating the performance of public buyers (OECD, 2006). This could help to promote policy compliance or for detecting irregularities in implementing measures designed to facilitate SME participation in public procurement in the UK.

2.3.2.6 Principle of value for money

Value for Money (VFM) has been described as a concept that helps public organisations spend budgets efficiently by using limited resources more productively (Gershon 2004), by basing purchasing decision not only on minimum price of goods/services but also on the maximum efficiency and effectiveness of the purchase. Brammer and Walker (2011:457) made argument for an expanded definition of VFM and defined it as “optimum combination of whole life cost and quality (fitness for purpose) to meet the customer’s requirement”. Linking this to SME participation in

procurement, public contracts should not be awarded based on lowest price (Loader, 2013; Glover, 2008) to make it more attractive to small businesses who might lack the economies of scale to compete with larger firms (Rostek, 2015).

To address this issue, public organisations might need to be more flexible with the criteria for supplier selection (Dimitri, 2013). This can be achieved through a multiple-criteria decision making system that highlights areas where SMEs are more prone to have competitive advantages over large firms such as in services responsiveness, agility and quality (Simionescu and Bica, 2014; Trzecieliński, 2016). Therefore, this thesis will argue that public organisations can achieve better value for money in procurement process in addition to encourage SME participations by shifting focus from using price as key factor for contract award decisions, to placing emphasis on supplier's adaptability, speed, and innovativeness.

2.3.2.7 Principle of proportionality

The principle of proportionality is commonly used in the field of Law to describe the notion that penalty for an offence should be in the same ratio to the severity of the offence itself. The European Court of Justice (ECJ) defined proportionality as “one of the general principles of [EU] law” which “requires that measures implemented through [EU] provisions should be appropriate for attaining the objective pursued and must not go beyond what is necessary to achieve it”⁷. However, proportionality in practical terms can be nebulous and confusing, depending on the context in which it applies (Nurmi, 2014). For example, proportionality in the context of public procurement could mean the use of identical criteria to assess the capability of bidders with irrespective of their firm's size or experience. This is perhaps why the UK and EU procurement laws obliges public organisations to use selection criteria that are commensurate with the value, complexity and risks of the contract opportunity (Public Contracts Regulations, 2015).

On the contrary, there is also emerging evidence that public buyers rarely follow such rules due to various reasons (Flynn and Davis, 2015), such as conflicting policy

⁷ Case No. C-491/01, *The Queen v Secretary of State for Health, ex parte British American Tobacco*

priorities (cost savings versus buying from SMEs) and pro-large suppliers attitude of the public buyers (Loader, 2013). This provides another basis for suggesting ways in the framework development to improve the implementation of policy measures such as “division of contracts to lots”, which seeks to discourage public procurement officers from using criteria that have the effect of being discriminatory against SMEs.

2.3.2.8 Principle of competition

How public organisations can promote competitive markets through procurement practices has been a key focus of the European public procurement law (Sanchez-Graells, 2010). Therefore, principle of competition is core to procurement in public organisations within the UK and can help government manage financial resources more efficiently. Despite the benefits that competition presents with regards to improving efficiency in budget execution, the public sector has not as keen to take advantage of it until recently (Thai, 2006). Although Thai did not provide reasons for the restriction to competition in public procurement, the need to achieve social outcomes such as promoting SME participation can influence competition distortion in the market.

Similarly, public procurement is underpinned by the theory of public interest (Vincent-Jones, 2006). This argues that government has a role to play to avoid market failures through regulatory interventions, which could aid optimal transactions between buyers and sellers achieve and lead to wider societal benefits. Thus, this provides a rational for the policy measures designed by the UK government to support SMEs in public procurement. However, these policies can create undue advantage for SMEs over large businesses that also compete for public sector contracts, as Arrowsmith *et al* (2000) has highlighted. Another important question that arises here is: how can public organisations increase dealings with SME suppliers without tempering with the natural functioning of the competitive procurement markets?

The researcher has made recommendations on how to address this question in subsequent chapter (8), where public procurement competition and its implications for improving SME participation were examined. Competition gradually becoming the most important objective of every procurement scheme (Onur *et al.*, 2012; Trepte, 2004) because it offers an opportunity for achieving cost savings in expenditures.

Likewise, if more SMEs are involved in the public procurement process, there will be greater diversity in the types of firms participating in the bidding process, and this can lead to securing goods and services at the optimal prices. However, one should not overlook the non-financial benefits that SME suppliers can provide to help address the increasingly complex needs of the public sector (Department of Enterprise, Trade and Employment, 2009), particularly regarding the need for flexibility in service delivery.

2.3.2.9 Principle of efficiency

According to OECD (2009), an efficient procurement system does not only seek to acquire goods and services at the cheapest prices, but to reduce transaction process and bureaucracy. Apart from helping to ensure that goods and services are acquired at the right cost, right quality as well as at right time (Basheka, 2008), efficiency can help public organisations to reduce waste in the utilisation of budget funds (Evenett *et al.*, 2005). In other words, the principle of efficiency encourages public officers to ensure that the numerous needs of the public are met with limited resources.

Nevertheless, the pursuit of efficiency in procurement have important implications for SME participation. For example, public sectors buyers might prefer to deal with few large contracts than several small business suppliers due to administrative convenience (Flynn and Davis, 2016a). In addition, large firm might secure a stronger competitiveness position in the public procurement market since they are more able to produce at lower cost through economies of scale than small firms (Rostek, 2015). For instance, Chever and Moore (2013) examine the effects of negotiated procedures on tender prices using data from the largest social housing constructor in Europe. They discovered that negotiated procedure was very efficient by reducing the number of bids received by about 26%. This might likely influence public buyers to drive financial efficiency in public expenditure by awarding contracts to larger firms over and above SMEs.

There is evidence to suggest that efficiency can be achieved in procurement system by increasing transparency of information (Bulow and Klemperer, 1996). Similarly, Balsevich *et al.* (2012) discovered that there was a positive correlation between the number of firms participating in a tender and the rate of price discounts offered by the

bidders. In other words, the greater the number of firms bidding for a tender, the greater the cost efficiency that can be achieved in the process. This is a convincing argument for public organisations to increase the number of SMEs participating in the procurement process.

2.3.2.10. The evolving application of public procurement

In the late 20th century, an evolution in the public procurement process was witnessed as the global economic landscape pushed governments across the world to spend more efficiently (Matthews, 2005). Consequently, public procurement experts were called upon to help in maximising the impacts of government spending by streamline procurement process for efficient outputs. This supports the argument by Coggburn (2003) that public procurement helps to ensure that projects, goods and services are secured in a timely manner as well as realising value for money in government spending.

However, in the 21st century, public procurement potentially wide-reaching implications beyond cost savings and efficient resource utilisations (Weele, 2002; Hinson & McCue, 2004; Matthews, 2005). In the UK for instance, government use public procurement to promote multi-sector policy goals (e.g. Preuss 2009; Walker and Brammer 2012). According to Erridge (2005) the goals of public procurement policy can be summarised into three categories:

1. **Regulatory goals:** focus on compliance with national public procurement directives and regulations. For example, UK public sector organisations are required to comply with the European Union Public Procurement Directives (the 'Directives') through the Public Contracts Regulations 2015⁸.
2. **Commercial goals:** entail the use of competitive tendering and contract produces to achieve economic benefits such as cost efficiency and value for money. Ultimately, the procurement process should be conducted in such a way that it balances costs, with quality and delivery.

⁸ Public Contracts Regulation, 2015:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/356494/Draft_Public_Contracts_Regulations_2015.pdf

3. **Socio-economic goals:** using public procurement to back wider government developmental policies such as social inclusion, supporting local businesses, equal opportunities, job creation and gender issues.

There are other policy objectives of public procurement that were not covered in Erridge's classification. These include the promotion of national security, industrial and regional development, enhancing environmental performance and the redistribution of wealth to the poor (e.g. Dawar and Evenett, 2011; Arrowsmith, 2010; Turyahikayo, 2008). However, more relevant to this thesis is the use of public procurement policy to pursue regulatory and socio-economic objectives; as the research examines the policy measures to facilitate SME in public procurement in the UK. This is likely to result in a multiplier effects since SMEs also contributes to a nation's economy in terms of job creation, innovation and poverty reduction.

In addition, public procurement accounts for between 12- 20% of total government spending across the world (Frøystad et al., 2010), and given the increasing growth in global population which may also affect public consumption through government spending (Flynn, 2016), the statistics mentioned above would have increased to offer more scope for increasing SME participation. Therefore, the framework development in this thesis will consider how SMEs can take full advantage of the policy measures to improve their chances of winning public-sector contracts.

2.3.3 Definition of SME

Different countries use different criteria to describe the term SMEs. For example, in Japan, SMEs are organisations employing less than 300 staff, whereas the Australian government regard firms with less than 200 staff as SMEs (Flynn, 2016). In US and Canada, SMEs are any manufacturing and non-exporting company employing not more than 500 staff members as a SME (United States International Trade Commission, 2010). The European Commission went a step further in their definition of SME using combined criteria that includes the number of employee and income that a firm has. Specifically, a firm is classed as an SME (in EU countries) if it employs less

than 250 people and has annual turnover of not more than €50,000,000 or a balance sheet total of not more than €43,000,000 (European Commission, 2003).

The EU definition of SME is adopted in this study since researcher will be collected data from firms operating in the UK (i.e. an EU member country). Just like the EU categorisation, UK SMEs are classified into three sub-categories (see Table 2.1): micro-enterprises employing between 0-9 employees and have revenue less than £2 million; small enterprises employing between 10-49 employees and have revenue less than £10 million; and medium-sized enterprises employing between 50-249 employees and have revenue under £50 million (Ward and Rhodes, 2014; Rhodes, 2017). These are the variables used to analyse data and discuss findings that relate to firm sizes of SMEs in this study (see details in chapter 6).

Table 2.1 UK definition of an SME

Enterprise category	Head count	Turnover
Micro Business	less than 10	under £2 million
Small Business	less than 50	under £10 million
Medium Business	Less than 250	under £50 million

Source: Ward and Rhodes (2014) and Rhodes (2017).

So far, it can be concluded that the concept of SMEs is not clear as definitions vary according to organisations structure, economic priorities and issues that authors intend to address. Previous scholars (e.g. Chebbi *et al*, 2013; OECD, 2005) seemed to agree with this inference that it might be difficult to propose a generally accepted definition of SMEs because countries have different criteria for categorising firms into small or large businesses. The EU countries seem to be an exception as they have common criteria for defining SMEs (i.e. number of people employed and annual revenue/ turnover of the firm).

Yet, there some variables that this categorisation does not consider about SMEs such as firm age, sector/industry of operation and ownership structure. Even though, the U.S and Canada take a firm’s business type and industry into account when defining

SMEs, the criteria used in these countries still do not reveal all the characteristics present in a firm. Since the definitions of, and categorisation of SMEs vary so much, the policy measures need to effectively influence their participation in public procurement might be considerably different. Notwithstanding, the various definitions have one thing in common; they all refer to number of staffs employed by the firm.

Furthermore, increasing efforts are being made to understand better ways of enabling SMEs to maximise economic benefits (Bennett, 2008) because of the strategic importance they present for national growth across the globe. Notwithstanding, existing literature (e.g. Ensari and Karabay, 2014; Ihua, 2009; Yew-Wong, 2005) show that SMEs had a relatively low success rate in business and are unrepresented in the public procurement markets. The question section will examine the link between SME and public procurement, to understand why participation is important for small business suppliers.

2.4 What is the contributing link between SME and public procurement?

The nexus between SMEs and public procurement is gradually becoming a topical issue in the academia and policy circles. Apart from the fact that government is increasingly becoming aware of the potential contributions of SMEs to economic development, politicians frequently discuss the benefits of involving SMEs in public contract competition (Flynn, 2016). The academic arena has also witnessed an increase in research outputs concerning SMEs' involvement in public procurement (Loader, 2013, 2015). This section, therefore, discusses the contributing link between SMEs and public-sector procurement.

The political push for making public contracts more accessible, stemmed from the adverse effects of the 2008 global economic recession on UK based SMEs (Flynn, McDevitt and Davis, 2013). The economic recession restricted access to finance for small businesses, leading to a decline in cash flow and subsequent negative effects on sales and profit margins (Sahin *et al.*, 2011). Since that time, ensuring that SMEs gain a greater share of public sector businesses has been a major consideration for policy makers and professionals. Similarly, as noted in the previous chapter, statistics published by The Federation of Small Businesses (FSB), show that SMEs accounted

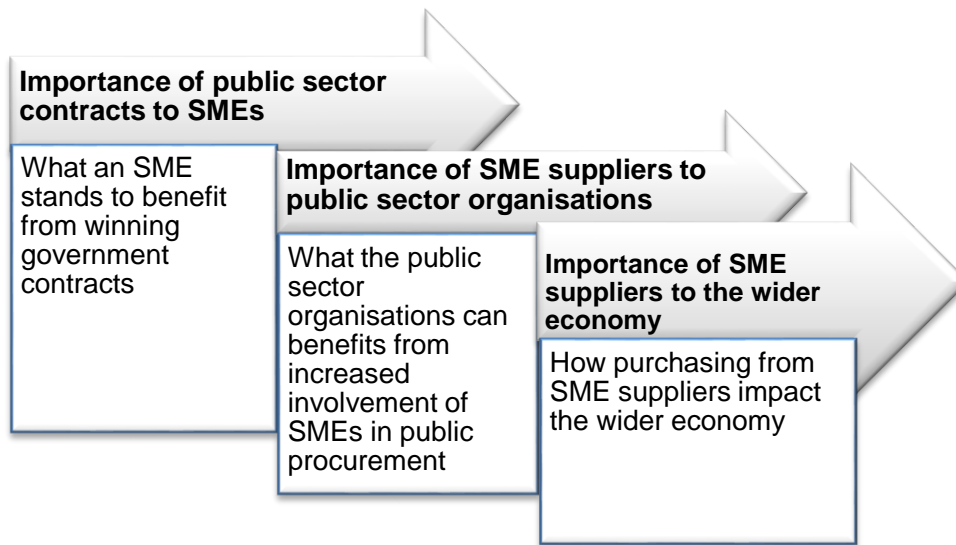
for 60% of all private sector employment in the UK, and 99.9% of all private sector businesses in the country (FSB, 2015).

SMEs can play a very significant role in job creation, improvement of living standards and provision of goods and services (Tátrai, 2013; Ensari and Karabay, 2014; Etuk, Etuk and Michael, 2014). They are important for local economic growth, serving as viable engines for indigenous technology development (European Commission, 2011). If fully developed, SMEs have been recognised as helping to alleviate poverty through wealth creation (Etuk, Etuk, and Michael, 2014). Regardless of their strategic importance, SMEs have a relatively low success rate in business due to financial constraints, lack of infrastructure and lack of economies of scale (Rostek, 2015). Perhaps, this is the reason why the UK government has resorted to leveraging its public purchasing power to support small businesses in the country. Since the aim of this research is to develop a framework for improving SMEs participation in public procurement, it is imperative that the researcher understands the role and importance of promoting SME in public sector marketplaces.

2.4.1 Why is SME participation in public procurement important?

Apart from the obvious contribution of SMEs to a nation's economy, e.g. through job creation, there is a general agreement among academics, policy makers and politicians that SME participation in public procurement should be enhanced (Loader, 2013; Flynn, 2016; Flynn and Davis, 2015; Pickernell *et al.*, 2011; Yukiko, 2014). Evidence from literature review shows that the benefits associated with SME participation in public procurement can be analysed under three categories namely importance of public sector contracts to SMEs; importance of SME suppliers to public sector organisations; and Importance of SME suppliers to the wider economy (see Figure 2.1).

Figure 2.1 Benefits associated with SME-public procurement nexus



Source: Adapted from Flynn (2016).

2.4.1.1 Importance of public sector contracts to SMEs

First, the public-sector markets can be a source of predictable demand for products and services from SMEs (Medina-Arnáiz, 2010). This is what Commandeur and Casey (2016) refer to as Structured Demand (SD) markets, that offer huge, consistent sources of demand for products/services to suppliers, leading to improved income, and reduced poverty. SMEs acting as public-sector suppliers can leverage on the relatively stable demand in this market to income and cash flow (Pickernell *et al.*, 2011; Bovis, 1996). Secondly, the government can use public procurement to achieve innovation in public service delivery (Georghiou *et al.*, 2014; Dutz *et al.*, 2011). This presents an opportunity for SMEs to gain competitive advantage when bidding for public contracts, since they are known to be the engines of innovative activity in most industries (Madrid-Guijarro *et al.*, 2016).

Although scholars argue that public sector contracts are important to SMEs in terms of demand stability as mentioned above (e.g. Medina-Arnáiz, 2010; Pickernell *et al.*, 2011), this argument is not entirely convincing due to the constantly changing economic and business environment. For instance, recently, procuring organisations in the UK are facing challenging financial situation owing to pressures on government budgets (Institute for Fiscal Studies, 2015). This is suggesting that the opportunities, which public-sector markets present for SMEs is might not be sustained if the

government decides to cut spending for whatever purposes. Considering the foregoing, the public procurement markets may not offer supply opportunities for SMEs a long-term basis. A safe way for SMEs to secure a continuous stream of revenue is to combine income from various sources in addition to selling to the government.

Furthermore, the idea that SMEs can achieve competitive advantage by producing innovative products/services for the benefits of public organisations (e.g Georghiou *et al.*, 2014; Dutz et al, 2011; Hillemane, 2012), is poorly supported by empirical data. It is common knowledge that innovation often draws on research and development (R&D), and UK SMEs might not have enough budget to improve innovative capacity via R&D without tax incentives from governments (HM Revenue and Customs, 2016). Considering the above argument, it would be rather hasty to conclude that SMEs have greater levels of innovation capability than large firms.

Nonetheless, the inherent capabilities of SMEs for developing innovative services or technologies cannot be ignored (Hillemane, 2012). Although this is outside the scope of the present study, future studies can examine the implications of innovative capabilities of SMEs for improving their participation in public procurement.

2.4.1.2 Importance of SME suppliers to public sector organisations

SMEs have other unique attributes which make them attractive to public sector organisations such as risk-taking ability (Woldesenbat, Ram and Jones, 2011), possession of greater flexibility (Simionescu and Bica, 2014) and quick response to customer needs (Trzecieliński, 2016). By doing business with SMEs, the public sector can benefit from these capabilities. Furthermore, enhancing SMEs participation in procurement can help boost diversity of supplier base in public organisations (Loader, 2015; European Commission, 1990). This is particularly important because diverse suppliers not only bring quality and expertise, they can help craft innovative solutions to address the increasingly complex challenges of public service delivery.

Besides the potential benefits of diversity and innovation, having more SMEs in the suppliers list offers public-sector buyers a broader range of qualities to choose from

during supplier selection process (Ram and Smallbone, 2003), for negotiating prices and discounts. However, it is not clear whether SMEs are in fact able to submit competitive bids for public organisations to achieve cost savings in procurement processes. It has been argued (e.g. Rostek, 2015) that SMEs lack economies of scale to reduce operation costs, but the author does not seem to take into consideration the low administrative overhead costs that small businesses experience when compared with large firms. Similarly, the assumption that SMEs have a stronger focus on customer service and offer better flexibility (Simionescu and Bica, 2014; Trzcieliński, 2016), which enable them to provide the same level of expertise like large firms is less convincing and quite improbable. Large businesses, given their size and scale, are supposedly expected to have more skilled workers who would be productive and dedicated to providing quality services than in SMEs.

As it stands, there is limited empirical evidence that SMEs bring more benefits to public organisations as suppliers than large businesses. However, if the policy measures under investigation are widely and properly implemented in the UK, government may realise some benefits from doing business with SMEs, in the areas of local sourcing (Young, Nagpal and Adams, 2016), compliance with social value act (Walker and Preuss, 2008) and to support the UK government sustainable development agenda (Preuss, 2009). By incorporating these issues into the employee performance appraisal system within the public sector, there is a likelihood that buyers will be motivated to do more business with SMEs. This is an idea that will be considered as part of the recommendations for the framework development to explore whether public buyers can be incentivised to take increase transactions with small businesses.

2.4.1.3 Importance of SME suppliers to the wider economy.

SMEs contribute to job creation and productivity in an economy, and incomes gained from public contracts to produce multiplier effect on a country's economy in these aspects (Erridge, 1998). For example, data from the Office of National Statistics show that SMEs generate about £34 of gross value added to the UK economy for each £100 of revenue, whereas large firms generate about £27⁹. This suggests that if SMEs'

⁹CONSULTATION DOCUMENT: Making public sector procurement more accessible to SMEs:

earnings from public contracts increases, there would be a corresponding increase in the UK's gross added value.

Apart from the job creation potentials that SMEs offer, their operations can create positive impact on the local communities (Preuss, 2011) and improve social cohesion (Smallbone *et al.*, 2008). Along these lines, Flynn (2016) argues that enhancing SME participation in public procurement process is a way of reducing negative externalities such as social discrimination. That is, by increasing its transactions with SMEs, the government can address the needs of socially excluded groups in the society (e.g. women, small-holder farmers, minority groups). Another way that society can benefit from SME participation in public procurement is through environmental sustainability (Walker and Brammer, 2013). Unlike larger companies, SMEs can source local materials to reduce the carbon footprint of logistics operations.

Surprisingly, notwithstanding their lack of professionalisms and inability to offer the same level of quality to their clients as large businesses (HM Revenue and Customs, 2016), the studies discoursed above highlight some positive aspects of SMEs and the implications for socio-economic development. Notwithstanding, the argument presented by Walker and Brammer (2013) is that SMEs can play an important role in addressing the national sustainability challenges, but the study includes more of theorisation than empirical findings. Similarly, there is lack of empirical evidence in favour of the idea that SMEs can increase multiplier effect such as increase in employment rates, innovation and tax revenue generate by winning more public contracts (Erridge, 1998,2005). Although these issues are beyond the scope of this thesis, it could be the subject of future investigation.

Additionally, there is lack of economy of scale in SMEs which hinders their ability to produce products/services at lower costs (Kidalov, 2015), and how this can potentially impact bargaining power or ability to hold a cost advantage over larger suppliers in the public procurement markets, has not been given due consideration in existing literature. This point brings attention to a potential drawback of the policy measures

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/243685/SME_consultation_-_publication_version_-_18september.pdf

being implemented in the UK, which expects SMEs and large firms to compete on an equal playing field. Recommendations have been made as part of the framework development in this study on how to change the dynamics of the competition in public procurement in favour of small businesses.

2.4.2 SME activity and performance in public procurement

Despite the numerous benefits that could be gained from doing business with small suppliers, existing evidence still indicate low rates of SMEs' involvement in public procurement systems across Europe (Flynn, 2016). A survey conducted with 5000 UK SMEs in 2012 revealed that only 10% had tendered for public sector contracts in the previous year (BMG Research, 2013). Similarly, Loader (2013) conducted a comprehensive review of current evidence on SMEs' participation in public tendering across a twenty-year period in the UK and discovered that small numbers of SMEs were tendering for public contract opportunities. The author also found that there has been no significant improvement in the success of SMEs winning public sector contracts.

Furthermore, results of a study conducted around the same year by Federation of Small Businesses (FSB) provide a clearer picture of the situation. FSB is the biggest pressure group influencing government policy in the interest of small business owners in the UK. It is important to mention that FSB has a panel membership of 6,394 and all were invited to participate in the survey. The surveys reported that 78% of SMEs had not bid or worked in public sectors (FSB, 2013). Similar findings emerge in their more recent survey which revealed that only 23% of SMEs had worked for the public sector in the UK over the previous year (FSB, 2017).

By and large, research has shown that SME participation in public procurement in the UK is amongst the lowest in Europe (MSDUK, 2014) and other studies (e.g. Loader and Norton, 2015; McKevitt and Davis, 2015; Yukiko, 2014) have linked the low participation to several challenges/barriers, which are discussed in later sections 2.5 – 2.5.4. However, what remains a conundrum is the fact that SMEs are still underrepresented in public procurement markets despite government's policies to increase access to contracts opportunities. Therefore, its becomes necessary to

analyse the current SME-friendly procurement policies in the UK to identify the need for change or modification.

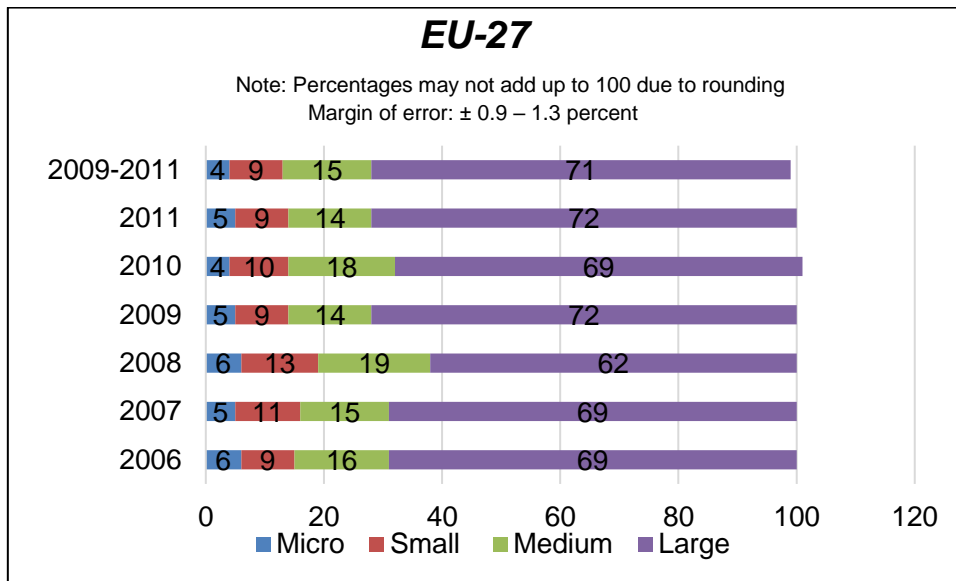
2.4.2.1 Success rates of SMEs participating in public procurement in EU

Generally, SMEs in the EU have underperformed in public contract competition in relation to their population (Flynn, 2016) when compared to their contribution to economic growth (Freshminds, 2008). There are approximately 20.8 million SMEs registered in the EU representing 99.8% of all private enterprises and these produces more than 50% of European GDP (Thomassen et al, 2014). Yet SMEs won 60% of above-threshold contracts¹⁰ between 2006 and 2008 awarded in EU (GHK, 2010). This corresponds to only 33% of the total value of the above-threshold contracts awarded during this period (Flynn, 2016).

Figure 2.2 and Figure 2.3 below outline the number and value of contracts awarded to SMEs in EU, and depict a poorer situation, with relatively recent data. The estimates for the successive three years–period (2009-2011) indicates that approximately 56% of all public procurement contracts above the EU-thresholds were given to SMEs, which equates to 29% market share of the total value of contracts awarded (Thomassen et al., 2014). This suggests that while SMEs have won more than half of all public contracts above the EU-thresholds, they hardly have access to the major public contracts of high monetary value. The total value of contracts secured by SMEs is significantly smaller as the large companies succeeded in winning contracts value representing 71% share of the above-threshold procurement market for 2009-2011 in the EU (Thomassen *et al.*, 2014).

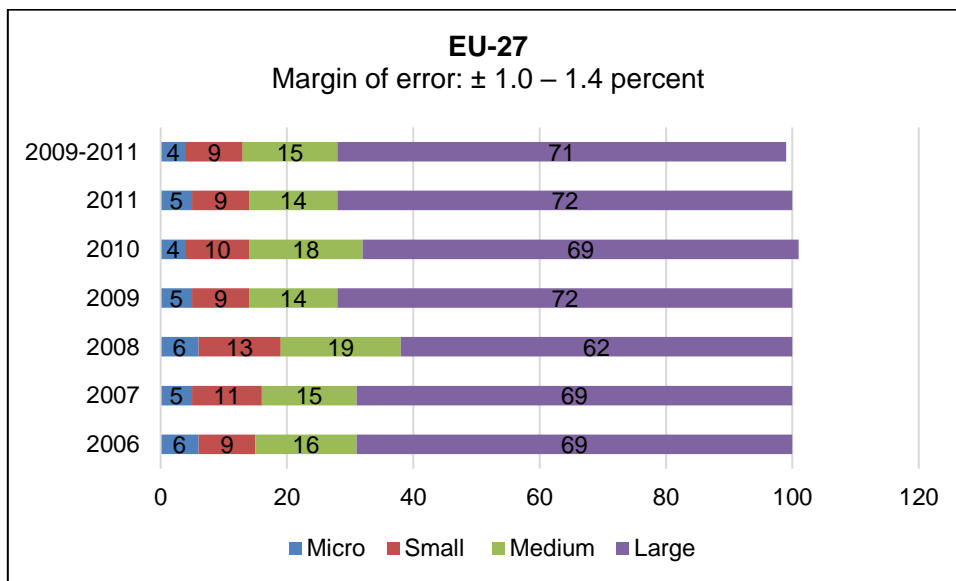
¹⁰ Public organisations all over the EU are required by the procurement directive to publish contracts valued above certain financial thresholds in the Official Journal of the European Union (OJEU). Above-threshold contracts account for nearly 16% of public procurement expenditure across the EU.

Figure 2.2 Number of public contracts awarded to SMEs in EU 2009-2011



Source: Thomassen *et al.* (2014).

Figure 2.3 Value of public contracts awarded to SMEs in EU 2009-2011



Source: Thomassen *et al.* (2014).

Therefore, based on the above figures, SME success in public procurement has been declining, even though the total market value of public procurement in EU has increased by approximately 40% in the 2006-2011 period. This further justifies the framework being proposed to support SME participation in public procurement. Thomassen *et al.* (2014) also showed that in all above-threshold contracts that were awarded in the EU between 2009-2011, micro-enterprises secured 18%, small

enterprises secured 21% and medium-sized enterprises secured 18%. However, their figures on the total value of contracts won by SMEs in the EU between 2009 -2011, provide a different picture.

A negative trend is observed regarding SMEs success rates in public procurement, and this becomes more apparent when the statistics are broken down into SME sub-categories. Flynn (2016) detected a similar trend from a recent analysis of SMEs' performance in public procurement. The study shows that micro-enterprises secured 4% of the total value contracts awarded between the EU 2009-2011 (as compared to 6% between 2006 and 2008) and medium-sized enterprises secured 15% of the total value over the same period (as compared to 17% between 2006 and 2008).

In summarising the discussion above, SMEs in the EU seem to have benefited from public procurement in terms of quantity of contracts which might not necessarily translate into higher income, in monetary terms. Nonetheless, some of the argument presented in Thomassen *et al.* (2014), is largely derivative. For instance, their findings did not reflect the fact that firm size plays key role in SMEs activity and performance in public sector contracting, as highlighted in other studies (Pickernell *et al.*, 2011; Flynn and Davis, 2016a).

In addition, the methodology used in Thomassen *et al.*'s paper has analytical weaknesses in terms of scope and interpretation of findings, particularly regarding how the heterogeneous characteristics of SMEs (e.g. size, age) could influence rate of participation. By including such information, the authors could have offer broader insights into factors that influence quantity/value of contracts awarded to SMEs in EU. This gap will be addressed in the present study by considering different categories of SMEs. The researcher will not just analyse aggregate SME data, but breaking them down into categories based on size, age and years of experience in bidding for public contracts.

The next section discusses SME's success rates in public procurement participation with a focus on the UK.

2.4.2.2 Success rates of SMEs in public procurement in the UK

Historically, SMEs' share of public sector spending has not made significant improvement over recent years. In an earlier study conducted with a sample of public organisations in the UK, Michaelis *et al.* (2003) discovered that less than 30% of the total value of contracts goes to 70% of SMEs that participated in tendering exercises. Their study shows that the underrepresentation and success rate in public tendering becomes pronounced when the SMEs are broken into distinct categories of enterprise sizes. Likewise, findings of a study conducted by NERA Economic Consulting in 2005 estimated that British SMEs only won 5% of the contracts available (by value) in the UK public procurement market.

Five years after NERA's study, SMEs have been experiencing marginal increase in share of public sector spending in the UK. In 2009/2010, 6.5% of public procurement spending departments went directly to SMEs, this increased slightly to 6.8% in 2010/11 and rose to 10.0% in 2011/12 (Booth, 2013). Table 2.2 for further details which shows the proportion of public procurement spending that went to SMEs directly from 2009-2012. This indicate that SMEs have been receiving a very small share of public sector contracts and suggests that many departments lag behind regarding government's ambition, set in 2010, to spend 25% of procurement expenditure with SME before 2015.

Table 2.2 Fraction of procurement expenditure directed at SMEs 2009-2012

Department	2009/10	2010/11	2011/12
Business, Innovation and Skills	22%	25%	27%
Communities and Local Government	14%	12%	21%
Cabinet office	8%	7%	12%
Culture Media and Sport	27%	26%	18%
Energy and Climate Change	1%	1%	0%
Environment, Food and Rural Affairs	11%	19%	16%
Education	25%	24%	18%
International Development		39%	31%
Transport	3%	2%	3%
Heath	18%	7%	9%

Works and Pensions	12%	15%	11%
Foreign and Commonwealth Office		6%	5%
HM Revenue and Customs	11%	0%	0%
HM Treasury	14%	13%	6%
Home Office	2%	7%	6%
Defence	4%	3%	5%
Justice	9%	9%	34%

Source: Booth (2013).

However, figures presented in table above does not show the causes of variability in value or proportion of contracts awarded to SMEs across government departments and agencies in the UK. Although these agencies use the same public procurement process as prescribed by law, they differ in many areas such as strategic focus, remits, nature of service provided and allocation of expenditure budgets. As Loader and Norton (2015) has argued “attempts to improve participation and success of SMEs in the public procurement process require that consideration is given to the need for a distinct, sector-driven, remedy”. While it is important to recognize these distinctions, previous studies (e.g. Caroline Perry, 2011; Glover, 2008; Preuss and Walker, 2011) on SMEs involvement in public procurement have tend to treat the public sector as a homogenous body.

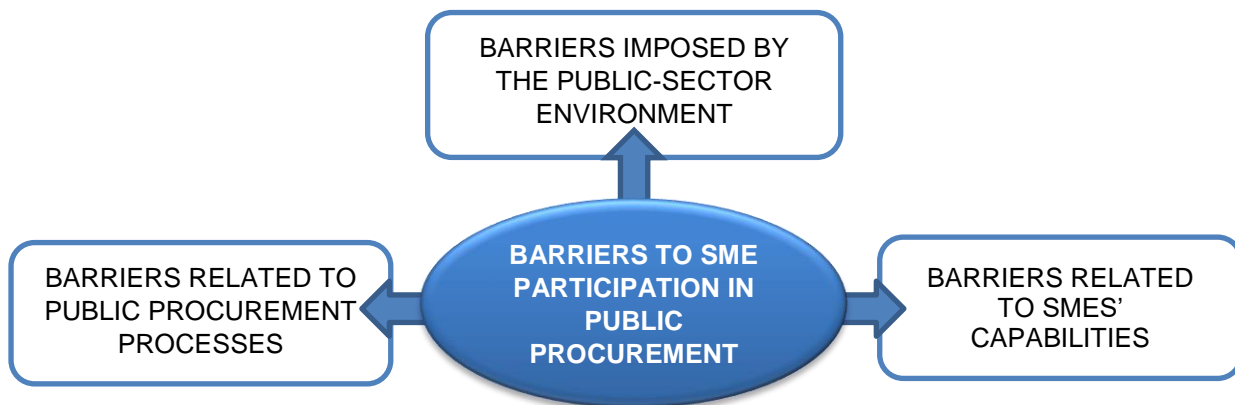
To address the above mentioned problem, this study will consider the role of context in SME and public procurement nexus by collecting data from NHS Trusts in the North-West of England, rather than generalising findings across public organisations in the entirely UK. Through this, the findings can improve our understanding by taking a close look at the distinctiveness of public sector organisations and the implications for improving SMEs participation in procurement.

2.5 Barriers to SME participation in public procurement markets

In this section, the researcher examines several barriers in the existing literature regarding SME participation in public procurement. Many barriers were identified and classified in three broad sources, according to (Loader, 2013): the factors imposed by the public-sector environment; the public procurement process; and resource

limitations of SMEs. The key sources of barriers facing SMEs in public procurement are depicted in Table 2.2 and discussed in sequence below.

Figure 2.4 Sources of barriers facing SMEs in public procurement markets



Source: developed from Loader (2013)

2.5.1 Barriers related to the public-sector environment

According to Loader (2013), many of the factors limiting SMEs access to public contracts originate from the workings of the public-sector environment. The author argues that the public sector is inconsistent in developing policy goals promoting SMEs participation and most of the existing policy instruments have conflicting objectives which make their implementation difficult. Aligning himself with Loader, Flynn (2016) posits that public organisations often lack direction and focus on where efforts should be made to reduce SMEs' under-representation in public contract competition. According to the author, public buyers are faced with a dilemma that places them in-between saving costs in procurement and helping small businesses to win contracts.

Other major factors acting as barriers to SME participation include lack of expertise (Loader, 2007; Walker and Preuss, 2008; Pickernell *et al.*, 2011) and risk averse attitude amongst public officers (Loader, 2005; FreshMinds, 2008). It has also been discovered that public sector buyers lacked market knowledge and adequate skills to make the tendering process more attractive to SMEs (OECD, 2013; Georghiou *et al.*, 2014). With regards to risk averseness, public organisations have been accused of

being insensitive to the needs of SMEs, as they prefer to do business with well-established larger companies rather than trying new offerings from smaller ones.

Nevertheless, apart from Pickernell *et al* (2011), many of the studies discussed above have only served to provide a basis for understanding some potential barriers facing SMEs in public procurement, with limited in-depth analysis of these barriers according to the type of products/services being procured. It would be more relevant if the authors (e.g. Loader, 2013; Georghiou *et al.*, 2014) to have taken into account, the idiosyncratic characteristics specific public organisation in analysing the barriers identified. Similarly, the claims made by other authors (e.g Flynn, 2016; Loader, 2007, 2013; Walker and Preuss, 2008) seem to have been done through review of extant literature, there is no quantifiable evidence to show which barriers are considered more important for SMEs to address when bidding a particular public organisation.

For instance, both the NHS and Ministry of Justice are public bodies in the UK albeit with distinct service offerings and strategic goals. These differences may also affect SME different in terms of public procurement participation. This is another reason why the present study will examine SME participation within a specific type of public sector using data from NHS trusts. The research findings presented in Chapter 6 suggest what categories of SMEs is likely to benefit from the policy measures being implemented in the UK. Issues to be addressed for SMEs to full advantage of these policies are identified in Chapter 7, to make recommendations for improvements in participation in Chapter 8.

Furthermore, there is no denying that some SMEs have been successful at winning public sector contracts, but there are insufficient case studies in the literature showing how the barriers imposed by public-sector environment have been tackled by SME themselves. This suggests need for further studies on strategies that SMEs can use in responding to barriers outside their control to increase participation in procurement, and provides a rationale for adopting the Resource Based View (Barney, 2002: Conner, 2002) as a theoretical lens in this study. This theory is discussed in more details in subsequent section (2.6.6.1), indication how SMEs can leverage their internal capabilities to improve participation in public procurement.

2.5.2 Barriers related to the procurement process

Other than barriers originating from the public-sector environment, the procurement process also hinders SMEs' participation. First, SMEs find it difficult to identify existing contract opportunities in the public procurement markets (Loader, 2005). Also, the literature (e.g. Ringwald et al., 2009) reported that SMEs complained that the tender specification was overly problematical, and the qualification criteria were disproportionate to the size or value of the contract. These issues have been highlighted in developing (Akenroye and Aju, 2013b) as well as developed countries (Yukiko, 2014; Loader, 2015), where SMEs complained that the evidence of insurance and financial capability required in public tenders are too high.

Although the abovementioned authors have made useful efforts to reveal which aspects of public procurement process the SMEs perceive to be frustrating and unfair to them, the methodological approach followed have some weaknesses. For example, Yukiko (2014) use binary logit model (quantitative analysis) to investigate the factors responsible for withdrawer of SMEs from public tendering in the Japan, but the correlations of variables (e.g. financial performance indicators and non-financial performance indicators) do not provide sufficient information to infer the underlying reasons for leaving the procurement marketplace. It might have been more thorough if the author has obtained narrative data with other qualitative methods such as interviews or focus group to help identify the factors that influence decision made by SMEs about tendering for public works. Such may help supplement or interpret the results obtained from the quantitative analysis, as being considered at present in this thesis.

Similarly, although Loader (2015) made effort to obtain data for SME suppliers across the UK but several crucial questions are left unanswered about sample representativeness as well as generalisation of the findings. First, the data use in her study are collected from an online medium which increase the tendency of reporting bias and analysis. Secondly, the paper presents an analysis of SME suppliers' views without considering the opinion of other stakeholders such as procurement experts, contract managers, whose interest or attitude might impact on SME participation as well. This suggest a need to compare and contracts data amongst these different audiences to get more accurate picture of the phenomenon under investigation. The

present study will attempt to address this gap by using data collected from SMEs and public buyers to test the proposed framework developed, through focus group discussions.

Other common barrier to SME participation in procurement include lack of awareness of opportunities and insufficient communication with the public procurement officers (Cabras, 2011; GHK, 2010). Effective communication is of paramount importance and has implications for improving participation of SMEs in public tendering. For instance, this can enable prospective suppliers' linkup with public officers to identify existing contract opportunities. In attempting to address the lack of awareness about contract information, the EU procurement law has made it mandatory that all public organisation in the member states must advertise contracts publicly either via the internet or e-procurement portals to make opportunities more noticeable (Eurostat, 2015). Consequently, since 2010, the UK government has taken steps to ensure that public organisations advertise contract opportunities on a dedicated website called "contracts finder".

Yet, there is insufficient evidence to suggest whether government policy interventions like the contract finders has influenced SMEs to participate more in public procurement.. For example, Loader (2013) revealed that most of the barriers mentioned in earlier studies (e.g. Glover, 2008; Cabras, 2011; GHK, 2010) still exist even after the SME-friendly procurement policy measures come into force in the UK, but the author did not assess the impact of these policies on public procurement participation rate amongst SMEs. This aligns with research objective 3 of this thesis, which seeks to examine key issues and concerns about the policy measures, to recognise whether opportunity for improvement exists. It is imperative to review the policies being implemented in UK's public organisations to determine whether additional features need to be added or removed. The findings can help address the increase trend of SME underrepresentation in public procurement markets.

Finally, SMEs perceive the procurement process to be time consuming and costly to comply with (Flynn, McDevitt and Davis, 2013). This is related to the huge paper work requirements and time needed to prepare tender response (Small Business Forum, 2006). These are some of the difficult issues for SMEs to address given their resources

limitation. To add to this difficulty, there is a widespread concern about delay in payments to contractors and sub-contractors (Loader, 2015). The policy measures taken in response to these issues in the UK include the elimination of PQQ from small contracts and the prompt payment rule that requires public sector to pay suppliers within 30days of receiving invoice.

2.5.3 Barriers related to limitation in SMEs' capabilities

Barriers related to limitation in SMEs' capabilities are not necessarily caused by the public-sector environment or the procurement process, but firms' internal factors such as level of expertise, skills, capital, human resources and technological competence. Since these resources and capabilities form the basis for supplier selection in public procurement (Temponi and Cui, 2008), they are of critical importance to SMEs that compete for public contracts. However, several studies (e.g. Glover, 2008; Karjalainen and Kempainen, 2008; Loader, 2013; Akenroye and Aju, 2013a) have associated SMEs low participation and success in public procurement to shortage of resources and capabilities such as lack of legal, administrative, customer services, IT skills, human resources issues like bid preparation and management skills.

However, the findings in these studies only provide limited insights as only one study (i.e. Loader and Norton, 2015) has examined the barriers within a specific public organisation i.e. the UK the heritage sector. Yet, the authors did not show whether SME experience of barriers to procurement in this sector are caused moderated by firm age, size or experience. To make the findings more comprehensive and insightful, a quantitative analysis like correlation can be used to test whether certain barriers facing SMEs in public procurement markets are influenced by other firm-specific variables. That is why, the process of analysing data in this study takes into consideration firm-specific characteristics of SMEs in the UK. The findings might reveal new evidence to aid the development of actions towards participation and success of SME of different sizes and experiences in the public procurement.

Furthermore, Karjalainen and Kempainen (2008)'s investigation was on SMEs participation in municipalities and state government procurements, but their discussion of findings did not highlight the aspects of public sectors that might influenced the barrier identified, unlike Loader and Norton (2015) did to offer deeper insight. On the

contrary, Karjalainen and Kemppainen's research was deducted in nature as it enables the authors to test impacts of variables already reported in the literature (e.g. resource perceptions, electronic systems and enterprise size). Again, this methodology tends to limit the scope of response/views shared by the respondents. For example, if the authors have used qualitative techniques like interviews or case study, they might identify new themes that depict the barriers to participation in public procurement.

Michaelis, McGuire and Ferguson (2003) has argued that SMEs are considered resources deficient and might not be able to align offerings effectively meet specific needs of their public-sector clients. This explanation seems reasonable but very narrow bearing in mind that other researchers (e.g. Simionescu and Bica, 2014; Trzecieliński, 2016) have often depicted SMEs as flexible and responsive enterprises, with ability to provide a niche service. Hence, this thesis seeks to identify how SMEs can leverage their unique capabilities to maximise the policy measures being implemented in the UK. A detail discussion on this issue is presented in subsequent sections (2.6.6).

2.5.4 Barriers to SME participation in public procurement in the UK

In 2008, the Glover committee tried to examine the challenges faced by UK SMEs in public procurement markets (Glover, 2008). The committee sought the views of wider stakeholder groups; small businesses, public procurement experts and SME representative organisations to understand key issues relating to the underrepresentation of SMEs in public tendering. Glover committee report shows that lack of access to information regarding available contract opportunities was the most important barrier to SME participation in public procurement.

Although the issues that Glover committee investigated were of critical importance to the UK government, the findings were narrow in scope. For example, the report claims that data were collected from different public-sector entities in the UK, but this was not reflected in the end results. It would have been more logical to see whether the barriers to procurement differs across regions where SMEs are located. Similarly, the findings cannot be generalised across the SME population in the UK without considering the

sub-groups within it. SMEs are not a homogenous group due to differences in firm size, age, location, business focus etc., and it would be appropriate to highlight the variables in studies when investigating their participation in public procurement.

Other key barriers facing SMEs in public procurement globally in the UK include the large size of public contracts (Loader, 2013), but this results conflict with evidence from a subsequent study by the same author. For example, Loader (2015) discounted the idea that SMEs cannot bid in public procurement because the contract sizes are large. In responding to the issue of contract size, the UK government has directed that public organisations should be dividing contracts into smaller lots to attract small businesses. However, there are currently no incentives/penalties applied to motivate compliance amongst public sector buyers. This suggest an opportunity to considered in this study, a possibility for using incentives to encourage public buyers to do more business with small suppliers.

Similarly, contract bundling might still be prevalent because it can enable public organisations to negotiate better deals from suppliers (Smith and Hobbs, 2001), as against diseconomies of scale are associated with the letting contracts out in multiple lots. This is because the desire for reducing contract size seems conflicting with the efficiency and cost savings agenda of the government (Flynn, 2016; Cabras, 2011), and this might explain why cost consideration take priority in supplier selection process in most public organisations (Loader, 2011). For this reason, the present study will also examine whether SMEs are enthusiastic about the rule requiring public organisations to split contract into lots.

Generally, firms seeking for public contracts are asked to demonstrate their track record of performance in similar contracts (e.g. Loader, 2011, 2013). This suggest that lack of experience or track record is another barrier facing SMEs in the UK. The use of this criteria for supplier selection could be discriminating against young SMEs – especially those that are new to the public procurement markets. The question then arises, how can SMEs with no previous experience of bidding participate in public procurement process? This is another issue that has been addressed in this thesis through the approaches recommended in Chapter 8.

So far, there is insufficient research examining the barriers facing SMEs in public procurement in the UK. Apart from the evidence obtained from non-academic reports or government publications (e.g. Glover, 2008; GHK, 2010; Cabinet Office, 2013, 2014, 2015), majority of the few studies published in academic journals were authored by one notable scholar (i.e. Loader, 2005, 2007, 2011, 2013, 2015, 2018). Although being a qualitative researcher, Loader has used various qualitative approaches like systematic literature review, case study and interviews to investigate the barriers to SME participation in public procurement, she does not seem to take into consideration; however, that there are fundamental differences in the characteristics of SME which has implications for generalising findings to the total population of small business in the UK.

Interestingly, in her most recent study, Loader recommends that new ways of measurement are needed to examine the impact of SME-friendly policies of the UK government. In responding to this call, the present study will be adopting mixed methods by using qualitative and quantitative data to evaluate the said policy measures from the perspectives of SMEs. No doubt, Loader *et al* has contributed significantly to the literature regarding the barriers that prevent SMEs from participating in public procurement, but there is a paucity of studies analysing whether these barriers are interrelated or interconnected. Although this is not within the scope of the present study, but it suggests opportunities for future researchers to analyse the possible interactions between the barriers identified in the literature to determine which are the driver and dependent variables. Such an analysis can help determine the critical barriers that SME owners/managers in the UK should pay attention to when participating in public procurement.

Consequently, the next section will discuss and analyse the policy measures that are being implemented to facilitate SME participation in public procurement. The policies will be examined further in Chapters 6 and 7 through a survey of SMEs to identify opportunities for improvement.

2.6 Overview of policies to support SMEs in public procurement

This section discusses the policy measures that governments have introduced to support SMEs in public procurement. Some of these policy measures were designed in response to the barriers of public procurement participation as discussed in previous sections 2.5-2.5.4 and have also been referred to as SME-friendly procurement policy (e.g. Flynn and Davis, 2015;2016a). Therefore, throughout this section, the terms will be used synonymously these terms will be used interchangeably to denote government's actions and approaches to promote participation of SMEs in public procurement. The forms and dimensions of policy measures may be different across countries depending on the nature of barriers facing SMEs in each procurement jurisdiction. For example, the main purpose of SME-friendly procurement policies in EU is to reduce discrimination against SMEs by making sure that the contracting process is fair and transparent, whereas, countries such as China, India and Kenya, adopted 'interventionist approach', in which governments set aside a specific fraction of public sector contracts for SMEs (Flynn, 2016).

Likewise, policies to support SMEs in public procurement might be state-specific in the US due to the relatively devolved approach to public procurement legislation (Kidalov and Snider, 2013). Therefore, there is a probability that policy measures implemented by each country may reflect the severity of the barriers posed by public procurement process against SMEs (Flynn, 2016; Loader, 2015). However, in the present study, the policy measures that are being implemented in EU and UK will be the primary focus because data are collected from SMEs that compete for public procurement in the UK.

2.6.1 EU Policies to promote SME participation in public procurement

According to Flynn (2016), the origin of SME-friendly procurement policies in the EU could be traced to the establishment of internal market for goods and services in 1992. The author highlighted some of the measures introduced to enhance SMEs' ability to compete in public procurement markets in the EU and overseas. These include: increasing information availability to SMEs, provision of training to small firms, simplifying the tender process and reducing the sizes of contracts to improve greater participation of SME. Even after the creation of the single market in 1992, pressures

on EU member countries have not relented towards ensuring that small businesses are empowered to fulfil their potentials. For instance, in 2008 (June 25), the European Code of Best Practices Facilitating Access by SMEs to Public Procurement Contracts was introduced to draw the attention of Member States and their contracting authorities to the problems encountered by SMEs (European Commission, 2008).

The 'Code of Best Practices' proposes different solutions to challenges that SMEs face when bidding for government tenders (Preuss and Walker, 2011). These include:

- The dividing contracts into lots to help reduce complexities arising from the size of contract to attract SME suppliers
- Increasing the transparency of contract information so that SMEs can gain access to existing contract opportunities in the public sector
- Setting fair qualification requirements for prospective suppliers
- Giving sufficient time for bidders to prepare and submit tenders
- Making sure that payments to suppliers are not delayed unnecessarily - suppliers are to be paid promptly
- Adopt value for money rather than lowest price in evaluating tenders and simplifying the tendering process.

Furthermore, the European Parliament adopted new Procurement Directives for public contracts, utilities and concessions in 15 January 2014 (i.e. new Public Contracts Directive, 2014/24/EU and the Utilities Directive, 2014/25/EU). The new Directives consist of reforms to help SMEs to bid successfully for public sector contracts throughout the European Union (EU). A summary of the measures introduced to encourage small firms are:

- Shortening of the procurement timeframes,
- Using standard 'European single procurement document' to make bidding process simpler for companies,
- Removal of stringent supplier requirements such as three years' worth of audited accounts (i.e. reduced red tape),

- Introducing “e-certis” (a central online portal where suppliers can find out the type of bidding documents required in any EU country),
- Allowing bidders to prove qualification status with self-declarations,
- Breaking contracts into lots for SME participation and
- The introduction of turnover cap to facilitate SME participation i.e. Companies with annual turnover that is twice the estimated contract value must be allowed to participate in the bidding process (Cabinet Office, 2014).

Although the EU policy schemes to increase public procurement access for SMEs are well intentioned, there is no definitive guideline showing procurement managers the strategies most appropriate for addressing priority issues in their countries. For example, lack of access to information and large contract size are the most prevalent barriers to public procurement in the UK (Loader, 2013, 2015), but these may or may not have been prominent issues in other EU countries regarding SME participation in procurement. Therefore, there is potential for inconsistencies in implementation and compliance across the EU, which can make monitoring and evaluation complicated. Hence, a one size fits all approach to policy formulation might not be successful since each member states of the EU have its unique situation influencing SME participation in procurement.

In addition, the centre assumption of the EU procurement law is that SMEs would be able to compete better in a fair, transparent and non-discriminatory bidding process (European Commission, 2008:2). On the contrary, larger suppliers can perceive governments’ actions to improve SMEs participation in public procurement as biased and unfair. This suggest the need for approaches that can boost SME participation without compromising the competitiveness of larger firms in public procurement. Therefore, the present study aimed at exploring ways in which SMEs can derive benefits from EU procurement policies being implemented in UK public organisations.

2.6.2 Procurement policies implemented in non-EU countries to support SMEs.

In this section, the researcher reviewed government policy and measures to promote SME involvement in procurement in Non-EU countries, perhaps, this may provide

insight into how SMEs participation in public procurement can be enhanced in the UK. For example, the United States that have traditionally been supporting small business through public contracting process through the Small Business Act 1953, which requires public sector bodies to set aside a proportion of their expenditure for small/minority owned businesses (Kidalov and Snider, 2013). The same Act articulates the principle of ‘maximum practical opportunity’ requiring public sector bodies to utilise contract advisements and subcontracting strategy to facilitate the participation of small firms in public tendering (Qiao, Thai and Cummings, 2009; Clark and Moutray, 2004). A similar approach has been used successfully in form of incentives packages to encourage SME participation in procurement in India (Small Enterprise India, 2012). For example, small business suppliers are exempted from paying the non-refundable tender security fees that is required when bidding for public contracts in India.

However, there is a difference in methods for supporting SME in the US, India and EU. The US and India reserves a certain percentage of public sector contract for small firms by adopting an ‘*interventionist*’, whereas the EU policy intends to remove discrimination against SMEs and creating a level playing field for all bidders (Flynn, 2016; Kidalov, 2013; McClelland, 2006). The interventionist approach used in the US seem more stringent as it sends clear message on need for strict compliance as against EU policies which are currently being implemented in the UK. This may be a reason that Loader (2013) referred to the policy measures as being ineffective. Therefore, this study argues that levelling the playing field for all bidders does not prevent large firms from leveraging their size and resource advantage to gain competitive edge over SMEs in the public procurement markets. The researcher will be recommending approaches (in chapter 8) to help mitigate the risk arising from the exposure of SMEs to competition with large firms.

Moreover, the UK might combine the existing policy measures with the interventionist approach for better impact about SME participation in public procurement. A similar example could be found in the practices adopted in African countries such as Egypt and South Africa, where mixture of interventions toward promoting SME participation in procurement. In Egypt, for example, 10% of public sector contracts was set aside for SMEs under the Small and Medium-Sized Enterprises Development Law of 2004 (Akenroye and Aju, 2013a). The South African government approached this from a

different angle but like the EU policy measures, which reflect the introduction of changes to public procurement practices. According to Wittig (1999), the South African government introduced “Green Paper on Public Sector Procurement Reform (GPPR)” which contains measures similarly to those adopted in the EU, namely streamlining the procurement process and the establishment of tender advice centres for SMEs (Republic of South Africa, 1997).

Other initiatives that symbolise actions to promote SME participation in public procurement in African countries include ‘match-making events’, where small firms (such as smallholder farmers) were networked with traders/caterers (Sadler and Thomson, 2016). This method has been successfully implemented in Kenya, Ghana and Mali to connect smallholder farmers with the contract opportunities for the supplier of foodstuffs to support school feeding programmes in the primary schools (Karg, Satta and Casey, 2015). Match-making events created an avenue for smallholder farmers to meet traders and they can then work out collaborating scenarios among for developing profitable business relationship. This was designed to address specific challenges of smallholder farmers these countries namely inability to meet the skills and experience required by the school feeding procurement process (Commandeur, 2013).

Since SMEs in the UK face very similar challenges when competing in public procurement, this thesis will also examine whether there is a possibility for using match-making events to link SMEs together to develop collaborative bids. In addition, this could offer opportunities for large prime contracts in the public sector to connect with SMEs that seek to explore future sub-contracting opportunities.

2.6.3 Policies to support UK SMEs in public procurement: chronological review

The research context of this study is the UK marketplace for public sector contracts. SMEs face varieties of challenges when competing for public contracts (e.g. Loader, 2011, 2013, 2015), and they are important to the UK economy: 99.9% of all private sector businesses in the country are SMEs, they account for 60% of all private sector employment in the UK and 47% of all private sector turnover (FSB, 2017). Perhaps, these are the reasons why the government seeks to make public procurement markets work for small firms. In the last fourteen years, like other EU Member States, the

government has introduced various measures to promote SMEs' participation in public procurement (e.g. Flynn, 2016; Flynn and Davis, 2015; Loader, 2015). Therefore, this section focuses on policy measures aimed to improve SME participation in UK's public procurement markets.

In 2003, the government issued a policy notice, entitled *Small Supplier...Better Value*, which was aimed at enlightening public-sector organisations about the benefits of using SMEs as suppliers (Office of Government Commerce, 2003) cited in Flynn (2016). That same year, Better Regulation Task Force (BRTF) and the Small Business Council (SBC) released a joint report titled: *Government: Supporter of Customer?*¹¹. The BRTF/SBC report highlights the key barriers to SMEs' participation in public procurement, and viable solutions to tackle those (Vincze et al., 2010). The Small Business Friendly Concordat was introduced in 2005 to promote SMEs involvement in procurement in the local council (Office of the Deputy Prime Minister, 2005). This was a non-statutory guidance to encourage local authorities to award more contracts to SME suppliers.

Similarly, a committee headed by Anne Glover, was set up in 2008, to suggest how the barriers facing SMEs in public procurement could be tackled (Booth, 2013). In a report titled *Accelerating the SME Economic Engine: Through Transparent, Simple and Strategic Procurement*, the Glover committee recommended that the government should promote transparency, simplicity, strategic approach to public procurement" (Glover, 2008:5). To achieve these, the committee put some ideas forward: establishing a dedicated online portal for all public organisations in the UK to publish contract opportunities above £20,000 and make it freely accessible to the public; simplifying tender documentations and issuing them electronically, allowing different SMEs to submit a 'consortium bid' and make subcontracting opportunities accessible to small businesses (Kidalov, 2013).

There are indications that government had adopted all the recommended actions (HM Treasury, 2008, p 74; Booth, 2013) and the policy measures have been put in practice

¹¹ *Government: Supporter of Customer? Better Regulation Taskforce & Small Business Council, 2003. Available at: <http://www.brc.gov.uk/publications/smeprocurement.aspx>*

by the UK's public-sector organisations (Vincze et al., 2010). However, apart from portraying the government's agenda for SMEs' involvement in public procurement, the series of measures designed to promote their participation in public procurement were not targeting specific outcomes. Even though these measures intended to help more SMEs bid for public sector contracts, it appears that little or no performance targets were set concerning the volume or value of government contracts that SMEs can win as a result.

The more recent efforts to promote SMEs' participation in public procurement were set out in both the 2010 budget (HM Treasury, 2010) and the Conservative - Liberal Democrat coalition agreement. The coalition agreement mandated that 25% of central government procurement spending, by value, would be directed to SMEs by 2015 (HM Government, 2011). Prior to this time, only 6.5% of government procurement expenditure was spent directly on SMEs (Booth, 2013). These were reinforced with sequences of policy notices: Plans to Open Up Government To Small Businesses (Cabinet Office, 2010), Government Opens Up Contracts To Small Business (Cabinet Office, 2011a), Making Government Business More Accessible To SMEs (Cabinet Office, 2011b) and A Better Deal For Small Businesses (Cabinet Office, 2012c).

The above-mentioned policy notices contain several measures that have been adopted to make it easier for SMEs to gain access to contract opportunities in the public sector and to help them bid. The measures include:

- Issuing a standardised template for pre-qualification questionnaire (PQQ) to help streamline the procurement process and to remove excessive bureaucracy.
- The launch of a new website called "Contract Finder" where prospective supplier can easily find all public sector contracting opportunities over £10,000.
- A directive requiring all public-sector organisations to pay contractors within 30 days and to mandate their prime contracts to do the same to subcontractors.
- Splitting large contracts into smaller lots.

- Encouraging major contractors to provide sub-contracting opportunities for SMEs.
- Organising Product Surgeries for SMEs to pitch innovative solutions.
- The Government eMarketplace (GeM) was launched to make procurement process easier and simpler for providers, including SMEs. This provides prospective suppliers the ability to quickly bid for low value contracts without undergoing any lengthy procurement process.
- A pilot of a new online tool named Solution Exchange which is intended to facilitate pre-procurement market engagement practices in the public sector. The tool will help Government departments to advertise problems to the marketplace and interact with SMEs. The exchange provides a forum where SMEs can also learn about how to sell goods and services more effectively to the public sector (Cabinet Office, 2012d).

From 2014 to 2015, the UK government began to use legislation to promote wider implementation of some of the policy measures already mentioned above. The Public Contracts Regulations 2015 (Cabinet Office, 2015; Crown Commercial Service, 2015a) mandate all public organisations in the UK to facilitate SMEs' involvement in procurement by focusing on some priority measures (e.g. Cabinet Office, 2011a; Cabinet Office, 2015; Cabinet Office, 2013; Department for Business Innovation and Skills, 2013; Loader, 2015; Perry, 20011). Overall, public sector organisations are still expected to conduct their procurement exercises in compliance with the core principles of transparency, fair competition and value for money (Flynn, 2016).

2.6.3.1 A critique of policies to support SMEs in public procurement in the UK

A critique of the policy measures discussed in previous sections (2.6.3.1) and the studies that undergirds them, is presented in this section. What can be deduced from a discussion of existing literature is that the policy agenda of UK over the last decade has focused on how to use public procurement as a policy tool to develop SMEs. However, there are a number of issues related to the policies being implemented in

this area. First, the government seem to take as given that such policies will yield the expected outcome, without giving due consideration to other factors, which might affect implementation, such as the roles of different stakeholders (e.g. managers of small businesses or large businesses). These persons can affect or be affected by the government's actions and policy to improve SME participation in public procurement and their interest or concerns should be taken seriously. Therefore, this study can make contribution in this area as data will be collected from SME owners/managers as key beneficiaries of the policy measures under investigation.

There is a paucity of literature identifying the drawback of SME-friendly procurement policies in the UK, but this does not suggest that the policies are perfect. For example, the government launched the Contracts Finder as an online portal for advertising public contract opportunities so that SMEs can gain better access to information. However, it appears that due consideration was not given to the fact that SMEs might not be tech-savvy (Bharati, 2010) as larger firms to make use of this system. Similarly, the Prompt Payment policy mandates public organisations to pay undisputed supplier invoices within 30 days, but then again, there might be deliberate attempts by public buyers to dispute invoices and avoid the prompt payment rule. This can happen if the organisation is constrained by limited financial resources as a result of budgetary cuts (Institute for Fiscal Studies, 2015).

Therefore, to avoid unnecessary delays in payments to suppliers, there needs to be absolute clarity about what constitutes acceptable/unacceptable reasons for invoice rejections in the public sector. This might be an opportunity for the UK government to set deadlines for resolving issues relating to supplier invoices, as addendum to existing prompt payment rule. The present study will test this assumption by collecting data from SMEs to understand concerns about the policy measures being implemented in the UK. This can help the researcher to determine strengths and weaknesses of the policy and identify the need for improvement, in line with **research objective 4**.

Furthermore, SME-friendly procurement policies in the UK do not specify what the expected impact or outcomes will be for distinct categories of small firms. According to Flynn, McDevitt and Davis (2013), SMEs have heterogeneous characteristics in

terms of firm size, age, industry sector and it is expected that policies designed to support them should reflect these features. Because of this, the present study will consider different categorises of SMEs in the UK in the process of data analysis. For example, the UK categorises SMEs in terms of size as micro, medium and small enterprises (Rhodes, 2017); this classification has been reflected in the analysis of attitude of SMEs towards the policy measures in Chapter 6. This links to the **sub-research questions 2 and 3**, which seek to test whether there is a significant difference in awareness and attitudes towards the policy measures.

Moreover, looking at the reports and notices published by government departments (e.g. Cabinet Office, 2010, 2011a, 2011b, 2012c, 2013, 2015; Department for Business Innovation and Skills), there is no evidence that SMEs were involved in designing the policy measures under investigation. As the primary beneficiaries of government actions that tend to promote fair in public procurement, SME views, beliefs as well as feedback are important. This can help shape effective implementation of pro-SMEs procurement policies and to ensure that the priorities of government reflect key challenges facing the small business sector in the UK. Therefore, this study will examine the possibility of improving engagement with SMEs during the policy-making processes in the UK.

Table 2.3 lists policy measures to promote SME participation in public procurement in the UK, identified based on the literature review in section 2.6.3, and their frequency of occurrence in the reviewed articles. There are six policy measures that were identified as important because they *are* recognised in the UK public procurement law and/or the EU procurement code of practice (i.e. European Code of Best Practices Facilitating Access by SMEs to Public Procurement Contracts, and Public Contracts Directive, 2014/24/EU and the Utilities Directive, 2014/25/EU), which regulate procurement practices in all public-sector organisations in England:

1. Elimination of PQQ for smaller contracts
2. Prompt Payment Rule,
3. Consortium Bidding,
4. Contracts Finder,
5. Division of Contracts into Lots, and

6. Sub-Contracting

Furthermore, the above mentioned are the most reported policy measures in the reviewed literature regarding policy to support SME participation in public procurement in the UK (e.g. Booth, 2013; Booth, 2015; Cabinet Office, 2014; Cabinet Office, 2015; Crown Commercial Service, 2015b; Crown Commercial Service, 2015a; Crossley et al., 2015; Flynn and Davis, 2016a; Loader, 2013; Loader and Norton, 2015). A more in-depth discussion of six key policy measures is presented in sections 2.6.4.1 – 2.6.4.6, below.

Table 2.3 Key policy measures supporting SMEs in public procurement in the UK

AUTHOR(S) AND YEAR OF PUBLICATION	Sources	POLICY MEASURES IDENTIFIED										
		Elimination of PQQ for smaller contracts	Prompt payment rule	Consortium bidding	The Contracts finder	Dividing of contracts into lots	Subcontracting	Product surgeries	Mystery shopper	Solution exchange	SME training	Meet the buyer events
Freshminds (2008)	Project report	X									X	
European Commission (2008).	EU Directive /EU Regulation	X	X	X		X						
HM Treasury (2008)	Government publication	X	X	X			X					
Glover (2008)	Project report	X	X	X		X	X					X
Holmes et al (2009)	Academic journal			X								
Cabinet Office (2010)	Government policy/publication	X	X		X							
HM Treasury (2010)	Government policy/publication	X	X		X		X	X			X	
HM Treasury (2011)	Government policy/publication	X			X							
FBS (2011)	Non-academic research		X									
Loader (2011)	Academic journal		X	X		X	X					
Preuss and Walker (2011)	Academic journal		X	X		X						

Perry (2011)	Academic journal			X	X	X	X	X			X	X
European Commission (2011)	EU Directive /EU Regulation					X						
European Commission (2013)	EU Consultation paper					X						
Cabinet Office (2011a)	Government policy/publication	X			X			X	X			
Cabinet Office (2011b)	Government policy/publication	X		X	X	X	X					
Cabinet Office (2012b)	Government policy/publication	X	X							X		
Cabinet Office (2012c)	Government policy/publication	X	X		X	X						
Cabinet office (2012d)	Government policy			X								
Booth (2013)	Government Statistics	X	X	X	X	X	X					
Loader (2013)	Academic journal			X	X							
Cabinet Office (2013)	Government policy/publication	X	X		X				X	X		
Department for Business, Innovation and Skills (2013)	Government policy/publication	X	X		X				X	X		

Cabinet Office (2014)	Government policy/publication	X			X	X						
Flynn and Davis (2015)	Academic journal			X		X						
Cabinet Office (2015)	Government policy	X	X		X							
Crown Commercial Service (2015a)	Policy notice	X	X	X	X	x						
Crown Commercial Service (2015b)	Policy notice	X		X	X							
Crown Commercial Service (2015c)	Policy notice		X									
National Audit Office (2015)	Government policy/publication		X									
Crossley et al, (2015)	Academic journal			X								
Loader and Norton, (2015)	Academic journal											
Krasnokutskaya and Seim (2011)	Academic journal					X						
Strömbäck (2015)	Academic journal					X						
Ballard (2015)	Essay report											
Kidalov (2013)	Academic journal						X					
Department of Enterprise, Trade	Project report						X					

and Employment, (2009)												
Loader (2018)	Academic journal	X	X	X								
TOTAL		19	18	15	15	15	9	4	3	3	3	2
RANKING		1st	2nd	3rd	4th	4th	6th	7th	8th	9th	10th	11th

Source: developed by the author from the review of literature in sections 2.6 – 2.6.

2.6.4 Six key policy measures being investigated in this study

The policy measures implemented to facilitate SME participation in public procurement in the UK are summarised in Table 2.2 following the review of literature in sections 2.6 – 2.6.4. The key ones to be focused on in this study are discussed below:

2.6.4.1 Elimination of PQQ for smaller contracts

Multiple studies and publications (e.g. Cabinet Office, 2012a; Cabinet Office, 2012b; Booth, 2013; Cabinet Office, 2013; Department for Business, Innovation and Skills, 2013; Cabinet Office, 2014; Cabinet Office, 2015; Crown Commercial Service, 2015a; Crown Commercial Service, 2015b) have reported that the UK government has made efforts to streamline the supplier qualification process in public procurement.

Early actions in this regard include reducing the bidder's qualification requirements through the elimination of PQQ for smaller contracts (Cabinet Office, 2015; Crown Commercial Service, 2015a; Crown Commercial Service, 2015b; Loader, 2018), where the value of the contract is below the EU threshold for goods/service. Presently, the EU threshold for procurement of goods and services in central government bodies is £106,047 and £164,176 outside central government¹². As part of this reform, the use PQQ for larger contracts was replaced with a standard Selection Questionnaire (SQ), allowing bidders to self-certify their ability to meet the required selection criteria/standards (e.g. financial and insurance requirements).

Traditionally, the PQQ was used to assess bidders' eligibility to fulfil a contract and thereby to facilitate the process of preselecting suppliers. The inappropriate use of PQQ can lead to needless exclusion of suitable and capable suppliers from the tendering process, in addition to discriminating against SME suppliers. There are indications that some public-sector organisations in the UK deliberately use PQQs as a tool to reduce the number of tenders they want to evaluate, rather than to reject unfit suppliers (Cabinet Office, 2011a; Cabinet Office, 2012c).

¹²EU Procurement Thresholds. <http://www.ojec.com/thresholds.aspx>

While elimination of PQQ for smaller contracts look promising and likely to reduce some of the key barriers facing SMEs in public procurement e.g. administrative burden (Loader and Norton, 2015), bureaucracy and disproportionate qualification criteria (Loader, 2013), it has not been evaluated with a view to determining its efficacy in helping SMEs to improve participation in public procurement. Consequently, the current study aims to examine the attitudes and opinions of SMEs on policy relating to elimination of PQQ for smaller contracts.

2.6.4.2 The prompt payment rule

Many published studies (e.g. Cabinet Office, 2012b; Cabinet Office, 2012c; Booth, 2013; Cabinet Office, 2013; Department for Business, Innovation and Skills, 2013; Cabinet Office, 2015; Crown Commercial Service, 2015a; Crown Commercial Service, 2015c; National Audit Office, 2015), identified prompt payment rule as a policy measure to encourage SMEs' participation in public procurement in the UK.

A research conducted by Federation of Small Business (FSB) in 2011 shows that much of small business in the UK have experienced overdue payment for their supplied goods and services in the previous year (Price, Rae and Cini, 2013). Unlike SMEs, large suppliers have financial buffers to enable them cope with cash flow issues arising from late payments. However, poor cash flow can prevent the growth of small firms and even push them into insolvency. Therefore, a culture of late payment in the public sector can easily discourage SMEs from seeking or tendering for available contract opportunities in this sector.

The prompt payment policy was introduced to address this by ensuring that SMEs who are acting as prime contractors or sub-contractors are paid on time. It is important to note that, since 2008, most UK public organisations normally pay suppliers within 30 calendar days of receipt of an undisputed invoice (National Audit Office, 2015), and in compliance with EU Directive 2011/7/EU (Department for Business, Innovation and Skills, 2013). The prompt payment rule enforced by the Public Contracts Regulations 2015 raises the bar by making it a legal requirement for all central government departments to ensure that subcontractors should also be paid within 30 days of an

undisputed invoice, and that 80% of undisputed invoices are paid within 5 working days.

The policy also obliges public organisations to publish the number of invoices paid on time to their prime contractors, and it allows contractors to claim statutory interest for overdue payments (i.e. payments made after 30 days of receipt of the invoice). Although, it is rational to assume that the prompt payment policy would help SMEs to overcome the fear of cash flow issues that may arise from delayed payments. However, five years after the introduction of the prompt payment policy in the public sector, SMEs believed that some prime contractors did not pay their subcontractors on time (National Audit Office, 2015), even when the public organisation had disbursed moneys promptly to large firm contractors.

Considering the foregoing, it is unclear whether the prompt payment policy constitute some challenges for SMEs besides the potential opportunities in presents. Therefore, the present study will examine SMEs' attitudes and concerns towards the prompt payment policy and, particularly, in relation to how it has influenced their participation in public procurement. It is also important to consider the experiences of SME suppliers in relation to the prompt payment policy, in attempting to determine the priority area of focus for the proposed framework development.

2.6.4.3 Consortium bidding

Many studies (e.g. Booth, 2013; Loader, 2013; Flynn and Davis, 2015; Crown Commercial Service, 2015a; Crown Commercial Service, 2015b; Crossley *et al.*, 2015) have shown that consortium bidding is an important technique to help SMEs participate more in public procurement. A consortium is an association of two or more individuals, organisations or businesses who decide to pull their resources and work together to achieve a common purpose (Crossley *et al.*, 2015).

Consortium bidding offers the option for SMEs to rely on their combined financial and technical ability in competing for public sector contracts. It is not expected that they have formal or legal arrangements, but they should be able to prove that they have access to the services of their group members, and that the group fulfils the level of

capacity required by the public organisation. Consortium bidding may provide an alternative route for SMEs to better participate in public procurement processes. As revealed in sections 2.5-2.5.4, the ability of SMEs to partake in public tenders is limited by resources constraints and large-scale tendering poses an important problem for them.

When the size of a contract is large, an individual SME may not be able to meet the range of requirements and consortium bidding could offer a solution. This comes with several advantages for SMEs:

1. The ability to synergise resources of group members to increase the chance of winning a contract (i.e. an SME can bid for public contracts without needing to rely on its limited resources to complete the whole project),
2. The collaborating SMEs have an opportunity to share knowledge while working together in delivering contractual obligations, each SME within a consortium would have their own niche area which they bring to bear when putting bids together, and this can enhance the quality of their proposal. Hence, consortium bidding can also help SMEs to produce high quality winning bids.

However, even if consortium bidding is seen as an option to enhance SME ability in public tendering, the extent to which SMEs are willing to engage in consortia formation should be examined. For example, Loader (2018) discovered that UK SMEs are not aware of the policy measures that government has put in place for them to improve participation in public procurement. This evidence suggests a need to examine whether SMEs are aware that consortium bidding is allowed in the public sector. In addition, even if SMEs are aware of this policy, they may be reluctant to consider it as an option to participate in public procurement because of the challenges associated with finding trustworthy collaborator (Holmes *et al.*, 2009). For these reasons, the present study seeks to evaluate SMEs' attitudes and concerns towards consortium bidding, as it relates to improving their participation in public procurement.

2.6.4.4 Contracts finder

Several studies (e.g. Cabinet Office, 2011b; Cabinet Office, 2012b; Booth, 2013; Loader, 2013; Cabinet Office, 2013; Department for Business, Innovation and Skills, 2013; Cabinet Office, 2015; Crown Commercial Service, 2015a; Ballard, 2015) identified 'contracts finder' as a key measure to improve SME participation in public procurement in the UK. 'Contract finder' is a central advertising web-portal for contract opportunities in the UK public sector, designed for government and its agencies to publish contract opportunities worth over £10,000 in different sectors.

On contracts finder, companies who seek to do businesses with government agencies can register and search for information about contract opportunities free of charge. SMEs interested in supplying goods and services to the public sector can then receive free email alerts about tender opportunities that are presumed suitable for small suppliers. SMEs can use the contract finder to download documents of on-going tenders, search for information on upcoming procurement opportunities, and get details of different types of contracts that have been awarded. Contracts finder is expected to achieve the following key outcomes: to promote transparency of contract information, simplify the process of public tendering by making the search for tender opportunities less tedious and making tender documents available online for download.

Even though it is mandatory for public organisations to advertise procurement opportunities on contracts finder, existing evidence suggests that some public organisations are not complying with this directive (Ballard, 2015). Therefore, while contracts finder has the potential to increase transparency and simplify access to information about public contracts, there is a need to examine whether SMEs consider that it is beneficial. Hence, this study will examine SMEs' awareness and attitudes towards contracts finder. For example, the fact that irrelevant information are published on contract finders, as highlighted by Ballard (2015), can cause SMEs to lose interest or enthusiasm in using the portal to search for contracts.

2.6.4.5 Division of contracts into lots

An increasing number of research studies and government publications have indicated that public organisations in the UK are required to consider division of contracts into smaller lots, in order to encourage SMEs (e.g. Krasnokutskaya and Seim, 2011; Cabinet Office, 2011b; Cabinet Office, 2012c; Booth, 2013; Cabinet Office, 2014; Flynn and Davis, 2015; Strömbäck, 2015). It is important to note that even before this became a compulsory requirement by the UK public procurement regulations, public organisations have been using their discretion to split contracts into smaller lots to attract SME suppliers.

In 2014, the EU reformed its Public Procurement Directives and encouraged public organisations to reduce contract sizes by means of splitting large contracts into lots. Perhaps this is because a major problem facing SMEs in public tendering in the UK is the large size of the large size of public sector contracts (Loader, 2015). A large contract size creates difficulties for SMEs when competing with larger firms, because small suppliers may not have the resources and competence to meet the contract requirements (Loader, 2013). Similarly, it is often assumed that large firms are more efficient and competent than SMEs at carrying out big projects (Strömbäck, 2015), and the capability deficiencies in SMEs could be sufficiently significant to distract them from competing for public sector contracts (Krasnokutskaya and Seim, 2011).

The division of contracts into smaller lots is therefore expected to induce SMEs to participate in public procurement processes by allowing them to express interests in one or more contract opportunities within a single procurement exercise and offering them the flexibility to choose the type of contract opportunity that aligns with their business interests or competencies. A study conducted in the Republic of Ireland shows that dividing contracts into smaller lots is an “optimal strategy which encourages SME participation” (Davis and Brady, 2015:18). Similarly, research into SME participation in the EU discovered that division of contracts into lots enhanced SMEs’ likelihood of winning the contracts (GHK, 2010).

However, it cannot be assumed without empirical confirmation that the same finding would emerge in the UK context. Therefore, the current study evaluates how “division

of contracts into lots” is perceived (i.e. awareness, attitudes and concerns) by SMEs in relation to their participation in public procurement in the UK.

2.6.4.6 Subcontracting

Like the efforts made to use subcontracting to increase SME participation in public procurement in the EU and the US (Kidalov, 2013), the UK government has required public organisations to encourage subcontracting opportunities and make them accessible to SMEs (e.g. Booth, 2013; Department of Enterprise, Trade & Employment, 2009; Glover, 2008; HM Treasury, 2010; Loader, 2013; Perry, 2011). In March 2012, the government announced additional sets of initiatives to boost SME involvement procurement. One of which is to increase sub-contracting opportunities for SMEs (Cabinet Office (2012d).

The announcement attracted new commitments from large private sector firms that served as prime contractors with the government on frequently continuous basis (e.g. Balfour Beatty, Capita, Hewlett Packard, Logica and Serco). These companies are five which have signed up to advertising their government subcontracting opportunities on the Contracts Finder to provide greater visibility to SMEs. Apart from that, subcontracting has been identified is one of the best practice strategies for increasing SMEs’ presence in procurement (Institute for Sustainability, 2012). A research by FreshMinds (2008) found that approximately 50% of the contracts awarded to SMEs originated from subcontracting opportunities.

However, existing research in this area (e.g. Loader, 2018) has identified low awareness of SME-friendly policy measures. However, existing research in this area (e.g. Loader, 2018) has identified low awareness of SME-friendly policy measures. This could be because the prime contractors are independent firms and they are responsible to add new tiers of supplier to their supply chain, which can also result into multiple tiers of SME supplier who do not have a direct relationship with the primary client (i.e. public-sector organisations). Nevertheless, SMEs needs to be aware of public contracts that they may get via subcontracting routes so that they can move up the tiers in the supplier chain if they can meet the contract requirements.

Although subcontracting is not a way for SMEs to trade directly with public sector organisations, it can work to the advantage of the public organisations as the risk of contract delivery is on the shoulder of large prime contractor (FreshMinds, 2008). On the other hand, subcontracting offers SMEs access to the public-sector contracts, which they possibly will not have. Besides, SMEs that can deliver subcontracted work successfully give themselves a better chance to be considered for contracting directly with public organisations.

Traditionally, public organisations appoint prime contractors, who are also responsible for identifying their subcontractors. The implication of this is that, the contracting authority hardly knows who the subcontractors are or they lack visibility in their capabilities. Some public organisations in the UK have developed a new strategy to avoid this scenario (National Audit Office, 2016). For example, the Department for Culture, Media and Sport (DCMS) now identify and appoint the potential subcontractors for specific work in advance of transferring the contract to a large prime contractor to accomplish. With this, public buyers can easily identify the numbers of SMEs that make up their supply chain and understand the amount of procurement spending that goes indirectly to the SMEs via subcontracting.

However, despite the possibility that SMEs can generate revenue from the public sector indirectly as subcontractors, there is a common impression amongst scholars that public buyers have pro-large firms' attitude (Loader, 2013; Davis and Brady, 2015; Perry, 2011). This suggests that certain factors could potentially limit the rate at which subcontracting opportunities are made available for SMEs in the public procurement markets. Therefore, one of the objectives of this study to examine awareness, attitude and concerns of SMEs towards subcontracting.

2.6.4.7 Linking key policy measures to public procurement barriers

Each of the six key policy measures discussed in previous sections 2.6.4.1 – 2.6.4.6, have attributes, which can potentially reduce the barriers hindering SMEs from participating in public procurement. In section 2.5.4, the researcher discussed the key barriers to SME participation in public procurement in the UK. Table 2.4 illustrates the

link between key policy measures and key barriers facing SMEs in public procurement in the UK.

Table 2. 4 Linking policy measures to SME barriers in public procurement.

Key Policy Measures	Summary of attributes of the policy measure	Relevance to SME barriers to public procurement
<p>1. Elimination of PQQ for smaller contracts</p>	<ul style="list-style-type: none"> • Elimination of Pre-Qualification Questionnaire (PQQ) for smaller contracts is expected to reduce unnecessary qualification requirements by ensuring that selection criteria are proportionate to the contract value. • The removal of PQQ for low value contracts is expected to: make the procurement process less time-consuming, make the supplier eligibility criteria less difficult to meet, reduces the administrative burden placed on the bidders • Bidders are allowed to self-certify their ability to meet the required selection criteria (e.g. financial and insurance requirements). 	<ul style="list-style-type: none"> • SMEs complained about the many paper work/ documents that should be completed by firms seeking public contracts (Glover, 2008). • As part of the pre-qualification process, public buyers require proofs of financial capacity that are disproportionate to the value/size of the contract opportunities (Pickernell et al, 2011).
<p>2. Prompt payment rule</p>	<ul style="list-style-type: none"> • The prompt payment rule is expected to alleviate the impact of prolonged delay in payment under public procurement contracts (Nicholas and Fruhmann, 2014). This measure can have impact on the cash flow of contractors and help subcontractors to be financially healthy (Rostek, 2015). • It also believed that paying government suppliers on time can inspire existing/potential contractors to be on the lookout for new contract opportunities (National Audit Office, 2015). 	<ul style="list-style-type: none"> • There is a widespread concern about delay in payments to contractors and sub-contractors (Loader, 2015). SMEs are discouraged from participating public tendering because they perceived that public sector organisations delay payments to their contractors (Cabinet Office, 2012b; Loader, 2011; Preuss and Walker, 2011).
<p>3. Consortium bidding</p>	<ul style="list-style-type: none"> • Consortium bidding has been identified with the UK public procurement law (Public Contracts Regulation, 2015) as a measure for addressing SMEs weaknesses when competing for public sector contracts. With this, public sector organisations would accept joint bidders to fulfil the requirements (technical and financial 	<ul style="list-style-type: none"> • SMEs raised concerns about the tender requirements that expects them to demonstrate track record of performance in similar contracts (Loader, 2007; Loader, 2013) and this tend to hinder their participation– especially those that have little /no

	<p>capacity) for the contract (Nicholas and Fruhmann, 2014). It also enables two or more SMEs to pool knowledge together or combine unique expertise to submit high quality bid/proposal to the public sector (EU, 2009).</p> <ul style="list-style-type: none"> • Firms forming a consortium to deliver contracts can transfer skills (Palacios-Marqués et al, 2015) between one another to better individual public tendering experience, and use such knowledge to bid independently for future contract opportunities. • If an SME do not have the required geographic presence to deliver the service requirements of the contract, they can explore the possibilities in consortium bidding (Competition & Consumer Protection Commission, 2014). 	<p>experience of public tendering (e.g. Loader, 2011).</p> <ul style="list-style-type: none"> • Most SMEs lack of ability to meet the resource and capability requirements to participate in public tendering (Temponi and Cui, 2008). For example, SMEs perceive that their poor performance in public tendering is as a result of lack of legal, administrative, customer services, IT skills marketing, administrative and human capital resources (e.g Karjalainen and Kempainen, 2008; Loader, 2013).
<p>4. Contracts finder</p>	<ul style="list-style-type: none"> • Contracts finder was established to make contract opportunities more visible in order to increase SME participation in public procurement. The contracts finder has the potential to influence SME participation in public procurement in the following ways (Cabinet Office, 2011a; Cabinet Office, 2015; Cabinet Office, 2013; Department for Business Innovation and Skills, 2013): <ul style="list-style-type: none"> - Enabling prospective bidders to keep an eye on forthcoming tender opportunities - Reducing the time and stress that SME go through to search for information on existing tender opportunities - Increasing transparency of sub-contracting opportunities - Simplifying the procurement process 	<ul style="list-style-type: none"> • SMEs complain of lack of awareness of opportunities and insufficient communication with the public procurement officers (Cabras, 2011; GHK, 2010; Loader, 2013). As such, there is perceived insufficient transparency in public procurement process and the procurement process is seen to be inefficient (Glover, 2008). The implication is that while SMEs are prepared to sell to the public sector, they might not know where to get information about the existing tenders and instructions on the processes involved.
	<ul style="list-style-type: none"> • Since a large contract size often creates difficulties for SMEs when competing with larger companies, public sector buyers are expected to be dividing contracts into lots (Loader, 2013; Karjalainen and 	<ul style="list-style-type: none"> • Major concerns for UK SMEs are relating to large sizes of contracts (Glover, 2008; Loader and Norton, 2015). Hence, small businesses perceive that they lack the

<p>5. Division of contracts into lots</p>	<p>Kemppainen, 2008). The UK government requires public organisations to adhere to this measure to improve SMEs participation, and they will have to explicitly explain when not doing so (Booth, 2013; Public Contracts Regulation, 2015). This may enable SMEs to compete on the same level with larger companies (Glover, 2008), and the small lots may match better the resources and capability of SMEs (Perry, 2011).</p> <ul style="list-style-type: none"> • The one or more lots may correspond more closely to the specialisation of SMEs (European Commission, 2008). Thus, this may offer SMEs the flexibility to bid for more than one contracts within a single procurement exercise. 	<p>capacity to participate public contracts competition (Glover, 2008; Loader and Norton, 2015).</p> <ul style="list-style-type: none"> • In addition, the technical requirements are too high and there is a pro-large-business culture of public buyers (Loader, 2011; Loader, 2013).
<p>6. Sub-contracting</p>	<ul style="list-style-type: none"> • Having realised the barriers relating to contract sizes, the UK government encourages public agencies and their prime contractors to enhance the visibility of relevant subcontracting opportunities for the benefit of SMEs. This approach is expected to be a less difficult route for SMEs to participate in public procurement markets (Department of Enterprise, Trade & Employment, 2009). SME sub-contractors can learn from their prime contractors and acquire some relevant experiences for future tender competition. • In addition to enabling the SMEs to supply the public sector indirectly, subcontracting can also facilitate skill transfer from large firms to SME sub-contractors. Hence, subcontracting is seen as one of the most effective channels for knowledge transfer and skill acquisition for local SMEs (Carayannis and Sipp, 2005). 	<ul style="list-style-type: none"> • Major concerns for UK SMEs are relating to large sizes of contracts (Glover, 2008; Loader and Norton, 2015). Hence, small businesses perceive that they lack the capacity to participate public contracts competition (Glover, 2008; Loader and Norton, 2015). • In addition, the technical requirements are too high and there is a pro-large-business culture of public buyers (Loader, 2011; Loader, 2013).

Source: developed by the author

2.6.5 SME participation in public procurement: review of previous studies

Data published by the Cabinet Office in 2017 shows that the proportion of government spending with SMEs has decreased for two consecutive years (Cabinet Office, 2018). This overrides previous report that the government has exceeded¹³ its own target for reserving 25% of public contracts by value to SME suppliers (Booth, 2015), which arguably was the most acclaimed evidence for the impact of policies designed to promote SMEs in public procurement in the UK. Given the lack of empirical evidence linking government policy measures with SMEs' participation in public procurement, scholars (e.g. Loader, 2015; Loader, and Norton, 2015) have called for further studies in this area. The present research will be addressing this gap by investigating SME-friendly procurement policies from the perspectives of SMEs.

Furthermore, there seems to be limited evaluation of policy measures adopted in the UK to promote SME participation in public procurement, with the exceptions of few studies (e.g. FSB, 2013; Booth, 2013, Loader, 2013). Evidence from the Federation of Small Businesses (2013) shows that most UK SMEs are not aware of these measures and about 78% had never tendered for public sector contracts. While these findings are relatively dated, the common barriers to SMEs participation seem have not changed, as more recent data (Davis and Brady, 2015; Loader, 2015) point out that SMEs are under-represented in the public procurement markets, and the value of contracts awarded to them is low. The above-mentioned limitations present another rationale for evaluating the effectiveness of current policies supporting SMEs in public procurement. This links to key objectives of this study which seeks to examine SMEs' level of awareness and attitudes towards the policy measures being implemented in the UK. The findings outcome can help towards identifying changes that should be made to improve the efficacy of such policies for enhanced participation of SMEs in public procurement.

Furthermore, a research conducted by Loader and Norton (2015) in the UK's Heritage sector, revealed that SMEs would prefer to deal directly with the procuring authorities rather than acting as subcontractors to larger firms or forming consortium. However, the authors did not provide much detail about the reasons for the negative attitude

¹³The UK government reported that an estimated 27% of government contracts by value have been awarded to SMEs (Booth, 2015).

expressed by SMEs. This suggest that there are issues causing SMEs' lack of enthusiasm for maximising the benefits available to them through the policy measures under investigation. Therefore, this study will survey SMEs' reported experience of key policy measures being implemented in the UK, which might provide useful insight into new ways to improve their participation in public tendering.

In a study conducted by Flynn and Davis (2015), Irish SMEs were found to be showing a "wait-and-see" attitude towards the rollout of policy measures before they developed more confidence in bidding for public sector contracts. This is, however, surprising because the purpose of SME-friendly procurement policies is to inspire small firms to participate better in public procurement. Hence, it is worth investigating further whether SMEs are aware of key policy measures designed to support them in public procurement, and to determine what sort of attitude they have towards the same. This is another aspect of the present study that will be tested through research questions 2, 3 and 4.

Other studies show that measures aimed at increasing SMEs' participation in public procurement in EU countries were ineffective (Cabral, 2015; Stake, 2014; Kidalov, and Snider, 2011), but these studies do not offer explanations for the ineffectiveness. On the other hand, some studies conducted in the Republic of Ireland (e.g. Davis and Brady, 2015; Flynn and Davis, 2015; Flynn, 2016) have attributed the ineffectiveness of SME-friendly procurement policies to several factors, such as lack of wider implementation of SME-friendly policies, however, country-specific studies are scarce on this subject matter are scarce. For example, Loader (2018) seem to be the only scholar that have reviewed the UK government's SME-friendly procurement policies and their impact. The author used data from secondary sources but alluded to the fact that there is a need to develop better ways of measuring and collecting data, which again can show the importance of multiple data sources used in the present study (i.e. government publications, survey and focus group).

Furthermore, the techniques used to collect data in previous studies by Flynn and Davis *et al* were predominantly quantitative, providing statistical evidence on the impact of SME-friendly policy measures (ibid). Although such statistical data could be useful, but insufficient to provide in-depth understanding regarding on how policies

have influenced SME participation in public procurement. This provides a basis for combining qualitative and quantitative data in this study to investigate the policy measures designed to facilitate SME participation in the UK.

2.6.6 Role of firm resources and capabilities in SME participation in public procurement

Flynn and Davis (2016) argue that there has been a delay in the emergence of research evidence on factors internal to the firm, which can influence SMEs' participation and performance in tendering. In the authors' opinion, this was due to that fact that public procurement was an emerging field of research and prior research had mostly focused on barriers external to the SMEs (Loader, 2013). Perhaps, since SME-friendly policies have turned out to be a widespread practice across nations (Flynn, 2016), there is a tendency to shift attention from seeing the unique resources and capabilities of SMEs that can help them succeed in public tendering. However, not too long ago, some scholars (e.g. Karjalainen and Kempainen, 2008); Flynn and Davis, 2016a; Tammi, Reijonen and Saastamoinen, 2016) have begun to use the resource-based view (RBV) concepts in investigating the link between SME and public procurement. This study will extend take the debate forward by examining how the RBV can help towards improving SME participation in public procurement.

2.6.6.1 The resource-based view theory: origin, evolution and critique

The Resource-Based View (RBV) has a long history (McKiernan, 1997), which can be traced from the works of scholars like Marshall (1890), through Coase (1937) to Penrose (1959). Although, Penrose was the initial promoter of this theory, suggesting that a firm's collection of resources (human, physical and capital) can be exploited to achieve competitive advantage, other researchers (e.g. Wernerfelt, 1984; Barney, 1991, 2002; Conner, 1991, 2002) have expanded the RBV to specify the tangible/intangible assets, which support business performance of firms.

The RBV has come under sharp attack in the middle of the 20th century, by scholars like Birger Wernerfelt, Jay Barney, Mata Francisco and William Fuerst; they all agreed that the possession of resources alone is not enough basis for the firms to achieve sustainable competitive advantage. For example, Wernerfelt (1977; 1984) highlighted

the need for firms to be versatile when operating in a changing business environment, where customisation is required to meet customers' expectations. This seems to suggest that competitive advantage is not so much about the possession of resources but the ability to balance existing resources with development of new resources to grow as well as adapting or be adapted to many different functions.

But Wernerfelt's perspective of RBV has its limits as it does not account for the potential difficulties that firms might face in identifying and transforming internal resources into competitive offerings. Looking at RBV from a different perspective, Barney (1991) contends that the method in which a firm's exploits and use its various internal resources is key for determining performance in a competitive business environment. Barney's argument brings out the assumption of resources diversity, which pertains to the heterogenous nature of resource bundle the firm possess. Although this argument may seem logically sound, it does consider the possibility that except if the capability and bundles of resources of a firm are valuable or rare, they can be possessed or imitated by many other competing firms.

Therefore, a firm might need to possess resources with different levels of efficiency to gain competitive advantage. This brings to the fore the strategic importance of resource uniqueness or homogeneity which Mata *et al*, (1995) defined as capabilities that are unique and can be difficult to acquire by competitors due to either cost or lack of knowledge. Although the authors cited that firms could be unique in their ability to move resources from one part of a business to another, but they did not indicate what practical steps can be taken towards creating and managing resource mobility. This perhaps reflects one of the most common limitations of the RBV (i.e. Mahoney and Pandian, 1992) regarding its narrow managerial implications.

So, it not enough for a firm to build resources only, without possessing human and managerial competence to drive competitive performance. This has been suggested by several authors (e.g. Morita and Tang, 2018; Barney, 2002; Conner, 2002), for a variety of reasons. For example, Barney (2002) suggested clear need for integrating various individual, social and organisational behavioural phenomena within the firm to increase management capability, for effective resource allocation and utilisation. Consistent with this view, Morita and Tang (2018) discovered that skill and abilities of

managers are key contributors to the pool of resources in a firm, in other words, higher managerial capability raises labour mobility.

Therefore, although it seems simple to focus on the resource as the firm's most important constituent competitive advantage, the core assumptions of RBV that resources must be heterogeneous and immobile can be regarded as superficial. Apart from its limited managerial applicability (as mentioned earlier), the RBV is regarded as too ambiguous and narrow (Bendoly and Chao, 2016). For example, the competitive success of a firm can reside in the hands of managers, and particularly in their ability to deploy different management tactics appropriately from one stage of organisational growth to another. Hence, if the central message of the RBV is that strategic assets are intangible and incomparable, how do managers identify, define and use them? Therefore, the limited focus on how a firm can acquire and develop its valuable/ unique resources makes the RBV essentially rhetorical and unpractical in nature. Despite the limitations offered by the RBV to professionals and researchers, it is a promising concept that examines how firm resources can influence competitive advantage.

However, the RBV has to date not been widely used in SME-public procurement research. The present research seeks to advance knowledge in this area by evaluating the conceptual links between aspects of RBV and the policy measures under investigation, and then test this empirically through a focus group discussion that involves SMEs, public procurement officers and policy makers. The findings can contribute on-going debates on the importance of public procurement to SME development, with the intention of helping researchers and SME owners/managers in identifying and choosing those resources that are most appropriate to their participation in public procurement. This provides an opportunity to address key criticisms of RBV theory, that it is ambiguous and offers limited managerial relevance and practical implications (e.g. Mahoney and Pandian, 1992; Bendoly and Chao, 2016).

In attempting to address key limitations of RBV and extend its core propositions, several related concepts have emerged such as dynamic capabilities (e.g. Teece, 2007, 2015), Intellectual Capital (e.g. Harris, 2000; Jardon and Susana Martos, 2012) and strategic behaviours/orientations of firms (e.g. Hakala and Kohtamäki, 2011;

Reijonen, Tammi and Saastamoinen, 2014). Each of these perspectives develop and expands the RBV's to explain sustainable competitive advantage in various contexts; they bring together various organisational aspects, which are new in the strategic management literature (Morgan and Strong, 2003). Consequently, the implications of the RBV concepts for improving SME participation in public procurement are discussed in the subsequent sections.

2.6.6.2. The application of RBV approach to SME participation in public procurement

In this study, the RBV is adopted as a theoretical lens to help explain how firm's internal resources and capabilities can influence SME performance in public procurement markets. Looking at previous studies on firm performance (e.g. Teece, 2007, 2016; Gruber and MacMillan, 2017; Wood et al, 2014) and the strategic management literature (O'Dwyer and Gilmore, 2017), the possession and use of certain resources and capabilities can help firms to improve competitive advantage in the marketplace. However, this perspective has not been widely considered in researching SME participation in public procurement markets (e.g. Tammi et al, 2014, 2016; Reijonen et al, 2016).

To address this gap, the research will consider the different concepts of RBV and the implications for SME participation in public procurement (see sections 2.6.6.2.1 – 2.6.6.2.7). The discussions in these sections will identify which RBV concepts are pertinent to the present research, and how the possession of resource or capability of some sort can help SMEs overcome barriers to public procurement as well as maximising the policy measures under investigation. The central argument of this thesis is that any debate on SME business success, competitiveness or growth is deficient if there is no consideration of internal firm factors which can help them to effectively participate in the public procurement market.

2.6.6.2.1. Firm resources and SME participation in public procurement

Resources are assets used by a firm to produce goods and service that meet human needs (Sirmon, Hitt and Ireland, 2007), and these could be categorised as either tangible or intangible assets (Hunt and Derozier, 2004). Tangible assets include property, shares, financials, equipment and machinery, whereas intangible assets are

those possessions that are valuable but are difficult to quantify, for example knowledge, experience, trademarks, reputation, collaborative linkages, organisational procedures and routines (Teece, 2015; Wilk and Fensterseifer, 2003). As discussed previously, the RBV assumes a firm that possess these resources has a potential in building competitive advantage in the market place. Yet, there seems to be limited literature focusing on how a firm's valuable resources can be developed and exploited to gain competitive advantage in the public-sector markets.

Some the intangible assets mentioned above (see Wilk and Fensterseifer, 2003) are like the common criteria for supplier selection, such as evidence of reputation, knowledge and experience in delivering similar works in the past (Loader, 2007, 2011, 2015). Consequently, if SMEs lack these resources/capabilities, they might be unable to compete successfully for public sector contracts. Considering the above, Loader (2013) has called for self-help actions from SMEs themselves to improve participation in public procurement but the author did elaborate on what strategies small firms need to upgrade internal resources to increase their chances of winning public contracts. Hence, if SMEs do not possess the requisite skills for transforming their valuable resources into economic outputs, it is doubtful that they can achieve competitive advantage in the public procurement markets.

Furthermore, not all the resources that small firms possess can be utilised to gain competitive advantage in the marketplace. For example, SMEs have been known for service agility and operational flexibility (Simionescu and Bica, 2014), but they still record low success rates in public procurement competition (FSB, 2017; Preuss, 2011). Previous studies have alluded to the fact that SMEs lack of skills to develop winning bids (Karjalainen and Kemppainen, 2008), and lack of management proficiency is a barrier to participation in public procurement (Loader and Norton, 2015). Therefore, development of appropriate management competences could be an important consideration in developing a framework to help SMEs improve participation in public procurement.

Furthermore, the RBV might provide an avenue to understand what SMEs can do to improve participation in public procurement, but it fails to consider the potential influence of external industrial factors, such as those highlighted in Michael Porter's

Five Forces Model (Porter, 1989). For example, given the significant amount of money spent in the public sector to provide goods and services, governments usually have higher bargaining power in the public procurement marketplaces. It would probably be illogical to ignore the influence of external factors such as the imbalance of power (between buyers and suppliers), which may represent barriers to new entrants or existing competitors. Therefore, the RBV's key assumption that a firm can gain sustainable competitive advantage by exploiting internal valued resources, may not be true in the context of public procurement competition.

Similarly, the RBV does not offer suitable strategies to help firms handle external factors like the perceived prejudice and discrimination which SMEs are facing in the public procurement markets (e.g. Flynn, 2016). Such external factors are riskier for organisations because managers cannot easily predict them (Mason, 2007). This brings to fore another limitation of the RBV theory, with regards to its inability to support competitive advantage beyond stable or predictable market environments. Since public procurement is regulated and not usually within a rapidly changing environment like the private sector, this point mentioned above is outside the scope of this study. However, future qualitative research can explore this area to use techniques like interview or focus group to unearth the underlying factors of resource perceptions amongst SMEs, to determine whether their low participation in public procurement was due to the possession (or lack) of resources or inability to transform existing resources to competitive advantage when bidding for contracts.

Furthermore, previous studies identified lack of proficiency in bidding and the inability to meet the technical requirements for public contracts as key barrier to SME participation (e.g. Flynn, McDevitt and Davis, 2013; National Public National Audit Office, 2015; Glover, 2008). SMEs can exploit existing policy measures to address these barriers by forming a consortium to bid jointly for government contracts or participate in subcontracting opportunities. However, they must first build awareness of these policy measures and grasp the potential benefits or risks associated. Hence, the **objectives (2 and 3)** of this research seek to examine SME awareness and attitude towards key policy measures of the UK government.

2.6.6.2.2 Dynamic capability and SME participation in public procurement

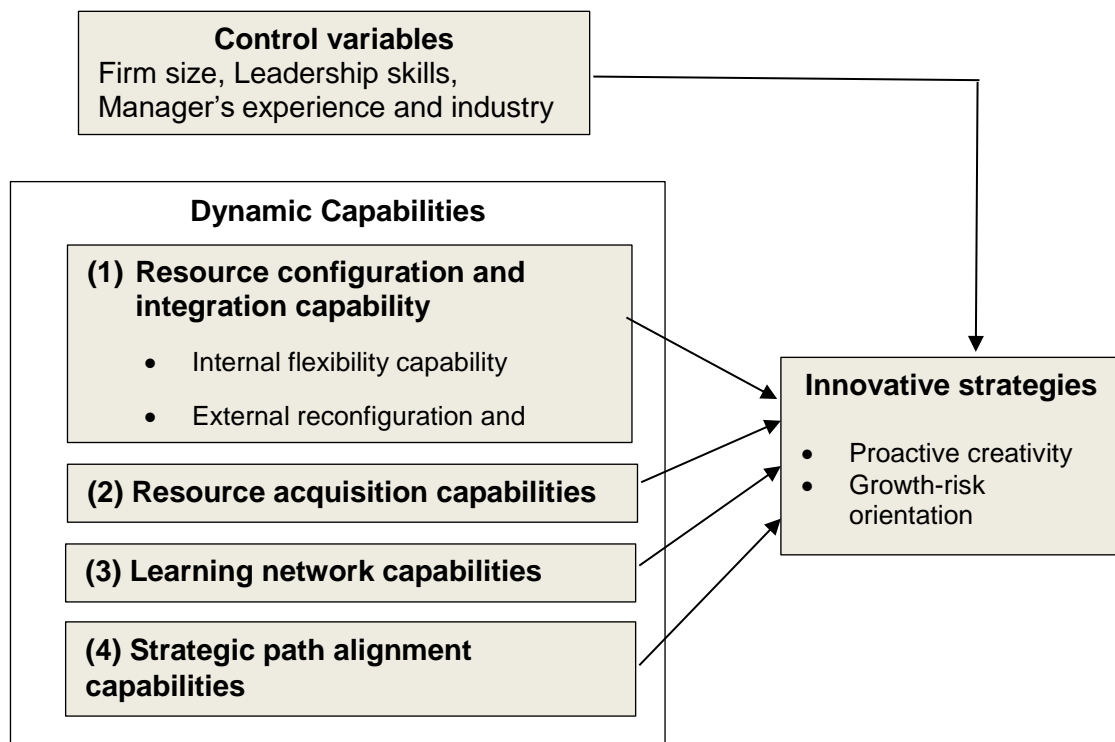
As hinted previously, Dynamic Capability (DC) is a concept derived from the resource-based view and was defined initially as the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece, Pisano and Shuen, 1997, p. 516). This consist of the firm's ability to sense opportunities, size and shape business threats for enhanced competitiveness (Teece, 2007). Helfat *et al* (2007) extends Teece's definition with an argument that DC goes beyond what happens within boundaries of the firm. The authors argue that, a firm can acquire capabilities from external sources to supplement its exiting skills set through network development. Hence, DC can also be described as the ability of a firm to decisively create, extend, transform, re-configure, or modify its resource base to sustain a competitive advantage.

After tracing the evolution of DC in the literature, there is a common agreement amongst scholars (e.g. Teece, 2010, 2012; Helfat *et al.*, 2007; Ambrosini and Bowman, 2009), that the theory seeks to explain how firms can achieve sustainable competitive advantage in rapidly changing environments, and the emphasis is very much on learning, networking and transfer of knowledge from external sources into the firm. Barney *et al.* (2001) is one of the few studies to show the effect of DC on SME participation in public procurement. The authors argue that dynamic capability aid resources mobilisation and usage in SMEs but did not explain how. However, the importance of DC for SME participation in public procurement, is an under-explored area in the literature.

SME are known to place immense importance on relationship building (Welbourne and Pardo-del-Val 2009), but they lack key resources to participate in public bidding such as track records, enough human and financial capital (Pickernell *et al*, 2011; Walker and Preuss, 2008; Karjalainen and Kemppainen, 2008; Loader, 2013). Hence, the ability of SMEs to pool resources together through network building may be viewed as dynamic capability, an intangible resource for organisations to explore opportunities for consortium bidding in the public sector. Similarly, because SMEs have historically been underrepresented in the public procurement markets, they are likely to be discourage from participating in bidding exercise after several unsuccessful attempts. However, research has shown that repeated practice or routines can enhance the

creation of firm dynamic capabilities (Finstad and Pettersson, 2016), and this might be relevant to public procurement participation. In other words, SMEs repeated practice in tendering could lead to positive outcomes, if they are not discouraged because of failed attempts to win public contracts.

Figure 2.5 Categories of DC that influence SMEs innovation strategies



Source: Borch and Madsen (2007)

To summarise the different perspectives of DC, Borch and Madsen (2007) proposed four-dimensional model identifying different aspects that may contribute to the development of innovative strategies within the SMEs (Figure 2.5). These dimensions are potentially relevant for SMEs that seek to participate in public procurement but are rarely considered in research. Aspects of Borch and Madsen’s DC dimensions that are relevant to the present study are discussed below. Resource configuration is the starting point of the model (in Figure 2.) but this may not be the case when participating in public procurement where the capabilities required for bidding often depends on the size or type of contract. Hence, there might be need for SMEs to first assess their internal resources and capabilities against the contract specifications to determine the extent of configuration needed.

After conducting the self-assessment, SME can identify existing capability gaps and initiate appropriate strategies to address them. This may offer insight into which key resources are needed to exploit the benefits associated with key policy measures of the government. For example, an SME can decide whether it is more favourable to bid for contracts divided into small lots or consider selling to the public sector indirectly as subcontractor. Similarly, Contracts Finder (Ballard, 2015) requires bidders to log in to the internet to gain access to public contract opportunities. Therefore, the results of a self-assessment process might indicate the need for SMEs who is new to public tendering to adopt Internet-based ICT to help improve access to information about public contract opportunities.

Furthermore, strategic alignment capability is another element of DC that seems relevant when bidding for tenders divided into lots (Glas and Eßig, 2018) because it can help SMEs to choose the type of tender opportunities that matches their unique competencies. Additionally, SMEs might need to develop strategic path alignment capabilities when seeking to collaborate with another firm to take advantage of consortium bidding policy (Nicholas and Fruhmann, 2014). This is due to the fact that firms with higher level of alignment capability would likely be able to distinguish a collaborating partner with complementary strengths to compensate for resource limitations of each other when bidding jointly. Therefore, when developing the proposed framework in this study, considerations will be made to how SMEs can build alignment capability for redeploying resources (i.e. resource configuration) towards submitting a stronger bid via consortium.

Another important point is the fact that public organisations are often confronted with multiple challenges, which are characteristically complex, unstable and diverse (Daglio *et al*, 2014; Bayarçelik *et al.*, 2014). This suggests a need for more innovative products and services in the public sector markets. Since innovation capability (Zawislak *et al*, 2012) is one of the unique competences that have been attributed to small firms, in addition to flexibility and service agility (Simionescu and Bica, 2014; Trzecieliński, 2016), this can be used as a leverage to gain competitive when bidding for public contracts.

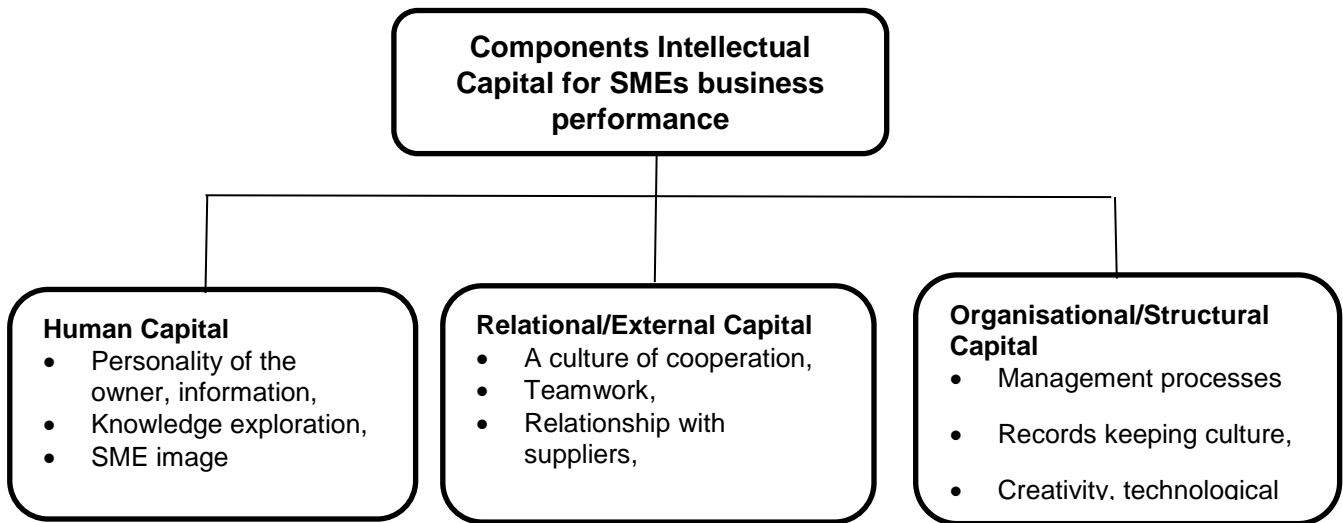
2.6.6.2.3 Intellectual capital (IC) and SME participation in public procurement

The concept of Intellectual Capital (IC) is an extension of RBV and highlights the value that intellectual assets add to a firm's performance. Different authors have conceptualised IC differently, in terms of invisible assets (Itami and Roehl 1991), intellectual property (Parr and Smith, 1994), immaterial values (Sveiby, 1997) and the recognition that knowledge is important to organisations to create wealth (e.g. Roos and Roos, 1997). Irrespective of these definitions, the intangible assets in a firm is considered tri-partite (Daou, Karuranga and Su, 2014; Roos and Roos, 1997), including Human Capital (i.e. value that the employees offer in terms of skills, expertise and knowledge), Relational Capital (i.e. relationships with customers, suppliers) and Structural Capital (i.e. the infrastructure that support day-to-day operations of the business such as trademarks, systems, databases).

Figure 2.6 shows key components of IC. The combination of these capitals enables a firm to gain competitive edge in the market place (Steenkamp and Kashyap, 2010), although a typical firm might possess one type of IC over another. Notwithstanding its theoretical importance, IC has some limitations; the most noticeable of these relates to the vocabulary 'intellectual capital', which itself can cause misunderstanding of the essence of IC. For example, using the word 'capital' implies that intangible resources (such as knowledge/information) are material wealth of some kinds that can be managed the same way as physical assets to generate income, but such argument still lacks empirical proves and substance (Blankenburg, 2018), particularly regarding accounting reporting purposes.

Secondly, IC has been characterised by its lack of measure (Mourtisen et al 2001) and there are conflicting views on how each distinctive types of intellectual capital is associated with firm performance. For example, a study conducted by Mavridis (2004) suggest that there is negative correlation between human capital efficiency and company's value-added activities, whereas, many studies (e.g. Carlos and Martos, 2012; Ahangar, 2011; Joshi, Cahill and Sidhu, 2010) argue that human capital possession has positive impact on financial returns of companies.

Figure 2.6 Important elements of IC for SMEs business performance



Source : Daou, Karuranga and Su (2014)

Furthermore, the proponents of IC failed to consider the influence of culture, which can change assumptions about how knowledge and information are created, shared and used across organisations. For instance, each components of IC can influence SMEs' business performance individually or collectively, depending on contextual factors such as institutional regulations, geographical locations of a firm and nature of business (Khalique et al., 2011).

However, it is not the intention of this thesis to simply criticise IC but to the components that can contributed to the improvement of SME participation in public procurement. This in turn, can help in further development of the theory as there is little research evidence linking IC and SMEs involvement in public procurement. Therefore, it is the intention of the researcher to lay the ground work for further discourse on practical implications of IC for improving SMEs in public procurement. For example, research has shown that SMEs lack legal, administrative, customer services, marketing, and track record of supplying the public sector (e.g. Loader, 2011, 2013; Walker and Preuss, 2008), all of these are related to the human capital aspect of IC.

IT skills for instance is a necessity for prospective suppliers to find tenders that UK public organisations have advertised on the contracts finder portal and related to structural capital of IC. Furthermore, the development of relational capital depicts the

value inherent in the relationships developed with clients, suppliers and other stakeholders, as Holienka et al (2016) have indicated, which can also be a valuable resource when bidding for public procurement contract.

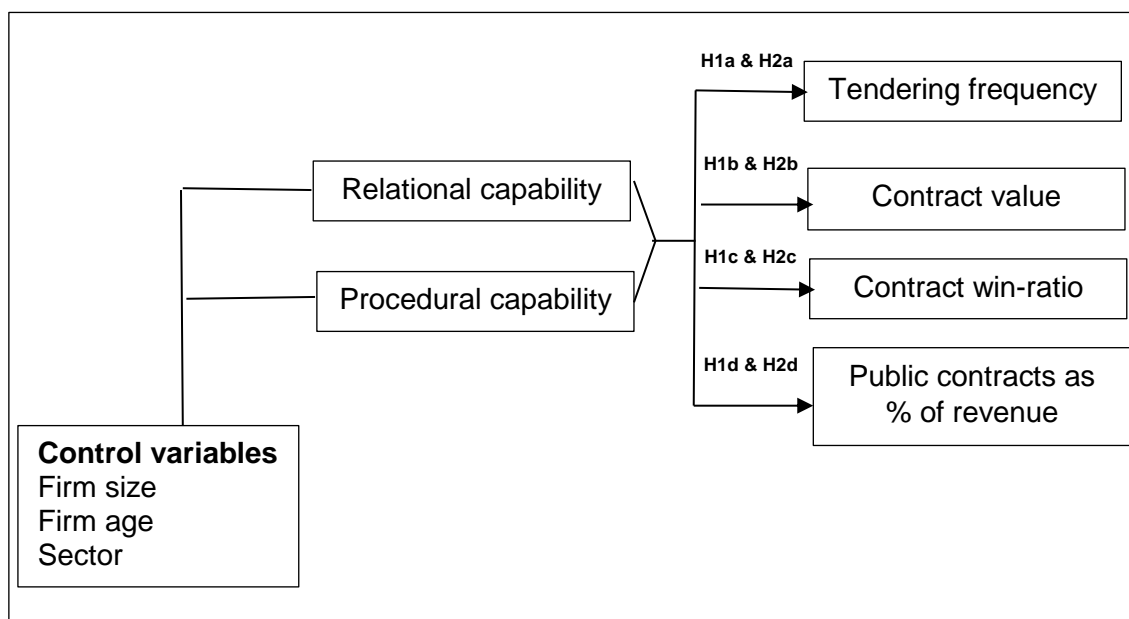
With regards to how SMEs can improve participation in public procurement, relational capital could mean attending product surgeries, trade exhibitions, or/ and expos organised by government (Flynn and Davis, 2016c), where suppliers can gain better access to public-sector buyers and interact with them for promoting new products/services. This might help address another issue like lack of opportunity to interact with public buyers, which has been identified a barrier hindering SMEs ability to identify contract opportunities (Loader, 2018; Common Wealth, 2010). Additionally, interfirm relational capital can enhance strategic collaborative outcomes by strengthening the ties between collaborative firms (Downe, Loke and Sambasivan, 2012). This could be help SMEs develop cooperative and collaborative behaviour take advantage of consortium bidding, and will be given due consideration in this study when recommending approaches to help improve participation in public procurement.

Procedural capability is another key component of IC that has been found to be relevant to the participation of SMEs in public procurement (Flynn and Davis, 2016a). However, the authors did not discuss the implication of these capabilities on SMEs' ability to exploit key policy measures that the government has designed to help improve participation in public procurement. For example, the UK government has directed public organisations to enable bidders to self-certify that they meet the mandatory criteria of tendering such as the possession of insurance and healthy financial standing (Crown Commercial Service, 2015a). This directive is intended to reduce unnecessary paper work of public tendering process so that only the firms that succeed in winning contracts are would need to provide necessary documents like insurance certificates and financial statements. Therefore, procedure, and procedural capability could help in this context in helping SMEs to comply with the process of public tendering.

Another way that SMEs can develop procedural capability is through repeated participation in public bidding process or by attending training for them to learn the rudiments of public procurement. Although training programmes current exist in this

area (Flynn, 2016), the effect on level of compliance to public procurement system amongst UK SMEs needs to be investigated further to determine where changes should be made. Similarly, SME suppliers might need to develop certain structural/procedural capability to get paid on time by their public sector clients. This can support the implementation of prompt payment policy of the UK government (Cabinet Office, 2013). For example, most public organisations now use electronic systems for processing invoices (Daou, Karuranga and Su, 2014), which demands their supplier to possess a kind of e-payment system, to avoid invoicing issues. This again, underscore the relevance of structural/procedural capability to SME participation in public procurement.

Figure 2.7 Relational and procedural capabilities as predictors of SME participation and performance in procurement.



Source: Flynn and Davis (2016a)

2.6.6.2.4 A firm's strategic orientation and SME involvement in public procurement

Strategic orientation is an extension of the RBV theory and can be defined as “principles that direct and influence the activities of a firm and generate the behaviours intended to ensure its viability and performance” (Hakala and Kohtamäki, 2011:199). There are three common types of strategic orientation which researchers have

suggested that can influence the performance of a firm (e.g Hakala and Kohtamäki, 2011; Ruokonen and Saarenketo, 2009). These are Entrepreneurial Orientation (EO), Market Orientation (MO) and Learning Orientation (LO). Key constituent elements of the different forms of strategic orientations are summarised and captured in Figure 2.8

2.6.6.2.5 Entrepreneurial orientation

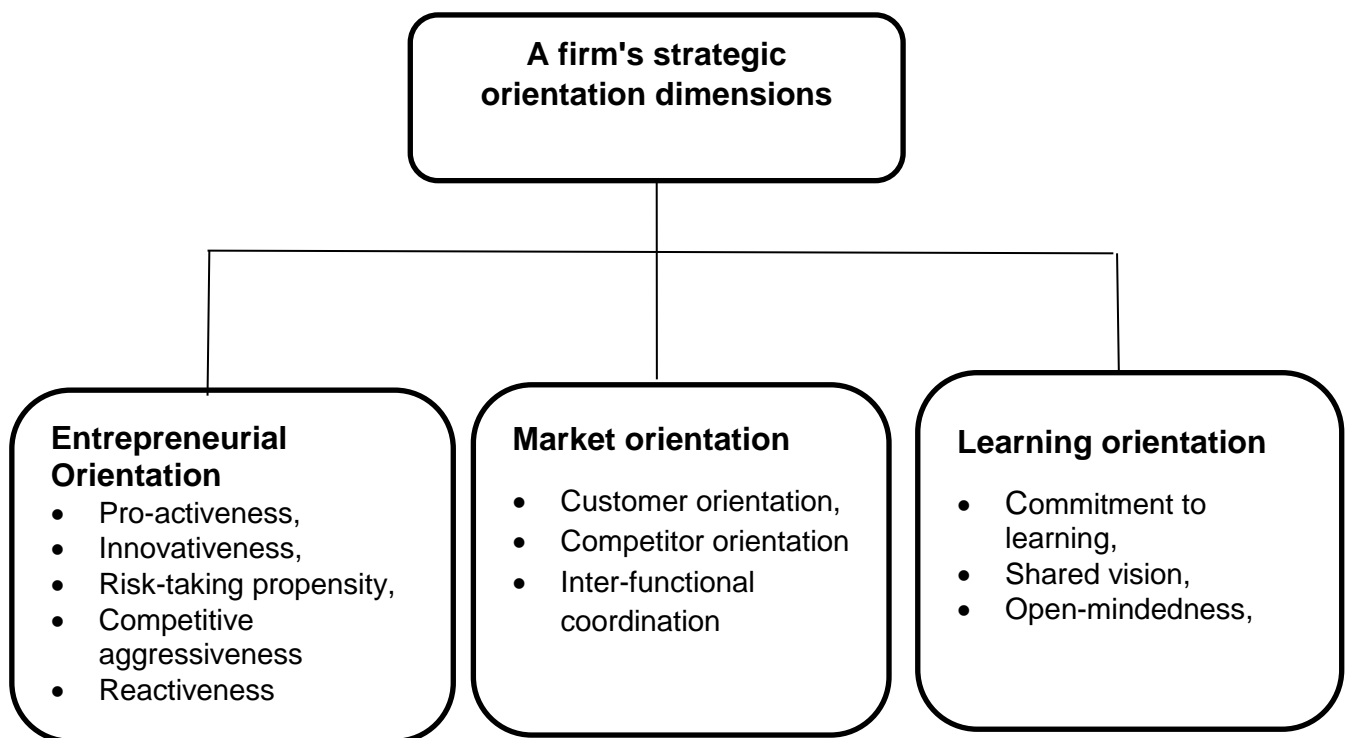
EO consists of a firm's strategy-making practices, managerial philosophies and firm behaviours that are entrepreneurial in nature (Anderson *et al*, 2009; Soininen *et al.*, 2012). It describes firm's behaviour in the following aspects: pro-activeness, innovativeness, risk-taking propensity, autonomy, competitive aggressiveness and reactiveness (Kusumawardhani, McCarthy and Perera, 2009). These characteristics empower firm to overcome market entry barriers and make optimal commercial decisions (Baker, Grinstein and Harmancioglu, 2015). Although research has shown that different aspects of EO could impact on business performance differently (Kreiser *et al.*, 2013), SMEs in possession of higher level of EO can respond quickly to changing market needs (Hazlina *et al.*, 2010).

Yet, there is lack of literature that links EO to the performance of SMEs in public procurement marketplace. Reijonen, Tammi and Saastamoinen (2014) is one of the few existing studies that examined how different constructs of EO, namely pro-activeness, innovativeness and risk-taking can influence SMEs ability and willingness to participate in public tendering. The study found that SMEs with high rate of pro-activeness and innovativeness can chase contract opportunities more effectively, but no correlation was found between risk taking abilities of SMEs and their activity in public procurement. This finding is rather strange because SMEs are known to have considerable risk taken propensity (Duong, 2009). However, the fact that they are resource constrained (Burgstaller and Wagner, 2015;) might limit their risk-taking predispositions because firms with more capital take more investment risk (Schindehutte *et al*, 2008).

Nevertheless, the pro-activeness dimension of EO can play a supplementary role to risk-taking as Hosen *et al* (2004) posits; "proactive risk-taking is decision-making under conditions of measurable uncertainty by a decision-maker who chooses goals

and means in the service of attaining long-term subjective well-being”. This can be relevant for addressing procurement barriers such as lack of awareness of tender opportunities (e.g Cabras, 2011; Common Wealth, 2010; Loader, 2018). For example, it is better for SMEs make early attempts to communicate with buyers in the public sector rather than waiting for notifications about contract opportunities. Furthermore, the development of a proactive risk-taking culture can help SMEs to embrace failure as learning and build resilience to cope with unsuccessful outcomes of public bidding experience. With this, SMEs can be more audacious and not get easily discouraged about barriers facing them in the public procurement markets.

Figure 2.8 Key dimensions of strategic orientation and the components



Source: items taken, assembled from (Kusumawardhani, McCarthy and Perera, 2009; Baker, Grinstein and Harmancioglu, 2015; Kreiser *et al.*, 2013)

SMEs are less likely able to aggressively or directly challenge larger firm competitors concerning price reduction, increased production output and investment in marketing owing to their resources and capabilities restrictions (e.g. Rostek, 2015). However, despite the limited financial resources they can be more flexible and responsive to

customer needs than large firms (e.g. Simionescu and Bica, 2014; Trzcieliński, 2016). These unique characteristics present an opportunity for SMEs to leverage their service flexibility capabilities in developing offerings that can help the public sector address its imminent supply chain challenges. As recent research has revealed that the public sector is increasingly becoming vulnerable to unpredictable events which disrupt their operations, such as distance/transport related delays in goods delivery (Abidin and Afroze, 2018; Christopher and Peck, 2004).

2.6.6.2.6. Market orientation

Market orientation (MO) has been defined as a process by which firms generate, disseminate and leverage market intelligence to build competitive advantage (Kohli and Jaworski, 1990; Maleki, Ansari and Safari, 2013). This concept is commonly used in marketing research (Liao *et al.*, 2011; Mahmoud, 2010) but has been receiving increased attention recently in strategic management literature highlighting the effect of customer orientation, competitor orientation and inter-functional coordination on the competitiveness and performance of SMEs (Kam Sing Wong and Tong, 2012). For example, Reijonen and Komppula (2010) argue that access to customer information enables SMEs to plan and develop strategic market intelligence that can enable them direct value creation activities to meet specific customer needs (Reijonen and Laukkanen, 2010).

Despite wide recognition of the role that MO play in influencing business performance in SMEs, the implications for public procurement participation has not been well examined. However, previous studies have shown that customer orientation can play a key role by prompting suppliers to collect information to enable them to increase their intelligence about the customers (e.g Kohli and Jaworski, 1990; Liao *et al.*, 2011). This idea provides a theoretical basis to deduce that the greater a firm's market orientation, the more able the firm is to support its bid with necessary information, and the better the firm's ability to predict the extent to which specific needs of a client is being met. For example, one of the barriers to SME participation in public procurement points towards lack of understanding of specification requirements (Akenroye and Aju, 2013a; Cabras, 2011; GHK, 2010). To address this problem, element of customer

orientation is needed through constant communication with public sector buyers to improve understanding of specification requirements.

Considering the foregoing, this thesis will argue that SMEs with higher customer orientation would have higher propensity to get important market information and use it to gain competitive advantage in public sector contracts (Tammi *et al*, 2014). It is expected that SMEs can determine which types of resources are needed to meet or exceed customer requirement by gathering necessary information from customers (i.e. public organisations). In addition, the possession of competitors' orientation can help an SME re-evaluate its strengths and weaknesses against competitors in the public procurement markets to gain better understanding of what the competitors are doing differently.

Notwithstanding the foregoing, SMEs may be unable to invest moneys in tools needed to conduct such an analysis due to their resource's constraints. Again, inter-functional coordination can help address these limitations (Mohsen and Eng, 2016), possibly enabling SMEs to mobilise talents from other departments within the firm (internally) for delivering public sector contracts or externally through consortium bidding route.

2.6.6.2.7 Learning orientation

Learning orientation contends that a firm can gain competitive advantage in the market place by demonstrating a strong commitment to learning, open-mindedness, and a shared vision (Beyene *et al*, 2016; Sinkula, Baker and Noordewier, 1997; Calantone *et al*, 2002). The key assumption of LO is that a firm can increase its innovation capability to develop new products/services by creating more opportunities for learning and sharing of skills all throughout organization (Cooper, 2000; Damanpour, 1991). In figure 2.8, the key components of learning orientation are presented and the implications of these to SME participation in public procurement are discussed below.

First, organisations commitment to learning has been described as the essential investment that a firm makes towards acquiring the right knowledge for improving business performance (Xian *et al*, 2018; Sinkula *et al*, 1997). Therefore, the more a firm continuously lay emphasis on the value of learning, the more likely it will get

access to the necessary knowledge and skills to support its operations. This implies that SMEs should develop the habit of seeking to increase understanding of policy measures available to help them participate better in public procurement. Similarly, lack of expertise to prepare winning bid has been identified as a key barrier facing SMEs in public procurement (Loader, 2011, 2013). This suggest that if SMEs are committed to learning, they are likely to be able to develop bidding skills. Therefore, as part of the framework development process, the researcher will consider how training and capacity development can help SMEs to reach their potentials in the public procurement marketplace.

Another component of LO that might be relevant to SME participation is “open-mindedness”. This is referred to as the process through which organisation starts to erase existing knowledge to accepting new realities with open arms (Beyene et al, 2016; Eshlaghy and Maatofi, 2011). Similarly, Eshlaghy and Maatofi (2011) has argued that ruminating on past experiences (negative experience) can work as an obstacle to keep a firm from accepting innovative ideas that are necessary for business transformation. For this study, this is suggesting that SMEs should be open-minded about the public organisations notwithstanding their underrepresentation in public procurement markets. Therefore, SMEs might need to be more open-minded to hunt for opportunities to avoid losing hope due to the barriers faced in public procurement markets. That is why it the present study seeks to examine awareness and attitude of SMEs towards policy measures designed by the government to facilitate participation in public procurement.

Additionally, “shared vision” is another key component of LO and it suggest that people within an organisation will be motivated to learning new skills if they have a common identity and a sense of purpose (Beyene *et al*, 2016). In other words, if there is disharmony in different parts of an organization, individuals will be confused regarding the what and how to learn. It is not surprising then that collaborative is a key requirement for building shared vision and trust amongst (Sinkula *et al*, 1997). This also implies that enthusiasm for partnerships could automatically shoot up when people of comparable interests are coming together with a vision of achieving mutually beneficial outcomes. In the context of public procurement and SME nexus, this means

that shared vision can aid successful inter-organizational collaboration efforts amongst suppliers that seek to bid as consortium or relate via subcontracting.

Table 2.5 summarises key points that emerged from discussions in section 2.6.6.2 – 2.6.6.2.7 above. The conceptual linkages between key firms' internal resources and ability to participate public procurement are highlighted and these could be important to development of the RBV in this context. Key ideas are drawn from the theoretical analysis in these sections to discuss the findings of this study in chapters (7 and 8).

Table 2. 5. The RBV of SME participation in public procurement

Underpinning theory	Related concepts	What are the implications for improving SME participation in public procurement?
Resource-Based View (RBV)	Dynamic capability	<ul style="list-style-type: none"> • Dynamic capabilities can help improve SMEs' ability to mobilise additional resources through networking with other firms to remedy their resource limitations • SME with a higher level of networking capability might be able connect with other organisations to bid jointly for public contract opportunities (consortium bidding) • Resource configuration can help an SME assess its internal resources to identify capability gaps, which might then inform its bidding decision: e.g. whether to bid directly or pursue subcontracting opportunities. • Strategic alignment capabilities can help an SME to choose the tender opportunities that are relevant to its competencies, particularly when bidding for contracts, which divided into different lots. • SME with higher level of strategic alignment capabilities might be better able to choose a potential partner for consortium bidding.
	Intellectual capital	<ul style="list-style-type: none"> • Relational capital can influence willingness to cooperate amongst SMEs for bidding as consortium. • It is important for SMEs to have relational capital when seeking to linkup with public buyers for information about available contract opportunities. • Training and development can help improve human capital in SMEs to enable them to develop the appropriate management competences such as record keeping, time management, IT skills, could be an important consideration here. • SMEs having structural capital like ICT capabilities are likely to make best use of contract finders for identifying contact opportunities.

		<ul style="list-style-type: none"> • Inter-firm relational capital is needed for connecting with like-minded firms to bid as a consortium • To improve compliance with the processes of public tendering, SMEs need procedural capabilities.
	Entrepreneurial orientation	<ul style="list-style-type: none"> • With higher level of pro-activeness and innovativeness, SMEs can chase contract opportunities more effectively • The development of a proactive risk-taking culture can help SMEs build resilience to cope with unsuccessful outcomes of public bidding experience • SMEs can leverage their operational flexibility to deploy reactive actions for mitigating the unexpected disruptions in the supply chains.
	Market orientation	<ul style="list-style-type: none"> • The greater a firm's market orientation, the more able the firm is to support its bid with necessary information, and the better the firm's ability to predict the extent to which specific needs of a client could be met. • Customer orientation can play important role in ensuring that SMEs meet, or exceed, the requirements of the tender specification. • Competitors' orientation can help an SME to get smart about self-assessment of its relative strengths and weaknesses compared to the competitors in the public procurement markets.
	Learning orientation	<ul style="list-style-type: none"> • SMEs that are committed to learning can address this problem by attending training sessions on how to tender. • SME need to develop an open-minded view about public procurement so that they do not miss important opportunities. • An open-minded SME can be more likely to try out the policy measures that government has designed to facilitate public procurement participation. • Inclination to shared vision is critical for developing successful inter-organizational collaboration that can motivate SMEs to participate in public procurement through consortium bidding or subcontracting.

Source: texts summarised from the discussions in sections 2.6.6.2.1 – 2.6.6.2.

2.6. Key findings from the literature highlighting the research gaps

Based on the literature review in chapter 2, there is a significant amount of literature on the subject area of SMEs' participation in public procurement; mostly focusing on challenges and barriers faced by SMEs in public sector markets (e.g Loader, 2013; Loader and Norton, 2015; Perry, 2011; Preuss and Walker, 2011; Strömbäck, 2015), and policies developed by government to support SMEs in public procurement (e.g.

Ballard, 2015; Booth, 2013; Crossley et al., 2015; Glover, 2008; Krasnokutskaya and Seim, 2011). However, there are few studies which analyse SME-friendly procurement policies from SMEs' viewpoints. If the small businesses do not demonstrate good knowledge and enthusiasm for these policies, as the targeted beneficiaries, then, implementation might not be successful.

However, it appears that little research has sought to investigate SMEs' attitudes towards the policy measures, which the UK government has designed to promote participation in public procurement. If the government's intention for designing the policy is to boost participation of SMEs in public procurement marketplaces (Flynn and Davis, 2016a; Flynn, 2016; Loader, 2018), it is vital to determine whether SMEs perceive the policy measures as supportive or beneficial in this regard. Therefore, it is suggested that if SMEs are not aware of or pleased with the benefits inherent in these policy measures, they might not take full advantage of them. This provides the basis for formulating **research questions 2 and 3**.

Smith (2015) has revealed that available statistics on policy to promote SME participation in public procurement contained very little analysis based on types or categories of SMEs. Similarly, SMEs are often portrayed as a singular and homogeneous entity in many of the policy documents (e.g. Cabinet Office, 2015; Crown Commercial Service, 2015b; Crown Commercial Service, 2015a; Cabinet Office, 2014; Booth, 2015; Department for Business Innovation and Skills, 2013) related to government actions to support SMEs in the UK. However, it is empirically acknowledged that SME population is diverse and comprise characteristics such as firm size (Flynn, McDevitt and Davis, 2013; Loader and Norton, 2015), age and the years of experience in tendering for public sector contracts Flynn and Davis (2015). These distinctive characteristics may affect SMEs' behaviour in public procurement markets, and their perspectives about the policy measures that the government has adopted to support them. This provides the basis for formulating **sub-research questions 2 and 3**.

Some studies (e.g. Glas and Eßig, 2018; Loader and Norton, 2015) have suggested that SME-friendly procurement policies, such as unbundling and subcontracting, were ineffective in enabling small businesses to participate in procurement. Similarly, the

need to consider compliance and enforcement of SME-friendly procurement policies has been identified (e.g. Flynn and Davis, 2015, 2106; Loader, 2018). However, these studies did not highlight the drawbacks of the policy measures currently implemented in the UK to promote SME participation in public procurement. It is important to examine issues and concerns associated with these policy measures, to identify whether an opportunity for improvements exist, which can be considered in the framework development process. This provides the basis for formulating **research questions 4**.

Furthermore, it has been argued that SME competitiveness is more relevant to their success in public tendering than the policy measure to support participation (Glas and Eßig, 2018). The question, then, is to discover the factors determining competitiveness of SMEs in general, and how these can help towards successful participation in public bidding. Karjalainen and Kemppainen (2008) have recognised that firm resources base and capabilities can be important for the competitiveness of SMEs in public procurement markets. However, there has been very little research reported in this area. Scholars (e.g. Flynn and Davis, 2016a; Reijonen Tammi and Saastamoinen, 2014), have recommended that more research should be conducted to expand our understanding on the role of firm capabilities and strategic orientations in SMEs participation in public procurement. This provides the basis for formulating **research question 5** and might be useful for the framework to be developed in this research.

2.7. Chapter summary

This chapter provides a critical analysis of the literature drawing from studies published in academic journals, working papers, technical reports, government publications, policy documents and consultation papers, which link SMEs, public procurement and policy. This report reviews the existing literature on the topic of SMEs' participation in public procurement in the UK. Although this line of enquiry has considerably progressed in the last two decades, there is still insufficient knowledge of how SMEs can achieve optimal level of participation and success in public procurement (Karjalainen and Kemppainen, 2008).

It appears that there might be a collective agreement amongst scholars that SME-friendly policy offers shared benefits to small businesses, public sector bodies and national economic development. It is not surprising, therefore, that local, regional and national governments in both developed and developing economies have continued to implement different interventions or policy measures to help SMEs bid more for public sector opportunities. These have inspired empirical studies and policy debates on the need to use public procurement as a policy tool to develop the SME sector.

Of note is the increasing evidence emerging on the barriers which inhibit SME access to contracting opportunities in the public sector. In addition, contemporary viewpoints on how to increase SMEs' participation in public procurement have mostly been from the demand side, i.e. the government's intervention in the markets using purchasing power to influence SMEs competitiveness. This is understandable, considering the role of government as a market regulator (dictating the rules for suppliers) and the largest buyer of goods and services.

However, an alternative view argues that SMEs can depend on certain types of resources and capabilities to gain a competitive advantage in the public procurement markets. This offers an opportunity to understand the phenomenon of SME participation in public procurement from a broader perspective. It may provide complementary insights to existing policy measures designed by governments to improve SME participation and success in public tendering. Nevertheless, what appears to be the most recurring issue in literature is the need to address the issues of SMEs' underrepresentation in public procurement markets. This reinforces the relevance of the research aim which is to develop a framework that can help increase SME participation in public procurement.

CHAPTER 3

3.0 Research methodology and design

3.1 Introduction

Research does not exist in a vacuum; they are founded on certain philosophical assumptions which shape the design and implementation of an investigation. Various philosophical assumptions underlie the choice of methods that guide the process of data collection, data analysis and interpretation of outcomes in any research. Therefore, a researcher should identify the philosophical assumptions (Slife and Williams, 1995 cited in Creswell, 2003:4) that support their investigation in the process of creating new knowledge. After considering several types of possible philosophical assumptions, a post-positivist philosophical perspective was an appropriate framework for this study. The rationale for the chosen philosophical approach is discussed immediately afterwards.

In this chapter, the researcher presents, discusses and justifies the data collection techniques as well as data analysis methods, after taken into consideration the research aim and objectives, which are qualitative and quantitative in nature. Consequently, a mixed method design was employed to data (quantitative and qualitative) in a survey, and this is justified by discussions in sections 3.6.3 and 3.6.3.5. In addition, Table 3.1 illustrates the rationale for the choice of mixed methods in more detail by linking the research objectives and the data collection techniques together. The chapter also includes a discussion on validity, reliability and trustworthiness of the research. The chapter concludes with a summary of discussion that link research objectives and research methods together.

Table 3.1 Linking research objectives, research methods and data collection techniques

Research objectives	Research methods	Data collection techniques
1. To identify key policy measures to promote SME participation in public procurement in the UK	Critical analysis	Literature review
2. To examine SMEs' awareness of key policy measures and test whether there	Quantitative method	

are significant differences between SME groups (in relation to firm size, firm age, and tendering experience), with regards to their awareness level.		Survey (closed – ended questions)
3. To evaluate SME’s attitudes towards key policy measures and determine whether there are significant differences between SME groups (in relation to firm size, firm age, and tendering experience).	Quantitative method	Survey (closed – ended questions)
4. To examine key issues and concerns about the policy measures, to recognise whether opportunity for improvement exists.	Qualitative method	Survey (open-ended questions)
5. To explore the roles of firm’s resources and capabilities in improving SME participation in public procurement	Critical review of theories and concepts	Literature review
6. To develop and test a framework containing approaches, which could potentially guide policy makers, public organisations and researchers in identifying areas where improvements can be made towards SME participation in public procurement. Key principles of the constructive research approach (for more details, see Chapter 4) were used to guide the framework development, along with the synthesis of research findings	The constructive research approaches Qualitative method	Synthesising of research findings with lessons learned from the literature review Focus group discussions

3.2 Research paradigm

The origin of the word paradigm is traceable to Greek word paradeigma, which denotes ‘pattern’ (Thomas, 2010). This word was first conceptualised by Thomas Kuhn (1977); he proposed the use of paradigm as a theoretical model for providing answers to difficult research problems. In Kuhn’s view, a research paradigm is “the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed” (Kuhn, 1962). According to Scotland (2012) paradigm is an assemblage of philosophy, theoretical models, values, and assumptions, which classify research into three dimensions: ontology, epistemology, and methodology, which are identified in the present research as discussed below.

3.2.1 Ontology

Ontology denotes an individual's perception of reality or existence. It deals with how reality is perceived by an individual, that is, knowing what a person believes to be factual (Blaikie, 2010). According to Saunders *et al.* (2012), there are two possible ways of viewing the word namely objectivism and constructivism, and researcher can decide which stance to take depending on the nature/purpose of the study, and based on the judgement of the researcher. While objectivism takes a stance that social entities exist that are exterior to and independent of social actors concerned with their existence, constructivism holds that reality is created through views and actions of the social actors (Saunders *et al.*, 2012).

Regarding this present study, the researcher's ontological stance is that of constructivism, which can also be referred to as post-positivism (Huglin, 2003). This is because the research seeks to collect data from SMEs as social actors who can provide information that may be useful in generating new knowledge on how to improve participation in public procurement. In addition, the phenomenon being investigated in this study is not independent of social actors (i.e. SMEs), whose perceptions and individual/subjective opinions are interpreted by the researcher as what constitutes their construction of reality. Although the researcher is external to the research subjects because self-completion questionnaires were administered to collect data from SMEs, like the tenets of objectivism, the study reflects more of a constructivist philosophy, as the researcher's expertise and personal values might well influence his perception of reality. For example, in attempting to address research objectives 4 and 6, the researcher collected and analysed qualitative data from the survey and focus group discussion to identify potential opportunities for improving SME participation in public procurement, such as those listed in Chapter 8.

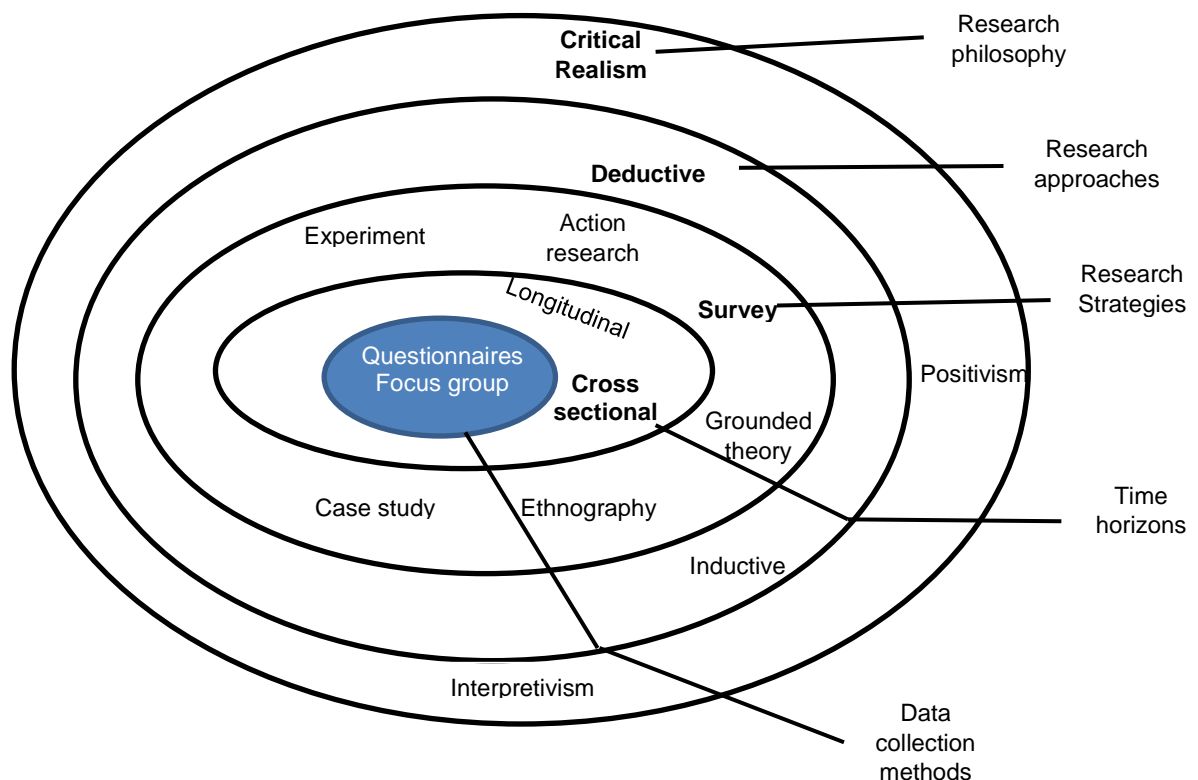
3.2.2 Epistemology

Epistemology was derived from the Greek words episteme and logos, which denote knowledge and reason respectively, and it describes the step by step process involved in knowledge creation (Turri, 2016). Thomas (2010) suggests epistemology is concerned with the philosophy of knowledge, which centres on the justification or rationality of belief. It also provides "a general set of assumptions about ways of inquiry into the nature of the reality" (Easterby-Smith *et al.*, 2012:18), in other words, probing

“how we know what we know” (Crotty, 1998:8). Therefore, epistemological positions are philosophical perspectives concerned with the theory of knowledge and justification of belief (Saunders et al, 2012).

The research onion concept suggested by Saunders et al. (2015) serves as a guide in discussing the relevant epistemological stances in the present research. The research onion presented (in figure 4.1) below was adopted in this study because it involves sequences of philosophical choices, which a researcher could consider before arriving in to the research strategy, approach and data collection methods (Johnston, 2014). In addition, Ganiyu *et al.*, (2018) highlighted that many PhD theses have been successfully defended through implementing the Saunders’s research onion as a generic approach to making decisions about research methodology.

Figure 3.1 Research Onion



Source: Saunders *et al.* (2015)

3.3 Research philosophy

A research philosophy describes the approach by which data about a research investigation should be collected, analysed and utilised. The philosophical perspectives which are commonly found in social and management research are positivism, interpretivism, and pragmatism (Mkansi and Acheampong, 2012; Chen, 2011; Thomas, 2010). In the present study, insights are drawn by combining elements of positivism and interpretivism to inform the research strategy and the choice of data collection methods (as discussed in sections 3.3.1 – 3.3.3). Thus, the philosophical stance taken in this study is post-positivism, which advocates for a multiple perspective approach to study a research problem (Moore, 2009). Sections 3.3.4 - 3.3.5 present further discussion about post-positivism and its justification as the chosen philosophical underpinnings in this study.

3.3.1 Interpretivism

The underlying assumption of interpretivism is that people operate in a social context, which offers opportunities to comprehend how individuals see their own actions (Wood, 2015; Edirisingha, 2012). This suggests that interpretive researchers can discover reality through social factors such as language, perception and shared values (Wood, 2015). For example, the open-ended questions included in the questionnaire for the present study, enabled the researcher to draw inferences from the meanings that people assign to the phenomenon being studied. Although the interpretive paradigm is concerned with seeing reality from individual participant's experiences, it does not impede the researcher from reflecting his own knowledge when analysing data.

Similarly, interpretivist researchers believe that reality is subjective, and context bound (Potrac et al, 2014), and thus requires an understanding and interpretation of human motives and meanings. In other words, interpretivism assumes that people's idiosyncratic experiences and beliefs about the world shape their view of reality. Concerning ontology and epistemology, interpretivists believe that there is no single reality because different people can view an event differently (Wood, 2015). It denotes multiple and relative realities (Hart, 2015), which are neither static nor can be

explained easily because their meanings are underpinned by other systems (Kelliher, 2011).

Interpretive researchers hold the view that reality is socially constructed (e.g. Edirisingha, 2012; Kelliher, 2011). With this, the researcher can pursue contextual knowledge by appreciating the distinctiveness of an individual situation, through analysis of qualitative data (Edirisingha, 2012). Therefore, the focus of interpretivism is to comprehend and explain the rationale for human behaviour, rather than developing hypotheses to predict causal relationships. Unlike positivist researchers that often utilise fixed conceptual or operational frameworks, interpretivists apply a more flexible research models that enables the researcher to grasp the value of human interactions (Edirisingha, 2012). For example, an interpretivist researcher can go into the field with the intention to interact with the participants to obtain sufficient knowledge of what constitutes reality. This requires a blend of personal knowledge of the researcher and the data obtained from multiple interactions with the research participants (Hart, 2015).

In terms of data collection methods, interpretive researchers use different qualitative approaches (such as interview, focus group discussions and observations) to explore these multiple realities. Using these methods, the researcher can communicate with the subjects (i.e. research participants) to understand the “why” and “how” of human subjective perceptions (Edirisingha, 2012.), rather than generalising findings. Considering the foregoing, interpretivism paradigm would be suitable for examining complex research problems, which requires multiples or a diverse viewpoint to generate knowledge (Potrac *et al.*, 2014).

Notwithstanding the above discussions, the present study did not absolutely subscribe to interpretivist assumptions, because the first stage of the data collection process involved a survey requiring restricted interactions with the research participants. In addition, according to Henning *et al.* (2004), the key words about interpretative research are participation and cooperation between the researcher and the subjects. Again, such collaboration did not happen in this study because SMEs independently completed the questionnaire used for data collection. This could help avoid

unnecessary interference during data collection and reduce the chance of any potential bias that could be created by the researcher.

However, since data were also collected through focus group discussions (i.e. the second stage) to test the applicability of the proposed framework, there were interactions between the researcher and the research participants. Therefore, one could argue that such interaction represents an assumption of interpretivism that is relevant to this study.

3.3.2 Positivism

The ontological assumption of positivist paradigm is that there is an objective reality, which can be measured independent of the researcher (Archer, 2013). According to Navarro Sada and Maldonado (2007), western thinkers have used positivism repeatedly as a philosophical model to examine social reality, but the modern-day adoption of positivism was influenced by the works of August Comte (Macionis, 2012), who believed that the societies operated according to certain principles similar to the laws regulating the physical world. He assumed that observation or experiment played a critical role in examining human behaviour and that true knowledge could be acquired through reasoning.

Positivists held that truth could be uncovered through the implementation of scientific methods and systematic processes, which enabled the researcher to examine the interactions between variables (Henning, Van Rensburg and Smit, 2004). This view is further emphasised by Collin (2010: p38) who noted that “positivism has an atomistic, ontological view of the world as comprising discrete, observable elements and events that interact in an observable, determined and regular manner”. Therefore, if a researcher intends to use quantitative data to test a hypothesis, it is appropriate to consider a positivist paradigm as the research philosophy. In the cases of the present study, quantitative data are used to analyse key policy measures (i.e. the initial variables) from SME perspectives, and the evidence is used to inform recommendations for improving participation in public procurement.

Scholars adopting a positivist paradigm tend to base their findings on facts, assessed through logical analysis; not by common sense or experience of the researcher.

Hence, if as a researcher “you assume a positivist approach to your study, then it is your belief that you are independent of your research and your research can be purely objective. Independent means that you maintain minimal interaction with your research participants when carrying out your research” (Wilson, 2010). Although, in the process of generating knowledge, positivism give emphasis to observational evidence (empiricism), it also assumes that the use of observation cannot discover certain constituents of our knowledge. This led to the advent of “logical positivism” (Ade-Ali, 2015; Uebel, 2013), which assumes that knowledge is truthful when it is scientifically verified rather than relying upon subjective experiences.

In other words, positivists believe that it is important to create a distinction between science and people’s perceptions or experiences, suggesting that judgement is different from fact. For this reason, positivists uphold the view that facts are embedded in scientific information and that reality is not socially constructed. Furthermore, positivists perceive the larger society as a key influencing factor on individuals’ behaviour: that people’s actions are moulded by their position in the society (Ade-Ali, 2015). Perhaps that is why the positivist tradition places great emphasis on the need for collection of information from a large population (quantitative research) to get a broader understanding of the society and how it influences on human behaviours. This enables a researcher to generate knowledge by uncovering the patterns and trends within different social groupings.

One of the key shortcomings of positivism is that it produces inadequate knowledge, and it does not have mechanisms for (self) correction and (self) reflection (Adam, 2014). Perhaps the realisation of this deficiency influenced the advent of post-positivism, which assumes that it is virtually impossible to obtain absolute objectivity when seeking knowledge (Adam, 2014). Key assumptions of post-positivism which are mostly relevant to the present study (see section 3.3.4 for detailed explanation of post-positivism).

3.3.3 Pragmatism

Pragmatism is a research philosophy that provides some assumptions about knowledge and how reality is to be conceptualised. Pragmatic researchers believe that

there are various methods of generating knowledge and that no single perspective can provide a sufficiently comprehensive picture of reality (e.g. Hall, 2013; Saunders *et al.*, 2012). According to the pragmatist research philosophy, theories are appropriate to explore a phenomenon only if they support actions (Hall, 2013).

The important thing about pragmatism is the nature of the research question: this is the basis for determining the appropriate philosophical basis for a study. Hence, pragmatic researchers are not compelled to use only multiple methods of data collection; they can adopt whatever methods they consider appropriate to address their research questions (e.g. Hall, 2013; Saunders *et al.*, 2012). For example, there are occasions when a researcher notices that quantitative and/or qualitative method alone cannot help in achieving satisfactory research results; in such a circumstance, he/she can leverage on the assumptions of pragmatism (Tashakkori & Creswell, 2007) as the convenient approach to generate knowledge.

In addition, pragmatism provides several notions about knowledge that differentiates it from positivism and interpretivism. Greene *et al.* (2005) recognise this as a new approach that provides a rationale for combining different research philosophies to strengthen an investigation. For example, pragmatic researchers can mix positivist and interpretivist perspectives to conduct a single study depending on the nature of the research problem (Denscombe, 2008). This is what gives a researcher the flexibility to adjust the philosophical underpinnings for a study, even as the research progresses (Collis and Hussey, 2013).

Furthermore, there is a general impression that pragmatic denotes 'anything goes' (Denscombe, 2008), and it has been viewed as the philosophical partner for the Mixed Methods approach (e.g. Glogowska, 2015; Feilzer, 2010). A researcher can use pragmatism to underpin a Mixed Methods research, but pragmatism is not applicable only to Mixed Methods research. The purpose of pragmatism goes beyond providing basis for adopting mixed methods as a research strategy. Evidence (e.g. Bryman, 2006) suggests that researchers have been using quantitative methods to supplement qualitative approaches before the advent of the Mixed Methods paradigm. Therefore, it is illogical to say that Mixed Methods approach "has an exclusive right over the use

of quantitative and qualitative methods or means the adoption of pragmatism as the philosophical foundations” (Denscombe, 2008:8).

Hence, it is imperative for researchers to show strong justifications for their choice of pragmatism as a philosophical underpinning, rather than emphasising mixed methods as the rationale. In the same way, the present study does not assume pragmatism as the philosophical underpinning just because quantitative and qualitative data were collected to address the research questions/objectives. Rather, the combination of different data types provides the basis for synthesising evidence from multiple sources to better understand how SMEs’ participation in public procurement can be improved. For example, in this study, the quantitative data has higher priority than the qualitative data, because it is relevant to addressing two key research **objectives 2 and 3**. In contrast, the qualitative data is obtained to clarify and supplement the quantitative results, and this is relevant to addressing **research objective 4**. In view of the above-mentioned reasons, the philosophical approach adopted in this study could best be described as embracing a post-positivist paradigm (Mok *et al.*, 2015). The next section discusses post-positivism in detail, as the philosophical approach adopted for this study.

3.3.4 Post-positivism: chosen philosophical approach

In the light of the above discussions, the philosophical assumption underlying this study is post-positivism. Proponents of post-positivism (e.g. Moore, 2009; Collin, 2002) argue that, even though the researcher and the researched entity may be independent of each other, the researcher’s observation can be influenced by his/her experience, values and other theories. That is, the researcher cannot claim to perceive objective reality accurately through mere observations or via scientific experiments. Therefore, it may be ideal if the researcher balances measurable quantitative evidence with information in narrative forms (i.e. qualitative data) to gain a comprehensive understanding of the social phenomenon being investigated.

While the present researcher believes in objective reality, he also understands that research is a continuing process, which is subject to manipulation and modification to improve understanding of the concepts being examined (Fletcher, 2016). Some

researchers (e.g. Groff, 2004; Bisman, 2010; Parr, 2015) have considered post-positivism as identical to a philosophy called critical realism. Even though it is arguable that post-positivism is an important modification to on positivism, the former is nevertheless a total rejection of the latter's central principles (e.g. Dodd et al., 2016; Mok et al., 2015; Adam and Westlund, 2013).

Furthermore, post-positivism admits that scientific models are valuable research instruments; however they cannot be a substitute for theoretical elaboration (Adam and Westlund, 2013). As a result, it seems to criticise implicit positivism and empiricism. It, however, recognises that true knowledge can be created through objective analysis of an event (Adam, 2014). That is, one cannot fully understand the truth by depending on theory and observation alone because empirical evidence often has errors, which limit one's ability to understand the world, and all theory is revisable (Adam, 2014). In recent times, social and management researchers (e.g. Mok et al., 2015; Cohen, Manion and Morrison, 2013; Bond and Pope, 2012) have adopted post-positivism as a research philosophy.

Post-positivism encourages the implementation of research strategies that suit research contexts (Cohen, Manion and Morrison, 2013). Therefore, post-positivist scholars may combine quantitative and qualitative methods to reduce the possibility of bias. For example, it is believed that the researcher's skills, experiences and residual knowledge about the subject under investigation which may influence his/her perception of reality (Cohen, Manion and Morrison, 2013). This logically implies that an individual cannot have a perfect knowledge of the truth because subjective perspectives can affect all observations. Therefore, the use of evidence from multiple perspectives enables a researcher to offset whatever types of error that are inherent in the research methods adopted.

The next section provides the rationale for adopting post-positivism as a research philosophy in this study.

3.3.5 Rationale for choice of philosophical approach

According to Saunders *et al.* (2012), it is important to consider the aim and objectives of a research when choosing a research paradigm. The goal of this research is to

examine the awareness, attitudes and concerns of SMEs towards six key policy measures, with the aim of developing a framework for improving participation in public procurement. The researcher is adopting a post-positivist stance, with the assumption that objectivity is a social phenomenon which cannot be attained perfectly but a researcher can move close to it through critical analysis of multiple sources of knowledge (Adam and Westlund, 2013; Adam, 2014). Looking at the closed ended features in the questionnaire, it could be argued that this research was built (primarily) on positivist principles, but then, post-positivism allows the researcher to shift to interpretivist ideas to collect narrative data (qualitative data) and identify details, which quantitative measurement would never detect. Therefore, the fact that some qualitative data were collected in this study through open-ended questionnaire items to complement quantitative data supports the researcher's choice of post-positivism as a philosophical stance.

Consequently, the research instrument (questionnaire) was used to collect quantitative type of data to establish trends and interactions between variables, and then meaningful narratives from the respondents reported experiences and/or feelings, to determine how and why the trends/interactions in the quantitative data might have occurred. It is only through post-positivist principles that one can possibly apply such a flexible approach to knowledge creation (Denscombe, 2008). With the quantitative data collected in this study, the researcher could analyse awareness and attitudes towards the key policy measures supporting SMEs in public procurement.

The qualitative data required SMEs to express opinions on key issues and concerns about the policy measures. Therefore, the dominant type of data is quantitative: the qualitative data (collected via open-ended questions) was helpful to examine the opinions of SMEs about the possible drawbacks and limitations of key policy measures investigated in this study. This strategy enabled the researcher to reduce the potential effects of biases (Giddings, 2006; Robson, 2002), by complementing the quantitative results with qualitative data.

3.4 Research Methodology

Scholars (e.g. Zikmund *et al.*, 2012; Collis and Hussey, 2009) have categorised research into three main types: exploratory research, descriptive research, explanatory research and predictive research.

3.4.1 Exploratory research

An exploratory research is undertaken to explore a research problem or topic, especially where there are very limited studies on the topic. Exploratory research is very useful to identify concepts and to explain the nature of research problem. It usually takes place before a researcher can attempt to develop or explain conceptual relationships within a study (Shields and Rangarajan, 2013). Therefore, exploratory research is helpful for initial development of concepts and variables, which the researcher will examine in-depth. One of the key objectives of this study is to explore SMEs' awareness of and attitudes towards key policy measures designed to improved participation in public procurement. This is the exploratory element of the current study.

3.4.2 Descriptive research

A descriptive research helps to describe the phenomenon under investigation as well as the types of a study population. Rather than answering questions such as how/when/why, descriptive research helps in addressing the "what" question (Shields and Rangarajan, 2013). Descriptive research aims to provide clarity about the research questions and to build a picture of trends in a social phenomenon. However, descriptive research does not show causal relationships between variables: it describes neither the cause of an event, nor the effect of one variable on another (Nassaji, 2015; Shields and Tajalli, 2006). It often utilises surveys as the data collection methods (Poonar, Sobiya and Olive, 2016). In descriptive studies, statistical calculations such as percentages, mean, median and other descriptive measures are common. The descriptive aspect of this research examines SMEs' awareness and attitudes towards the policy measures to support small businesses in public procurement. This was achieved through the design and implementation in subsequent chapters 5 and 6.

3.4.3 Causal (explanatory research)

Causal or explanatory research examines the relationships and impact of variables against one another. According to Zikmund *et al.* (2012), explanatory research is an extension of descriptive research because it enables the researcher to describe trends, relationships and causal effects of variables: cause-and-effect relationships. This type of research encourages predictions or hypothesis development from theories, which are empirically tested. Hypotheses can be causal or relational: causal hypotheses test if changes in a certain variable cause another variable to change, while relational hypothesis are to determine existing relationships between variables (Collis and Hussey, 2009).

Therefore, the present study embraces both exploratory and descriptive approaches to investigate key policy measures aimed at supporting in public procurement in the UK. The descriptive aspect of the study examines SMEs' awareness and attitude towards the key policy measures, while the exploratory aspect seeks to determine the issues or concerns associated with the policy measures. The table below (Table 3.2) summaries the key features of exploratory research, descriptive and causal research. It was adapted from Zikmund *et al.* (2012) to show the research approaches, which are pertinent to the present study.

Table 3. 2 Key features exploratory research, descriptive and causal research

Features		Amount of uncertainty characterising decision situation	Key research statement	When conducted ?	Usual research approach	Pertinent to the present study?
Types of research	Exploratory research	Highly ambiguous	Research question	Early stage of decision making	Unstructured	YES
	Descriptive research	Partially defined	Research question	Later stages of decision making	Structured	YES
	Causal research	Clearly defined	Research hypotheses	Later stages of decision making	Highly structured	NO

Source: adapted from Zikmund *et al* (2012)

3.5 Research approach

Research approach is an important part of any study notwithstanding the subject of investigation. Research can either be inductive, deductive or abductive in its approach (Bryman and Bell, 2015). It is important for a researcher to identify and explain the research approaches adopted in a study.

3.5.1 Inductive approach

Inductive research approach “involves the search for pattern from observation and the development of explanations or theories” (Bernard, 2011, p.7). It does not seek to evaluate existing theories, constructs, or patterns in the research process. The relevance of inductive approach to the present study was manifested during the qualitative data analysis of open-ended survey responses. The thematic coding and categorisation of data from textual comments were done inductively to identify issues and concerns that SMEs observed about the policy measures.

3.5.2 Deductive approach

On the other hand, a deductive approach involves thinking from general to specific. It is concerned with the exploration of a known phenomenon, concept, theory or expected pattern, evaluated against observations in each setting (Babbie, 2015). The difference between deductive and inductive approaches lies in whether the investigator collects data to evaluate/test existing concepts/theories (deductive) or else to generate a theory (inductive) based on analysis of the data collected (Saunders et al., 2012). Likewise, the policies examined towards the development of framework in this study are existing measures that government is using to support SMEs in public procurement. The fact that the researcher evaluates the awareness and attitude of SMEs towards these policy measures indicate the deductive aspect of the present study.

3.5.3 Abductive approach

In abductive research, the researcher collects data from various sources and reflects on other factors (external to the collected evidence), which might potentially shape the way she/he perceives reality. It overcomes the weaknesses between deductive and inductive approaches by implementing a realist viewpoint (Bryman and Bell, 2015). It

can also be argued that the present study is deductive in nature because it first reviewed the literature to identify existing concepts (key policy measures), which were analysed quantitatively to know whether SMEs were aware and pleased with them (see findings in chapter 6), and qualitatively using written comments submitted by SMEs to identify potential opportunities for improvements in public procurement participation (see findings in chapter 7). In addition, the qualitative data collected through open-ended questions helped to clarify some quantitative findings from the survey.

3.6 Methodological choices: mixed methods

The following factors usually influence the decision on research methods: research question(s), research objectives, types of data required and the philosophical assumption underpinning the research (Saunders *et al.*, 2012). The common methods of research have been categorised as qualitative, quantitative and mixed methods (e.g Saunders *et al.*, 2012; Yamagata-Lynch, 2010; Bryman and Bell, 2005; Hussey and Hussey, 1997; Yin, 1994). Looking at the features, relative advantages and limitations of qualitative and quantitative (as summarised in table 3.3), the researcher selected mixed methods as the appropriate methodology for this study, which involves the combination of quantitative and qualitative methods (Creswell, 2014; Creswell and Plano Clark, 2011).

Quantitative research entails “the collection of numerical data and exhibiting the view of relationship between theory and research as deductive, a predilection for natural science approach, and as having an objectivist conception of social reality (Bryman and Bell, 2005: 154). For the study, quantitative data was collected in a survey to examine the key policy measures from SME perspectives. The quantitative elements of the survey enabled the following research questions to be examined (i.e. research objective 2 and research objective 3). On the other hand, a qualitative method relies on non-numeric data type to provide better understanding of a research problem. For this study, qualitative data was obtained through open-ended survey questions to identify issues and concerns about the policy measures, for determining whether improvement opportunities exist for SME participation in public procurement.

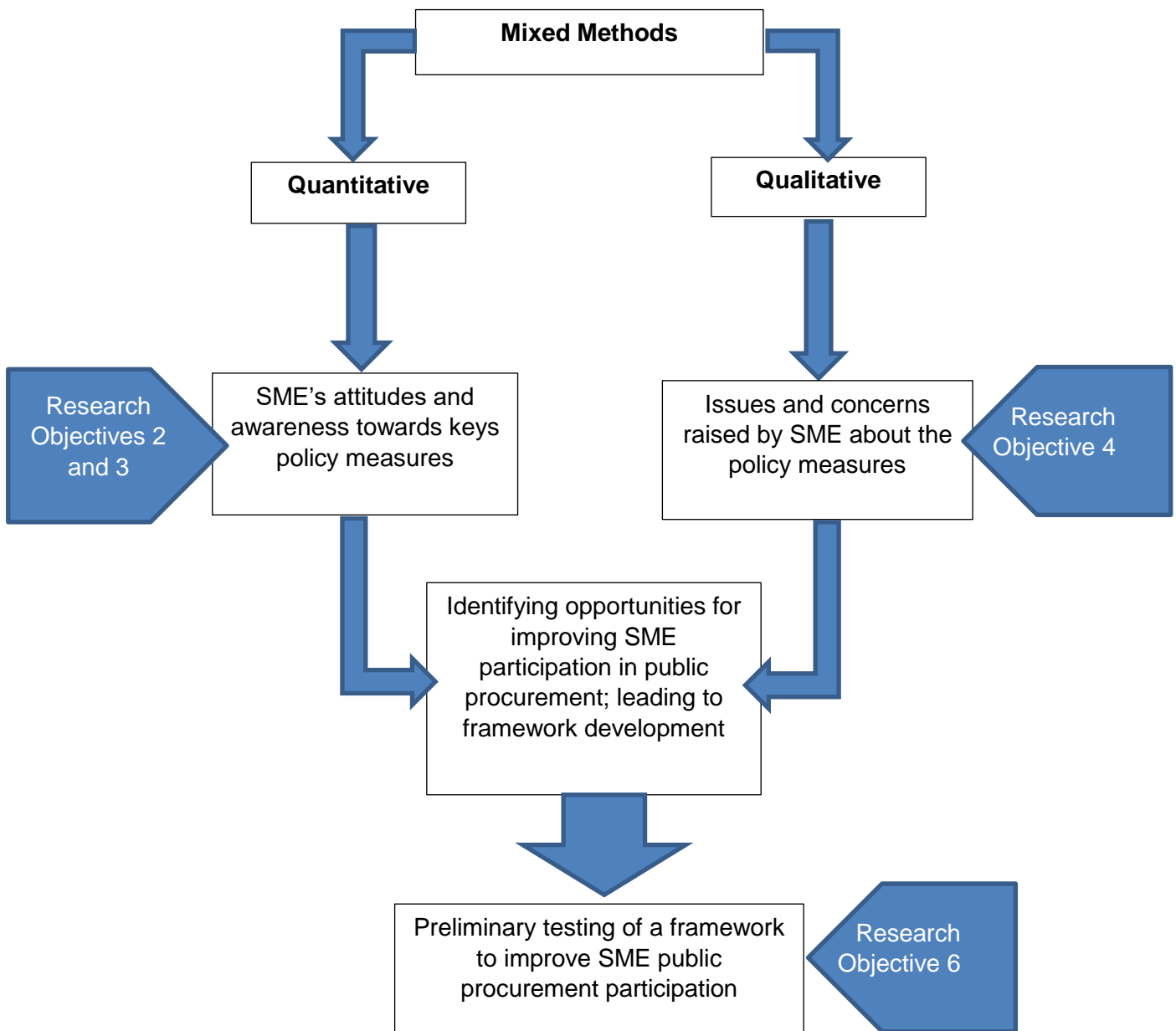
Table 3.3 Features, advantages and limitations of qualitative and quantitative methods

Methods	Characteristics	Advantages	Limitations
Quantitative	<p>Seeks to maximize objectivity by using hypothesis to test cause and effects between variables</p> <p>Observations conducted without interfering with the thinking of the research participants, just like the survey implemented in this study.</p>	<p>Can help the researcher to reduce bias in interpretation of the phenomenon under investigation, and increase the tendency to generalise research findings</p>	<ul style="list-style-type: none"> • It provides little understanding towards the context in which people behave or act • It enables the researcher to relationship of set of variables, but it may fail in providing better understanding on how the relationship differs amongst various categories of respondents, and why • Findings from quantitative studies may not be very useful in grasping the issues being investigated thoroughly
Qualitative	<p>The goal is not to make predictions or test hypothesis, but to help the investigator get better is rich and deep data, which could enhance knowledge about the issues being researched</p>	<p>Rather than reliance on numbers and statistics, it tries to uncover the true knowledge by collecting data in form of words and analyse the data inductively to provide a descriptive account of the topic being examined</p>	<ul style="list-style-type: none"> • In ability to generalise research findings • Potential for biased interpretation by the researcher • The research findings are not objectively verifiable in most cases • The researcher would require additional skills to conduct qualitative interviews

Source: compiled from (Creswell and Plano Clark, 2011; Eriksson and Kovalainen, 2015; Harwell, 2011; Taylor, Bogdan and DeVault, 2015; Smith, 2015)

Furthermore, the adoption of mixed methods as the methodological choice in this study was also influenced by the types of data collected and methods of analysis, as described in figure 3.2 which is a flowchart describing how different methods are mixed to achieve research objectives of this study.

Figure 3.2 How different methods are mixed to achieve research objectives



Mixed methods thinkers (e.g. Teddlie and Tashakkari, 2008; Creswell & Plano Clark 2007; Brewer and Hunter, 2006; Niglas, 2004) have developed several types of designs. To avoid arbitrary selection amongst the various mixed method design types, Tashakkori & Teddlie (2008) advised researchers to follow the five steps set out in Table 3.4, which shows how these steps were applied to help in selecting appropriate mixed methods design for this study.

Table 3. 4 Steps in determining appropriate mixed methods design for the study

Key decision steps	Relevance to the present study
1. Do the research objectives/research questions require a mono method or mixed methods design?	<ul style="list-style-type: none"> • Yes – the research objectives 2, 3 and 4 were examined through a survey that collected quantitative and qualitative data, whereas, the proposed framework was tested in focus group discussions.
2. Are qualitative and quantitative data required to answer the research objectives /research questions?	<ul style="list-style-type: none"> • Yes – the research objectives 2 and 3 require quantitative data to examine SMEs’ awareness and attitudes towards the policy measures under investigation. • Qualitative data are required to answer research question 4 which seeks to identify issues and concerns about the policy measures
3. Has the researcher acknowledged those different typologies of mixed methods research design?	<ul style="list-style-type: none"> • Yes – the researcher reviewed different typologies of mixed methods research design to choose the appropriate design for the study (in chapter 3)
4. The researcher should determine which stage of data collection takes priority in the study. For example, clarify whether qualitative data play the dominant role in the study, more that quantitative data.	<ul style="list-style-type: none"> • The quantitative data play the dominant role in the study because it relevant to addressing more research questions (i.e. research questions 2 and 3), more that qualitative data that only addresses research question 4.
5. At what stage in the study will the researcher integrate qualitative and quantitative results?	<ul style="list-style-type: none"> • The researcher integrates qualitative and quantitative results during discussion of findings in Chapter 7 and when developing the framework in Chapter 8.

Source; texts developed and modified from Tashakkori and Teddlie (2008)

Figure 3.3 summarises the typologies of mixed methods design developed by Creswell & Plano Clark (2007), and each of the design types describes when data collection, analysis and integration should be done to enable the researcher to address the research problem appropriately. According to Creswell and Plano Clark (2007), mixed methods can be either concurrent or sequential and involve four types of design: triangulation; embedded; explanatory; and exploratory.

Figure 3.3 Typology of mixed methods

Design Type	Timing	Mix	Weighting/Notation
Triangular	Concurrent quantitative and qualitative at the same time	Merger the data during interpretation or analysis	QUAN + QUAL
Embedded	Concurrent and sequential	Embed one type of data within a larger design using the other type of data	QUAL (quan) Or QUAN (quan)
Explanatory	Sequential: Quantitative followed by qualitative	Connect the data between the two phases	QUAN → qual
Exploration	Sequential: Qualitative followed by quantitative	Connect the data between the two phases	QUAL → quan

Source: Creswell and Plano Clark (2007).

After reviewing these typologies of mixed methods, bearing in mind the types of data to be collected for addressing different research objectives and in view of the steps mentioned in table 3.4, the researcher found that the most appropriate mixed methods design type for this study was explanatory sequential strategy. The subsequent sections 3.6.1 and 3.6.2 discuss the rationale behind this choice in more details.

3.6.1 Chosen research design: explanatory sequential model

According to Saunders *et al.* (2012), a choice of research strategy is determined by research question(s), research objectives, the philosophical underpinnings adopted, and the amount of time available to conduct the research. The primary purpose of the present study is to develop a framework that can help improve SME participation in public procurement in the UK. The starting point of the research involves an evaluation of key policy measures adopted to support SMEs. The policy measures were analysed using quantitative and qualitative data collected from SMEs to identify opportunities for improvement in public procurement participation (see details in chapters 6 and 7).

In view of the aim of this research, explanatory sequential mixed method design is adopted. This involves the collection of both quantitative and qualitative data

sequentially, as the findings of one method can help inform another method. According to Creswell (2009), the first strand of the study aids the researcher to select participants and develop data collection tools to address the research objectives in the second strand. There are four important reasons why a researcher may consider explanatory sequential design (Creswell and Plano Clark, 2007):

1. Whenever the researcher has the capacity to recruit the initial survey participants for another phase of data collection via qualitative method
2. Whenever the researcher believes that he/she has enough time to implement two phases of field data collection.
3. Whenever the research objectives cannot be answered alone through quantitative data.
4. When new qualitative question types can be developed based on the quantitative results

The above-mentioned reasons were considered as the basis for adopting an explanatory sequential mixed method design for this study. Hence, the research involved two key phases: phase 1 was the main study wherein quantitative and qualitative data were collected through survey, and then, focus group discussion was conducted as part of the framework development and pre-testing process, which was expected to help the researcher to increase confidence in the suitability, usefulness and practicality of the proposed framework. This constitutes the second phase of data collection in the research.

3.6.2 Rationale for using explanatory sequential design

Some of the key reasons for adopting explanatory sequential design in this study are:

1. The research objectives are mostly quantitative; however, it is also important to collect quantitative data to enable the research to get a comprehensive understanding of the phenomenon under investigation.

2. Secondly, because the two phases of the research were conducted one after the other, it makes the discussion of findings consistent and straightforward.
3. Thirdly, the approach is advantageous with respect to timing: there was enough time for the researcher to analyse the data collected in the first phase of the study before proceeding to the second phase.
4. The results of quantitative analysis from the first phase helped to inform the type of questions to be asked in the qualitative phase (the second stage).

3.6.3 Using mixed methods to offset the limitations of quantitative and qualitative methods.

As discussed previously and shown in figure 3.2, both quantitative and qualitative data were collected to address the research objectives of this study. However, it is important to note that these different methods have weaknesses or limitations (as presented in table 3.3), which can be counterbalanced when mixed appropriately (Creswell, 2014). For example, quantitative research is lacking in understanding the circumstance in which people act, but this is something for which qualitative research compensates. Then again, a qualitative method has been criticised due to its reliance on subjective analyses by the researcher and inability to generalise research findings to a large group (Ezzy, 2013), but the mixing with a quantitative method can compensate for this deficiency.

Mixed methods can help in resolving the tensions between the qualitative and quantitative methodological movements (Cameron, 2009). Furthermore, quantitative research occasionally fails to understand the circumstance in which people act, but qualitative research may compensate for this. By combining quantitative and qualitative types of data in a single research, the strong point of each method can compensate the limitations of the other and help in resolving inconsistent findings (Berk *et al* 2015). The weakness of qualitative method is inability to support generalisation of research findings to a large population, however quantitative method does not have this weakness. Therefore, the need to address the above-mentioned limitations presents another rationale for adoption of mixed methods in this study.

For example, in this study, the quantitative findings in Chapter 6 shows that SMEs were enthusiastic about the policy measures but still reported low participation in public procurement. Using the qualitative data collected through open-ended questionnaire items, the researcher could identify possible reasons why SME participation was still low despite the positive attitudes they have expressed about the policy measures (as discussed in chapter 7). With this, the researcher can offset whatever inconsistencies existing in the research results, as the different methods embraced in the study will compensate the limitations of each other, as Berk *et al* (2015) have indicated.

3.7 Data collection techniques

A review of the literature has shown that different methods can be used to collect data in a research (e.g. Bryman, 2015; Eriksson and Kovalainen, 2015; Denzin and Lincoln, 2005). The factors that should be considered in determining the data collection method include the type of research questions/objectives, the philosophical underpinnings, access to data and the research topic under (Hua, 2015; Collis and Hussey, 2003). The above-mentioned factors were considered in choosing the data collection techniques for the present study. The common methods for collecting data in a research include observation, documented records, focus groups, focus groups, case studies, surveys (using a questionnaire) and interviews. Each of these techniques is briefly described below.

3.7.1 Observation

In recent years, observation has been used as data collection tool in research conducted in various fields (Spradley, 2016; Dahlke, Hall and Phinney, 2015). This method has been used for collecting data concerning people's behaviour and cultural practices (Spradley, 2016). According to Saunders *et al*, (2009) observation is appropriate for investigating a research question that requires an understanding of what people do. In doing this, the researcher uses his/her senses to watch events as they unfold. There are two major categories of observation: participant observation and structured observation (Spradley, 2016; Sekaran and Bougie, 2013). Participant observation is used to identify the meaning that individuals ascribe to their deeds. Structured observation deals with the rate at which the researcher observes the

actions of the research subjects or participants. A potential downside of observation includes refusal of the participants to allow the researcher to observe their actions. To address this problem, it is advisable that the researcher should use another data sources to complement the observed evidence (Sekaran and Bougie, 2013).

3.7.2 Documented records

Existing records can be a source of useful data for both qualitative and quantitative studies (Hashimoto *et al.*, 2016). A researcher could use data from documents to validate or supplement the results of quantitative analysis (Bryman and Bell, 2007). The information collected from documents is classified secondary data, especially if they exist in statistical forms (Hashimoto *et al.*, 2016). Unlike other sources of data, documented data enables a researcher to capture contextual information about the concept or organisation under investigation. Documented information can be more easily accessible in comparison to other data sources (Hashimoto *et al.*, 2016). This helps in avoiding some common problems of data collection such as chasing respondents up for interviews or survey.

With the advent of internet, company reports, and records are made available in the public place for free (Bowen, 2009). While this may tend to make access to documented data relatively cheaper than other sources, there is a challenge of protecting citizens' information security and confidentiality, following the transformational government reform agenda in the UK (Combe, 2009; Hasbullah and Combe, 2017). However, such an issue did not arise in this study because the researcher did not seek to collect personal and confidential information from respondents. In addition, by using documents, a research reduces the bias that could arise between the investigator and the subject under investigation: this is often called 'the researcher effect' (Fox *et al.*, 2008). In this study, documented data includes UK government statistics and policy notices that report the outcomes of policy measures to promote SMEs in public procurement.

3.7.3 Focus groups

Sekaran and Bougie (2013) defines focus groups as small gatherings of participants put together to debate a research topic/subject. Depending on the nature of the

research, a focus group discussion can last for 1-2 hours, as the researcher or investigator moderates it (Morgan, 2010). In focus group discussions, the researcher is interested in obtaining rich and diverse perspectives from the participants to enhance understanding of the research problem. Hence, the most important outcome is the quality of data obtained from the discussions, rather than the number of the participants. In fact, a small number of participants can offer more useful data than a large sample (Corbetta, 2003).

However, the focus group has some disadvantages: participants may decide to limit their contributions due to possible lack of interest in the research questions, or a feeling that their views may not matter in any way (Smithson, 2000). For example, in the present study, this disadvantage was avoided because participants in the focus group for testing the proposed framework were individuals who have shown interest in joining the discussions. The discussions involved participants who possess first-hand knowledge and experienced about the research topic, otherwise known as key informants (Chamberlin *et al*, 2015). Please see further details about the focus group implementation in Chapter 8 (section 8.3.1). This approach was relevant for addressing research objective 6, which seeks to assess the applicability of the framework developed in this study.

3.7.4 Surveys

A survey is a method that enables the researcher to collect data from a relatively large audience. Most often, survey facilitates the gathering of information in numerical forms, offering quantitative depictions of respondent's opinions and attitudes about the subject of investigation (Creswell, 2013). According to Saunders *et al*. (2007), "surveys are popular for collecting data from a large population of participants in a standardised and less expensive ways" (p168).

Furthermore, surveys support the collection of quantitative data for determining trends, impact and relationships amongst a set of variables (Groves *et al*, 2011; Lambert and Loiselle, 2007). While this can be implemented by means of questionnaires or interviews (Leedy and Ormrod, 2001), it is more efficient and less expensive to use questionnaires to collect data in a survey than using interviews (Lambert and Loiselle, 2007). A questionnaire could use open or closed ended questions (or both) to collect

data (Malhotra and Birks, 2007). For example, for this study, a cross-sectional survey of SMEs competing for public contracts in North West England was implemented. The questionnaire that was used in this study contains both open-ended and closed-ended questions. While the closed questions offer survey SMEs to select an answer from many choices of statements about the policy measures, the open questions enabled them to share opinion about the limitations and drawbacks of the policy measures, through written responses.

3.7.5 Interviews

An interview is a method that enables the researcher to gather qualitative data from the participants. Interview participants are given the opportunity to express themselves about the subject under investigation (Wilson, Onwuegbuzie and Manning, 2016). An interview is a special type of dialogue that enables the researcher gain in-depth knowledge about a phenomenon (Wengraf, 2011). The use of interview technique will offer opportunities for the participants to share their experience, views and opinions regarding the research theme. Interviews can be structured, semi-structure and unstructured (Easterby-Smith *et al.*, 2012). Structured interviews consist of closed questions requiring the participants to pick an answer choice from a list of choices.

In contrast, a semi-structured interview contains standardised open questions which offer the opportunity for the researcher to explore the research topic in detail. A similar approach was used in the present study when seeking to clarify and expand on the responses to open-ended questions. For example, in the initial data processing stage, the researcher read through all the comments provided by the respondents and highlighted any statements he felt were unclear. Calls were made immediately over the phone to the relevant respondents to clarify and elaborate on their initial response to the open-ended questions.

Table 3. 5 The advantages and limitations of interview

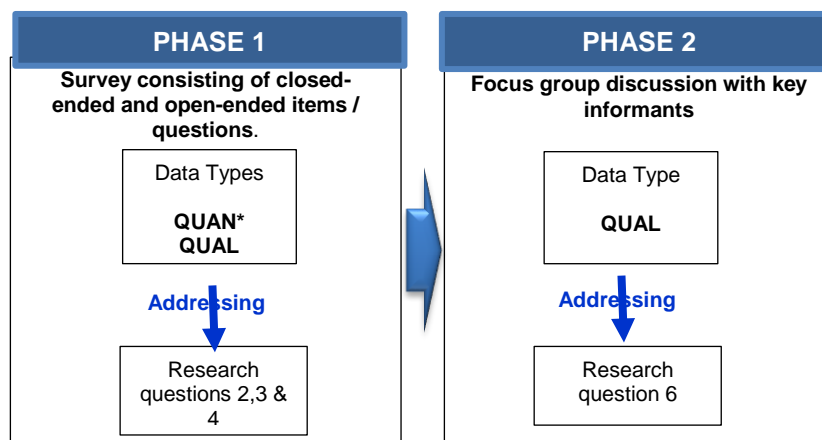
Advantages	Limitations
<ul style="list-style-type: none"> • The information gathered through the interview is likely to be more accurate than information collected by other means • Helps the researcher to obtain rich, deep and detailed understanding of the phenomenon being investigated • Allows probing and exploring to validate research findings, as well as the proposed framework to enhance SMEs participation in public procurement 	<ul style="list-style-type: none"> • It can be costly and time consuming • It cannot be used to collect data from a large population of respondents • It allows the investigator to interpret data inductively, leading to bias

Source: compiled from (Dana et al, 2013; Onwuegbuzie and Manning, 2016; Oppenheim, 1992)

3.7.6 The research strategy for data collection

The research design for this study is the ‘Explanatory Sequential Model’, which combines quantitative and qualitative approaches consecutively in a single study. Figure 3.4 shows how this study combined qualitative and quantitative methods. The study involves two phases of data collection: phase 1 involves quantitative and qualitative data gathering via a questionnaire survey (as presented in Chapters 6 and 7), and phase 2 utilises focus group discussion to collect qualitative data from experts (or key informants as presented in Chapter 8).

Figure 3.4 Data collection strategy



Source: developed by the author

3.7.7 Sampling method

According to Palys (2008), there is no one best sampling strategy for conducting a research, as the sampling strategy adopted in a research should depend on the nature of the research objects and the context in which the investigation is being conducted. There are two major types of sampling: probability and non-probability sampling (Sekaran and Bougie, 2013; Uprichard, 2013; Fowler, 2013). In probability sampling, the likelihood of selecting a participant in the population can be accurately determined. In contrast, in non-probability sampling, the sample size may be difficult to determine because, some elements of the population are out of coverage (Fowler, 2013). The chosen sampling method for this study was purposive sampling (a non-probability sampling method).

According to Lucas (2014a), purposive sampling technique is appropriate when a researcher cannot recognise all members of the sample population, but he/she is interested in selecting participants, whose views can be useful to address the research objectives. The research participants for this study were SMEs competing for contract opportunities in public sector organisations in the UK. The participants were selected based on their characteristics, experiences and relevance to the research theme (Lucas, 2014b).

3.7.8 The rationale for sampling method of choice

The reasons for choosing purposive sampling are:

1. Even though SMEs account for about 99% of the private businesses in the UK, there is no single database containing all SME firms in England (Department for Business Innovation and Skills (2015).
2. Only a small number of SMEs compete for public sector contracts in the UK (Loader, 2015), and it can be very difficult to calculate a sample size of SMEs participating in public procurement, a priori (Flynn, McDevitt and Davis, 2013). Similarly, the total number of SMEs competing for public sector contracts in the UK is unknown (to the researcher).
3. Since it was difficult to know the population of SMEs participating in public procurement in the UK, the research participants were purposively selected

amongst the firms competing for contract opportunities within NHS organisations in North West of England. Purposive sampling provides a means for identifying and contacting participants in such a hidden population (Morgan, 2008). This approach was more practicable and less expensive considering quick access to data and proximity to the researcher's base.

4. Although probability-based sampling might provide the researcher with a higher level of confidence as compared with non-probability sampling (Easterby-Smith et al., 2012), however, this present study is exploratory and descriptive in nature and purposive sampling would be an ideal technique for data collection.

Consequently, the researcher contacted several NHS organisations in North West of England and requested the list of firms that have either participated in or have registered to bid/participate in contract opportunities they advertise. This information was requested by means of email appeals and via the Freedom of Information Act (FOIA). In the end, the researcher could compile a list of 811 firms (both large firms and SMEs).

3.8 Constructive research approach: framework design methodology

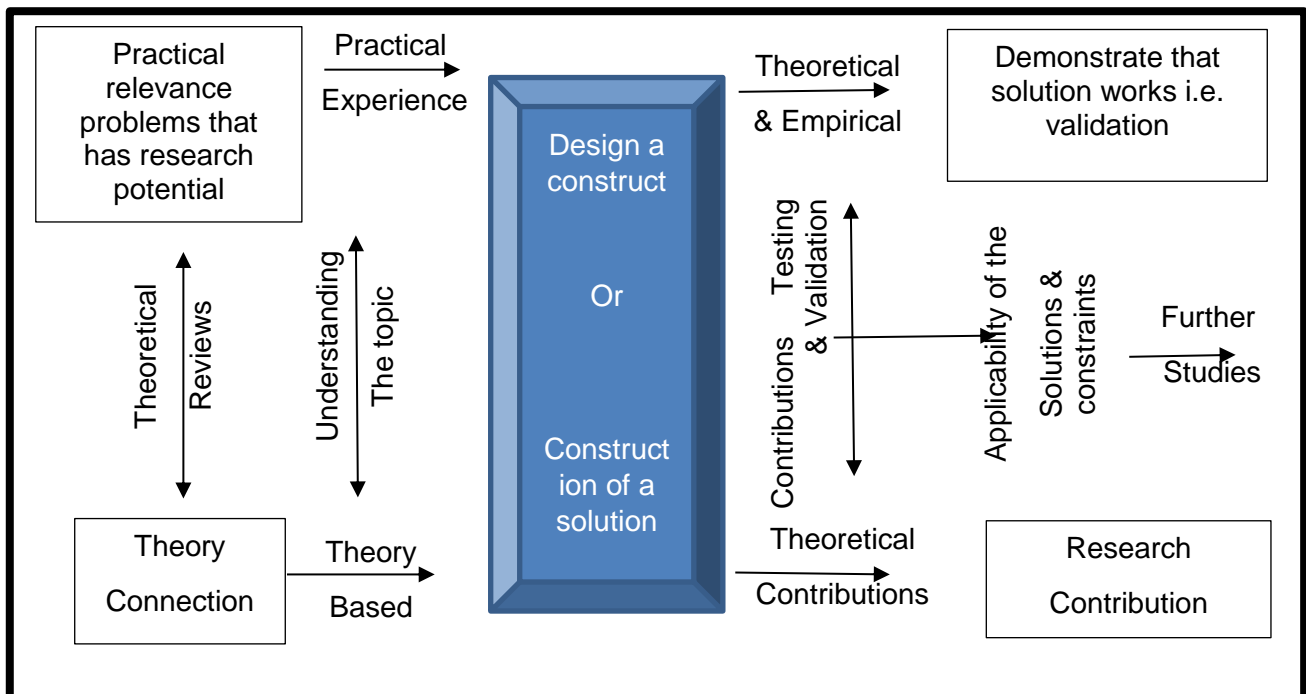
A key aim of this study is to use research findings to develop a framework that can help improve SME participation in public procurement. To achieve this aim, the constructive research approach (also known as design science methodology) was adopted to guide the framework development process. Constructive methodology has been described as a problem-solving approach (e.g. Oyegoke, 2011; Kasanen *et al.*, 1993) for improving existing processes or systems, with the overall goal of creating new knowledge or increasing the existing body of knowledge. The main component of the constructive approach is the novelty/design construct stage which must be theoretically justified and empirically grounded (Oyegoke, 2007). Therefore, its application can lead to creation of new knowledge /solutions, which the researcher can test its usability by conducting a pilot in advance of full implementation.

In the present study, constructive research approach offers a theoretical construct to guide the researcher to think through important considerations and stages, which

helped towards the development of a framework to improve SME participation in public procurement. Apart from providing a logical step that was followed in order to build the framework (proposed in figure 8.2), the constructive approach essentially embraces different types of data (Morris, 2010), just as the researcher has implemented in the present study wherein both quantitative and qualitative methods were mixed to address the research objectives.

Many studies (e.g. Oyegoke, 2011; Oyegoke and Juhani, 2009; Morris, 2010) have applied constructive approach in new product development, innovation and project management studies. In an investigation that is closely related to the present research field, Oyegoke (2011) followed five stages of the constructive research process (see figure 3.5 and table 3.6) to address the problems of Specialist Task Organisation (STO) procurement. These stages present explicit methodical procedure for implementing constructive research in a rigorous and systematic manner and were followed during the framework development process in this study.

Figure 3.5 Key aspects of the constructive research approach



Source: Oyegoke (2011)

3.8.1 STAGE ONE: identifying practical relevance problem with a research prospect.

The problem requiring research can be informed by an existing issue in the industry or sector, for example, the need to reduce the barriers hindering SMEs from participating successfully in public procurement, and the limitations of existing policies in dealing with this subject matter. In addition, Oyegoke (2011), argues that research problems can be found from practical experience, anecdotal evidence and evidence in the literature. Irrespective of these sources, the literature study should corroborate practical problems to point out knowledge gaps.

Likewise, in section 1.1 of the present study, the researcher began by discussing the problem of SME underrepresentation in public procurement, and it links to the policy measures, which the UK government has adopted to increase small business participation in public procurement. The discussion was supported with literature evidence and buttressed with statistical data from government reports to enable the researcher to understand the research problem comprehensively. It is obvious that SME participation in public procurement is still low, despite the various policy and measures by which the government attempts to increase access to public sector contracts. Hence, there are problems in this area of study which has research potentials, and should be explored, as depicted by the research aim (see full details in Chapter 1).

3.8.2 STAGE TWO: getting a broader understanding of the topic

After identifying and defining the problem that requires a research, a literature review should be conducted to provide general understanding of phenomenon that is being investigated. This includes reviewing and documenting several studies that offer new insights and ideas of addressing the research problem. Consequently, a critical review of the literature was conducted in Chapter 2 on the barriers facing SMEs in public procurement (see sections 2.5 – 2.5.4), evidence on the rate of SME participation in public procurement (see section 2.6.5) and key policy measures designed to support SMEs in public procurement (see section 2.6.4).

To comprehend the wider context of the problem from different perspectives, the scope of the literature review was extended beyond SME-friendly policies; other factors internal to a firm were identified (see sections 2.6.6 – 2.7), which can influence SME participation in public procurement. Important attributes of the policy measures were identified through the review of literature in Chapter 2 (see section 2.6.4.7) and evaluated through a survey. The survey examined the attitudes and concerns of SMEs about the existing policy measures in identifying opportunities for improvement public procurement participation.

3.8.3 STAGE THREE: design a construct/construction of a solution

The constructive research approach necessitates that the design of an innovative solution or new idea should be based on thorough interpretation and synthesis of the findings from the investigation of the research problem, in conjunction with the analysis of relevant literature, to gain an in-depth understanding of the targeted phenomenon (Oyegoke, 2011). Similarly, having reviewed the empirical findings from this study (in Chapters 6 and 7), and examined different theoretical perspectives (in Chapters 2 and 4), a set of approaches were recommended (in Chapter 8) and then assembled into a framework. At this phase, the constructive approach demands that the new solution should focus on the notable features that will demonstrate its feasibility. In the case of the framework proposed in this study, there are four distinct pathways and corresponding approaches that can potentially improve SME participation in public procurement (see figure 8.1).

3.8.4 STAGE FOUR: showing that the new construct/ works

The fourth phase of constructive research demands a demonstration of the feasibility and applicability of the new construct. This is important to ensure that the theoretical idea/construct is closely related with practical reality (Oyegoke, 2011). According to Pollack (2007), there are two common approaches to validating and improving the features of newly developed construct; these include a pilot case study (where the solution is implemented and monitored to determine its workability) and triangulation where different data collection protocols (such as case study, focus group, interviews) can be employed to determine whether the solution works and to obtained feedback that can be used to refine the construct.

Regrettably, a pilot case study was not a viable method of validating the workability of the framework proposed in this study because of cost reasons and restrictions caused by bureaucratic structures in the public sector. Therefore, empirical validation of the framework developed in this study was carried out in forms of a focus group discussion, which comprised individuals who were directly involved in public procurement practice as it relates to SMEs involvement in the UK (see further details in sections 8.3 – 8.3.3). The focus group discussion was conducted to identify the opinions of the respondents about the feasibility and practical relevance of the framework components, and to determine where changes were needed for improvement. Subsequently, in Chapter 8, the proposed framework was refined based on feedback from the focus group discussion and represented (see figure 8.2)

3.8.5 STAGE FIVE: demonstrating research contribution

In addition to stating the originality and scope of application of the proposed solution/construct, the constructive research demands that the researcher should indicate how the study added to the body of knowledge in terms of theoretical, methodological contributions and practical implications. Similarly, the framework proposed in this study makes potential contributions to the body of knowledge in different areas as discussed in Chapter 9 (see sections 9.4 -9.4.3). For example, the findings of the focus group discussion (in sections 8.3.2 – 8.3.4) demonstrate the novelty of the proposed framework both in terms of theoretical contribution and practical relevance to the phenomenon of SME participation in public procurement. In other words, the framework, if adopted, might possibly result in improving the rate of SME participation in public procurement in the UK.

Particularly, now when SMEs' share of public procurement spending is comparatively lower than SME overall contributions to the country's economy in terms of employment creation, GDP contribution and value added (Rhodes, 2017). Essentially, it is herein posited that the framework resultant from the findings in this study, offers a significant theoretical contribution and it has practical implications amongst procurement managers, SME owners/managers, policy makers both within the UK public sector environments and practitioners in other countries, such as the EU member nations, which have comparable public procurement regulations.

Table 3. 6 Application of key stages of constructive research approach

Key stages	What happened at each of these stages	Application in this thesis	Methodological choices (data collection methods)
STAGE 1	Identifying practical relevance problem with a research prospect	Chapters 1 and 2	<ul style="list-style-type: none"> Literature review
STAGE 2	Getting a broader, more comprehensive understanding of the topic/research problem	Chapters 2, 3, 4, 5, 6 and 7	<ul style="list-style-type: none"> Literature review Survey (quantitative & qualitative data)
STAGE 3	Design a construct /construction of a solution	Chapters, 2, 3 and 8	<ul style="list-style-type: none"> Constructive research approach Synthesis of research findings
STAGE 4	Showing that the new construct/solution works (i.e. Validation)	Chapter 8 (section 8.3)	<ul style="list-style-type: none"> Focus group discussion
STAGE 5	Demonstrating research contribution of the proposed solution	Chapter 9 (section 9.4)	<ul style="list-style-type: none"> Critical discussion to highlight important contributions that the study has made.

3.9 Validity and reliability of the findings of the study

This section includes discussions about reliability, validity and trustworthiness, which are key criteria for ensuring research quality within both quantitative (Johnson and Christensen, 2008) and qualitative investigation (Lincoln and Guba, 1985). Validity denotes “the correctness or truth of an interpretation or inference”, whereas reliability stands for to the consistency and repeatability of the data collection techniques (Johnson & Christensen, 2008, p. 253). The applications of these methods are described below.

3.9.1 Validity

Different scholars have interpreted validity from different perspectives. According to Hardy and Bryman (2004), validity is about whether the instrument or technique

employed during the data collection process is assessing the concepts it is meant to measure. In other words, to ensure validity, the researcher must understand the information collected from the research participants without ambiguity (Ghauri and Grønhaug, 2002). For example, to ensure content validity the researcher can obtain the opinions of experts on the questionnaire contents (Colquitt *et al.*, 2014), whereas, face validity assesses the appearance of the survey instrument based on practicability, legibility, use of language, clarity and logical flow of the questions (Barnett *et al.*, 2015).

Regarding this study, content and face validity of the survey questionnaire was tested via piloting of an initial draft of the questionnaire (see an initial draft of the questionnaire in Appendix 2). Consequently, 25 potential pilot participants were identified; these included SMEs who compete for public contracts in the UK and public procurement professionals. The participants were sampled purposively to include only individuals who have expertise and interest in the subject being researched. These individuals provided feedbacks, which helped in ensuring that the questionnaire contents are fit for purpose, suitable and relevant to the research aim and objectives. See Chapter 5 (section 5.4) for full report of the pilot implementation and the outcomes.

In view of the above discussion, the survey questionnaire was pre-tested/piloted amongst SME manager/owners, other research colleagues and professionals to ensure content and face validity. The pilot participants reviewed the questionnaire items, categories/options, design, layout and grammar to help in ensuring that the contents were fit for purpose. They completed an evaluation form which assisted them in reviewing each item in the questionnaire using set criteria listed in section 5.4.1. The researcher obtained feedback from the piloting and used them to improve the questionnaire. Respondents' validation helps to ensure that the correct concept was measured reliably to reflect what is happening in the given situation. In addition, Easterby-Smith *et al.* (1991) emphasises the need to use appropriate language during data collection as this can help build trust with the research participants. For this present research, the researcher designed the survey questionnaire in plain English language, because this was a language familiar to UK SMEs, who were engaged as research participants.

Furthermore, Silverman (2001) highlighted the need to ask the research participants to confirm if those findings resulting from the data analysis represent their reported opinions about the phenomenon under investigation. Similarly, the researcher ensured that the framework developed from the study was shared with a sample of the respondents during the focus group discussion to ensure validity. Perakyla (1997) emphasise that vital non-verbal aspects of the message being conveyed by the participants can sometimes be omitted from transcripts. This issue was relevant in the present study when analysing the qualitative data from the open-ended questions. The researcher conducted follow-up telephone discussions with some participants to capture accurately and unambiguously the experiences of SME respondents and to present them in convincing texts. Tellis (1997) also stresses on internal validity using pattern-matching that entails connecting or associating data from different participants about, the research problems being investigated. In this research, themes that emerged from different SME responds were compared and combined where appropriate to form the basis of addressing the research questions.

Voss *et al.* (2002), believed validity can be ensured by generalising findings beyond the current research context. In quantitative research generalisability is usually tested statistically using the extrapolation method introduced by Pace (1939), whereas, in qualitative research, generalisation is about transferability of the research findings (Lincoln and Guba, 1985). This essentially requires the researcher to compare empirical findings and previous literature and theories to avoid making rather selective or myopic conclusions (Vaivio, 2008). Therefore, since this study utilised both quantitative and qualitative data, the approaches described above were used to ensure generalisation. The extrapolation was conducted (see section 5.7.1.2) to show that SME respondents in this study are representative of the larger population from which they have been selected (Flynn, 2016). For the qualitative aspect, the results were compared and contracted with previous literature to show how the findings of the present study can enhance our understanding of the research topic.

According to Lubbe (2003), every research has elements of bias which must be acknowledged, minimised or addressed by the researcher. The following approaches were used to minimise the biases associated with this study:

- The use of multiple sources of data (qualitative and quantitative) helps to enhance the reliability of the research.
- The use of literature evidence to support research findings and discussion
- Using focus group to pre-test the proposed framework to develop stronger proof of validity
- The framework was reviewed by different actors in the UK public procurement system, rather than concentrating on SMEs
- Following up with the participants to probe for further explanations when faced with vague and inconsistent responses to the survey questions.

3.9.2 Reliability

Although this idea has mostly been used for testing quantitative research, particularly with respect to the measurement techniques Stenbacka (2001), the relevance of reliability to qualitative research cannot be overlooked as Lincoln and Guba (1985) has argued that: “Since there can be no validity without reliability, a demonstration of the former (validity) is sufficient to establish the latter (reliability)”. Reliability is concerned with the dependability, suitability or consistency of the research instrument (Johnson and Christensen, 2008). It is useful for determining the degree to which the questionnaire items measure what it claims. Also, it shows how the items in the questionnaire touch on the key constructs of the theoretical frameworks (Kane, 2001). In the present study, a reliability test was conducted to check the internal consistency of questionnaire scale or items. Cronbach’s alpha coefficient (Cronbach, 1951) was used to test construct validity to determine internal consistency of the questionnaire items during the survey implementation process in subsequent Chapter 5 (See section 5.7.3 for full details about reliability method adopted in this study and the results).

3.9.3 Ethical considerations

According to Saunders *et al.*, (2012), the process of collection, analysis and reporting of data should be guided by a set of moral principles, commonly regarded as ethics. These principles include but not limited to obtaining informed consent from organisation or individual participants before collecting data and strict compliance with directives of established research ethics committees. Obtaining ethical approval will help to ensure that the research participants are not abused (physically or

psychologically) during data collection (Johnson & Christensen, 2008). Concerning this study, the researcher is aware of the potential ethical issues associated. The key ones are ensuring anonymity and gaining informed consent of the participants. To address these, the following ethical practices were utilised:

1. The researcher assured anonymity and confidentiality of participants in the study (survey and focus group), allowing the survey participants to know that their decision to participate is optional and not mandatory.
2. The researcher obtained ethical approval from the University of Salford (Ethics Committee) before proceeding to data collection. A copy of the ethical approval is in Appendix 4.
3. The researcher adhered to the code of ethics of the University's research ethics committee in conducting this study.
4. The researcher prepared consent forms for the proposed focus group participants. The form contains detailed information about the purpose and objectives of the study, and a statement of promise by the researcher to safeguard the participants' confidential information and rights.
5. The researcher will destroy such documents/information once the research is completed to ensure the security of all the manuscripts and electronic files, which contain confidential information of the participants.

3.10 Chapter summary

This chapter presents and justifies the research methodology used in this study. The study commenced with a literature review on the policy measures designed to improve SME participation in public procurement. From the literature review, the researcher identified the existing knowledge gap on the subject matter being investigated. The gaps identified in the literature informed the formulation of research aim and objectives, which then informed the types of research methods adopted. The chapter also describes the philosophical underpinnings of the research with justifications for

choosing post-positivism as the research paradigm. This led to a discussion on the types of data collected for the study, the methods of data collection (questionnaire) and an outline of the research designed (survey).

Due to the exploratory and descriptive nature of the research, the researcher collected both quantitative and qualitative data in a survey of SMEs who compete for contract opportunities in public sector organisations in the UK. The chapter also highlighted issues relating to validity, reliability and research ethics that are relevant to this study. However, while this study has considered a sequential mixed method strategy that involved the collection of qualitative and quantitative data, there are other techniques for data collection such as in-depth-interviews and cases study which were not used in this study, but can be considered for future investigation of SMEs' participation in public procurement.

In terms of sampling, the purposive sampling technique used in this study is prone to higher sample errors as against probability sampling method. Although the researcher had justified the reason for using purposive sampling in the present study, other approaches such as random or statistical sampling can be used in future studies (where appropriate) to reduce sampling errors.

CHAPTER 4

4.0 Theoretical framework for the study

4.1 Introduction

In social and management research, theories provide the basis to explain and analyse the phenomenon under investigation as well as helping the researcher to make sense of the research findings (Anfara Jr and Mertz, 2014; Neuman, 1997; Shmueli, 2010). Therefore, this chapter presents discussions on the underpinning theories used in this research. Looking at the literature review in chapter 2, SMEs' performance/business success can be influenced by internal factors such as the firms' innate resources and capabilities as well as external factors of institutional supports.

Therefore, the theories considered to be relevant for this study are Resource Based View (RBV) and Institutional Theory. Sections 4.2 – 4.4 present detailed discussions of RBV and Institutional Theory, along with the rationale for their application in this study. These theories offer guidance on the literature review in chapter 2, discussion of findings in chapters 6 and 7, as well as ideas that might enhance the synthesis of research findings towards framework development in chapter 8. In addition to providing the basis for explaining the topic under investigation, the combination of RBV and Institutional Theory can help connect the researcher with existing knowledge for developing better understanding about factors influencing SME participation in public procurement.

Furthermore, as mentioned in previous section (3.3.4), post-positivism was the appropriate epistemological stance adopted in this study. This is a philosophical approach that highlights the importance of multiple measures or sources of data, as in this study where qualitative and quantitative data were collected from a survey and focus group discussion to help with the development of a framework for SME participation in public procurement. Post-positivism also holds that all observations are construed through a prior understanding of other theories (Adam and Westlund, 2013), and this is another motivational factor to draw upon the following two theories, that is RBV and Institutional Theory.

4.2 The resource-based view of firm

Irrespective of the various business barriers and challenges facing SMEs, they have also been successful in doing business. It has been suggested that firms should focus more on reinforcing their intangible resources and organisational capabilities in dealing with the complexity and dynamics of today's business environment (Crema and Nosella, 2014). Therefore, in this study, RBV provides a premise to understand how strategic resources and capabilities can support SME's competitiveness in the public procurement marketplace. The Resource Based View (RBV) explains how the resources possessed by a firm could be the determining factors of its performance and competitiveness (Hooley and Greenley, 2005). RBV may also enhance our understanding of how resources and capabilities help organisations to obtain a competitive advantage, for example, SMEs can take of advantage of their innate capabilities in the areas of innovation and responsiveness to increase chances of success when bidding for contracts in the public sector.

The terms resources and capabilities have been used interchangeably, but they do not mean the same thing. According to Sirmon, Hitt and Ireland (2007:35) "resources are stocks of available factors that are owned or controlled by the organization, and capabilities are an organization's capacity to deploy resources". Capabilities are superior types of resources, whose purpose is to increase the efficiency of the other resources owned by the firm (Makadok, 2001). A firm's resources include physical assets, skills, capabilities, organisational process, knowledge and non-tangible assets, which enable it to implement strategies that improve its efficiency and effectiveness (Barney 1991 cited in Akio, 2005). Other authors (e.g. Hunt and Derozier, 2004) categorised a firm's resources into three constructs, namely tangible assets, intangible assets and capabilities.

Tangible assets include property, shares, financials, equipment and machinery, while intangible assets are those possessions that are valuable but cannot be quantified, for example know-how, trademarks, licences, repute, collaborative linkages, databanks, organisational procedures and routines (Teece,2015; Wilk and Fensterseifer, 2003). Capabilities comprise other intangible assets such as dynamic capabilities (Teece, 2015), intellectual capital (Delgado-Verde, Martín-de Castro and Amores-Salvadó, 2016) and different strategic orientations of a firm.

Although organisations may differ in terms of size and nature of trade, the fundamental resources that contribute to their survival in the marketplace are very similar (Yukiko, 2014). For example, as it was previously mentioned in sections 2.6.6 -2.8, the possession of resources such as legal proficiency, ICT/electronic systems, administration skills (Karjalainen and Kemppainen, 2008), relational capabilities (Flynn and Davis, 2016a), networking skills (Valkokari and Helender, 2007), competitor orientation, proactiveness and innovative capabilities (Reijonen, Tammi and Saastamoinen, 2014) can influence SMEs likelihood of participation and success in public contracting.

Previous studies (e.g. Hakala and Kohtamaki, 2011; Herath and Mahmood, 2013) have used the RBV to describe the resources and capabilities that form sources of sustainable competitive advantages for SMEs. As today's marketplace is rapidly changing, firms cannot rely solely on their possession of resources but they will need to reconfigure or transform and deploy these for their benefits in the competitive marketplace. For example, networking and learning capabilities might be useful for SMEs who seeks to linkup with other large firms to develop new skills needed to succeed when competing for public sector contracts. Therefore, to improve understanding of factors which influence SME participation in public procurement, it is necessary to look beyond the policy measures of the government to other ways in which SMEs can use what they already have in getting what they need.

4.3 Institutional theory

Institutional theory has been defined as “a way of thinking about formal organisation structures and the social processes through which these structures develop” (Dillard *et al.*, 2004, p. 508). This theory explains how organisational rules, norms, practices and structure are developed, and established (Scott, 2004). There are three pillars of institutions, which describe organisational behaviour: normative, cognitive and regulative (Scott, 1995). The normative aspect uses less explicit factors such as norms and values to guide behaviour, while the cognitive element takes advantage of culturally accepted purposes to achieve legitimacy. However, the SME-friendly procurement policies being investigated towards the development of the framework in

this study are neither normative nor cognitive but enforced by government as coercive regulatory tools.

The regulative element of institutional theory utilises rules, rewards, controls, sanctions, laws and regulations to guide organisation’s behaviour. Regulatory forces can operate in different forms: persuasion, collusion or coercion (DiMaggio and Powell, 1983). Institutional theories emphasize on different assumptions, such as “rational myths, isomorphism, and legitimacy” (Scott, 2008). For example, it is required by law that public sector organisations, as agents of government should adopt policy measures designed by the UK government to facilitate SME participation in public procurement, as discussed in sections 2.6.4.1 – 2.6.4.6, in their tendering process for the benefit of SMEs.

Furthermore, institutional theory offers explanations on the wider adoption of best practices in other fields of management such as accounting (Bebbington and Fraser, 2014). Other scholars (e.g Hahn *et al.*, 2015; Grob and Benn, 2014) have used institutional theory to examine sustainable procurement practices in private, as well as in public organisations (e.g Young, Nagpal and Adams, 2016; Sayed, Hendry and Zorzini, 2014; Walker and Brammer, 2008). Concomitant with a move to adopt sustainable procurement practices (Walker and Philips, 2008), public sector organisations are now under pressures to adopt SME-friendly procurement practices (Flynn, McDevitt and Davis, 2013). However, with the recent focus on research into public sector procurement, institutional theory is becoming more common amongst researchers (Akenroye, 2013; Meehan, Ludbrook and Mason, 2016).

4.4 The relevance of Institutional theory and RBV

The table (4.1) below illustrates how RBV and institutional theory are pertinent to the present study.

Table 4.1 The theories and their relevance to the present study

Theory	Relevance to the study	Potential outcomes
	<ul style="list-style-type: none"> <li>Institutional theory acknowledges that an organisation can be influenced by formal or 	<ul style="list-style-type: none"> <li>Identification and analysis of key policy measures being implemented by the government to facilitate SMEs participation in

1. Institutional theory	informal factors/practices, which are external to its operations (Fuenfschilling and Truffer, 2014; DiMaggio and Powell, 1983).	public procurement, to determine opportunities for improvement.
2. RBV	<ul style="list-style-type: none"> The RBV takes an inside-out assessment on why companies succeed or fail in business (Madhani, 2010). It argues that competitive advantage lies mainly in the application of inherent resources and capabilities at the firm's disposal (Madhani, 2010). 	<ul style="list-style-type: none"> Improved understanding of firm's internal resources and capabilities, which may help influence SME participation in public procurement markets, and perhaps help in complementing the policy measures. An important consideration when designing the framework to improve SMEs participation in procurement.

4.5 The rationale for combining different theories

The reasons for combining RBV and institutional theory in the study are discussed below. Table 4.2 shows how and where each of these theories applies in the current study.

1. Each of the theories contains assumptions that may explain the factors affecting participation or success of SMEs in public procurement, the researcher argues that none by itself offers a complete explanation and justification of this phenomenon.
2. While these two theories may focus on different areas of organisational actions, they can be combined to identify, explain and analyse the internal and external factors that may influence an organisation's behaviour in a competitive marketplace – such as the public procurement markets. For example, by linking institutional policies such as SME-friendly procurement measures with concepts of RBV such as dynamic capability and strategic orientation of firms, the researcher can understand the factors influencing SME participation in public procurement more holistically, in attempting to develop the proposed framework (i.e. the aim of this research).

Essentially, our understanding on how to improve SMEs’ participation in public procurement can be broadened by a conceptual blend of these two theories. The unique resources and capabilities of SME firms can complement the current policy measures towards improving participation in public procurement. For example, SMEs that show high dynamic capabilities are more likely to remedy any resource limitations that might have prevented them from participating effectively in public procurement, due to their ability to mobilise additional resources through networking with other firms. Furthermore, SMEs that possess higher levels of relational capabilities are more likely to get the information they need about procurement opportunities by linking up with the public sector.

Table 4. 2 How and where theories were used in the study

Theory	How the theory is used this research	Where the theory is used this research
Institutional theory	<ul style="list-style-type: none"> • The theory was used to identify and analyse key policy and measures institutionalised to promote SME participation in public procurement in the UK 	<ul style="list-style-type: none"> • Literature review to identify the policies and measure designed by UK government to support SMEs in public procurement (Chapter 2) • Primary data collection to determine SMEs’ attitude and concerns towards the policy measures (Chapters 6 and 7) • Recommendations on potential approaches to improve SME participation in procurement, which assisted in framework development (Chapters 8 and 9)
RBV	<ul style="list-style-type: none"> • Offered insights into resources and capabilities that can help SMEs to compete better in public procurement markets • Provided the basis for recommending approaches to address the constraints which may hinder SMEs’ ability to improve participation in public procurement. 	<ul style="list-style-type: none"> • Literature review on the roles of firm’s resources and capabilities in improving SME activity and performance in public procurement (Chapter 2) • Recommendations on potential approaches to build SMEs capabilities for participation in public procurement (Chapters 8 and 9)

4.6 Chapter summary

The two theories incorporated in this study help to describe and explain the phenomenon under investigation. The present study used institutional theory and the RBV to underpin an investigation that is aimed at developing a framework that can help improve SME participation in public procurement in the UK. Sections 4.2 - 4.4 describe each of the theoretical lenses in detail; explaining the wider context and nature of their applications to the present study.

While the RBV enabled the researcher to identify internal firm resources and capabilities that may influence SME participation in public, the institutional theory helped to explain how governments used policies to support SMEs in the same context. The two theories were combined in this study to provide a broader understanding of how SMEs can improve participation in public procurement, and thus offer some insights for exploring the research key aim– which is, to propose a framework that may help improve SME participation in public procurement. Section 4.5 provides a discussion of the rationale for combining institutional theory and the RBV in analyse measures to improve SME participation in public procurement.

The scope of applications of theories in this study was limited due to the exploratory and descriptive nature of the research questions. Hence, the RBV and institutional theory are used mainly as underpinning theoretical lenses to explain, but not so much for predicting relationships amongst the phenomenon under investigation. This is a limitation that should be further explored in future explanatory studies through development and testing hypotheses to validate or disprove the key assumptions of the theories used in this study, and particularly regarding their importance and relevance to SME participation in public procurement. Nevertheless, the use of theories in public procurement research is emerging (Flynn and Davis, 2014), and this study can contribute to the body of knowledge in this area.

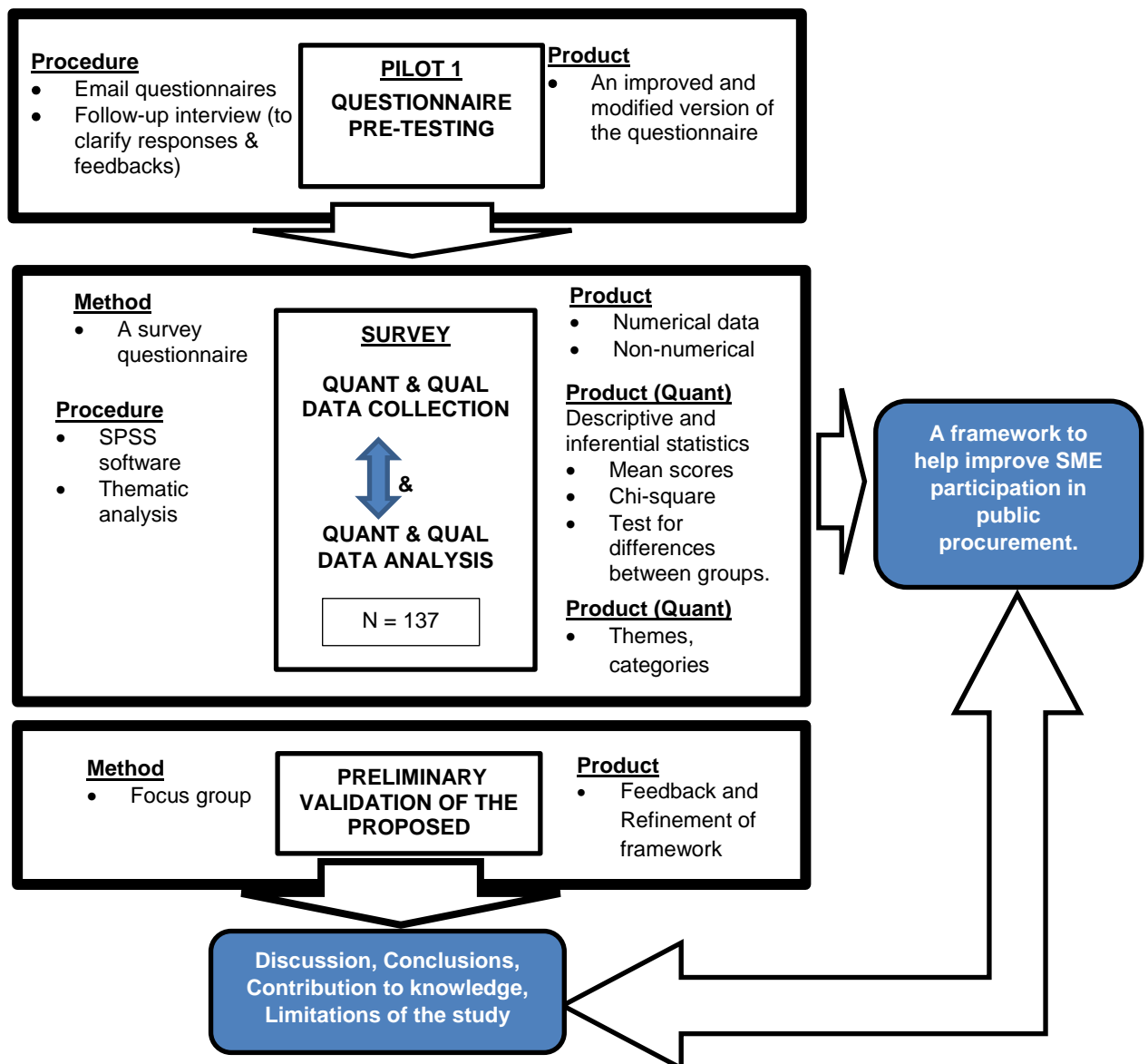
CHAPTER 5

5.0 Designing and implementation of the survey

5.1 Introduction

Following up on the discussions of methods in Chapter 3, this Chapter presents a discussion on the questionnaire design, piloting (pre-testing) and actual implementation of the survey. This includes discussions on the questionnaire administration process, response rate, and test for reliability and techniques for analysing the survey data. Figure 1 presents a flowchart summary of the research strategy to achieve the main aim of the research.

Figure 5.1 Survey implementation flowchart



As mentioned earlier in the methodology chapter, the choice of survey as a method of data collection in this study is influenced by a range of factors. For example, the table (5.1) below, summarises some of the key advantages of using survey as data collection strategy, which also informed the researcher’s choice for adopting this approach as the research strategy.

Table 5.1 The advantages of conducting surveys

Sources	Advantages of surveys
Bresee (2014).	<ul style="list-style-type: none"> Enables standardisation of questions for easily collection of responses
Fautrel <i>et al</i> (2017)	<ul style="list-style-type: none"> Participants can respond at their own convenience
Bresee (2014)	<ul style="list-style-type: none"> Allows adoption of questionnaire measures/items that has been validated through previously studies
Head <i>et al</i> (2013)	<ul style="list-style-type: none"> Low cost
Couper (2011) Desselle (2005).	<ul style="list-style-type: none"> Appropriate for evaluating variables, such as attitudes, behaviours and perceptions, that are not easily available via other sources Enable collection of large amount of data.
Boynton and Greenhalgh (2004)	<ul style="list-style-type: none"> Offers multiple modes of data collection such as mail, interview, telephone, internet etc
Denscombe (2007)	<ul style="list-style-type: none"> It is a powerful means of selection empirical data in a structured manner Comprehensive coverage

Source: compiled from (Bresee, 2014; Fautrel *et al.*, 2017; Head *et al.*, 2013; Couper, 2011; Desselle, 2005; Boynton and Greenhalgh, 2004; Denscombe, 2007)

Despite the above-mentioned advantages, some studies have reported the disadvantages of conducting a survey. Table 5.2 itemises the common disadvantages of conducting surveys and the actions taken to address them in this research.

Table 5. 2 Disadvantages of surveys and remedy solutions actions taken to overcome them in this research.

References	Disadvantages	Steps taken in this study to overcome the disadvantages
Nardi (2015)	<ul style="list-style-type: none"> Questionnaire items can be too long and too complex 	<ul style="list-style-type: none"> Questionnaire was designed to contain standardised items which make it simple for the respondents to answer

		<ul style="list-style-type: none"> The initial draft of the questionnaire was pretested for content validity and appropriateness of measures
Fowler (2013)	<ul style="list-style-type: none"> Measurement error: unclear questions 	<ul style="list-style-type: none"> The first draft of the questionnaire was pretested with a sample of the target audience (i.e. SMEs) to ensure clarity, appropriateness of the measures Using the feedback from the pretesting, the questionnaire items were improved to remove any ambiguities
Bresee(2014)	<ul style="list-style-type: none"> Inaccurate measures/categories used in the survey instrument 	<ul style="list-style-type: none"> Some of the items used in previous research on SME and public procurement were adapted The piloting session assisted in ensuring that the measures/items are fit for purpose.
Mathers, Fox and Hunn 2007)	<ul style="list-style-type: none"> Can contain unnecessary information, which may discourage participation 	<ul style="list-style-type: none"> The survey instrument was modified and streamlined after piloting to remove unnecessary information
Lambert and Loiselle, (2007) Andrews (2005)	<ul style="list-style-type: none"> Inappropriate or vague answering and question skipping may occur in open-ended survey questions 	<ul style="list-style-type: none"> Before analysing the qualitative survey data, follow-up telephone discussions were conducted with some respondents to clarify any vague comments from the open-ended questions This supplemented the responses obtained through the open-ended questions in the survey
Heffner (2004)	<ul style="list-style-type: none"> Data is based on participants' responses which might be wrong and untruthful 	<ul style="list-style-type: none"> The potential respondents were informed that the study is purely for academic purpose, and confidentiality was guaranteed.
Cooper and Schindler (2003)	<ul style="list-style-type: none"> Low response rate depending on the mode of administering the questionnaire 	<ul style="list-style-type: none"> The questionnaire was designed online and distributed through email Follow-up emails reminders were sent out to participants No personal information was requested to ensure anonymity
	<ul style="list-style-type: none"> Accurate mailing list required 	<ul style="list-style-type: none"> The email addresses of all the sample population were not on record, hence the correct email contacts were obtained via searching the company websites and through making follow up calls

Source: developed from (Nardi, 2015; Fowler, 2013; Bresee, 2014; Mathers, Fox and Hunn, 2007; Lambert and Loiselle, 2007; Andrews, 2005; Heffner, 2004; Cooper and Schindler, 2003)

5.2 Rationale for the survey approach

The survey approach used in this study is known as a self-completion survey. Another name for this approach is self-administered survey method (Robson, 2002). This approach was selected because it aided the distribution of survey to a larger sample of participants who could complete the questionnaires on their own (Fautrel *et al.*, 2017; Head *et al.*, 2013). This involved an online questionnaire designed and distributed through SurveyMonkey: an online-based survey website. The prospective participants received email invitations to participate in the survey, with a link to the survey location online. The invitation email also assured anonymity of participants.

SurveyMonkey permits the researcher to monitor response rates to the questionnaire and to track incomplete responses real-time. Furthermore, it allows the respondents to complete the questionnaire at their own pace, locations and convenient times, with just a click on the survey link. Table 5.3 presents some key advantages and disadvantages of executing online-based surveys. After comparing the advantages with the disadvantages, the researcher concluded that this approach would be most appropriate. In addition, the researcher recognised that the prospective respondents are more likely to be contacted through Internet than other survey methods.

Table 5.3 The advantages and disadvantages of online survey instrument

Authors	Advantages	Disadvantages
Fautrel <i>et al.</i> (2017)	<ul style="list-style-type: none"> • Wider distribution of sample • It allows long length of data gathering period: participants can be sent reminders to complete the survey 	Difficult to tract specific respondents have response
Szolnoki and Hoffmann (2013)	<ul style="list-style-type: none"> • It is relatively cheaper than other method such as postal or face-to-face survey 	<ul style="list-style-type: none"> • Computer literacy is important

	<ul style="list-style-type: none"> • Higher speed of response • Flexible and user-friendly • Respondents can complete at their own convenience 	<ul style="list-style-type: none"> • Only compatible with smartphones • Respondents must be motivated to complete the survey
Couper (2011)	<ul style="list-style-type: none"> • Reliant on respondents' perspectives and experience 	<ul style="list-style-type: none"> • Potential for eliciting untruthful responses
Hoogendorn and Daalmans (2009).	<ul style="list-style-type: none"> • Easily accessible by potential respondents via various mediums (phones, computer, ipad) 	<ul style="list-style-type: none"> • Problems with representativeness as most people still do not have internet access
Denscombe (2007)	<ul style="list-style-type: none"> • Enable access to potential respondents that would not otherwise be easy to reach • Responses are collated systematically in a format that aid easy transfer into software for statistical analysis 	<ul style="list-style-type: none"> • Internet survey have higher propensity for sample bias: some groups of people may not be online • Potential respondents can easily decline participation
Duffy <i>et al.</i> (2005)	<ul style="list-style-type: none"> • Does not require the researcher presence 	<ul style="list-style-type: none"> • Special skill is needed to design the survey instrument online.

Source: compiled from Fautrel *et al.*, 2017; Szolnoki and Hoffmann, 2013; Couper, 2011; Hoogendorn and Daalmans, 2009; Denscombe, 2007; Duffy *et al.*, 2005)

The following subsections discuss the process of developing the questionnaire and the sampling approach for this study.

5.3 Questionnaire development

This research began by conducting a literature review on the key policy measures supporting SMEs in public procurement in the UK. The researcher chose the following six key policy measures for empirical investigation in this study: Elimination of PQQ for Smaller Contracts, Prompt Payment Rule, Consortium Bidding, Contract Finder, Division of Contracts into Lots, and Sub-Contracting. The purpose of the survey questionnaire was to achieve three key objectives:

1. Firstly, to examine SME's awareness of key policy measures and determine whether there were significant differences between SMEs classified in different categories according to size (i.e. microenterprises, small enterprises, and medium enterprises), age and public tendering experience.
2. Secondly, the survey sought to analyse SMEs' attitudes towards key policy measures and to determine whether there were significant differences between respondents classified in different categories according to their size (i.e. microenterprises, small enterprises, and medium enterprises), public tendering experience, age and public tendering experience.
3. Lastly, the survey sought to examine key issues and concerns about the policy measures, from the perspectives of SMEs, to recognise whether opportunity for improvement existed.

As previously mentioned, the development of the questionnaire began with extensive review of the literature to identify past studies that have investigated measures to support SMEs in public procurement in the UK. Sources for the literature review included academic journals, policy notes, consultation papers, guidance documents, press releases and other government publications. Given the institutional similarities in public procurement regimes among EU Member States (Flynn and Davis, 2016b), the literature review includes studies from other EU countries.

Questionnaire development for this study was informed by previous studies (Flynn and Davis, 2015, 2016b, 2016c; Loader, 2016, 2017; Eßig and Glas, 2016; Tammi, Reijonen and Saastamoinen, 2016; Tammi, Saastamoinen and Reijonen, 2014; Ward, 2014; Hojmosse et al., 2013). The researcher revised and adapted items from these studies, where possible, to reflect the focus of the present research. Some items were synthesised from the literature and incorporated into the questionnaire to formulate questions, which were more relevant to the research objectives. The questionnaire was pilot tested for validity and reliability.

5.3.1 Questionnaire design

The questionnaire consisted of items designed to elicit responses from the participants, which can help in addressing the research objectives. It had main three sections, namely, sections A, B and C.

Section A: This contains questions related to the educational status, knowledge, and experience of the respondents. For example, respondents were required to indicate their current job role and the roles they played when their company was competing for public contracts. These questions were important to help determine whether the respondents had the required knowledge and experience to provide valuable evidence for testing the research objectives.

Section B: This section consists of demographic and other related organisational attributes which were modified from previous studies (Flynn and Davis, 2016a; Tammi, Saastamoinen and Reijonen, 2014; Reijonen, Tammi and Saastamoinen, 2014) on SME participation in public procurement. The respondents were required to identify:

- The industry type of their company, by choosing one of the following options: services, construction, manufacturing and “others”.
- The number of employees working in their company, based on the following classifications: Micro (1–9), Small (10–49), Medium (50–249) and Large (over 250). This enabled the researcher to classify respondents’ companies according to the UK government’s definition of an SME (Ward, 2014).
- How long their company has been trading, by choosing one of the following options: less than 1 year, 1–5 years, 6–10 years, 11–20 years and over 20 years.
- The percentage of their company’s total annual revenue that is attributable to income from public sector contract, by choosing one of the following options: 0% (none), Up to 20%, 21% to 39%, 40% to 59%, 60% or more and “others”.

- The rate at which their company seek tender opportunities within NHS, based on the following options: daily, weekly, monthly, yearly and “don’t know”.
- The typical value of public contract sought after by the company, based on the following options: £1 – £25,000, £25,001 – £50,000, £50,001– £100,000, £100,001– £150,000 and more than £150,001.
- The quantity of public contracts the company has tendered for in the last 12 months, based on the following options: None, 1-5, 6-10, 11-20, 21-30 and “Don't know”
- The quantity of public sector bid/tender won in the last 12 months, based on the following options: None, 1-5, 6-10, 11-20, 21-30 and “Don't know”.
- The company’s public tendering experience, based on the following options: Never, 1 – 5 years, 6 – 9 years, 10 – 14 years, over 15 years and “Don’t know”

Section C: includes questions examining respondents’ awareness of and attitudes towards the key policy measures supporting SME in public procurement in the UK. The section had six sub-sections, which represented each of the following key policy measures: Elimination of PQQ for Smaller Contracts, Prompt Payment Rule, Consortium Bidding, Contract Finder, Division of Contracts into Lots, And Sub-Contracting). The questions asked under each key policy measure are listed below:

- The first question required respondents to indicate their awareness of the policy measure, with a “Yes” or “No” answer.
- The second question required respondents to indicate their extent of agreement or disagreement with a list of statements depicting the potential benefits of each of the key policy measure. These were identified from the literature review as possible

benefits that SMEs might derive from the six policy measures being investigated. The questionnaire statements were measured using a five-point Likert Scale: 1= Strongly Disagree to 5=Strongly Agree, as adopted from previous studies that investigated SME and public procurement participation (e.g. Tammi, Saastamoinen and Reijonen, 2014; Flynn, 2016). Table 5.4 presents the items measured under each of the key policy measures, which were summarised from the critical review of the literature in Chapter 2 (see sections 2.6.4.1 – 2.6.4.6,)

- The third sub-section sought to examine SMEs’ opinion about the key policy measures, using open-ended questions. This section includes two questions asking the respondents to express their views on any issues or concerns about the policy measures.

Table 5.4 The items examined through the questionnaire to assess attitudes towards the key policy measures

Policy Measure	Items <i>(attributes showing the potential benefits the policy measure)</i>	Source (e.g.)
Policy Measure 1: Elimination of PQQ for smaller contracts	<ol style="list-style-type: none"> 1. It makes the procurement process less time-consuming 2. It helps to make the supplier eligibility criteria less difficult to meet (allow bidders to self-certify their ability) 3. It reduces the administrative burden placed on the bidders 4. It helps to ensure that selection criteria are proportionate to the contract sizes 	Flynn and Davis (2016a) Flynn and Davis (2016b) Flynn and Davis (2016c) <i>Loader (2016)</i>
Policy Measure 2: Prompt payment rule	<ol style="list-style-type: none"> 1. It inspires existing contractors to be on the lookout for new contract opportunities 2. Firms that haven’t been competing for public tenders may be motivated to do so 3. It helps to improve the cash flow of contractors 	Flynn and Davis (2016a) Flynn and Davis (2016b) Flynn and Davis (2016c) <i>Loader (2016)</i>

	4. It helps to keep subcontractors healthy	
Policy Measure 3: Consortium bidding	<ol style="list-style-type: none"> 1. It helps to improve the bidder's technical capacity to meet the minimum requirements for the tender 2. It enables the bidder to meet the geographic spread required for contract delivery performance 3. It enables the bidder to prepare high quality bid/proposal by combining expertise with peers 4. It helps the bidder to develop skill to tender independently for future contract opportunities 	<p>Flynn and Davis (2016a) Flynn and Davis (2016b) Flynn and Davis (2016c) Loader (2013) <i>Loader and Norton (2015)</i> Perry (2011).</p>
Policy Measure 4: Contract finder	<ol style="list-style-type: none"> 1. It helps prospective bidders to keep an eye on forthcoming tender opportunities 2. It is less wearisome to search for information about existing tender opportunities 3. It makes searching for contract information less time consuming 4. It helps to increase transparency of sub-contracting opportunities 5. It helps to simplify the procurement process 	<p>Flynn and Davis (2016a) Flynn and Davis (2016b) Flynn and Davis (2016c) <i>Loader (2016)</i> Nicholas and Fruhmann (2014) Palacios-Marqués <i>et al.</i> (2015)</p>
Policy Measure 5: Division of contracts into lots	<ol style="list-style-type: none"> 1. It enables SMEs to compete on the same level with larger companies 2. It offers opportunities for SMEs to bid for more than one contracts within a single procurement exercise 3. It enables SMEs to bid for contract opportunities that are relevant to their competencies. 4. Smaller contract sizes would be opened up to SMEs 	<p>Carayannis and Sipp (2005). Flynn and Davis (2016a) Flynn and Davis (2016b) Flynn and Davis (2016c) Kidalov (2013). <i>Loader (2013)</i> <i>Loader (2016)</i></p>

Policy Measure 6: Sub-contracting	<ol style="list-style-type: none"> 1. It offers opportunities for SMEs to get some relevant experience for future tender competition 2. It helps to facilitate skill transfer from large firms to SME sub-contractors 3. It is a less difficult route for SMEs to participate in public procurement markets 	<i>Glover (2008)</i> <i>Loader and Norton (2015)</i> Nicholas and Fruhmann (2014). Rostek (2015).
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Source: items taken, assembled and modified and from the literature review sections 2.6.4.1 – 2.6.4 (Chapter 2)

5.4 Piloting the questionnaire

The initial draft of the questionnaire was pilot tested (see Appendix 2 for an initial draft of the questionnaire). The researcher considered this necessary because a pilot might detect potential issues pertaining to usability of questionnaire items and validity of the research findings (Blessing, & Chakrabarti, 2009). A pilot test was conducted at the initial stages of questionnaire development to determine whether the questions asked, and the variables measured were relevant and easily understood, and to assess the quality and suitability of the contents (items/questions), scope and structure of the questionnaire. This was conducted between August and September 2016.

5.4.1 Pilot process and participants

A pilot study is often used to test data collection instruments and sampling techniques in a small study, in preparation for a large-scale population-based study (Blessing and Chakrabarti, 2009; Hassan et al., 2006). Researchers have suggested different sample sizes for pilots in survey investigation. For example, Saunders et al. (2007) suggested a minimum number of 10 observations for social and management research, while Julious (2005) and van Belle (2002) recommended a minimum of 12 participants for pilot studies in the medical field. On the other hand, Kiropoulos *et al.* (2016) recommended that a sample size ranging of 30 had many advantages for pilot studies, such as detection of vague items/statements, misinterpretations of survey items and identification of other unforeseen errors.

Notwithstanding, it is important to state that the purpose of a pilot in this study was to assess the reliability or consistency of the survey instrument, using feedback from participants. Therefore, the quality of feedback obtained from the pilot study will be considered more important than the sample size of respondents, because this will assist the researcher to improve the overall content, presentation and style of the instrument before implementing the survey. In view of the above, a sample of 25 SME firms was involved in piloting the questionnaire used for this study. Although this is lesser than 30 as suggested by Kiropoulos et al. (2016), the sample size is considered adequate given the reasons above, and because it is more than the minimum number recommended by other previous mentioned researchers (e.g. Saunders *et al.*, 2007; Julious, 2005; 2002).

The pilot participants included SME firms supplying goods and services to a NHS organisation in the North West Region of England which were identified by purposive selection. The researcher had previously sought the consent of the referred organisation to recruit SMEs from their supplier database (the consent letter is in Appendix 1). The pilot participants were sampled purposively from the database provided by this organisation (i.e. a NHS trust). Thus, it was important to include a sample population of the targeted participants who were presumed knowledgeable about the topic under investigation.

Hassan et al. (2006) describe key issues to observe amongst participants of a pilot study, which are adopted in the present study. Consequently, the pilot participants received an email with a copy of the questionnaire requiring them to:

- Record time it takes to complete the questionnaire
- Identify any difficulties they encountered in responding to the questions
- Comment on the questionnaire items/measures: whether they were measuring what it intends to assess in relation to the research objectives
- Confirm whether the measurement scales are relevant and easily understood
- Indicate aspects of the research aim that are not addressed in the questionnaire

- Make comment on the layout and order of questions in the questionnaire: are they logical or suitable?
- Detect any typographical and grammatical errors
- Provide feedback and suggestions for improving the questionnaire (i.e. contents, scope and structure).

These points were considered important to determine the feasibility of the research protocol and validity of the contents. These enabled the researcher to gain a better understanding of where improvements were needed in the draft questionnaire, before carrying out the actual study.

15 out of the 25 people that were contacted as potential pilot participants completed and returned the questionnaires (see sample in Appendix 2) with useful feedback and suggestions for improvement. However, the researcher felt it was necessary to clarify the concerns raised by some (9) of the pilot participants. Consequently, 4 telephone conversations and 5 face-to-face discussions were conducted with the pilot participants. The outcomes of the piloting are discussed in the following section (see section 5.4.1.1 – 5.4.1.4). This involves some direct quotations from the pilot participants: the identities of the respondents were concealed for confidentiality purpose: pilot participant 1, pilot participant 2, pilot participant 3...and pilot participant 12.

5.4.1.1 Positive comments about the questionnaire

On average, pilot participants spent 15 minutes to complete the questionnaire survey. The pilot participants showed that they had a good understanding of the research topic and the research objectives. They believed that the research could bring about very interesting and potentially beneficial outcomes for SMEs. With the exemptions of a few grammatical mistakes, no one complained that the questionnaire contents/items were ambiguous or irrational. One of pilot participants articulated this more clearly:

“Sorry for a bit late reply. I've watched through your pilot and I asked my Director, who knows SME in the UK much better than me, to take a look as well. First of all, I would like to say that I believe you have a very inspiring and important project which I hope can bring the useful results. I've noticed some minor *mistakes that I have commented in the attached document*” (pilot participant 1).

Other pilot participants put this succinctly:

“I hope that you have had a great week? I have been through your questionnaire with a fine tooth comb today and I think that is it very well written. You seem to have covered everything that I can think of and I am particularly impressed with your last few questions... the few corrections or alterations to be made are in the attached” (pilot participant 4).

5.4.1.2 Some common issues raised by the pilot participants

The pilot participants sought to know how the researcher intended to distribute the questionnaire during the actual study. Although a decision had not been made concerning the method of administering the survey, this feedback could not be ignored because it offered an opportunity to determine the most optimal medium that would yield best results for disseminating the survey questionnaire (whether online or through the post or via emails). The researcher then asked the pilot participants to suggest their preferred medium for receiving questionnaire; they all showed a preference for online surveys. As one of them rightly said:

“I believe the online form would be preferable since it is easier to fill in and stay anonymous” (pilot participant 5).

Furthermore, pilot participants mentioned the importance of using incentives to motivate survey participants. One of them said:

“It doesn't really “sell” me on why I should do it. I think the whole survey is far too long and as there is no clear benefit for anyone filling it in them..... my belief is the response rate may be low if there are no incentives to motivate SMEs to spare time for filling in surveys” (pilot participant 11).

Another pilot participant suggested a strategy to motivate the proposed survey respondents:

“...As I know from my personal experience, the idea to participate in survey and get a chance to win 100£ e.g. (random winner) works very well as a motivation for many respondents.....If you think you are not able to suggest that, maybe you could promise to send the results through email and add the question about the email where the respondent would like to receive the results” (pilot participant 3)

5.4.1.3 Commonly omitted items in questionnaire

While screening the returned questionnaire responses, the researcher noticed that some pilot participants (i.e. 9 out of the 15) did not provide a response to the following items:

- **ITEM 15:** It helps SMEs to keep an eye on forthcoming procurement opportunities
- **ITEM 18:** It gives SMEs greater competitive advantage over large firms
- **ITEM 19:** More available small sized contracts are makes the public tenders more attractive to SMEs

The reason for the above omissions was discovered during the telephone and face-to-face interviews. The pilot participants said that they considered that the items were vague or grammatically ambiguous, and decided to overlook them. Using the feedback from the pilot participants, the items were improved as follows:

- **ITEM 15:** It makes searching for information about existing opportunities, less tedious
- **ITEM 18:** It enables SMEs to compete on the same level with larger firms
- **ITEM 19:** More accessible smaller size contracts would be available for SMEs, to enable them to participate.

5.4.1.4 General suggestions for improvement

The pilot participants made some suggestions for addressing the issues mentioned above. They recommended the following actions on the part of the researcher:

- The researcher should state the objectives of the research clearly in the survey cover letter to enable potential survey respondents to make a well-informed decision whether to participate

- The researcher should offer some incentives (both financial and non-financial) to potential survey respondents, and be transparent about the process for claiming the incentives.
- The researcher should ask survey respondents whether they want to receive a summary report of the research findings.
- The questionnaire needs modifications to reduce the length without losing any of its important contents.
- The researcher should delete (if possible) sections or items in the questionnaire, which irrelevant to the research objectives
- The researcher should indicate the estimated time for completing the questionnaire in the survey cover letter.

After reviewing all this feedback from the pilot participants, the researcher amended the questionnaire before using it in the main study (see final version of the questionnaire in appendix 3).

5.5 Questionnaire administration and response rate

A total of 811 firms¹⁴ were invited to participate in a survey that was conducted from 5th November 2016 to 19th December 2016 (i.e. over a four-week period). The questionnaire was disseminated via SurveyMonkey with an email containing a web link that directs the participants to the survey location. One hundred and fifty-four (154) responses were received in the first week after the initial email; this resulted in a response rate of 19%. A

¹⁴A list of all firms (811 in number) that have either participated in or have registered to bid/participate in contract opportunities advertised in the public sector, was obtained from different NHS organisations in North West of England.

follow up email was sent to the participants afterwards to help boost the response rate, and an additional 31 responses were received.

The total number of responses to the survey was 185, yielding an overall response rate of 22.8%. The data was screened before analysis and incomplete responses were removed. Since the study concerned SMEs, the surveys completed by large firms (i.e. firms with 250 or more staff members) were excluded. The total number of incomplete responses was 25 and the number of large firms was 23. The number of usable responses returned by SME sample was 137, corresponding of 16.9% (137 of 811). The response rate is considered acceptable and sufficient for statistical analysis when compared with recent surveys of SMEs. Flynn and Davis (2015, 2016) obtained a response rate of 10% for two successive surveys conducted in 2013 and 2014 amongst SMEs in the Republic of Ireland.

Similarly, Flynn, McDevitt and Davis (2013) secured a response rate of 8.7% from a survey that examined the impact of size on SME participation in public procurement in Ireland. Similarly, Tammi, Saastamoinen and Reijonen (2014) and Reijonen, Tammi and Saastamoinen (2016) obtained a 7.2% response rate from the surveys of 3305 SMEs in Finland: the studies were published in 2014 and 2016 respectively. Therefore, the present study achieved a higher response rate when compared with previous studies on SMEs and public procurement nexus.

5.6 Survey analysis process

The completed survey data were downloaded from SurveyMonkey and inputted into Microsoft Excel for initial screening of the data and SPSS software for statistical analysis. The five key stages of data analysis recommended by (Creswell and Clark, 2007; Mohamad, 2009) are data preparation, data exploration, analysis of the data, data representation and validation of the data. This process was followed in analysing the data collected in study. Table 5.5 provides detailed description of stages and the process followed on this study. The results of survey data analysis and findings are presented in chapter 6.

Table 5.5 Description of data analysis stages and processes

Stages of data analysis	The process followed in this study
<i>i. Data Preparation</i>	<ul style="list-style-type: none"> • The raw data collected from SurveyMonkey were transferred to Excel sheet and SPSS (Statistical Package for the Social Sciences). • Screening of data to identify errors, remove the errors and check if there were missing responses/values • Coding of questionnaires responses (data) into variables to enable analysis on SPSS • Ensuring that the data is of excellent quality: appropriate for the type of statistical analysis to conducted (e.g. reliability test, non-response bias test)
<i>ii. Data Exploration</i>	<ul style="list-style-type: none"> • Separate the survey responses according to the category of micro, small and medium-sized enterprises to look for observable trends • Separate the responses to differentiate the respondent firms' involvement in public procurement
iii. Analysis of The Data	<ul style="list-style-type: none"> • Test for non-response bias by comparing early respondents with late respondents' data • Conduct reliability analysis to determine the reliability of the questionnaire's items and measures • Use of descriptive statistics such as calculation of mean scores, percentages, variance to determine the sample according to the respondent firms' sizes, age, years of experience in tendering, value of public contract sought after and industry/sector • The use of percentage scores, cross-tabulation and Chi-square tests to analyses awareness of key policy measures. • The use of mean ranking, percentage scores and Kruskal-Wallis tests to analyse attitudes of SMEs towards key policy measures
iv. Data Representation	<ul style="list-style-type: none"> • Display of data using bar/pie charts, tables, figures and written analysis of statistical results

v. Discussion of findings and validation	<ul style="list-style-type: none"> • Compare data from survey with literature evidence
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Source: developed from (Creswell and Clark, 2007; Mohamad, 2009)

5.6.1 The preliminary stages of survey data analysis

This section covers the preliminary analysis of survey data. This covers tests for normality, respondents' representativeness using extrapolation, as well as using Cronbach's coefficient to determine the reliability of the questionnaire's items (as discussed below in sections 5.6.1.2 and 5.6.1.3).

5.6.1.2 Statistical test for normality of data

According to Ghasemi and Zahediasl (2012), the assumption of normality needs to be checked for every statistical procedure, to help determine whether a parametric or nonparametric test is appropriate and for ensuring validity of results. Approaches for evaluating if a dataset is normally distributed or not fall into two broad categories (Field, 2009). These can be examined visually using normal plots (e.g., Q-Q probability plots which usually display the observed values against normally distributed data) and statistical tests (e.g. Anderson-Darling/Kolmogorov-Smirnov/Shapiro-Wilk). However, statistical tests are used in this study because they have been recommended as more reliable and accurate (Ghasemi and Zahediasl, 2012). Consequently, the Kolmogorov-Smirnov and Shapiro-Wilk tests for normality were conducted at chosen significant level (i.e. $p < 0.05$) and the results are shown in Table 5.6 the results were interpreted as follows:

- $p > 0.05$ mean the data are normal.
- $p < 0.05$ mean the data are NOT normal.

The results of test presented in Table 5.6 suggests that the data for this study are not normally distributed because the p-value is less than 0.05, therefore, we reject the null hypothesis that the data follow a normal distribution. Since the assumptions of normality are not met, it is appropriate to use the non- parametric statistics, also known as distribution-free tests (Sprent and Smeeton, 2000; Altman and Bland, 2009). In addition, non-parametric tests are appropriate when the level of measurement of all the variables

is nominal or ordinal scales (McHugh, 2013), like used in this study to measure awareness and attitude towards key policy measures. The next step therefore is to determine which non-parametric tests should be considered for comparing groups, in order to address the following research sub-questions:

Research sub-question 2: *are there significant differences between diverse groups of SMEs regarding their level of awareness of policy measures?*

- **Dependent variable:** policy awareness is a nominal variable of two categories (i.e. Yes or No).
- **Independent variable:** e.g. SME size is a nominal variable consisting of more than two categorical groups (i.e. firm size, firm age)

Research sub-question 3: *are there significant differences between diverse groups of SMEs regarding their attitudes towards policy measures?*

- **Dependent variable:** policy awareness is a nominal variable of two categories (i.e. Yes or No).
- **Independent variable:** e.g. SME size is a nominal variable consisting of more than two categorical groups (i.e. firm size, firm age)

Table 5. 6 Normality test

Questionnaire Items	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Industry/Sector	.476	136	.000	.517	136	.000
Firm size (number of employees)	.222	136	.000	.805	136	.000
Firm age (years of trading)	.253	136	.000	.807	136	.000
Revenue from sector contracts	.177	136	.000	.904	136	.000
Frequency of seeking contract opportunities	.182	136	.000	.925	136	.000
Value of public contract sought after	.193	136	.000	.878	136	.000
Frequency of bid submissions	.290	136	.000	.795	136	.000
Success rate in public tendering	.303	136	.000	.635	136	.000
Public tendering experience	.222	136	.000	.903	136	.000
Elimination of PQQ	.390	136	.000	.623	136	.000
Attribute 1	.297	136	.000	.858	136	.000
Attribute 2	.339	136	.000	.800	136	.000
Attribute 3	.272	136	.000	.859	136	.000
Attribute 4	.350	136	.000	.806	136	.000
Prompt Payment Rule	.427	136	.000	.593	136	.000
Attribute 5	.330	136	.000	.816	136	.000
Attribute 6	.319	136	.000	.823	136	.000
Attribute 7	.250	136	.000	.843	136	.000

Attribute 8	.296	136	.000	.860	136	.000
Consortium Bidding	.495	136	.000	.480	136	.000
Attribute 9	.368	136	.000	.766	136	.000
Attribute 10	.355	136	.000	.775	136	.000
Attribute 11	.263	136	.000	.866	136	.000
Attribute 12	.243	136	.000	.883	136	.000
Contracts Finder	.478	136	.000	.518	136	.000
Attribute 13	.391	136	.000	.658	136	.000
Attribute 14	.391	136	.000	.745	136	.000
Attribute 15	.380	136	.000	.756	136	.000
Attribute 16	.321	136	.000	.835	136	.000
Attribute 17	.251	136	.000	.876	136	.000
Division of Contracts into Lots	.478	136	.000	.518	136	.000
Attribute 18	.299	136	.000	.844	136	.000
Attribute 19	.371	136	.000	.752	136	.000
Attribute 20	.364	136	.000	.753	136	.000
Attribute 21	.311	136	.000	.824	136	.000
Subcontracting	.501	136	.000	.462	136	.000
Attribute 22	.344	136	.000	.794	136	.000
Attribute 23	.289	136	.000	.842	136	.000
Attribute 24	.294	136	.000	.847	136	.000

5.6.1.3 Nonparametric approaches to test for differences between groups

There are different types of non-parametric tests, such as Chi-square, Mann-Whitney, Kruskal-Wallis and Jonckheere Terpstra (Ali *et al*, 2015), each having its own specific assumptions regarding how the variables (dependent and independent) are measured on either nominal, ordinal, interval and ratio scales. In order to determine the tests appropriate for examining whether differences exist between different groups of respondents in this study, it is important to first analyse how and the extent to which the data for this study meet key assumptions of different non-parametric tests. Table 5.7 presents analysis showing how scale of the variable measured in this study compare with underlying assumptions of different non-parametric tests. For example, While Mann-Whitney U tests requires that independent variables of two groups, Wilcoxon test is used for comparing two dependent samples and Chi-square requires two variables that are measured as nominal level i.e., categorical data (McHugh, 2013).

As seen from Table 5.7, it can be seen that most of the assumptions of Chi-square and Kruskal-Wallis test are met. For example, a key assumption of the Chi-square is that there are two variables, and both are measured as nominal level i.e., categorical data (McHugh,

2013). Likewise, the variables relating to **sub-research question 2**, fully met these assumptions, considering that both the dependent and independent variables are measured as nominal level, contrasted with other non-parametric alternatives such as Wilcoxon test or Jonckheere-Terpstra tests. Therefore, the Chi-square is considered suitable for testing whether significant difference exist between SME groups about awareness of key policy measures. The findings of Chi Square Tests are reported in Chapter 6 (see sections 4.1 – 6.4.6).

Furthermore, looking at table 5.6, key assumptions of Kruskal-Wallis (Wallis, 1952) are that dependent variable must be measured at the ordinal or continuous level and independent variable must consist of two or more categorical data. Similarly, the variables contained in sub-research question 3 fully meet these assumptions, as against other non-parametric alternatives such as Mann-Whitney U and Wilcoxon tests. For example, key assumptions of these alternative tests (i.e. Mann-Whitney U and Wilcoxon) are that independent and dependent variables must be of two groups, whereas the independent variable for this study comprises of more than two groups (e.g. SME firm size are categorised into micro, small and medium enterprises). Therefore, the Kruskal-Wallis Test H test was adopted to compare the groups of SME respondents regarding attitude towards key policy measures investigated in this study. The mean rank value in Kruskal-Wallis tests are presented in Appendix Tables 7, 8 and 9 to support discussion of the results in Chapter 6 (see sections 6.7.1 – 6.7.6).

Table 5. 7 Types of non-parametric tests

Purpose of test	Non-Parametric methods	Key assumptions	Do the data meet these assumptions? (Yes or No)	Clarifications
<i>Testing difference between groups</i>	<i>Chi-square test</i>	<ul style="list-style-type: none"> There are 2 variables, and both are measured as nominal level (i.e. categorical data) 	Yes	<ul style="list-style-type: none"> This assumption was met because both dependent and independent variables for testing sub-research question 2 are categorical data: For example, <ul style="list-style-type: none"> - Policy awareness (dependent variable) is a categorical variable having two categories (Yes and No) - SME size (independent variable) is a categorical variable having three categories (micro, small and medium)
		<ul style="list-style-type: none"> Consist of two or more categorical independent groups It does not require assumption of homogeneity of variances 	Yes	<ul style="list-style-type: none"> This assumption was met because SME size (independent variable) is an independent variable that comprise of more than two groups (e.g. micro, small and medium)
	<i>Kruskal-Wallis</i>	<ul style="list-style-type: none"> Dependent variable should be measured at the ordinal or continuous level 	Yes	<ul style="list-style-type: none"> This assumption was met because the dependent variables for testing attitude towards policy measures assessed through 5-point Likert scale
		<ul style="list-style-type: none"> Independent variable should consist of two or more categorical data 	Yes	<ul style="list-style-type: none"> This assumption was met because SME size (independent variable) is an independent variable that comprise of more than two groups (e.g. micro, small and medium)

		<ul style="list-style-type: none"> • A better option only if the assumption of (approximate) normality of observations cannot be met or if one is analysing an ordinal variable. • It does not require assumption of homogeneity of variances 	Yes	<ul style="list-style-type: none"> • These assumptions were met because the data used in this study significantly departed from normality • Dependent variables for this study are ordinal level measured through 5-point Likert scale
	Jonckheere-Terpstra	<ul style="list-style-type: none"> • Dependent variable should be measured at the ordinal or continuous level 	Yes	<ul style="list-style-type: none"> • Dependent variables for testing attitude towards policy measures are ordinal scales (5-point Likert scale)
		<ul style="list-style-type: none"> • Independent variable should consist of two or more ordinal, independent groups 	No	<ul style="list-style-type: none"> • This assumption was not met because the independent variable for this study comprise of categorical data only. For example: SME size (independent variable) is an independent variable that comprise of more than two groups (e.g. micro, small and medium)
		<ul style="list-style-type: none"> • Predict, a priori, the order of the groups of the independent variable 	No	<ul style="list-style-type: none"> • This assumption is not met because, no a priori predictions was made regarding the order of the independent variables (e.g. SME grouped by firm size).
	Mann-Whitney U	<ul style="list-style-type: none"> • Independent variables of two groups 	No	<ul style="list-style-type: none"> • This assumption is not met because SME size (independent variable) is an independent variable that comprise of more than two groups (e.g. micro, small and medium)
	Wilcoxon test	<ul style="list-style-type: none"> • Comparing two dependent samples 	No	<ul style="list-style-type: none"> • This assumption is not met because the data used were not from two dependent samples

It however important to state that a one-way ANOVA is an alternative method to test for significant difference between two or more categorical groups but this requires that data are normality distributed (Al Nabhani, 2007). However, the data for this data for this study did not meet the assumption of normality required for conduction one-way ANOVA, but Kruskal-Wallis test offers suitable alternative. Similarly, another assumption underlying ANOVA is that variances of the distributions in the populations are equal. This is commonly referred to as the assumption of **homogeneity of variance** but is not a requirement for non-parametric tests such as Chi-square and Kruskal-Wallis, which are used in the present study. As Nahm (2016) has argued that non-parametric statistics like these do not call for testing the assumptions homogeneity of variance.

5.6.1.4 Respondent representativeness

According to Dillman (2007), the likelihood that a survey will be representative of the population depends on the response rates achieved. Therefore, it is important to obtain a sufficient response rate when conducting surveys. In practical terms, most researchers hardly get high response rates from their sampled participants (Flynn, 2016). If the respondents are not sufficiently representative of the population, it can be difficult for the researcher to generalise findings from the study. A common approach used for examining respondent representativeness is to test for non-response bias is one of the (e.g. Lynn, 2008; Armstrong and Overton, 1977; Flynn, 2016), which can be done by comparing survey with a known population size. However, in the context of this study, such an approach is not feasible given that the total population of SMEs competing for NHS contracts in the entire North West of England is unknown. In fact, there is no single database containing details of all SME in the UK (Department for Business Innovation and Skills, 2015).

Alternatively, respondents' representativeness can be examined through the extrapolation as initiated by Pace (1939). Extrapolation assumes that non-response can occur if the participants feel doubtful of the purpose of the study, or if they lack interest in the research topic or they don't have the time to complete the survey (Flynn, 2016). This method works by comparing the means of two groups of respondents (i.e. early and late respondents), to determine whether there were statistically significant differences exist between them (Sancha, Longoni and Gimenez, 2015; Dalecki,

Whitehead and Blomquist, 1993). The absence of statistically significant differences shows that the respondents are representative of the larger population from which they have been selected.

5.6.1.4.1 Extrapolation for estimating nonresponse bias

The extrapolation method was adopted in this study to test whether the respondents were sufficiently representative of the larger population, consistent with previous similar studies in the field of procurement (e.g. Brewer, Wallin and Ashenbaum, 2014; Flynn, 2016; Sancha, Longoni and Gimenez, 2015). Accordingly, the survey used in the present study was conducted over a period of 4 weeks, and the number of useable responses received (n=137) were divided into two groups based on time course of return of questionnaires, following the approach recommended by Sahlqvist *et al* (2011). The early respondent group included the first SMEs (n=69) who responded to the survey prior to reminders, whereas the late respondent group consisted of the last responses returned afterwards (n=68).

However, it is important that the appropriate statistical analysis is used to determine whether there is a significant difference between these two groups. For example, if the data was normally distributed, a two-sample **t-test** would have been used to test for the difference between two independent variables or respondent groups (de Winter, 2013). However, since the sample data for this study is not normal distributed (see Table 6 for normality test results), the **Mann–Whitney U test**, which is a non-parametric alternative to the t-test was considered (at chosen significance level $\alpha = 0.05$). Table 5.8 below displays the results of the Mann–Whitney U test. Looking at this table, the *p-values* for all the items are higher than the significance level ($p > 0.05$), so we can conclude that there was no significant difference between the early and late survey respondents.

Table 5.8 Test for non-response bias

Questionnaire Items	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Industry/Sector	2.100.000	4.950.000	-1.366	.172
Firm size (number of employees)	1.947.000	4.797.000	-1.749	.080
Firm age (years of trading)	2.265.500	5.115.500	-.273	.785

Revenue from sector contracts	2.046.000	4.896.000	-1.236	.216
Frequency of seeking contract opportunities	2.291.000	5.141.000	-.151	.880
Value of public contract sought after	1.946.500	4.796.500	-1.687	.092
Frequency of bid submissions	2.248.500	4.201.500	-.346	.729
Success rate in public tendering	2.128.000	4.978.000	-.946	.344
Public tendering experience	2.067.000	4.917.000	-1.002	.316
Elimination of PQQ	2.043.500	3.996.500	-1.434	.152
Attribute 1	2.247.000	5.097.000	-.363	.716
Attribute 2	2.150.500	5.000.500	-.850	.395
Attribute 3	2.284.500	5.134.500	-.185	.853
Attribute 4	2.139.000	4.989.000	-.898	.369
Prompt Payment Rule	2.213.000	4.166.000	-.595	.552
Attribute 5	1.907.000	4.757.000	-1.992	.046
Attribute 6	2.289.000	4.242.000	-.169	.866
Attribute 7	2.277.000	4.230.000	-.221	.825
Attribute 8	2.183.000	5.033.000	-.655	.512
Consortium Bidding	2.204.000	5.054.000	-.770	.441
Attribute 9	2.291.000	4.244.000	-.169	.866
Attribute 10	2.298.500	4.251.500	-.132	.895
Attribute 11	2.077.000	4.927.000	-1.154	.248
Attribute 12	2.129.000	4.979.000	-.888	.375
Contracts Finder	2.254.500	5.104.500	-.421	.674
Attribute 13	2.168.500	5.018.500	-.897	.370
Attribute 14	2.076.500	4.926.500	-1.282	.200
Attribute 15	2.055.500	4.905.500	-1.382	.167
Attribute 16	1.827.000	4.677.000	-2.358	.018
Attribute 17	1.851.000	4.701.000	-2.180	.029
Division of Contracts into Lots	2.121.500	4.074.500	-1.214	.225
Attribute 18	2.290.000	4.243.000	-.162	.872
Attribute 19	2.186.000	5.036.000	-.691	.489
Attribute 20	2.300.500	4.253.500	-.121	.904
Attribute 21	2.185.500	4.138.500	-.653	.514
Subcontracting	2.315.500	4.268.500	-.062	.950
Attribute 22	1.980.000	4.830.000	-1.664	.096
Attribute 23	1.802.500	4.652.500	-2.407	.016
Attribute 24	2.083.000	4.933.000	-1.111	.266
^a Grouping Variable: Response Time				

Therefore, given the results of extrapolation test (Table 5.8), there is a compelling evidence to conclude that the sample used for this study is representative of the population from which they have been selected, at least to some extent. This thus suggest that the research findings can be generalised across a wider population of SMEs that compete for public contracts within NHS Trusts in in North West England.

5.6.1.5 Reliability test

The purpose of reliability analysis was to determine whether the data collected from the survey items produced consistent results. According to Pallant (2013) the reliability test offers a means of checking the internal consistency of questionnaire scale or items. In the present study, the researcher conducted a reliability test on the items under each policy measures. This provided an opportunity to determine the degree of reliability and consistency of the data collected from the survey in each variable relating to the six policy measures.

The reliability test was conducted in SPSS where alpha Cronbach's coefficient (Cronbach, 1951) was used to identify the internal consistency of the questionnaire items. Cronbach's alpha coefficient is one of the most frequently used tests to show internal consistency of items/scales (Dunn, Baguley and Brunnsden, 2014; Pallant, 2013). Ideally, an acceptable score of alpha coefficient would be over 0.7 (Pallant, 2013), and higher scores represent greater reliability (Flynn, 2016; Rodeghier, 1996). Based on Table 5.9, the alpha coefficient scores for all the items assessing the key policy measures were higher than 0.7. This suggests that the survey items were consistent and reliable enough as a scale to assess the research questions.

Table 5.9 Reliability analysis of policy measures attributes

Policy Measure	Items Under Each Policy Measure	Cronbach's Alpha (Item)
Elimination of PQQ for smaller contracts	Item 1	0.889
	Item 2	0.890
	Item 3	0.887
	Item 4	0.886
Prompt Payment Rule	Item 5	0.889
	Item 6	0.887
	Item 7	0.888
	Item 8	0.887
Consortium Bidding	Item 9	0.886
	Item 10	0.885
	Item 11	0.885
	Item 12	0.887
Contracts Finder	Item 13	0.889
	Item 14	0.889
	Item 15	0.889

	Item 16	0.883
	Item 17	0.884
Division of Contracts into Lots	Item 18	0.884
	Item 19	0.884
	Item 20	0.886
	Item 21	0.889
Sub-Contracting	Item 22	0.882
	Item 23	0.881
	Item 24	0.883

Reliability Statistics

Cronbach's Alpha	N of Items
.890	24

5.6.2 Techniques for analysing the survey data - quantitative

The quantitative data collected from the questionnaire were analysed with SPSS software and the following statistical analyses were performed:

5.6.2.1. Descriptive statistics

Descriptive statistics such as mean, frequency and percentage scores were used to describe the basic features (e.g. background/ demographic information) of the survey data. In sections 6.2 - 6.3.8, the application of this technique is discussed in detail.

5.6.2.2. Cross-tabulations analyses and chi-square

Cross tabulations were used to analyse data relevant to determining SME's awareness of the key policy measures. This enabled the researcher to present frequency and percentage statistics on data tables, which described the results of the whole group of respondents together with results from sub-groups (Schwarz et al., 2017). For example, the questionnaires used in this study required SME respondents to answer "Yes" or "No" to a question asking them whether they were aware of key policy measures available for their benefits. Awareness level was determined by calculating the percentage of the total SME respondents who said "Yes" or "No".

Afterwards, the data were grouped in terms of awareness of policy measures (Yes or No), and in terms of SME characteristics (i.e. Firm size, age and public tendering experience) with a purpose to test whether there is a significant difference in the

awareness of policy measures by SMEs in different groupings. Chi-square has been used widely for testing differences between groups based on two categorical/grouped data (McHugh, 2013; Sharpe, 2015; Zhu, 2016). This method was adopted to test whether significant differences exist between the following categorical variables:

1. Firm size and awareness of policy measures
2. Firm age and awareness of policy measures
3. Firm tendering experience and awareness of policy measures

The next thing is to determine whether a statistical significant difference exist in the data analysed about awareness of policy measures. For example, it is empirically acknowledged that SME population is diverse and comprise characteristics such as firm size (Flynn, McDevitt and Davis, 2013; Hamilton, 2012), age and the year of experience in tendering for public sector contracts (e.g. Flynn and Davis, 2015; Smith, 2015). These firm characteristics might influence SMEs' awareness or opinions about the policy measures being investigated in this study. Therefore, the research sub-question 2 developed to test whether; there are significant differences between diverse groups of SMEs regarding their level of awareness?

At first, the researcher must choose the acceptable p-value or probability value (p-value) for interpreting the Chi-square tests of differences between the groups of variables (i.e. SME size, age, tendering experience). Usually, most scholars use a p-value ($p \leq .05$) for testing statistical significance (Zhu, 2016; Al Nabhani, 2007), which means that there is 95% confidence that the difference found in the data is not by chance. This approach was adopted in the present study to interpret the results of Chi-square tests as follows:

- A small p-value (usually ≤ 0.05) indicates strong evidence that the Chi-square test results is statistically significant; meaning that it is **very unlikely** that the observed difference (if any) is by chance.

- A large p-value (usually $p > 0.05$) indicates weak evidence that the Chi-square test results is statistically significant; meaning that it is **very likely** that the observed difference is by chance. Hence, the result is not statistically significant.

For example, in Chapter 6 (sections 6.4.1 – 6.4.6), Chi-square tests were performed on the data to determine whether there are significant differences between SMEs in different groupings based on firm size, age, and tendering experience, on their awareness of key policy measures. So, if for example, the p-value was 0.04 (i.e. ≤ 0.05) for any of the Chi-square test results, and given that an alpha of 0.05 is used, the researcher can conclude that there is a statistically significant difference exists.

5.6.2.3 Frequencies and percentages score

To examine SMEs' attitudes towards key policy measures, a **5-point Likert scale** was used. Likert (1932) developed this as principles of measuring attitudes by requesting respondents to respond to a series of statements. Likert scale has been widely used by researchers (e.g. Awang et al., 2016; Caglar et al., 2016; Dumais et al., 2016; Flynn, 2016; Jamieson, 2014) to measure attitudes and behaviours of survey respondent. The questionnaire used in this research included 24 statements/items portraying possible benefits that SMEs might derive from the six policy measures being investigated (see Table 5.4 for details about the questionnaire items). SME respondents were asked to rank their agreement with each of the statements on a scale of 1 (strongly disagree) to 5 (strongly agree).

To analyse the data, frequencies and percentages score in level of agreement with each statement were calculated. The data was coded as follows: strongly disagree = 0.00 to 1.00, disagree = 1.01 to 2.00, uncertain = 2.01 to 3.00, agree = 3.01 to 4.00 and strongly agree = 4.01 to 5.00. The mean (average) agreement score for each statement was calculated. For example, a mean score of 4.0 or higher indicates that the statement, on average, had a high level of agreement by SMEs. In other words, a low mean score signified a negative attitude while a high score is indicating a positive attitude. This offers a way for the researcher to analyse and interpret the survey data quantitatively for addressing the **Research Question 3: *What is the attitude of SMEs towards the key policy measures?***

5.6.2.4. Kruskal-wallis test

To examine any existing difference between two or more groups of respondents, a one-way ANOVA would probably be ideal but this approach requires certain assumptions such as (Al Nabhani, 2007):

- The sample must be independent random sample and be normally distributed
- The population variances or mean values of each groups should be equal
- The sample size of each group should be equal or comparable

A quick look at the data at hand indicates that these assumptions were not met. For example, the samples for this study were not normally distributed to meet the requirements for a one-way ANOVA. Hence, one-way ANOVA test would not be suitable for analysing group means in the present study.

The researcher therefore adopted the Kruskal-Wallis Test H test (Wallis, 1952) to test whether the means calculated in each groups of respondents had significant differences. The Kruskal-Wallis Test H test is an alternative method to test for significant difference between two or more categorical groups, and it does not require the assumptions of ANOVA (e.g. normality in the data or for that the sample **size to be the same**). However, Kruskal-Wallis Test H has its own assumptions, and a researcher is expected to check whether the data at hand can be analysed with this method. Some of the key assumptions of Kruskal-Wallis H test are (Spurrier, 2003):

- The dependent variable must be in ordinal form (i.e. using a Likert scale).
- The independent variable should include more than two categorical groups
- The observations must be independent without allowing the participants in each group to be represented in another group

The data collected for this study meet the key assumptions for Kruskal-Wallis test, itemised above. Firstly, the independent variables (i.e. items for assessing the key policy measures) were ordinal consisting of a 5-point scale from "strongly disagree", "disagree", "unsure", "agree" and "strongly agree. Secondly, the independent variables

consisted of more than two groups (i.e. grouping respondents' based on firm size, industry type, age, experience of public procurement). Lastly, respondents were not allowed to select more than one answer choice in the independent variables to ensure that there were different participants in each group.

The next thing is to determine the acceptable significance level for the Kruskal-Wallis test while testing whether a statistical significant difference exist between SME groups on attitudes towards the policy measures. For example, as mentioned previously, SME firm characteristics (such as size, age, and tendering experience) might have an effect on individual attitudes towards the policy measures being investigated in this study. Hence, the **research sub-question 3** developed to test if; there a significant difference between diverse groups of SMEs concerning their attitudes towards the key policy measures.

There is also a need to choose the acceptable p-value or probability value for the Kruskal-Wallis test. Again, the p-value adopted for testing statistical significance is ($p < .05$), and was implemented as follows:

- A small p-value (usually ≤ 0.05) indicates strong evidence that the Kruskal-Wallis test results is statistically significant; meaning that it is **very unlikely** that the observed difference (if any) is by chance.
- A large p-value (usually $p > 0.05$) indicates weak evidence that the Kruskal-Wallis test results is statistically significant; meaning that it is **very likely** that the observed difference occurred by chance. Hence, the result is not statistically significant.

For example, in Chapter 6 (sections 6.7.1 – 6.7.6), Kruskal-Wallis tests were performed on the data to determine whether there are significant differences between SMEs is different groupings (based on firm size, age, and tendering experience), as regards attitudes towards key policy measures. So, for example, if the p-value was 0.45 (i.e. >0.05) for any of the Kruskal-Wallis test results, and given that an alpha of 0.05 is used, the researcher can conclude that there is no statistically significant difference.

5.6.3 Analysing the qualitative data from the survey

The purpose of the open-ended questions was to examine key issues and concerns about the key policy measures to recognise whether opportunities for improvement existed. In this study, the qualitative survey data were analysed using thematic analysis (Miles, Huberman and Saldana, 2013; Waring and Wainwright, 2008; King, 2004). This technique offers a guide for identifying themes from the data, to capture the richness of data and to assemble the findings into categories for useful discourse. With this, the researcher could make sense out of the reported opinions of SME respondents who have answered the open-ended questions. Findings derived from the qualitative data are relevant to addressing **research question 4**.

One of the key advantages of thematic analysis is its flexibility and ease of application, which does not require the researcher to have advanced experience of qualitative research (Braun and Clarke, 2006). It is a method that can be adopted to produce rich descriptions that encapsulate the key features of a large quantity of qualitative data. This can help the researcher to transform qualitative information into themes that can be used to address the key research questions (Braun and Clarke, 2006). According to Ryan and Bernard (2003), the initial step of thematic analysis is identifying key themes within the data via coding.

Coding and themes can be derived from literature review or the researcher can develop them inductively from his/her observations or interpretation of the data (Holliday, 2002). For this study, themes were identified by reading through all the qualitative responses and observing repeated patterns in the data set, as recommended by Braun and Clarke (2006). To achieve this, the researcher utilised the three key steps of qualitative data analysis advocated by Miles and Huberman (1994) and Miles, Huberman and Saldana (2014) to analyse the data collected from responses to the open-ended questions (i.e. data reduction, data display and data authentication). Data reduction starts with coding and immediate allocation of categories to avoid potential damage to the meaning of the data (Apulu, 2012; Eisenhardt, 1991). By reading through the textual comments in the survey responses, the researcher assigned codes to meaningful phrases and relevant information.

Coding was conducted manually: although the researcher explored the possibility of using analysis software such as NVivo, that option was rejected for the following reasons:

1. Software or computer programs are unable to scrutinise the temporal sequence in the data (Apulu, 2012).
2. Although the use of software such as NVivo can help the researcher to be efficient in the coding process, the use of technology does not enable immersion in the data which Waring and Wainwright (2008) considered to be a vital aspect of themes identification.
3. Similarly, the use of software for qualitative data analysis can save time to deal with large volume of data but tends to limit the researcher's focus on depth and meaning of the data (John and Johnson, 2000).

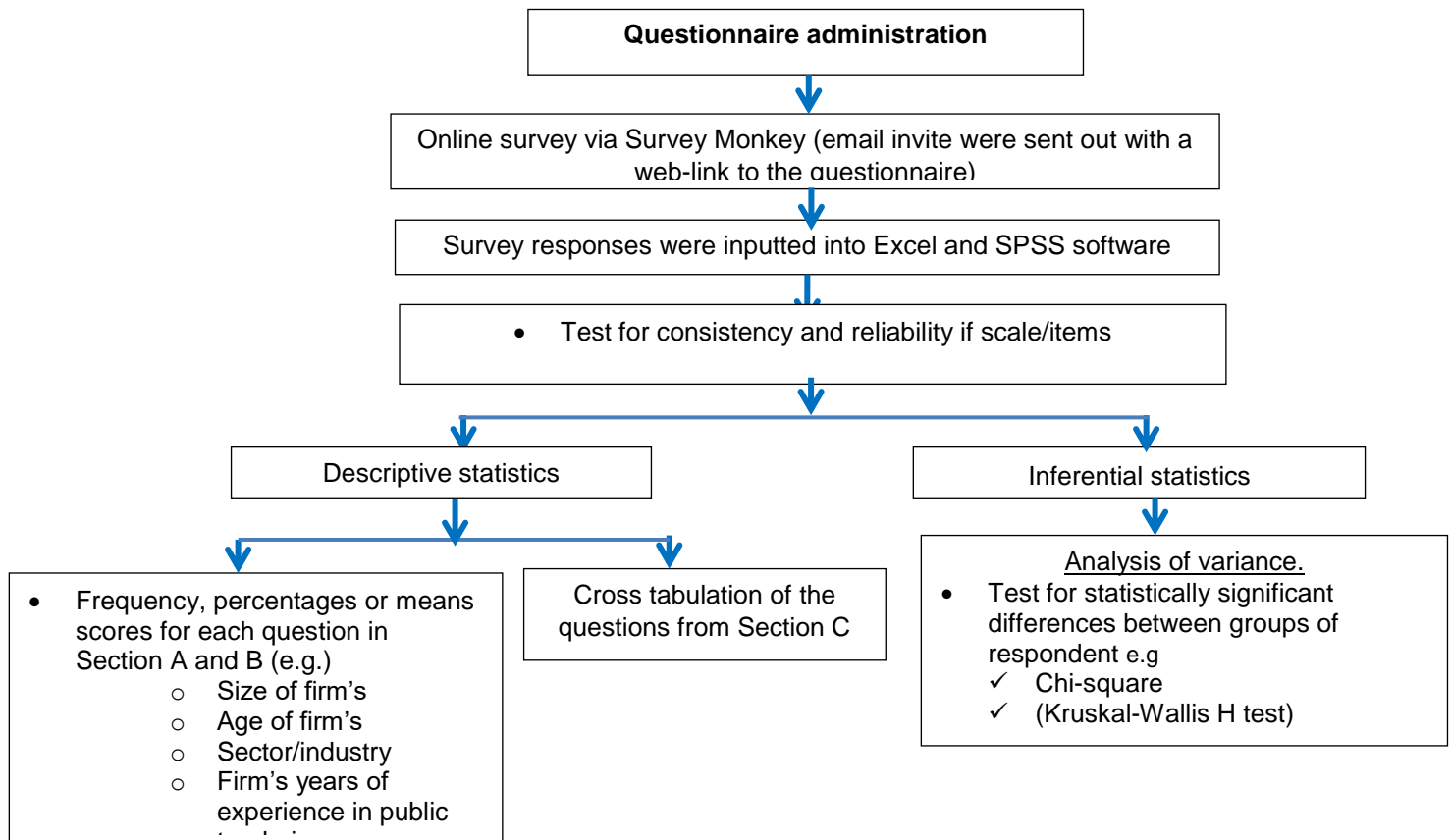
Consequently, several codes were generated and codes with similar meanings were assembled into categories, as Creswell (2003) recommended. Thematic categories evolving from the data analysis were then supported with direct quotations from participants. For anonymity, the names of the respondents/participants were concealed as follows; SME1, SME 2, and SME 3.....SME_n (to denote small and medium enterprises respondents). Afterwards, the themes identified in the qualitative data were summarised in Appendix 5 to facilitate the discussion of qualitative findings in subsequent Chapter 7.

5.7 Chapter summary

The chapter describes the implementation of survey as the research strategy for this study. The chapter starts with a discussion on justification for choosing survey, questionnaire design and development: the literature review contributed to the development of scales/items in questionnaire. Figure 5.2 presents in diagrammatic form, the approaches used for analysis of survey data. The results of data analysis are presented in the subsequent chapter (Chapter 6). However, it is important to acknowledge that, even though the alpha level ($p \leq 0.05$) used to test significance differences in this study are typically used by most scholars, it has a limitation in relation to the confidence level. For example, if a smaller alpha (e.g. $p \leq 0.01$) is

chosen as the accepted level of significance, the confidence level could be higher than 95%. This can help reduce the probability of making a wrong decision about the statistical differences in the observed results.

Figure 5.2 A summary of the survey implementation process



CHAPTER 6

6.0 Presenting and discussing quantitative research findings

6.1 Introduction

In this chapter, the results of survey data analysis and research findings are presented:

- Sections 6.2 - 6.3.8 reports demographic profiles and descriptive statistics of respondents, their organisational characteristics and activity in public procurement.
- Sections 6.4 - 6.5 examines the awareness of SMEs about six key policy measures. It assessed whether there were significant differences between SMEs grouped in relation to firm size, firm age, and tendering experience (i.e. number of years the firm have been bidding for public sector contracts). As mentioned in chapter 5, the significant level for testing the difference between SME samples is set as ($p < .05$). Altogether, the findings obtained from this section offer answers to **Research Question 2**: To what extent are SMEs aware of these policy measures? And are there significant differences between diverse groups of SMEs regarding their level of awareness?
- **Sections 6.6– 6.6.6** focus on SMEs' attitudes towards key policy measures. It presents an assessment of SMEs' attitude towards each of the six-policy measures designed to improve their participation in public procurement. To measure attitudes, SMEs were asked to rank their agreement with 24 statements on a Likert Scale of 1 (strongly disagree) to 5 (strongly agree). The findings obtained from this section offer answer to **Research Question 3**: What is the attitude of SMEs towards key policy measures designed to facilitate their participation in public procurement?
- **Sections 6.7 – 6.7.6** interprets and presents the results of Kruskal-Wallis H tests to find out whether there are significant differences in the attitudes of diverse groups of SMEs, in relation to firm size, firm age, and tendering experience (i.e.

number of years the firm have been bidding for public sector contracts). As mentioned in chapter 5, the significant level for testing the difference between SME samples is set as ($p < .05$). This offers an opportunity to address **Research Sub-Question 3**: are there significant differences between diverse groups of SMEs regarding their attitudes?

- **Sections 6.8 – 6.10** discuss the emerging findings about SMEs' attitudes towards key policy measures, and the conclusions.

6.2. Respondent profile (individual characteristics)

Out of 811 firms invited to participate in the survey, 137 usable responses were included in the analysis. Table 6.1 contains a profile of the 137 respondents. The first section of the questionnaire collected information about the profile of survey respondents. Respondents were required to identify their positions within their respective companies. The results shows that they held varieties of positions in their respective companies: 35% of respondents were company owners, while 34.3% and 22.6% indicated their positions as manager and director respectively. Apart from 4.4% of respondents who indicated that they were officers, 3.6% held other positions such as sales manager, technical administrator, business development coordinator, enterprise account manager and service co-ordinator. What this implies is that the majority (about 70%) of respondents were occupying managerial or top leadership positions in their respective companies.

Consistent with the above, 91.9% played important roles to help their companies secure public sector contracts. More precisely, most respondents (52.6%) were involved in preparing bid responses, 11.7% helped their companies to search for contract opportunities in public sector firms and 12.4% were responsible for post tendering activities such as contract negotiation and implementation. Alternatively, 6.6% of respondents had never played any role when their company was competing for public sector contracts, 16.8% said they were involved in all activities which included searching for contract opportunities, preparing bids and post tendering activities. Similarly, respondents have also had considerable years of experience in performing the roles mentioned above.

Table 6.1 Respondent profile

Questions	Options	Response	
		Frequency	Percentage
Which of the following best describes your position within your company?	Company Owner	48	35.00%
	Director	31	22.60%
	Manager	47	34.30%
	Officer	6	4.40%
	Other (please specify)	5	3.60%
Which of the following best describes the role you play when your company is seeking public sector contracts?	I am involved in the search for contract opportunities	16	11.70%
	I am involved in preparing bid responses	72	52.60%
	I am involved in post tendering activities (i.e. negotiation, contract implementation)	17	12.40%
	I have never been involved	9	6.60%
	Other (please specify)	23	16.80%
How many years of experience do you have with playing the role identified in (2) above?	Less than 1	2	1.50%
	1–4	43	31.40%
	5 – 9	39	28.50%
	10–14	17	12.40%
	15 & above	36	26.30%
Which one of the following best describes your highest level of education?	University Degree	77	56.20%
	Diploma	7	5.10%
	Professional Qualifications	14	10.20%
	GCSE or A-Level	26	19.00%
	Other (please specify)	13	9.50%

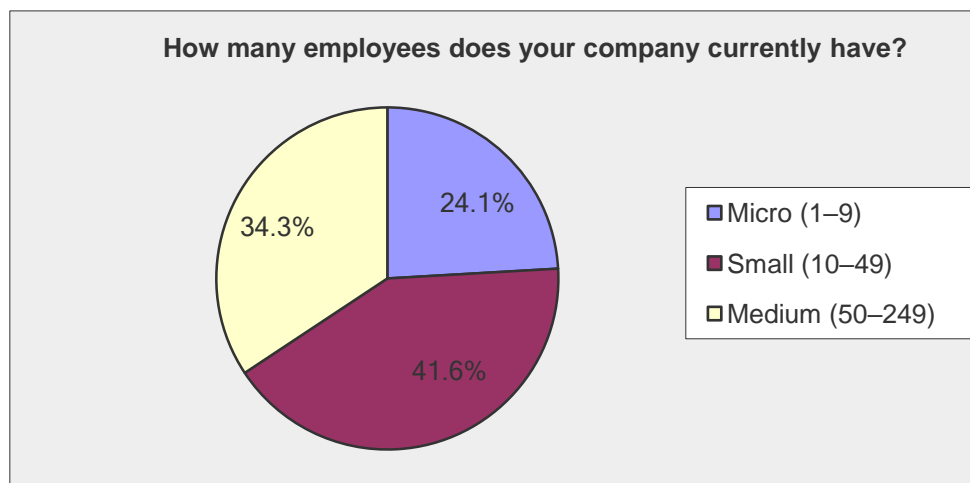
Almost 67% of respondents had between 5 - 15 years of experience, participating in activities related to public contract competition, whereas about 33% had less than 5 years' experience. Education achievement appears to be high amongst respondents. More than half (56.2 %) had a university degree, with 9.5% qualified to postgraduate levels including Postgraduate Diploma Master's Degree and Ph.D. Largely, the narratives in this section provided an illustration about people who responded to the survey and their knowledge and practical experience regarding public contract competition.

6.3 Respondents' organisations characteristics

6.3.1 Distribution of firm size (based on number of employees)

Firm size was measured as the number of full-time employees in the respondents' companies. According to the Ward and Rhodes (2014), the UK government defines an SME as a firm employing not more than 250 employees. These included: micro-sized firm with less than 9 employees, small-sized with less than 50 employees and medium-sized firms having not more than 250 employees. Using the survey data, the frequency and percentages for respondent companies' size were calculated based on the number of employees. The percentage scores were used to create a bar charts in Microsoft Excel spreadsheet. Figure 6.1 shows the distribution of respondents by firm size. The survey found that 41.6% of all respondents were small-enterprises (10-49 employees), 34.3% were medium-enterprises (50-249 employees) and 24.1% were micro-enterprises (1-9 employees). This shows that most respondents were small-enterprises, but micro-enterprises made up a larger proportion of respondents from various previous studies (e.g. Flynn, McDevitt and Davis, 2013; Flynn and Davis, 2016a; Tammi, Reijonen and Saastamoinen, 2016). This might be because the type of sampling method used in the present study was non-probability sampling as against the probability sampling technique implemented in previous studies.

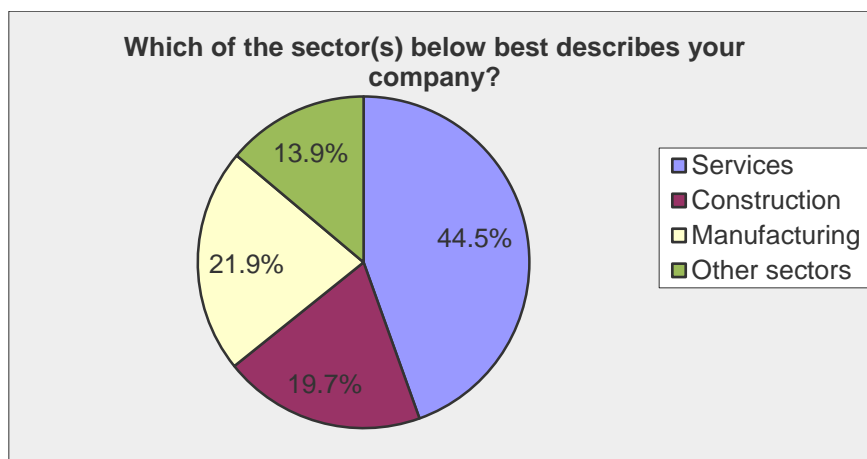
Figure 6.1 Firm size (based on number of employees)



6.3.2 Distribution of firms by industry/sector type

Not less than 44.5% of respondent firms reported that they operated in the services sector. While 21.9% identified themselves as businesses within the manufacturing sector, about 18% of respondents were construction sector businesses. The remaining 13.9% of respondents stated that their businesses operated other sectors such as market/social research, charitable, retailing, supply of consumables, asbestos industry and logistics. This result seems to indicate that service-oriented businesses are more involved in public sector contracting than their counterparts in the manufacturing and construction sectors. A similar finding was reported in previous (e.g. Flynn and Davis, 2016a; 2016b; 2016c) that SMEs in the services sector seem to account for a larger share of public contracts. The fact that Flynn and Davis used statistical techniques to analyse data, similar to the present study, might have caused the similarities in findings. This finding, although, it is not pertinent to testing the aim of this research, is worth mentioning because SMEs operated in different sectors of the economy (e.g. services, manufacturing, and construction). Figure 6.2 shows the distribution of respondent firms based on industry/sector type.

Figure 6.2 Types of industry/sector in which firms operate

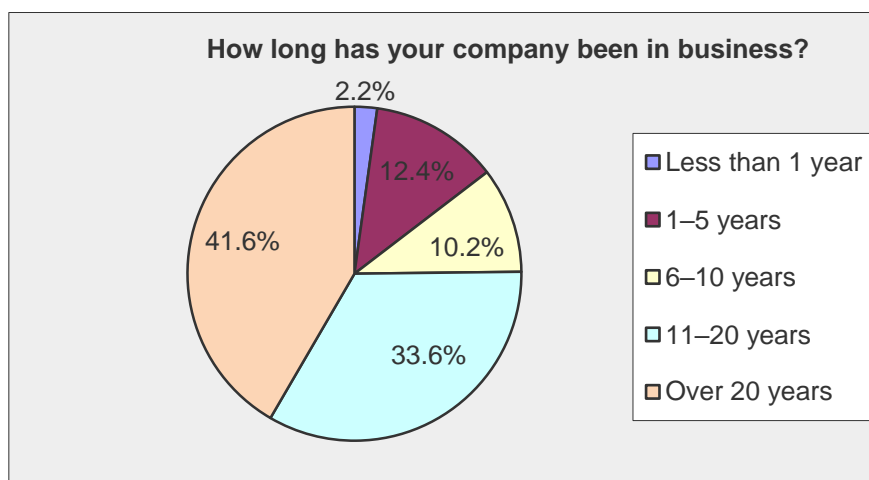


6.3.3 Distribution of firm age (based on years of trading)

The firm's age is measure by how long (number of years) the company has been trading. The oldest firms (41.6%) were over twenty years old, while slightly over two percent (2.2%) of total respondents were the youngest firms, which were less than one year old. On other words, 75% of the entire respondents have been trading for eleven years or more, while the remaining 25% have not been in business for more

than ten years. This shows that the majority of respondents have been trading for at least eleven years. In a previous study that used a similar method of analysis (i.e. simple percentage), Flynn and Davis (2016a) found that 62.4% of SME respondents have been trading for over eleven years. A major difference between this earlier study and the result reported in the present thesis is that, they both investigated the same research problem in different country contexts; Ireland and the UK, respectively. Yet, years of trading of a firm, as reported here was not specifically related to public procurement market, which could make the finding less relevant to testing the aim of this research.

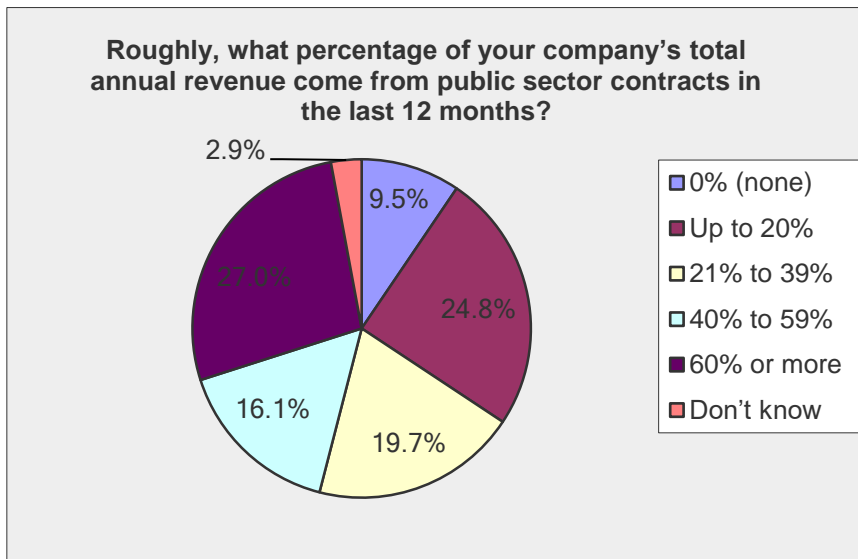
Figure 6.3 Years of trading of firms



6.3.4 Distribution of firms by the share of public sector contracts in their annual revenue

Survey respondents were asked to specify the proportion of their annual revenue that come from public sector contracts in 2015. Figure 6.4 shows the percentage of revenue the firm's revenue that comes from public contracts.

Figure 6.4 Percentage of firm's annual revenue derived public contracts



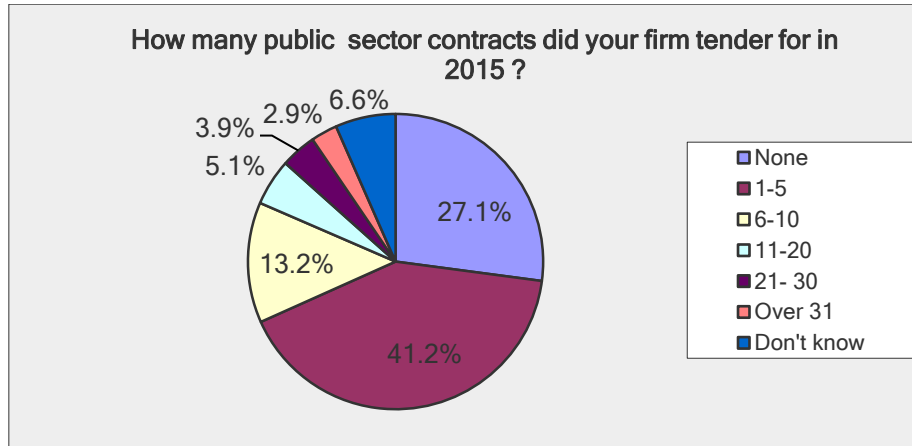
Only 27% of the respondent firms stated that they derived more than 60% of their annual revenue from public sector contracts. The aggregate proportion of SMEs, for which 21% to 59% of their annual revenue came from the public sector, was 35.8%. In fact, 24.8% of respondents did not seem to consider the public sector as their key customer because less than 21% of their annual revenue comes from such markets. The implication of this is that the likelihood for profiting from doing business with public sector is smaller for SMEs, since only 27% respondents derived over 60% of their gross revenue from the public contracts. This finding further provided a rationale for investigating how SMEs could increase revenue by participating more in public procurement, which reinforces the key aim of the present study.

6.3.5 Distribution of firms by frequency of tendering for public sector contracts

Figure 6.5 shows the distribution of how frequent the respondent firms tendered for public sector contracts annually. In a one-year period, 41.3% of respondents had tendered for public contracts, but not more than five times, whereas, about 27% of respondents did not bid for any public contract within the same period. In general, public procurement participation by SME respondents seems to be relatively low because 68% said they did not tender for public contracts more than five times in twelve months. This is suggesting that SMEs were essentially underrepresented in the public procurement markets and might support or buttress the need for a framework

for improvement in SME participation in public procurement (see research objective 6, pp4).

Figure 6.5 Frequency of tendering



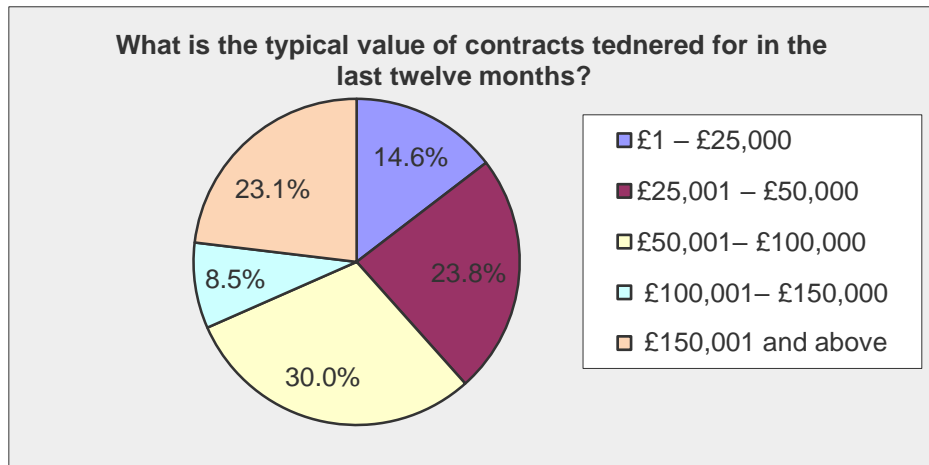
Bearing in mind the importance of this finding, the aggregate data was further broken down into different category of SME (i.e. micro, small and medium sized firms), to determine whether the underrepresentation is more pronounced among specific category of firms. The results of data analysis show that firms with less than 10 employees, that is micro-sized businesses, participated less frequently in public procurement, than their counterparts (small-sized and medium-sized firms). This is an important finding because micro-sized businesses represent 95.5% of all SMEs in the UK (Rhodes, 2017). Therefore, to address this issue, a specific consideration is being given to this category of small firms in the framework development process. See further details in Chapter 8 (section 8.2.1.3).

6.3.6. Distribution of firms by typical value of contracts tendered for in a year.

Figure 6.6 refers to typical value of public sector contracts tendered for by respondent firms in one year. 38.4% said they usually tendered for contracts which were worth less than £50,001, while 30% had been tendering for contracts with an estimated value ranging from £50,001 to £100,000 and 23.1% stated that they tendered for contracts value above £150,000. It thus appears that majority (68.4%) of the respondent firms focus more on contract value of under £100,000 than high value contracts (above OJEU threshold¹⁵).

¹⁵ EU Procurement Thresholds. <http://www.ojec.com/thresholds.aspx>

Figure 6.6 Typical value of contracts tendered for

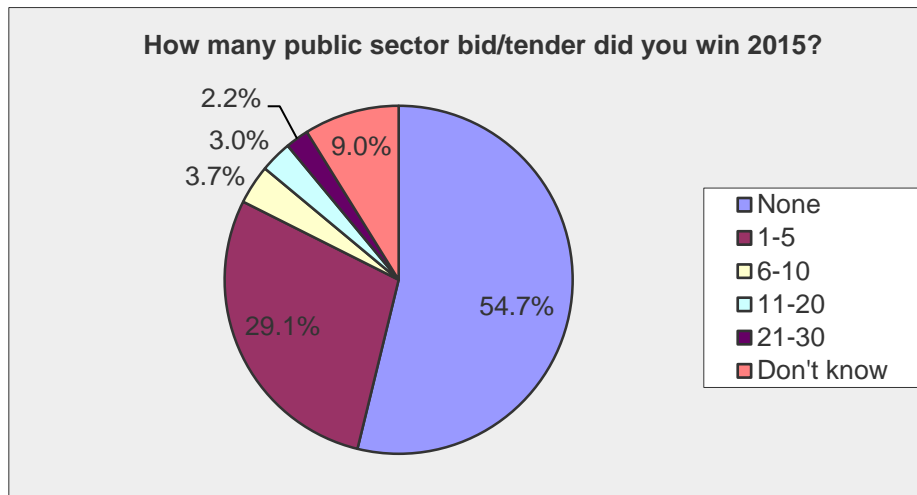


A recent report shows that most of high value (above OJEU threshold) contracts in the EU are won by larger companies (Thomassen et al (2014)). This could be a reason why SME firms seem to be targeting low value contracts in the public-sector. This issue has been given due consideration in Chapter 8, during the framework development process to ensure that SMEs are not being discouraged from bidding for high value public sector contracts (see further details in section 8.1.7).

6.3.7. Distribution of firms by number of public tenders won within one-year period.

Figure 5.6 shows the number of public tenders won within one-year period. More than half (54.7%) of respondents indicated that they did not win any public contracts for a period of twelve months, whereas only 29.1% won not more than five contracts in the same period. This result indicates that small businesses still experience low success rates in public tendering despite the policy measures implemented in the UK to increase SME participation in public procurement. It thus calls into question the efficacy of these policy measures, and further supports the need for investigating how SME participation in public procurement can be enhanced. Therefore, one of the objectives (research objective 4) of the present study, which has been addressed in Chapter 7, is to examine issues and concerns about SME-friendly procurement policy measures, and then identify opportunities for improvement.

Figure 6.7 Number of public tenders won in 12 months

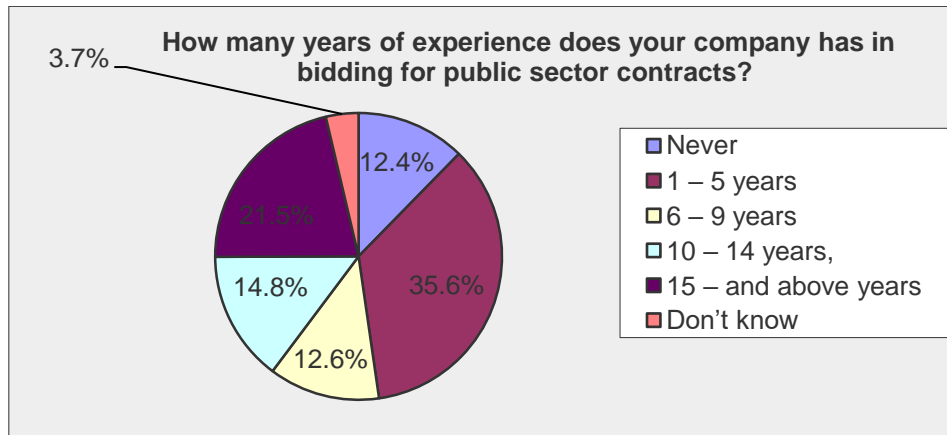


More importantly, it has been argued (e.g. Flynn and Davis, 2015; Loader and Norton, 2015) that the low success rate of SMEs in public procurement is attributed to lack of active participation in the bidding process. Hence, the framework developed in this study can help address this issue on the assumption that SMEs chances of winning contracts might improve if they are able to participate more often and better in public tendering.

6.3.8. Distribution of firms by tendering experience

Tendering experience was measured by the number of years the firm had been bidding for public sector contracts. Almost half (49%) of the respondents had never been involved in public tendering, nor with more than six years tendering experience; a similar proportion (48.9%) of respondents said that they have been tendering for public sector contracts in the last 6 years or more. However, none of the respondents had more than 14-year experience in public tendering. The above results suggest that a fair proportion of SMEs has public tendering experience, but do not seem to reflect in the reported frequency of bidding (see section 6.3.5), as well as success rate winning bids (see section 6.3.7). Consequently, this thesis has suggested some approaches to help new SMEs or start-up improve participation in public procurement, and forms part of the issues addressed in the framework development (see Chapter 8)

Figure 6.8 Public tendering experiences of firms



Furthermore, Flynn and Davis (2016) have identified that SMEs which had limited years of experience in public tendering were more likely to be unaware of the policy measures that the government has put in place to support them in this market. Accordingly, the following section (6.4) examines SME's awareness of key policy measures being implemented in the UK.

6.4. Presentation of results on SME's awareness of key policy measures

In this section, the researcher examined SMEs' awareness of six key policy measures (previously discussed in sections 2.6.4.1 – 2.6.4.6). Data collected from respondents (i.e. SMEs) were analysed by means of frequency distribution and cross-tabulation. Tables 6.2 – 6.7 present the results of data analysis. Further analysis was conducted using Chi-square tests to determine whether there is a significant difference between different groups of SMEs (based on firm size, age and tendering experience), in relation to their awareness. As mentioned in Chapter 5 (section 5.6.2.2), the minimum level of significance is defined as $p \leq 0.05$. The results of data analysis are presented in the following sections (6.4.1 – 6.4.6) and discussed in detail in section 6.5.

6.4.1 Elimination of PQQ for smaller contracts

As discussed in chapter 2, one of the foremost policy measures for improving SME participation in public procurement in the UK was labelled as "elimination of PQQ for smaller contracts" (Cabinet Office, 2014; Cabinet Office, 2015; Crown Commercial Service, 2015a; Crown Commercial Service, 2015b). SMEs were asked to indicate

whether they were aware of a policy to eliminate the use of PQQ for the procurement of low value contracts in the public sector. 59.9% of respondents said they are aware of this policy measure, against the 40.1% who were not aware. Table 6.2 presents the results of further statistical analysis performed on the data to determine whether there are significant differences between SMEs in different groupings based on firm size, age, and tendering experience. Slightly more than half (51%) of SMEs in each size and age group were aware of government's policy to eliminating the use of PQQ for smaller contracts: except for those between 1–5 years of age. The difference observed was not significant ($\chi^2 = 5.170$, $df = 4$, $p = 0.270$).

However, most SMEs (more than 76%) that never participated in public tendering were unaware of the policy for eliminating the use of PQQ for smaller contracts. SMEs with public tendering experience were more aware of this policy measure than those without experience of tendering, and the difference in awareness level was significant ($\chi^2 = 23.453$, $df = 5$, $p = 0.001$). This result was expected because it is comparable to the findings of Flynn, McDevitt and Davis (2013) who used the same data analysis approach, in a survey of SMEs in Republic of Ireland. Both the current study and previous research show that the tendering experience of SMEs could affect their awareness of SME-friendly procurement policy. Therefore, the need to link new small businesses to appropriate information that can help them improve participation in public procurement is critical to achieving the aim of this study. Approaches have been recommended to address this issue in Chapter 8 (see section 8.1.7.1), and thus captured in the proposed framework for SME participation in public procurement.

Table 6.2 SMEs awareness concerning elimination of PQQ for smaller contracts

Elimination of PQQ for smaller contracts					Chi-Square Tests
SME groups	Are you aware of this policy measure?	YES	NO	TOTAL	
Size	All SMEs	59.9%	40.1%	100%	$\chi^2= 1.685$ df= 2 p = .431
	Medium (50–249)	66.0%	34.0%	100%	
	Small (10–49)	59.6%	40.4%	100%	
Age	Micro (1–9)	51.5%	48.5%	100%	$\chi^2= 5.170$ df= 4 p = .270
	Less than 1 year	66.7%	33.3%	100%	
	1–5 years	35.3%	64.7%	100%	
	6–10 years	57.1%	42.9%	100%	
	11–20 years	63.0%	37.0%	100%	
Tendering experience	Over 20 years	64.9%	35.1%	100%	$\chi^2= 23.453$ df= 5 p = .001
	1 – 5 years	56.3%	43.8%	100%	
	6 – 9 years	93.3%	6.7%	100%	
	10 – 14 years	57.9%	42.1%	100%	
	15 – and above years	77.4%	22.6%	100%	
	Don't know	28.6%	71.4%	100%	
Never	23.5%	76.5%	100%		

6.4.2 Prompt payment rule

Overdue payments are one of the key challenges facing SMEs in public sector markets (Loader, 2015), and the prompt payment rule was introduced by government to address this issue. SMEs were asked about their knowledge of the prompt payment rule. More than two-thirds (67.2%) of respondents indicated that they were aware of the government’s directive that mandated public organisations to speed up payments to contractors, against 32.8% who were not so aware. Table 6.3 presents the results of further statistical analysis performed to determine if awareness of prompt payment rule differs between SMEs grouped according to size, age, and tendering experience. Although it appears that, the small-sized firms (about 80%) were more aware than the micro-sized (79%) and medium-sized firms (42.6%), this difference was not significant ($\chi^2= 19.707$, df= 2, p = .061).

Table 6.3 SMEs' awareness of the prompt payment rule

The prompt payment rule					Chi-Square Tests
SME groups	Are you aware of this policy measure?	YES	NO	TOTAL	
	All SMEs	67.2%	32.8%	100%	
Size	Medium (50–249)	42.6%	57.4%	100%	$\chi^2= 19.707$ df= 2 p = .061
	Small (10–49)	80%	20.0%	100%	
	Micro (1–9)	78.9%	21.1%	100%	
Age	Less than 1 year	66.7%	33.3%	100%	$\chi^2= 4.015$ df= 4 p = .404
	1–5 years	58.8%	41.2%	100%	
	6–10 years	85.7%	14.3%	100%	
	11–20 years	71.7%	28.3%	100%	
	Over 20 years	61.4%	38.6%	100%	
Tendering experience	1 – 5 years	66.7%	33.3%	100%	$\chi^2= 4.423$ df= 5 p = .490
	6 – 9 years	80.0%	20.0%	100%	
	10 – 14 years	78.9%	21.1%	100%	
	15 – and above years	61.3%	38.7%	100%	
	Don't know	71.4%	28.6%	100%	
	Never	52.9%	47.1%	100%	

There was no significant difference between SMEs of different age groups ($\chi^2= 4.015$, df= 4, p = .404), although SMEs aged 1-5 years, seem to have lesser awareness about prompt payment rule when compared with the remaining respondents in the age group. Similarly, no significant difference was found between SMEs grouped according to years of experience in public tendering ($\chi^2= 4.423$, df= 5, p = .490).

6.4.3 Consortium bidding

Consortium bidding allows a group of SMEs to submit a joint tender when competing for contracts within the public sector (Public Contracts Regulation, 2015). SMEs were asked to indicate whether they are aware of the opportunity to submit a joint bid for public contract opportunities. Almost all (81%) of SMEs said they were aware, against 19% who were not aware of consortium bidding. Table 6.4 presents the results of further statistical analysis performed on the data to determine if awareness of consortium bidding is significantly different between SMEs grouped according to size, age and years of experience in public tendering.

Table 6.4 SMEs' awareness of consortium bidding

Consortium bidding					Chi-Square Tests
SME groups	Are you aware of this policy measure?	YES	NO	TOTAL	
	All SMEs	81.0%	19.0%	100%	
Size	Medium (50–249)	80.9%	19.1%	100%	$\chi^2= 2.383$ df= 2 p = .304
	Small (10–49)	86.0%	14.0%	100%	
	Micro (1–9)	72.7%	27.3%	100%	
Age	Less than 1 year	66.7%	33.3%	100%	$\chi^2= 7.724$ df= 4 p = .102
	1–5 years	58.8%	41.2%	100%	
	6–10 years	85.7%	14.3%	100%	
	11–20 years	80.4%	19.6%	100%	
	Over 20 years	87.7%	12.3%	100%	
Tendering experience	1 – 5 years	83.3%	16.7%	100%	$\chi^2= 15.200$ df= 5 p = .010
	6 – 9 years	86.7%	13.3%	100%	
	10 – 14 years	84.2%	15.8%	100%	
	15 – and above years	90.3%	9.7%	100%	
	Don't know	85.7%	14.3%	100%	
	Never	47.1%	52.9%	100%	

There were no significant differences between SMEs grouped in different firm size ($\chi^2= 2.383$, df= 2, p = .304), and age ($\chi^2= 7.724$, df= 4, p = .102), about awareness of consortium bidding. On the contrary, there were significant differences in the awareness level of SMEs grouped according to their years of experiences in public tendering ($\chi^2= 15.200$, df= 5, p = .010). As shown in table 6.4, the majority (83.3%) of SMEs who had at least one-year experience in public tendering were aware of the policy measure (i.e. consortium bidding), but over half (52.9%) of those with no experience of tendering were not aware. The finding has implication for the present study; it suggests the need for increasing the awareness of policy measures amongst SMEs, who may had little or no experience of public procurement.

6.4.4 Contracts finder

Contract finder is another key policy measure aimed to increase SMEs access to procurement opportunities in the UK's public-sector marketplaces. The law mandates all public organisations to publish tenders on contracts finder to increase visibility of contract opportunities (Department for Business Innovation and Skills, 2013). SMEs

were asked in this study to indicate whether they were familiar with contracts finder or not. Most SMEs (77.4%) said they were aware, while 22.6% were not aware of contracts finder. Table 6.5 presents the results of further analysis performed on the data to determine if there were significant differences between SMEs grouped according to size, age and years of experience in public tendering, about awareness of contracts finder. The results were not significantly different for all SMEs irrespective of the firm size ($\chi^2= 2.859$, $df= 2$, $p = .239$) and age ($\chi^2= 3.603$, $df= 4$, $p = .462$). Similarly, while there were no significant differences between SMEs grouped according to tendering experience ($\chi^2= 4.661$, $df= 5$, $p = .459$), those that never tendered for public contracts were less likely to be aware of contracts finder.

Table 6.5 SMEs awareness concerning contracts finder

Contracts finder					Chi-Square Tests
SME groups	Are you aware of this policy measure?	YES	NO	TOTAL	
	All SMEs	77.40%	22.60%	100%	
Size	Medium (50–249)	74.50%	25.50%	100%	$\chi^2= 2.859$ $df= 2$ $p = .239$
	Small (10–49)	84.20%	15.80%	100%	
	Micro (1–9)	69.70%	30.30%	100%	
Age	Less than 1 year	100%	0.00%	100%	$\chi^2= 3.603$ $df= 4$ $p = .462$
	1–5 years	64.70%	35.30%	100%	
	6–10 years	71.40%	28.60%	100%	
	11–20 years	76.10%	23.90%	100%	
	Over 20 years	82.50%	17.50%	100%	
Tendering experience	1 – 5 years	81.30%	18.80%	100%	$\chi^2= 4.661$ $df= 5$ $p = .459$
	6 – 9 years	86.70%	13.30%	100%	
	10 – 14 years	78.90%	21.10%	100%	
	15 – and above years	77.40%	22.60%	100%	
	Don't know	71.40%	28.60%	100%	
	Never	58.80%	41.20%	100%	

6.4.5 Division of contracts into lots

Contract size used to be one of the key barriers preventing SMEs from participation in public procurement in the UK (Glover, 2008; Loader, 2011). To address this, public buyers are required to split large contracts into smaller lots to encourage SME participation in procurement process. In the questionnaire used for this study, SMEs

were asked to indicate whether they were aware of the policy calling for division of public contracts into lots to enable better participation of small suppliers.

Table 6.6 SMEs' awareness of division of contracts into lots

Division of contracts into lots					Chi-Square Tests
SME groups	Are you aware of this policy measure?	YES	NO	TOTAL	
	All SMEs	77.4%	22.6%	100%	
Size	Medium (50–249)	87.2%	12.8%	100%	$\chi^2= 6.168$ df= 2 p = .036
	Small (10–49)	77.2%	22.8%	100%	
	Micro (1–9)	63.6%	36.4%	100%	
Age	Less than 1 year	0.0%	100%	100%	$\chi^2= 9.763$ df= 4 p = .045
	1–5 years	70.6%	29.4%	100%	
	6–10 years	50.0%	50.0%	100%	
	11–20 years	76.1%	23.9%	100%	
	Over 20 years	86.0%	14.0%	100%	
Tendering experience	1 – 5 years	79.2%	20.8%	100%	$\chi^2= 15.532$ df= 5 p = .008
	6 – 9 years	86.7%	13.3%	100%	
	10 – 14 years	78.9%	21.1%	100%	
	15 – and above years	87.1%	12.9%	100%	
	Don't know	85.7%	14.3%	100%	
	Never	41.2%	58.8%	100%	

Many SMEs (77.4%) said they were aware, against the 22.6% who were not aware. As shown in Table 6.6, the results show that medium-sized firms and small-sized firms were more likely to be aware of such policy measure than the micro-sized firms. These differences were significant ($\chi^2= 6.168$, df= 2, p = .036). Likewise, there were significant differences between SMEs grouped according to age ($\chi^2= 9.763$, df= 4, p = .045) and tendering experience ($\chi^2= 15.532$, df= 5, p = .008). For example, more than 70% of SMEs that have been in business for more than 11 years above were aware of policy measure concerning the division of contracts into lots, whereas, the awareness level of SMEs that have been in business (less than 1 year) was relatively low. Similarly, SMEs with no tendering experience were less familiar with rule requiring public buyers to divide contracts into smaller lots, than those with previous tendering experience. The differences were strongly significant. Therefore, the framework developed in the present study considered how SMEs, who might have little or no experience of public procurement, can improve their understanding about key policy measures.

6.4.6 Subcontracting

Public organisations are required to increase subcontracting opportunities to offer another route for SMEs to act as suppliers (e.g. Booth, 2013; Department of Enterprise, Trade & Employment, 2009; Glover, 2008). SMEs were asked to indicate if they were aware of subcontracting as an option to become a supplier to the public-sector subcontracting. Nearly all (82.5%) SMEs indicated that they were aware, against the 17.5% who were not aware.

Table 6.7 SMEs awareness concerning subcontracting

Subcontracting					Chi-Square Tests
SME groups	Awareness of policy measure	YES	NO	TOTAL	
	All SMEs	82.5%	17.5%	100%	
Size	Medium (50–249)	80.9%	19.1%	100%	$\chi^2= 0.877$ df= 2 p = .645
	Small (10–49)	86.0%	14.0%	100%	
	Micro (1–9)	78.8%	21.2%	100%	
Age	Less than 1 year	66.7%	33.3%	100%	$\chi^2= 3.235$ df= 4 p = .519
	1–5 years	82.4%	17.6%	100%	
	6–10 years	71.4%	28.6%	100%	
	11–20 years	89.1%	10.9%	100%	
Public tendering experience	Over 20 years	80.7%	19.3%	100%	$\chi^2= 2.388$ df= 5 p = .793
	1 – 5 years	85.4%	14.6%	100%	
	6 – 9 years	86.7%	13.3%	100%	
	10 – 14 years	78.9%	21.1%	100%	
	15 – and above years	83.9%	16.1%	100%	
	Don't know	85.7%	14.3%	100%	
	Never	70.6%	29.4%	100%	

As seen in Table 6.7, the results were not significantly different for SMEs grouped according to firm size ($\chi^2= 0.877$, df= 2, p = .645), age ($\chi^2= 3.235$, df= 4, p = .519) and tendering experience ($\chi^2= 2.388$, df= 5, p = .793). Therefore, irrespective of their size, age and years of experience in public procurement, SMEs seemed to be very familiar with subcontracting.

6.5 Discussion of emerging findings on SMEs' awareness of key policy measures

This section summarises and discusses the findings emerging from an analysis of SME's awareness about six key policy measures. Further analysis was conducted to

determine whether significant differences existed between SMEs in different groupings (based on their firm size, age and experience in public tendering), in relation to awareness of the policy measures. The differences observed in level of awareness of the key policy measures are summarised in Table 6.8.

Table 6.8 Differences in level of awareness of key policy measures

Policy measures	Are there significant differences between SMEs in different groupings?		
	SME Size	SME Age	SME Tendering Experience
1. Elimination of PQQ for smaller contracts	NO	NO	YES
2. Prompt payment rule	NO	NO	NO
3. Consortium bidding	NO	NO	YES
4. Contracts finder	NO	NO	NO
5. Division of contracts into lots	MARGINALLY	MARGINALLY	YES
6. Subcontracting	NO	NO	NO

The key findings are discussed below:

The SMEs reported a high awareness of the six policy measures in the following proportion: elimination of PQQ for smaller contracts (60%), prompt payment rule (67.2%), consortium bidding (81.0%), contracts finder (77.4%), division of contracts into lots (77.4%) and subcontracting (82.5%).

Research conducted by Flynn and Davis (2015) in the Republic of Ireland suggests that majority (77%) of SMEs were not aware of policies in place for their benefit. Although, the authors did not give reasons for the low awareness, the finding is related to the present study because the policy measures for promoting SMEs in Ireland and UK are very similar. SME-friendly policies are important considerations in public procurement in Ireland and the UK, but the results of the present research suggest a different picture; signifying that SMEs in the UK have a higher level of policy awareness.

In the last decade, the UK government has increasingly been making efforts to ensure that SMEs have better access to the public procurement markets (Booth, 2015; Perry, 2001). As a result, it is possible that the policy measures investigated in this study have been promoted widely within the small business community or with other organisations connected to SMEs, such as cooperative associations and chambers of commerce. For example, the government appointed Stephen Allott as the Crown Representative for SMEs in 2011 to bridge the gap between government and the SME sector (Booth, 2011). One of his primary responsibilities is to develop close relationships with trade associations, which represent SMEs. He has also launched the mystery shopper scheme to enable SMEs register concerns regarding their experience of public procurement. These efforts might explain the high rate of policy awareness observed amongst SMEs. Pertinent to the aim of this study is how this level of policy awareness can be leveraged to benefit SMEs in terms of their participation in public procurement. Small firms who seem to have lost interest in the public procurement process due to the barriers (discussed in Chapter 2) may change their mind if the benefits associated with the policy measures become tangible.

Furthermore, there were no significant differences ($p > .05$) between SMEs grouped according to firm sizes, regarding awareness of six key policy measures. The only significant difference observed was between SMEs in this aspect related to awareness of “division of contracts into lots ($p \leq .05$). As seen in Table 6.6, the findings suggest that medium-sized firms are likely to be more aware of “division of contracts into lots”, than the small-sized or micro-sized firms are. The differences observed here might be due to several reasons. Firstly, the medium-sized firms have experienced the most successful outcomes in bidding for public contracts (Flynn, McDevitt and Davis, 2013). Such successful experiences could increase their awareness about key policy measures available to their benefits in the public procurement markets. Secondly, the medium-sized firms are more resource advantaged in terms of bidding for public contracts, than the small-sized and micro-sized firms (Flynn and Davis, 2015) are. It is hoped that the framework being developed in this study can help in drive equitable participation of SMEs with different size groups in public procurement and might consequently reduce any gaps in their awareness of policy measures.

Similarly, Tammi, Saastamoinen and Reijonen (2014) discovered that medium-sized firms are more active in public tendering than another SME subgroup. Perhaps, the medium-sized firms have been experiencing many successful outcomes by bidding for small lots contracts. Again, there were no significant differences ($p > .05$) between SMEs of different ages, with respect to their awareness of five key policy measures namely, elimination of PQQ for smaller contracts, prompt payment rule, consortium bidding, contracts finder and subcontracting. This might be expected because previous research (e.g. Flynn and Davis, 2015) revealed that firm age does predict the awareness level of SMEs about the policy measures.

However, the present findings show that significant differences exist between SMEs of different age groupings regarding their awareness of “division of contracts into lots” ($p \leq .05$). In fact, SME aged less than 1 year evidenced the least level of familiarity with this policy measure (see Table 6.6). This is suggesting that older SMEs are more likely to be aware of policy measure (labelled division of contracts into lots), than younger ones. Newly registered SMEs might also be new to the public procurement markets. As a result, they are less familiar with the different initiatives that the government have put in place to make public procurement more accessible to SMEs.

One distinct pattern appearing from the findings here is that SMEs with no experience of public procurement tend to be unaware of key policy measures that can help them improve participation in public procurement. This evidence supports the argument put forward by previous researchers (e.g. Akenroye and Aju, 2013a; Flynn, McDevitt and Davis, 2013), indicating that tendering experience is significant in influencing awareness of SME-friendly procurement policies. As seen in Tables 6.2, 6.4 and 6.6, SMEs with at least fifteen years’ experience of public tendering are probably likely to be more familiar with the following measures “elimination of PQQ for smaller contracts”, “consortium bidding” and “division of contracts into lots”. As emphasised by Loader (2005) and Ringwald et al. (2009), SMEs need to be aware of opportunities that can enable them to participate better in public procurement. In the same way, inadequate awareness of key policy measures may prevent SMEs to get involved in public procurement. Therefore, it is important to find out how SMEs, who have little or no experience of public procurement can utilise the policy measures to their own

benefits. This issue is being addressed in Chapter 8 and considered in the framework development process.

6.6 Presentation of results on SMEs' attitudes towards key policy measures

This section examines the attitudes of SMEs towards six key policy measures. As discussed in section 5.7.2.2, a 5-point Likert scale containing multiple-items was designed to measure attitudes. Tables 6.9 - 6.14 shows items from a Likert scale designed to measure attitudes, the frequency of agreement by SMEs and mean ratings for each statement. The results of data analysis are presented in sections 6.6.1 – 6.6.6 below and discussed in more detail in sections 6.8.1 – 6.8.6.

6.6.1 Elimination of PQQ for smaller contracts

Table 6.9 consists of four statements that were used to measure attitudes towards “elimination of PQQ for smaller contracts”. The table (6.9) presents the frequency of agreement and mean ratings for each statement relating to “elimination of PQQ for smaller contracts “. Generally, it appears that SME’s were slightly positive about this policy because mean agreement scores for the four statements ranged from 3.80 to 3.60. SMEs agreed mostly with statement 3, that PQQ “reduces the administrative burden placed on the bidders”. The statement generated the highest level of agreement with a mean score of 3.80. The statement that earned the next highest level of agreement was “it makes the procurement process less time-consuming” (statement 1).

Table 6.9 Elimination of PQQ for smaller contracts

No	Attitude Statements	Level of Agreement (%)					Mean	Rank
		SD	D	U	A	SA		
Statement 1	It makes the procurement process less time-consuming	.7	13.1	21.2	49.6	15.3	3.66	2
Statement 2	It helps to make the supplier eligibility criteria less difficult to meet by allowing bidders to self-certify their ability	1.5	7.3	27.0	57.7	6.6	3.61	3
Statement 3	It reduces the administrative burden placed on the bidders	1.5	12.4	16.8	43.1	26.3	3.80	1
Statement 4	It helps to ensure that selection criteria are proportionate to the contract sizes	3.6	12.4	15.3	57.7	10.9	3.60	4

In contrast, respondents gave their least level of agreement to statement 4 “It helps to ensure that selection criteria are proportionate to the contract sizes”. It was however, interesting to see that while statements 3 and 4 had the highest and lowest levels of agreement, respectively, they also earned the lowest percentage of undecided respondents (15.3% and 16.8%). This suggests that SME respondents seem to doubt whether the elimination of PQQ for small contracts “reduces the administrative burden placed on the bidders” or “helps to ensure that selection criteria are proportionate to the contract sizes”. The response to the research question 4 (see in Chapter 7), can help uncover the reasons for this uncertainty, by identifying the concerns of respondents about SME-friendly procurement policy measure being implemented in the UK.

6.6.2 Prompt payment rule

Table 6.10 consists of four statements that were used to measure attitudes towards “prompt payment rule”. It shows the frequency of agreement and the mean ratings to each statement.

Table 6.10 Prompt Payment Rule

No	Attitude Statements	Level of Agreement (%)					Mean	Rank
		SD	D	U	A	SA		
Statement 5	It inspires existing contractors to be on the lookout for new contract opportunities	3.6	13.9	21.2	54.7	6.6	3.47	3
Statement 6	Firms that haven't been competing for public tenders may be motivated to do so	2.2	23.4	17.5	51.1	5.8	3.35	4
Statement 7	It helps to improve the cash flow of contractors	2.2	3.6	21.2	42.3	30.7	3.96	1
Statement 8	It helps to keep subcontractors healthy	2.2	15.3	16.8	47.4	18.2	3.64	2

SMEs agreed mostly with statement 7 “it helps to improve the cash flow of contractors”, with a mean of “3.96”. Although slightly more than forty-two percent (i.e. 42.3%) of respondents strongly agreed and another 30.7% agreed with this statement, it has a very negligible disagreement “6%” and a rather high proportion of uncertainty “21.2%”. The percentage of respondents who were uncertain of this statement indicates an element of doubt about the prompt payment policy. In addition, statement 8 “it helps to keep subcontractors healthy”, was the next highest ranked. On the contrary, SMEs agreed least with statement 6 “Firms that haven’t been competing for public tenders may be motivated to do so” because of the prompt payment rule. This statement had the highest level of disagreement (23.4%), despite the fact that 47.4% strongly agreed and additional 18.2% agreed with it.

Overall, it appears that SME’s attitudes towards the prompt payment rule” were largely not so optimistic. Apart from statement 7, that has a mean score agreement of 3.96 (close to 4), the mean ratings for the remaining three statements range from 3.27 to 3.70. The findings reported in subsequent section (7.3) of Chapter 7 are relevant for determining why the respondents might have doubt about this policy measure, leading to some of the approaches recommended to help improve SMEs participation in public procurement.

6.6.3 Consortium Bidding

Table 6.11 consist of four statements that were used to measure attitudes towards “consortium bidding”. The table presents the frequency of agreement and mean ratings to each statement. SMEs have the highest level of agreement with statement 10 “It enables the bidder to meet the geographic spread required for contract delivery performance”. This statement has a rather sizeable level of uncertainty “21.2%”. The uncertainty concerning statement 10 might be due to some concerns (no yet known) or difficult experiences, which the SMEs have about consortium bidding. SMEs on average are more likely to agree that consortium bidding, “helps to improve the bidder’s technical capacity to meet the minimum requirements for the tender” (statement 9). Nevertheless, it can be seen from table (6.11) below, that the levels of agreement for statements regarding “consortium bidding” were generally not very positive, with respondents’ average mean rating of 3.69 – 3.19.

Table 6.11 Consortium Bidding

No	Attitude Statements	Level of Agreement (%)					Mean	Rank
		SD	D	U	A	SA		
Statement 9	It helps to improve the bidder’s technical capacity to meet the minimum requirements for the tender	4.4	7.3	16.1	62.0	10.2	3.66	2
Statement 10	It enables the bidder to meet the geographic spread required for contract delivery performance	2.9	5.1	21.2	62.0	8.8	3.69	1
Statement 11	It enables the bidder to prepare high quality bid/proposal by combining expertise with peers	2.2	8.8	35.0	45.3	8.8	3.50	3
Statement 12	It helps the bidder to develop skill to tender independently for future contract opportunities	3.6	27.7	22.6	38.0	8.0	3.19	4

On the contrary, there was considerably low level of agreement with the statements 12 “It helps the bidder to develop skill to tender independently for future contract opportunities”. More than a quarter (31.3%) of respondents disagreed (disagree or

strongly disagree) with the statement. Even though, 45.3% of SMEs agreed with statement 11; that consortium bidding “enables a bidder to prepare high quality bid/proposal by combining expertise with peers”, more than a third (35%) were unsure (neither agreed nor disagreed). The qualitative findings in Chapter 7 (see sections 7.4 – 7.4.4) offer possible reasons for the uncertainty reported by respondents about statement 11 as well as the low level of agreement with the statements 12. These were part of the issues considered in Chapter 8 (sections 8.1.5 and 8.2.1.2), when suggesting approaches to form the basis of framework development.

6.6.4 Contracts finder

Table 6.12 contains five statements that were used to measure attitudes towards “contracts finder”. The table below presents the frequency of agreement and mean ratings to each statement.

Table 6.12 Contracts Finder

No	Attitude Statements	Level of Agreement (%)					Mean	Rank
		SD	D	U	A	SA		
Statement 13	It helps prospective bidders to keep an eye on forthcoming tender opportunities	0	1.5	5.8	75.2	17.5	4.09	1
Statement 14	It is less wearisome to search for information about existing tender opportunities	.7	9.5	14.6	66.4	8.8	3.73	3
Statement 15	It makes searching for contract information less time consuming	0	8.0	16.1	65.7	10.2	3.78	2
Statement 16	It helps to increase transparency of sub-contracting opportunities	.7	14.6	21.9	53.3	9.5	3.56	4
Statement 17	It helps to simplify the procurement process	2.2	16.8	32.8	42.3	5.8	3.33	5

It is clear from the table (6.12) that most respondents agreed with statement 13, which indicates that contracts finder “helps prospective bidders to keep an eye on forthcoming tender opportunities”. Almost all (92.7%) of SME respondents agreed (strongly agree or agree) with the statement, while none (0%) strongly disagreed. Another statement that had a high level of agreement (66.4%) with some sizeable

uncertainty “16.1%” was statement 15 “It makes searching for contract information less time consuming”. A comparable proportion of respondents “14.6%” were unsure about statement 14 “It is less wearisome to search for information about existing tender opportunities”. Similarly, respondents least agreed with statement 17, “It helps to simplify the procurement process”, with a mean score of “3.33”. Although 42.3% of SMEs agreed with this statement, more than a quarter “32.8” said they were unsure.

The above results have important implications for SME participation in public procurement. For example, Ballard (2015) has observed cases where valuable information about the contract was not included in the opportunities advertised on the contracts finder. Therefore, SMEs can doubt the usefulness of the contracts finder, if they discover that information posted about contract opportunities are vague and insufficient to enable them to make informed decisions. Again, Bharati (2010) argued that some owners/managers of SMEs in the UK lack basic computer skills, and the fact that contracts finder is an internet-based system may pose some challenges to SMEs who have limited ICT capability. These issues might be probable causes of the uncertainty about statement 14 and has been taken into consideration in subsequent Chapter 7. The qualitative findings reported in Chapter 7 (sections 7.5 -7.5.3) indicated additional issues that SMEs have reported about contracts finder; these were subsequently addressed when recommending approaches for improving SME participation in public procurement, as presented in Chapter 8 (section 8.1.8).

6.6.5 Division of contracts into lots

Table 6.13 comprises four statements that were used to measure attitudes towards “division of contracts into lots”. The table reports the frequency of agreement and mean ratings to each statement.

Table 6.13 Division of contracts into lots

No	Attitude Statements	Level of Agreement (%)					Mean	Rank
		SD	D	U	A	SA		
Statement 18	It enables SMEs to compete on the same level with larger companies	9.5	16.8	18.2	48.2	7.3	3.27	4

Statement 19	It offers opportunities for SMEs to bid for more than one contracts within a single procurement exercise	6.6	6.6	15.3	62.0	9.5	3.61	3
Statement 20	It enables SMEs to bid for contract opportunities that are relevant to their competencies.	7.3	3.6	14.6	60.6	13.9	3.70	1
Statement 21	Smaller contract sizes would be opened up to SMEs	7.3	5.8	19.7	51.1	16.1	3.63	2

A key observation here is that SMEs' attitudes towards "division of contracts into lots" were generally not very positive with respondents' average mean rating of 3.27 - 3.70. Nevertheless, the majority (74.5%) of SMEs agreed or strongly agreed with statement 20 "division of contracts into lots enables SMEs to bid for contract opportunities that are relevant to their competencies". While the statement did not have the highest percentage in terms of agreement (60.6%), a few (3.6%) of SME respondents disagreed with it. In addition, statement 20 earned the lowest percentage (14.6) of uncertainty from the respondents.

Furthermore, statements 19 and 21 have comparable mean score of (3.61) and (3.63) respectively. Specifically, statement 21 "Smaller contract sizes would be opened to SMEs" had a higher strongly agree percentage (16.1%), than statement 19 "It offers opportunities for SMEs to bid for more than one contracts within a single procurement exercise" (9.5%). However, SME respondents were most uncertain about statement 21, regardless of its rank as second out of the four statements. In addition, over a quarter (26.3%) of SMEs disagreed (strongly disagree or disagree) with statement 18 that division of contract into smaller lots enables SMEs to compete on the same level with larger companies. A probable reason for the disagreement and uncertainty was identified in the qualitative findings in Chapter 7 (see further details in sections 7.6 – 7.6.4) and was addressed when proposing approaches for increasing SME participation in public procurement in a subsequent Chapter (8).

6.6.6 Subcontracting

Table 6.14 contains three statements that were used to measure attitudes towards “subcontracting”. The table reports the frequency of agreement and mean ratings for each statement.

Table 6.14 Sub-contracting

No	Attitude Statements	Level of Agreement (%)					Mean	Rank
		SD	D	U	A	SA		
Statement 22	It offers opportunities for SMEs to get some relevant experience for future tender competition	3.6	13.9	20.4	56.9	5.1	3.46	1
Statement 23	It helps to facilitate skill transfer from large firms to SME sub-contractors	8.8	20.4	19.7	46.7	4.4	3.18	2
Statement 24	It is a less difficult route for SMEs to participate in public procurement markets	10.9	22.6	13.9	46.0	6.6	3.15	3

The statement that earned the highest level of agreement from SME respondents was statement 22 “it offers opportunities for SMEs to get some relevant experience for future tender competition”. It was however surprising to see that 20.4% of SMEs were unsure about this statement. Several factors may be responsible for the uncertainty expressed by SMEs about statement 22. Firstly, SMEs may possibly be restricted to activities that would not enable them to learn tendering skills from prime contractors. This issue is particularly worth mentioning because unless the public organisation required main contractor to identify the subcontracting partner in its bid proposal, the prime contractors usually choose their subcontractors outside the public procurement system. This, perhaps is the reason why slightly more than fifty percent (51.1%) of SME respondents agreed (strongly agree or agree) with statement 23 “It helps to facilitate skill transfer from large firms to SME sub-contractors”.

In contrast, SMEs agreed least with statement 24 “It is a less difficult route for SMEs to participate in public procurement markets”. More than a quarter (33.5%) of SMEs disagreed (strongly disagree or disagree) with this statement. The qualitative data analysis in Chapter 7 (section 7.7) offer probable reasons to explain these findings. This was considered useful in identifying opportunities for improvements that can help an SME increase participation in public procurement.

6.7 Determining whether significant differences exist between different SMEs groups.

Previous research has established that firm size (e.g. Flynn, McDevitt and Davis, 2013), age (e.g. Flynn and Davis, 2015) and tendering experience (e.g. Flynn and Davis, 2016a) can influence SMEs’ experience and behaviours in public procurement. Therefore, the Kruskal-Wallis tests were performed on the survey data to determine whether there is a significant difference between different groups of SMEs (based on firm size, age and tendering experience), in relation to their attitudes towards key policy measures. As mentioned in section 5.7.2.3, the minimum level of significance is defined as $p < 0.05$. Table 6.15 – 6.21 reports the results of Kruskal Wallis tests for the mean comparisons regarding the attitudes of SMEs towards the six policy measures. Whenever a difference is significant, the mean rank shown in Appendix Tables 6 – 8 were used to identify which group the significant difference is favouring. The sections 6.7.1 – 6.7.6 below discuss the differences observed in the attitudes of SMEs towards key policy measures.

6.7.1 Elimination of PQQ for smaller contracts

The table (6.15) below presents the results of Kruskal-Wallis H tests to determine whether significant differences exist among SMEs grouped according to firm size, age and experience of public tendering, in level of agreement with four statements that measure attitude towards “elimination of PQQ for smaller contracts”:

Table 6.15 Differences regarding elimination of PQQ for smaller contracts

Statements	Grouping Variable								
	Firm size			Age			Tendering experience		
	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.
Statement 1	9.193	2	.010	5.944	4	.203	4.814	4	.307
Statement 2		2	.767	6.492	4	.165	2.466	4	.651
Statement 3	5.544	2	.063	9.257	4	.055	4.758	4	.313
Statement 4	2.481	2	.289	9.197	4	.056	10.923	4	.027

- a) SMEs grouped by firm size – There was a statistically significant difference between SMEs of different sizes, in levels of agreement with statement 1 “It makes the procurement process less time-consuming” ($\chi^2 = 9.193$, $df = 2$, $p=.010$), with mean ranks of 78.76, than micro-sized firms (74.35) or small-sized firms (57.86). This seems to suggest that medium-sized firms are more likely (than small-sized and micro-sized firms) to believe that “elimination of PQQ for smaller contracts” helps reduce the time required to complete the procurement process. The result is not too surprising because, other studies (e.g. Flynn and Davis, 2015; McKevitt and Davis, 2015) that used similar data analysis techniques to those used in the present research, have also discovered that firm size is a strong predictor of familiarity with SME-friendly policy, particularly regarding “elimination of PQQ for smaller contracts”. However, a study using a different method, such as case study or an experimental study, might reveal different results.
- b) SMEs grouped by age – There were no statistically significant differences between SMEs of different age in levels of agreement with the four statements, used to measure attitudes towards “elimination of PQQ for smaller contracts”. Although the mean ranking in Appendix Table 8 shows that SME respondents who had been in business for less than one year are more likely to agree with statement 3 “it reduces the administrative burden placed on the bidders”, and statement 4 “It helps to ensure that selection criteria are proportionate to the contract sizes”, than older SMEs. However, these differences were marginally outside the level of acceptable significance: statement 3 ($X^2 = 9.257$, $df = 4$, $p=.055$), and statement 4 ($X^2 = 9.197$, $df = 4$, $p= .056$).

c) SMEs grouped by experience of public tendering – Regarding tendering experience, there was a statistically significant difference in one out of four statements, which were used to measure attitudes towards “elimination of PQQ for smaller contracts”. The results of Kruskal-Wallis test show that a significant difference exist regarding statement 4 “it helps to ensure that selection criteria are proportionate to the contract sizes” ($X^2 = 10.923$, $df = 4$, $p = .027$). Looking at the mean ranking in Appendix Table 9, it appears that the significant difference is favouring SMEs with 6 – 9-year experience in bidding for public contracts.

6.7.2 Prompt payment rule

The table (6.16) below presents the results of Kruskal-Wallis H tests to determine whether significant differences exist among SMEs grouped according to firm size, age and experience of public tendering, in level of agreement with four statements that measure attitude towards “prompt payment rule”.

Table 6.16 Differences regarding prompt payment rule

Statements	Grouping Variable								
	Firm size			Age			Tendering experience		
	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.
Statement 5	1.620	2	.445	1.498	4	.827	1.881	4	.758
Statement 6	8.602	2	.014	2.811	4	.590	1.280	4	.865
Statement 7	2.204	2	.332	7.080	4	.132	8.628	4	.071
Statement 8	4.135	2	.127	5.712	4	.222	9.034	4	.060

a) SMEs grouped by size – There was a statistically significant difference between SMEs of different size, in levels of agreement with statement 6 “firms that haven’t been competing for public tenders may be motivated to do so” ($X^2 = 8.602$, $df = 2$, $p = .014$), with a mean rank of 75.85 for micro-sized firms, 67.68 for medium-sized firms and 66.12 for micro-sized firms. Although (in table 6.10) this statement was the least rated by all SME respondents, this finding is suggesting that micro-sized firms are more likely to agree with statement. Typically, small firms are much dependent on sustainable cash flow (Segarra and Teruel, 2009), but micro-sized firms which account for 96% of all businesses in the UK, have fewer turnovers

(Ward and Rhodes, 2014). Hence, the significant difference observed here might be due to different cash flow needs of SMEs in different firm size groupings (micro, small and medium). Given the relative small size and resource limitations of micro-sized firms, they might suffer from the impact of delayed payments, more than the small-sized and medium-sized firms. This issue has been addressed (see sections 8.1.2 and 8.1.6) with recommendations that can help improve implementation of the prompt payment rule to help encourage micro-sized firms to increase participation in public procurement.

- b) SMEs grouped by age - There were no statistically significant differences between SMEs of different age in levels of agreement with the four statements, used to measure attitudes towards “prompt payment rule”. Although Appendix Table 8 shows that the mean rankings are not the same in all the age groups, but the differences are not statistically significant.
- c) SMEs grouped by experience of public tendering –There were no statistically significant differences between SMEs with different years of tendering experience, in levels of agreement with the four statements, used to measure attitudes towards “prompt payment rule”. Although Appendix Table 9 shows that the mean rankings are not the same in all the tendering experience groups, but the differences are not statistically significant because the p-values for all the items were higher than the chosen significance level set for the H test ($p > .05$)

6.7.3 Consortium Bidding

The table (6.17) below presents the results of Kruskal-Wallis H tests to determine whether significant differences exist among SMEs grouped according to firm size, age and experience of public tendering, in level of agreement with four statements that measure attitude towards “consortium bidding”.

Table 6.17 Differences regarding consortium bidding

Statements	Grouping Variable								
	Firm size			Age			Tendering experience		
	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.
Statement 9	6.207	2	.045	3.224	4	.521	9.461	4	.051
Statement 10	4.188	2	.123	4.330	4	.363	8.263	4	.082
Statement 11	6.697	2	.035	5.704	4	.222	5.264	4	.261
Statement 12	4.249	2	.120	15.308	4	.004	5.870	4	.209

- a) SMEs grouped by size – There were statistically significant differences between SMEs of different size in levels of agreement with statement 9 “it helps to improve the bidder’s technical capacity to meet the minimum requirements for the tender”. The differences are marginal ($X^2 = 6.207$, $df = 2$, $p=.045$), and statement 11 “It enables the bidder to prepare high quality bid/proposal by combining expertise with peers” ($X^2 = 6.697$, $df = 2$, $p=.035$). It was clear from Appendix Table 7 that the highest mean rank agreement scores for these statements were from micro-sized firms. The results here are not too surprising because previous research conducted in Ireland by Flynn and Davis (2015) has found that firm size predict SMEs’ experiences of SME-friendly policies. The fact that Flynn and Davis adopted a quantitative analysis method, just like the present study, might have caused the similarities in findings, notwithstanding the different countries in which the two studies were conducted.
- b) SMEs grouped by age -There was a statistically significant difference between SMEs of different age in levels of agreement with statement 12 “it helps the bidder to develop skill to tender independently for future contract opportunities” ($X^2 = 15.308$, $df = 4$, $p=.004$). The mean ranking in Appendix Table 8 indicates that the difference is favouring young SMEs, precisely those that have been in business for less than 1 year (mean ranking score of 83.17). This is suggesting that new SMEs may consider “consortium bidding” helpful for developing their skills to tender for public contracts, just as Gessinger (2009) has shown that small firms, particularly

start-ups are always willing to learn new skills and competencies. This finding is important and was taken into consideration in subsequently chapter 8, towards the development of a framework to improve SME participation in public procurement (see section 8.1.7).

- c) SMEs grouped by experience of public tendering –There was no statistically significant difference between SMEs of different years of tendering experience, in levels of agreement with the four statements, used to measure attitudes towards “consortium bidding”. Although the mean ranking in Appendix Table 9 shows that levels of agreement with statement 9 are not the same amongst SMEs; particularly those with 15 – and above years have the highest mean scores ($X^2 = 9.461$, $df = 4$, $p=.051$). However, this difference is slightly outside the acceptable significance level.

6.7.4 Contracts finder

This table (6.18) below presents the results of Kruskal-Wallis H tests to determine whether significant differences exist among SMEs grouped according to firm size, age and experience of public tendering, in level of agreement with five statements that measure attitude towards “contracts finder”:

Table 6.18 Differences regarding contracts finder

Statements	Grouping Variable								
	Firm size			Age			Tendering experience		
	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.
Statement 13	2.329	2	.312	8.301	4	.081	1.567	4	.815
Statement 14	.592	2	.744	3.605	4	.462	1.926	4	.749
Statement 15	1.628	2	.443	4.578	4	.333	3.205	4	.524
Statement 16	1.810	2	.404	4.111	4	.391	6.900	4	.141
Statement 17	1.084	2	.582	2.834	4	.586	9.882	4	.042

- a) SMEs grouped by size –There were no significant differences between SMEs of different firm size, in levels of agreement with the five statements used to measure attitudes towards “contracts finder”. Although Appendix Table 7 shows that the mean ranking are not the same for SMEs in different firm size groupings, but the differences are not statistically significant. This is suggesting that the attitudes of SMEs towards “contracts finder” are unequivocal irrespective of their firm size.
- b) SMEs grouped by age – Again, there were no significant differences between SMEs of different age, in levels of agreement with the five statements used to measure attitudes towards “contracts finder”. Although Appendix Table 8 shows that the mean ranking are not the same for SMEs in different firm age groupings, but the differences are not statistically significant. Likewise, this finding is suggesting that attitudes towards “contracts finder” are relatively the same for SMEs of different age group.
- c) SMEs grouped by experience of public tendering –There was a statistically significant difference between SMEs with different years of tendering experience, in levels of agreement with statement 17 “It helps to simplify the procurement process” ($X^2 = 9.882$, $df = 4$, $p=.042$). This statement was the lowest rated by all respondents (see table 6.12), but the mean ranking in Appendix Table 9 shows that SMEs with tendering experience of 6-9 years are more likely to agree with it than the rest of the SMEs in the group. A possible explanation for this difference could be the prior experience the

SMEs in the group have with using contracts finder's, which might influence their attitudes towards its functionalities or benefits. Again, section 8.1.7 of subsequent chapter 8, has addressed this issue by recommending approaches to help improve the functionalities of the contracts finder.

6.7.5 Division of contracts into lots

The table (6.19) below presents the results of Kruskal-Wallis H tests to determine whether significant differences exist among SMEs grouped according to firm size, age and experience of public tendering, in level of agreement with four statements that measure attitude towards "division of contracts into lots":

Table 6.19 Differences regarding division of contracts into lots

Statements	Grouping Variable								
	Firm size			Age			Tendering experience		
	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.	Chi-Square	df	Asymp. Sig.
Statement 18	7.199	2	.027	4.688	4	.321	1.386	4	.847
Statement 19	4.312	2	.116	4.914	4	.296	4.946	4	.293
Statement 20	9.083	2	.011	3.368	4	.498	5.759	4	.218
Statement 21	.195	2	.907	2.462	4	.651	5.233	4	.264

- a) SMEs grouped by size – There were statistically significant differences between SMEs of different size in levels of agreement with statement 18 “It enables SMEs to compete on the same level with larger companies” ($X^2 = 7.199$, $df = 2$, $p = .027$), and statement 20 “It enables SMEs to bid for contract opportunities that are relevant to their competencies.” ($X^2 = 9.083$, $df = 2$, $p = .011$). Concerning statement 18, the significant difference is favouring the medium-sized firms with a mean rank score of 78.24, whereas the mean rank scores for small-sized firms and micro-sized firms are 69.13 and 55.61 respectively. The difference in levels of agreement with statement 20 seems to favour the small-sized firms; with the highest mean rank score of 78.81 (see Appendix Table 4). This is suggesting that the division of public contracts into lots might have influenced SMEs of different size, differently.

The results here may be relevant to understanding the impact of “division of contracts into lots” on SMEs of different firm size; but not pertinent to testing the original aim of this study, which is to develop a framework for SME participation in public procurement.

- b) SMEs grouped by age –There were no statistically significant differences between SMEs of different age in levels of agreement with the four statements, used to measure attitudes towards “division of contracts into lots”. Although Appendix Table 8 shows that the mean rankings are not the same for SMEs in different firm size groupings, the differences are not statistically significant. This may perhaps mean that SMEs’ attitudes towards “division of contracts into lots” are unambiguous irrespective of their firm size.

- c) SMEs grouped by experience of public tendering –There were no statistically significant differences between SMEs with different years of tendering experience, in levels of agreement with the four statements, used to measure attitudes towards “division of contracts into lots”. This is because the p-values for all the items were higher than the chosen significance level set for the H test ($p > 0.05$). Even though Appendix Table 9 shows that the mean rankings are not the same for SMEs with different years of tendering experience, the differences are not statistically significant.

6.7.6 Subcontracting

The table (6.20) below presents the results of Kruskal-Wallis H tests to determine whether significant differences exist among SMEs grouped according to firm size, age and experience of public tendering, in level of agreement with three statements that measure attitude towards “subcontracting”:

Table 6.20 Differences regarding subcontracting

Statements	Grouping Variable								
	Firm size			Age			Tendering experience		
	Chi-Square	df	Asymp . Sig.	Chi-Square	df	Asymp . Sig.	Chi-Square	df	Asymp . Sig.
Statement 22	4.795	2	.091	.633	4	.959	5.725	4	.221
Statement 23	10.954	2	.004	1.777	4	.777	2.419	4	.659
Statement 24	7.467	2	.024	.800	4	.938	1.122	4	.891

- a) SMEs grouped by size – There were statistically significant differences between SMEs of different size, in levels of agreement with statement 23 “it helps to facilitate skill transfer from large firms to SME sub-contractors” ($X^2 = 10.954$, $df = 2$, $p = .004$), and statement 24 “it enables SMEs to bid for contract opportunities that are relevant to their competencies” ($X^2 = 7.467$, $df = 2$, $p = .024$). The mean ranking in Appendix Table 7 shows that the differences (observed about statements 23 and 24) seem to favour the medium-sized firms, with topmost mean rank agreement scores of 83.26 (regarding statements 23) and 78.68 (regarding statement 24). This might be because medium-sized firms have more resources and capability than their counterparts, who are micro or small-sized firms (Flynn and Davis, 2015). Sincere source limitations typically restrict SMEs ability to participate in public procurement (Karjalainen and Kempainen, 2008), the framework that will be developed in this study will consider how SMEs irrespective of their sizes are given equitable opportunities to access subcontracting opportunities in the public-sector supply chain – as duly addressed in sections 8.1.8 and 8.1.8.1.
- b) SMEs grouped by age – There were no statistically significant differences between SMEs of different age, in levels of agreement with the three statements, used to measure attitudes towards “subcontracting”. Although Appendix Table 8 shows that, the mean rankings were not the same for SMEs in different firm age groupings, the differences are not statistically significant. This could be interpreted to mean the SMEs have unambiguous attitudes towards “subcontracting” irrespective of their firm age.

a) SMEs grouped by experience of public tendering –There were no significant differences between SMEs with dissimilar experience of public tendering, in levels of agreement with the three statements used to measure attitudes towards “subcontracting”. Although Appendix Table 9 shows that the mean rankings are not the same for SMEs in different tendering experience groupings, the differences are not statistically significant. This could be summarised by saying SMEs have comparable attitudes towards “subcontracting” irrespective of their experience in bidding for public sector contracts.

6.8. Discussion of emerging findings on SME attitude towards key policy measures

In this chapter, the researcher has explored the attitudes of SMEs towards six key policy measures. The survey developed for this purpose included a 5-point Likert scale consisting of 24 items (in the form of statements) with which the SMEs have either to agree or disagree. These statements were assembled into six categories portraying the attributes and benefits of each policy measure, as explained in chapter five (section 5.4). Table 6.21 shows the statements that SMEs gave their highest level of agreement to, for each policy measure, and the corresponding mean agreement scores. The table also show where significant difference exist after comparing the data from SMEs grouped according to firm size, age and tendering experience.

Table 6.21 Summary of attitude score for each key policy measure

Key policy measure	Statements that SMEs gave their highest level of agreement to	Mean level of agreement scores	Significant differences between SME groups		
			Firm size	Firm age	Experience of public tendering
1. Elimination of PQQ for smaller contracts	It reduces the administrative burden placed on the bidders (Statement 3)	3.80	NO	NO	NO
2. Prompt payment rule	It helps to improve the cash flow of	3.96	NO	NO	NO

	contractors (Statement 7)				
3. Consortium bidding	It enables the bidder to meet the geographic spread required for contract delivery performance (Statement 10)	3.69	NO	NO	NO
4. Contracts finder	It helps prospective bidders to keep an eye on forthcoming tender opportunities (Statement 13)	4.09	NO	NO	NO
5. Division of contracts into lots	It enables SMEs to bid for contract opportunities that are relevant to their competencies (Statement 20)	3.70	YES	NO	NO
6. Subcontracting	It offers opportunities for SMEs to get some relevant experience for future tender competition (Statement 22)	3.46	NO	NO	NO

6.8.1 Elimination of PQQ for smaller contracts

The mean attitude scores for this policy measure range from 3.60 to 3.80, indicating that SMEs have slightly positive attitudes towards “elimination of PQQ for smaller contracts”. About 70% of all SMEs agreed (agree or strongly agree) that the removal of PQQ stages for low value contracts, helps in reducing the administrative burden on bidders (statement 3). There were no significant differences between SMEs grouped according to firm size, age and tendering experience, in levels of agreement with this statement. This finding is not surprising because previous studies (Loader, 2013; Pickernell et al., 2011), albeit through different research method (i.e. literature analysis) has identified stringent pre-qualification criteria as a key barrier to SME participation in public procurement.

Key finding about attitudes towards “elimination of PQQ for smaller contracts”

- Respondents generally expressed slightly positive attitudes towards “elimination of PQQ for smaller contracts”, particularly regarding how it can help reduce the administrative burden placed on the bidders when participating in public tenders.

Although, the elimination of PQQ for smaller contracts is expected to help streamline the procurement process (Loader, 2018) and then to remove bureaucratic difficulties that might hinder SMEs from competing for contracts (Kidalov and Snider, 2011); yet this expectation is far from reality as the research findings (in section 6.3.2.5) indicates that SME rate of participation in public procurement is still low. Therefore, the subsequent chapter (7) is dedicated to determining issues that might affect the effectiveness of this policy measure (see further details in section 7.2). This might help identify opportunities for improvements, which might contribute towards the framework development.

6.8.2 Prompt payment rule

SMEs show slightly positive attitude towards the “prompt payment rule”, with mean attitude scores ranging from 3.47- to 3.64. Majority (73%) of SMEs gave their highest level of agreement to statement 7, which states that prompt payment “helps to improve the cash flow of contractors”. Although there were no significant differences between SMEs grouped according to firm size, age and tendering experience, in levels of agreement with statement 7, but some SMEs (21.2%) seems uncertain about it.

Key finding about attitudes towards the “prompt payment rule”

SMEs generally expressed slightly positive attitudes towards “the prompt payment rule”, particularly regarding how it can help to improve the cash flow of contractors. Although there is still some uncertainty surrounding SMEs’ attitudes in this regard.

The findings here seem to confirm what was contained in policy documents as the potential benefits of prompt payment policy, particularly regarding its impact on contractors’ cash flow (Segarra and Teruel, 2009; Rostek, 2015). However, the finding does not offer substantial evidence to support the notion that SMEs will be encouraged to participate in public procurement if they are paid on time (Cabinet Office, 2012b; National Audit Office, 2015). The qualitative data analysed in in subsequent chapter 7

(see section 7.3) can help to further explore this issues in determining how the prompt payment rule can be implemented to yield better outcomes in terms of SMEs participation in public procurement. Furthermore, this issues should be addressed because prompt payments is not only beneficial to SME suppliers; it is in the interest of the public organisations that their contractors maintain a healthy financial condition.

6.8.3 Consortium bidding

The findings indicate that SMEs have slightly positive attitude towards “consortium bidding”, with mean attitude scores ranging from 3.19 to 3.69. They gave their highest level of agreement to statement 10, which states that consortium bidding “enables a bidder to meet the geographic spread required for contract delivery performance” - more than 70% of SMEs agreed (agree or strongly agree) with this statement. It also indicates that SMEs are enthusiastic about consortium bidding, particularly because it can allow them to target tender opportunities, which exist outside their immediate geographical area. Even though statement (10) depicts one of the important benefits of consortium bidding (Competition & Consumer Protection Commission, 2014), there is no evidence from this study to suggest that SMEs participation in public procurement has improved through this policy measure.

On the contrary, there was a low level of agreement with statement 12, stating that consortium bidding “helps a bidder to develop skill to tender independently for future contract opportunities” (46% agreement amongst SME of respondents). What can be deduced from all the results is; SMEs attitude towards consortium bidding is slightly positive, even though both the procurement laws in EU (Vincze et al, 2010) and UK suggest that firms can use joint bidding to address their resource limitations in the public procurement markets (Loader and Norton, 2015). Considering the foregoing, it is important to determine the reasons why SMEs expressed a somewhat positive attitude towards consortium bidding. This might help identify opportunities for improvement in SME participation in public procurement, which links to the aim of the present study.

To achieve this, the researcher identified issues and concerns about consortium bidding is presented in subsequent chapter (see sections 7.4 – 7.4.4). This provides insights, leading to recommendations about how SMEs can take full advantage of this

policy measure to improve participation in public procurement (see further details in Chapter 8).

Key findings about attitudes towards “consortium bidding”

SMEs generally expressed slightly positive attitudes towards “consortium bidding”, particularly regarding how it can assist a bidder to meet the geographic spread required for contract delivery, along with improving bidder’s capability to meet the minimum technical requirements for the tender. There were no significant differences between SMEs grouped according to firm size, age and tendering experience, in levels of agreement with statement 10. This therefore, suggests that the SMEs are unequivocal in their attitudes towards consortium bidding in these aspects.

6.8.4 Contracts finder

SMEs have slightly positive attitudes towards the “contracts finder”, with mean attitude scores ranging from 3.56 to 4.09. They gave their highest level of agreement to statement 13, which states that contracts finder “helps prospective bidders to keep an eye on forthcoming tender opportunities”. While almost all (92.7%) SMEs agreed (agree or strongly agree) with statement 13, slightly less (75.2% of SME respondents) agreed with statement 14 that “it is less time consuming to search for contract opportunities and information on contracts finder”. Further analysis of the data shows that there were no significant differences between SMEs grouped according to firm size, age and tendering experience, in levels of agreement with the statements mentioned above.

What this finding suggests is that SMEs seem to be enthusiastic about contracts finder, as it can help them reduce the difficulties in searching for contract opportunities. This is not surprising because the UK government primarily designed the contracts finder to enable prospective bidders to identify available tender opportunities easily (Cabinet Office, 2011a; Cabinet Office, 2013; Department for Business Innovation and Skills, 2013). On the contrary, SME agreed less with the following statements (15 and 16) respectively, that the contracts finder helps to simplify the procurement process” and “it increases transparency about sub-contracting opportunities”. These issues are worrisome and have been explored further in subsequent chapters 7 (see sections 7.5 – 7.5.3), leading to some recommendations that can help in improving the efficacy of contracts finder for enhancing SME participation in public procurement (see further discussion in Chapter 8, sections 8.1.8 – 8.1.8.1).

Essentially, the findings here suggest the need for increasing compliance amongst public buyers regarding the implementation of contracts finder. For example, Ballard (2015) has discovered that important information about the contract were often removed from tender opportunities published on the portal. This is a critical issue that has been duly addressed in Chapter 8 and it provided another rationale for considering the need for improved transparency in advertisement of forms of contract opportunities in the public sector, which then contributes to the framework development (see section 8.2.1.3). Furthermore, it is important to increase transparency of contract opportunities on the contract so that SMEs can develop confidence and trust using it to search for or recognise existing contract opportunities within the public sector.

Key findings about attitudes towards “contract finder”

- SME respondents generally expressed slightly positive attitudes towards “contracts finder”, particularly regarding its ability to support prospective bidders in keeping an eye on forthcoming tender opportunities, and in addition, they think it makes searching for information on public contracts less time consuming.

6.8.5 Division of contracts into lots

SME have slightly positive attitudes towards “division of contracts into lots”, with mean attitude scores ranging from 3.27 to 3.70. SME respondents gave their highest level of agreement to statement 20, which states that division of contracts into lots “enables SMEs to bid for contract opportunities that are relevant to their competencies”. Although 74.5% of SMEs agreed, (agree or strongly agree) with this statement, there was a significant difference between respondents of different size, in levels of agreement. Looking at a comparison of the three groups, from the mean ranking in Appendix Table 4, small-sized firms seem to have more agreement than the medium-sized firms and micro-sized firms.

In a previous study, Flynn, McDevitt and Davis (2013) used mean ranking analysis, just like the present study, and discovered that the “small-sized firms enjoy a more advantaged position than micro-enterprises but lag behind medium-sized enterprises on some tendering dimensions” (p 14). Although, Flynn and Davis’ finding might offer a possible explanation for the difference observed in the present study regarding the mean ranking between SMEs of different size, in level of agreement with statement

20; the adoption of a different method such as cross-case analysis of data, may produce divergent outcomes from comparison of different group of respondents.

Similarly, statement 21 “smaller contract sizes would be opened up to SMEs” has a relatively high percentage of agreement of 67.2%. It should be noted, however, that statement 21 has the highest percentage of strongly agree responses (16.1%). The finding appears to substantiate the argument made by Perry (2011) that when contracting authorities split contracts into lots, SMEs have better opportunity to compete for public contract that match their unique capabilities. Even though Perry’s study focused on SMEs in Northern Ireland and was published approximately 7 years ago, it seems that nothing has changed since then about the potential benefits of division of contracts into lots. Therefore, the framework that will be developed in this study should consider how SMEs can realise the benefits associated with this policy measure

Key findings about attitudes towards “division of contracts into lots”.

- SME respondents expressed slightly positive attitudes towards “division of contracts into lots”. More than anything else, the SMEs are optimistic that this policy measure allows a bidder to target public contract opportunities that are relevant to its unique competencies, but attitudes in this regard may vary with firm size.
- To a lesser extent, SMEs are optimistic that division of contracts into lots would open opportunities for small-sized contract; although there is still some uncertainty about attitudes expressed in this regard.

On the contrary, the statement (18) which states that the division of contracts into lots enables them to compete on the same level with larger companies, was rated least by more than a quarter of the respondents. Precisely, 26.3% of respondents disagreed (disagree or strongly disagree) with this statement. This is an important finding and should be addressed further as has been done in subsequent chapter (see sections 7.7 – 7.7.4). The reason why this finding is important is as follows: UK government requires that buyers in the public sector should be dividing tender opportunities into small lots to create a level playing field for large and small firms competing for contracts (Booth, 2013; Glover, 2008; Loader, 2015), but the present findings (as presented in section 6.6.5) do not back up this claim entirely.

The foregoing has implications for improving participation of SMEs in public procurement because the large size of contracts represents a key barrier that prevents small firms from winning tenders in the public sector (Loader, 2013). For example, Flynn and Davis (2015) has highlighted the policy-practice gaps of SME-friendly procurement policy, and if the traditional practice of bundling contracts together to get the best deals from suppliers still persist in the public sector, as Smith and Hobbs (2001) has stressed earlier; there is a low probability that SMEs will be encouraged to participate more in public procurement, given their resource and capacity limitations. Therefore, the researcher has made recommendations that might potentially lead to better implementation and compliance to SME-friendly procurement policies in sections (8.1.2 – 8.1.4). It is expected that SME participation in public procurement might increase through the recommended approaches.

6.8.6 Sub-contracting

SMEs attitudes towards “subcontracting” is not very positive, with mean attitude scores ranging from 3.15 to 3.46. They gave their highest level of agreement to statement 22, which states that subcontracting “...offers opportunities for SMEs to get some relevant experience for future tender competition”. Although 62% of SMEs a (agree or strongly agree) with this statement, the percentage of uncertainty (20.4%) in the response calls for concern. In a previous study, Loader and Norton (2015) discovered that SMEs supplying the UK’s heritage sector prefer to trade directly with public organisations than via the subcontracting route. This is suggesting that SMEs might not be happy with their experience of working as subcontractors in public sector organisations. The findings from qualitative data analysis (see further detail in subsequent sections 7.7 - 7.7.6) offer additional insights into the probable causes of SMEs disinclination for subcontracting and was contributory to the framework development in Chapter 8.

Key findings about attitudes to “subcontracting”

- SME respondents expressed slightly positive attitudes towards “subcontracting”; more than anything else, they tend to believe that it offers opportunities to acquire relevant experience for needed future tender competition. However, there is still some uncertainty surrounding SMEs’ attitudes in this regard.

Furthermore, the present findings (as reported in section 6.6.6) do not entirely agree with the notion that subcontracting is a major channel for transferring unique skills and knowledge to SMEs, as Carayannis and Sipp (2005) has highlighted earlier. This is because more than a quarter (29.2%) of SMEs disagreed (disagree or strongly disagree) with statement 23, that subcontracting “helps to facilitate skill transfer from large firms to SME sub-contractors”. Similarly, 33.5% of respondents disagreed that subcontracting is less a difficult route for SMEs to participate in public procurement markets (statement 24). This, thus, suggest that SMEs might be facing some challenges participating in subcontracting opportunities in the public sector; notwithstanding previous claim that substantial amounts of work contracted to SMEs in EU and UK come from subcontracts (Thomassen et al, 2014; FreshMinds, 2008).

SMEs have limited free time to work on strategic issues and inadequate resources to devote to sourcing for business opportunities (Rostek, 2015). As a result, they might need additional support to find opportunities to act as subcontracts in the public sector. Therefore, the framework that will be developed from this study will consider new approaches that can help SMEs derive more benefits from participating in public procurement through the subcontracting route (see further detail in sections 8.1.7-8.1.8). For example, it was recommended that, rather than leaving SMEs to be contacting the large/prime contractors, it may be helpful if the public sector can mandate prime contractors to advertise subcontracting opportunities on the contracts finder for SMEs to gain easy access.

6.8. Conclusion

The data analysed in this chapter was collected from SMEs to explore awareness and attitudes towards key policy measures designed to increase participation in public procurement. It was clear from analysis of the quantitative data that the majority (60% and more) of SMEs are aware of all the six policy measures examined in this study. The levels of awareness amongst SMEs were not significantly different, regardless of their size and age. On the contrary, it was surprising to find out that SMEs exhibit rather slightly positive attitude towards key policy measures, which are expected to influence their participation in public procurement. This finding was unexpected and calls for concern; bearing in mind that those policy measures were designed to remove the barriers that inhibit the participation of SMEs in public procurement.

As suggested in previous studies (e.g. Flynn and Davis, 2015, 2016b), one reason for this finding might be the relative newness of SME-friendly policy measures. SMEs might want to wait and see whether the policy measures have benefited them substantially before making comments (Flynn and Davis, 2016b: 630). Secondly, SMEs have historically been less active in the public-sector marketplace (Flynn, McDevitt and Davis, 2013), and they have low perceptions of success in tendering (Flynn, 2016; Loader, 2013). It may take some time to build their current confidence levels in chasing for public sector contracts. Another probable reason may be the slow pace of policy implementation, which Flynn and Davis (2015) observed in the roll out of SME-friendly policy in the Republic of Ireland. Notably, both UK and Ireland have adopted similar policy measures to increase SME participation in public procurement.

As Flynn and Davis (2016b) discovered in their study, there is no positive relationship between SMEs' experiences of the following key policy measures, division of contracts into lots, flexibility over proof of financial capacity, and consortium bidding, rate of participation in public procurement. This may also explain the slightly positive attitudes that UK SMEs have exhibited towards key policy measures examined in the present study. As the present study progresses, the researcher seeks to examine key issues, limitations, and concerns about the policy measures, to determine whether opportunity for improvement exists (**research objective 4**). This might provide some evidence that can offer insights into the slightly positive attitudes expressed by SMEs about key policy measures; seem not to be reflected in their frequency of participation in public procurement.

CHAPTER 7

7.0 Presenting and discussing qualitative research findings

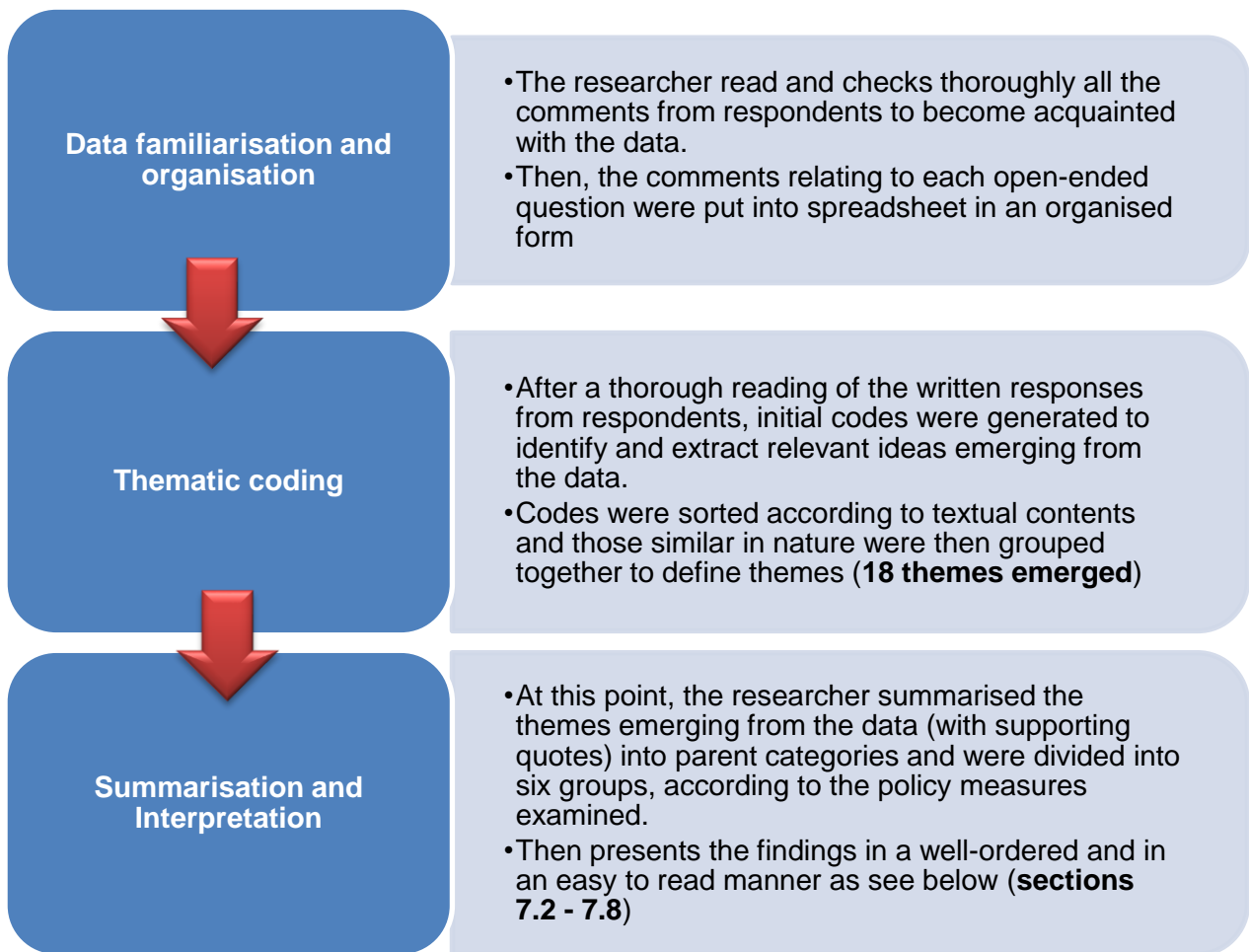
7.1 Introduction

This chapter presents the results of qualitative data collected from SME respondents through open-ended survey questions. The chapter also provides a discussion of the main findings to address the research question 3; i.e. what are the issues and limitations in the policy measures currently being implemented in the UK to promote SME participation in public procurement markets? This enables the researcher to identify weaknesses or drawbacks associated with key policy measures, in order to recognise opportunities for improvement. In addition, research findings were linked with other findings discussed in the relevant and extant literature, particularly considering concepts related to the RBV of the firm. These help in discussing the main findings from the research and implications for improving SME participation in public procurement.

7.1.2. Stages of qualitative data analysis

As described in section 7.1.1, respondents were asked to express their concerns and issues about the policy measures, through open-ended survey questions. The qualitative data collected from the survey was analysed using thematic content analysis (e.g., Neuendorf, 2016). To achieve this, the researcher implemented the key steps of qualitative data analysis advocated by Miles, Huberman and Saldana, (2013); Miles and Huberman (1994); and Ary et al. (2006), as described in diagram below (figure 7.1). The codes that were derived (inductively) from the raw qualitative data were collated into 18 main themes, for discussion in the sections (7.2 – 7.8) below.

Figure 7.1 The key steps in followed in analysing qualitative data



7.2. Elimination of PQQ for smaller contracts.

SME respondents (n-39) made comments to express their concerns about the policy that requires public sector buyers to stop using PQQ for smaller contracts. The comments were analysed and categorised further into three sub-groups reflecting the following themes: inequality; administrative negligence and poor execution/implementation. These themes are presented and discussed in more detail below.

7.2.1 Inequality

There were 11 respondents who said they observe inequality in tender specification requirements that are used by public organisations, irrespective of the supposed reduction in procurement documentation. Although, a few (4) respondents admitted that the volume of tender documents has become smaller due to the “elimination of PQQ for smaller contracts, there were a number of comments (7) indicting that

requirement specifications were still difficult for SMEs to meet because they were skewed towards large suppliers and the winning bid on contract is often on lowest price. One of the respondents explained:

“Of course, the changes have made it easier to bid. That said, the procurement system is still designed to favour big suppliers and the tender requirements are solely focused on price (fees) even though the document is small” (SME10)

Another respondent indicated that:

“As a Roofing Contractor we are nearly always unable to bid on contracts but have to await sub-contract opportunities from successful building contractors...we are forced to go for low value low margin work. Gets us boxed in away from the big players” (SME2)

The above comments suggest that if SMEs are to be encouraged to bid for public contracts, low cost should not be used as the main supplier selection criteria. Furthermore, the finding agrees with previous research on the disadvantage of using price as the key basis of supplier selection (e.g. Loader and Norton, 2015; Cabras, 2011). Even though these authors used different methodological approach (i.e. case study and quantitative survey, respectively), as against the open-ended survey responses collected in the present study, the findings suggest that cost is still a key consideration for selection of suppliers in the public sector.

This is an important finding because SMEs typically have higher operating costs and lack economies of scale (Rostek, 2015), which can also affect their ability to compete effectively with larger firms. Hence, they may be lagging in terms of price competition but are usually far ahead of large firms in terms of quality (Simionescu and Bica, 2014; Trzecieliński, 2016). This is an important consideration for testing the aim of the present research by proposing ways for improving SME participation in public procurement. SMEs might be implicitly discouraged from participating in the procurement process if public buyers continue to lay more emphasis on prices over quality when awarding contracts.

7.2.2. Administrative negligence

The prevailing view was amongst the respondents has been that buyers in public organisations pay limited attention to fact checking during tender evaluation process.

Ten out of 39 respondents share the opinion that there is no authentication rule requiring public buyers to validate every information or claims provided by the bidders. The respondents consider the lack of fact checking as a potential opportunity for large firms to increase their domination (even further) in the public procurement markets. One respondent commented;

“the main impact of the changes is to encourage “body-shopping” companies to collect freelancers and ship them out on contracts. They employ a good tender writer and there is no risk because there is no fact checking takes place on tender responses. Evidence of quality is no longer important, as quality cannot be proven in the new tendering process. And it is less likely for high quality providers to be selected” (SME 5).

Another SME stated that:

“Contract awards are often based on paper work, no checks to know if the company bidding will deliver the actual contract, meaning that any firm can bid for anything. A lot of suppliers now express interests in opportunities outside of their area of business and expertise” SME 9.

Comments like the above suggest that SMEs might be on the verge of losing faith in the public procurement process if buyers continue to pay selective attention to tender evaluation. This can indirectly be a constraint to SME participation in public procurement because, while small firms are known to have the ability to compete better in terms of quality (UNCTAD, 2005), public buyers might not discover such unique value propositions except there is effective fact checking and scrutiny of tender responses. Therefore, as part of our ongoing effort to improve SME participation in public procurement, important consideration should be given to capacity building and education of public buyers in this aspect (i.e. effective fact checking) to help inform overall scrutiny of a bid. Otherwise, it might be difficult control the suppliers from making promises that their services/products cannot keep.

In a previous study, Loader (2013) identified lack of professionalism in the conduct of public procurement as a barrier to effective SME participation in public procurement, whereas the research conducted by the Chartered Institute of Personnel and Development (CIPD) revealed that nearly half (46%) of public sector employees frequently get tired at work due to excessive pressure at work (Scott, 2016). Although the focus and scope of the current research is somewhat different from the above-

mentioned studies, the claims made by previous authors can help provide possible reasons to explain the administrative negligence of public buyers, as observed by SMEs. For example, buyers in public organisations might not have the requisite skills to thoroughly examine and sense checks all tender documents submitted by bidders. Furthermore, facts checking require time and resources, which could add to the current workload of public buyers.

7.2.3 Poor implementation

There were 18 respondents who said that implementation is lacking regarding the policy referred to as “elimination of PQQ for smaller contracts. Although, few (5) respondents observed that this policy is good on paper, there were many comments (13) indicting that little or no consideration is given for wider implementation of the policy across public sector organisations in the country. One of the SME respondents stated that:

“Our participation remains the same and we still need to tender to grow...so we have to bid for the work anyway”. Besides, I have not seen any using new templates and loads of documents are still requested during the procurement process” (SME 12).

What the above comment suggest is that the government policy to remove the use of PQQ for small contracts only exists on paper, but not in practice. This is consistent with previous studies (e.g. Flynn and Davis, 2015; Loader, 2018), which have shown that lack of policy implementation contributes to the low participation of SMEs in public procurement. Although, the present study used qualitative data from open-ended questions, the items in the questionnaire were adapted from Flynn and Davis (2015) and Loader (2018) who used different methodological approach, namely statistical techniques and literature, respectively. Hence, the consistency in finding may have arisen due to the reasons above.

The result here indicates that SMEs are still experiencing onerous tendering requirements due to lack of implementation of policy that was meant to reduce the paper work for participation in public bidding. Loader (2013) has identified that lack of professionalism amongst procurement officers in the public sector, which may also be a factor limiting the rate of implementation of SME-friendly policy measure. The above

points are important insofar as they offer the rationale upon which approaches can be recommended towards improving implementation of the policy to enable SMEs to enjoy the associated benefits. This is pertinent for developing a framework for SME participation in public procurement.

7.3 Prompt payment rule

SME respondents (n=33) made some comments to express their concerns about the policy on prompt payment for suppliers in the public sector. The comments provided by respondents were analysed and categorised into the following themes: regulatory compliance (within the public sector), regulatory compliance (in the supply chain) and ineffectiveness. These three themes are presented and discussed in more detail below.

7.3.1. Regulatory compliance (within the public sector)

There were 13 respondents who said that public procurers rarely follow the prompt payment rule to the letter. By far, the most commonly cited reason for the poor compliance was administrative convenience motives of buyers in the public sector. For example, one respondent who had experienced delayed payments commented:

“The prompt payment rule is completely ignored by all public bodies that I have worked with. It doesn't work we wait for payment for more than 6 months and always wait 3 months. Our experience of public institutions (for which we do most of our work) is that their very poor administration stops them paying invoices, but the invoices are not seen as outside the 30-day window as they only start counting once they are ready to pay” (SME 17).

Another respondent held the view that:

“The Prompt Payment Rule is not universally adhered to by public sector organisations such as NHS. Few trusts do pay on time, but a not insubstantial amount routinely over-run the 30 days. For example, we have had some NHS customer (Trusts) take over 90 days to pay us. CCGs pay within 60 days in most cases. Very few pay within 30 days” (SME 21)

The above comments suggest that not every public organisation in the UK is complying with the prompt payment rule for suppliers. This is similar to the point identified in the previous section (7.2.3) about the observed low-level of policy implementation. Apart from the fact that policy compliance was being ignored for administrative convenience, there are other factors that could be responsible for

overdue payments to suppliers. First, is the recent challenging financial situation of the procuring authorities which is precipitated by government budgetary cuts (Institute for Fiscal Studies, 2015); this can cause shortages of funds to pay suppliers promptly.

In addition, late payments may persist if SME suppliers do not have electronic system that majority of public sector organisations in the UK use for invoice processing (National Audit Office, 2015). For example, research has shown that many SMEs in the UK cannot afford to invest in ICT resources (Bharati, 2010). This could be another reason for the reported delays in invoice payments to suppliers, particularly for micro-businesses who may not have the luxury to invest in a technological solution for receiving orders or payments seamlessly from their public-sector clients. This brings to fore the importance of IC, in particular the structural capital (e.g. Carlos and Martos, 2012), which relates to implementing the right technologies that can help organisation perform. Therefore, SMEs have a role to play in make sure that they derive benefits from the prompt payment policy. There is a need for them to implement electronic invoicing solution, which can link to the financial systems in the public sector, in order to get the best from the prompt payment policy.

7.3.2. Regulatory compliance (within the supply chain)

The UK's public procurement regulation requires the prime contractor to comply with prompt payment timelines (30 days) when paying their subcontractors. However, themes identified in the qualitative data shows that prime contracts have not been complying with this rule. There were 9 respondents who said that many of the large companies which offered public sector contracts usually delayed payments to their subcontractors (suppliers). One respondent who had acted as subcontractor to various government contracts said:

“Some government bodies we deal with pay within 30 days anyway, but when they subcontract to a private sector service provider they are utterly appalling, some take 90 days. Currently unless we put the work on stop we don't get paid, so there is no change, and no change to our participation etc.” (SME 19).

Another respondent felt that the prompt payment policy was a good idea and that it could inspire SMEs to become more interested in doing business with public sector organisations:

“Certainly, the rule can influence positively our attitude toward tender opportunities but late payments pretty much existed. We see big contractors consistently miss payment dates; delays are due to internal politics” (SME 23).

In view of the comments above, it appears that non-compliance with the prompt payment policy was high amongst prime contractors, as well as the public-sector organisations in the UK. This is suggesting that there is a need to improve compliance for the prompt payment policy across the supply chain of the public sector. The finding here provides empirical support for the previously reported finding (e.g National Audit Office, 2015). The study conducted by National Audit Office used case study methods as against the qualitative data obtained from open-ended survey questions in the present study. Yet, both studies, based on different methodologies, discovered alike that prime contractors on government projects kept hold of the cash to improve their own working capital, rather than allowing it to reach small businesses in the supply chain.

Again, as mentioned earlier, this might be a consequence of the observed lack of policy compliance in the public sector organisations. Prime contractors might delay payment to their subcontractors until the procuring authorities paid them. Therefore, it is doubtful that subcontractors would be paid promptly if the main contractors were not themselves receiving timely funding. Furthermore, since public sector organisations rarely delved into the relationship between prime contractors and their subcontractors as the National Audit Office (2016) has observed, it might be potentially difficult to drive the implementation of this policy across the supply chain.

In the context of performance-based contracting, prime contractors can tie subcontractors' payments to certain performance criteria such as response time, cost and quality (Hughes and Kabiri, 2013). Bearing in mind the poor supplier performance can be the underlying causes of delayed payments to SMEs who work as subcontractors with prime contractors in public organisations. An important implication of the finding is that SMEs could be discouraged from partaking in public projects as subcontractors if there is no mechanism in place which guarantees prompt payments. This might be the reason why SMEs preferred selling directly to public sector organisations as against participating in subcontracting opportunities, as previously reported by Loader and Norton (2015). This is a pertinent finding that relates to the

aim of the present research; it will be considered part of aspects to improve on for increased participation of SMEs in public procurement.

7.3.3. Ineffective

There was a considerable consensus amongst respondents that ensuring prompt payment to suppliers should be the norm and should not be construed as a factor to increase SME participation in public procurement. Specifically, there were 11 respondents who said that the 30 days invoicing payment time limit stipulated in this policy was a common/standard practice in the private sector, and therefore, there was nothing special about it. The following comment represents the perception of one respondent about prompt payment:

“The rule is not a reason in and of itself for us to bid for public tenders, as our business is predominantly with NHS bodies. Even in recent times, our participation in public tenders has not improved, it remains the same. We continue to apply for any opportunities that are relevant to the services we provide regardless of this rule” (SME 22).

Respondents (7 out of 14) mentioned other issues, which they considered more important than late payments, for example past unsuccessful experiences, perceived lack of resources and capacity to compete against bigger firms. These issues were stated as factors causing SMEs not to be interested in bidding for public contracts. As one respondent narrated:

“It makes no difference, we do not specifically look for Public Sector opportunities because the response usually takes a lot of resource and SME's rarely win much business in this area. And we had bad experience elsewhere in government recently and so still sceptical about doing business with public organisations” (SME 16).

The comment above reflect a key assumption of the RBV (e.g. Wernerfelt,1984; Barney, 1991, 2002; Conner, 1991, 2002). It suggests that internal resources of the firm are important for achieving competitive advantage in the public sector markets. More specifically, researchers have shown that perceived lack of resources and capability impact on SMEs' ability to win public sector contracts (e.g Loader and Norton, 2015; Karjalainen and Kemppainen, 2008). This highlights that resource limitation is still perceived as a critical issue obstructing the participation of SMEs in public procurement. This is particularly surprising because previous studies (Booth,

2015; Loader, 2018) show that the UK government has been making efforts over the last decade to address the capability gaps in SMEs. Hence, the researcher will be addressing this issue by recommending approaches for effective implementation of the prompt payment policy (in chapter 8). If the policy is not effective, it can have cumulative negative impact on SME suppliers' cash flows (Rostek, 2015), indirectly decreasing their ability to invest in intellectual capital such as skills, expertise and knowledge, which are critical success factor for public sector tendering (Pickernell et al, 2011; Walker and Preuss, 2008; Karjalainen and Kemppainen, 2008).

7.4 Consortium bidding

Respondents (n=40) raised some concerns regarding consortium bidding. The comments provided by respondents were analysed and categorised into the following themes: networking; incomprehension; experiential barrier; and negative attitudes. These four themes are presented and discussed in more detail below.

7.4.1. Networking

One of the most prevalent themes amongst respondents is that finding the right partner to collaborate with can be difficult, particularly when it comes to bidding jointly for public sector contracts. Specifically, 14 respondents said they had attempted to bid as a consortium in the past but encountered difficulties in finding the right partner, and the most frequently cited reason for this was lack of trust. As one respondent stated:

“For one public sector bid we did offer to share the work with another organisation, slightly bigger than us in size, but they refused to share trade information, so we bid alone and then won the work. I don't think I will ever consider this process again” (SME 16)

Another respondent commented that:

“We did consider this option previously, but we discovered people are not willing to team up with us which reduced the possibility for consortium bidding. I think consortium bids only really work if each partner has a gap in their capabilities that the other one fills making the partnership mutually defendant. If you are just sharing the same practice, I am not sure of the benefits to any of the stakeholders. We are not likely to ever lead a consortium bid” (SME 11)

The comments above indicates a lack of readiness of firms to cooperate with each other to use consortium bidding effectively. This portrays a lack of cooperative culture (Daou, Karuranga and Su, 2014), which is an essential element in relational dimension

of intellectual capital. According to Downe, Loke and Sambasivan (2012), relational capital could be essential for firms seeking to connect with partners as a way to acquire external knowledge and should be an important consideration for SMEs when tendering as part of a consortium. This is an important consideration for SMEs that seeks do business with the public sector through consortium bidding. The finding suggests that even though consortium bidding might be good in theory, its effective usage would depend on SMEs' ability to build successful relationships with other firms that have complementary resources or can compensate for their weakness.

This result agrees with the observation that the eagerness of a firm to enter into a collaborative relationship is dependent on capability fitness (Rosas and Camarinha-Matos, 2009). Therefore, in chapter 8, the researcher has recommended approaches for enhancing relational capital in SMEs. The recommended approaches include how SMEs can identify and connect with each other to bid jointly for public sector contracts. This thesis argue that SMEs might find it difficult to leverage consortium bidding to improve participation in public procurement, if they are unenthusiastic to work together or trust each other to the extent of sharing commercial sensitive /technical information.

Similarly, previous failure experiences could be influence SMEs' motivation for consortium bidding, as Martínez (2010) has indicated that; a firm might be discouraged from entering into collaboration if their previous partnership projects have failed. This implies that SMEs that have experienced disappointment at one point or another in collaborative projects might be hesitant to consider consortium bidding. Also, research has shown that the intensity of market competition can affect a firm's predisposition towards alliance formation (Juergens, 2015). Therefore, more research is needed to examine the effect that public procurement competition might have on SMEs' intention to submit a consortium bid.

7.4.2. Incomprehension

There were 10 respondents who said that they were aware of consortium bidding but did not understand how it worked and doubted whether it was suitable for all types of supply opportunities. One respondent described consortium bidding as a complex process which was difficult to exploit for winning public-sector tenders:

“Define 'consortium'? We ignore it because it's such a nightmare that complicates the procurement process beyond belief. I don't understand how the government expects SME consortia to come about and I don't understand it's relevance to distributors of medical devices” (SME 7)

This comment indicates an apparent lack of understanding amongst the respondents regarding how consortium bidding could be used to improve participation in public procurement and contradicts the level of awareness (81%) reported earlier in Chapter 6. To further buttress this, another respondent commented:

“We have not had any experience in consortium bidding and to be honest although it sounds plausible, but we often hear that it is not always an effective solution due to the limited control over other companies that take part” (SME 15).

After comparing this finding with quantitative results in section 6.4.3, there is a reason to doubt whether SMEs have an in-depth knowledge of consortium bidding, and how it can be used to aid participation in public procurement. The result suggests that SMEs have superficial knowledge of this policy measure, and so might be unable to fully exploit the associated benefits. Bearing in mind the concept of knowledge exploration (Bierly, Damanpou and Santoro, 2009), as an extension of the RBV, there is a need for SMEs to be more acquainted with key policy measures in the UK. This issue will be addressed in Chapter 8 (see section 8.1.5.1), by suggesting trainings and workshops for SMEs to improve knowledge about consortium bidding.

7.4.3. Experiential barrier

Another prevalent theme amongst respondents was that experiential evidence was important for successful participation in public procurement, irrespective of whether the SMEs were bidding jointly. Many (12) respondents expressed concerns that previous experience of doing business with the public sector still mattered – as bidders were often required to provide evidence of success in delivering similar contracts in the past. Hence, public buyers have a tendency to show preference for firms, which had a strong record of accomplishment of the task of supplying goods/services to the public sector. There were some (5 out of 12) respondents who expressed doubt whether it would have made any difference for them to bid for a contract together if

both parties lacked previous experience of contracting within the public sector. One of the respondents stated that:

“The rigidity of evaluation criteria has dissuaded us from tendering for public sector works. The primary issue is that once a contractor is in, it is almost impossible to win contracts without citing direct case studies in the same sector. To us, this procurement system is simply designed to exclude us from getting contracts. The procurement officers need to open up to new thinking by genuinely considering new suppliers rather than the current rigged tenders” (SME 20).

This finding agreed with the previous finding of Flynn and Davis (2015) who discovered that more experienced SMEs were benefiting more from the policy measures of the government than SMEs that were new to public tendering. Even though Flynn and Davis used a different data analysis method (i.e. quantitative data), as against the qualitative analysis used in the present study. Notwithstanding this methodological difference, the finding suggests SMEs with a good history of public tendering had a better chance of participating in public procurement, than those with no prior experience of public tendering.

This highlights the importance of reputation and hands-on experience as intangible assets (Wilk and Fensterseifer, 2003) that SMEs need to have before thinking about how to tender for public contracts via consortium bidding. Previous research has also noted that the lack of past performance record or experience was a major reason for underrepresentation of SMEs in public procurement (Loader, 2005). It is somewhat surprising to see that not much has changed in the last twelve years given that experiential issues can still discourage two or more independent SMEs to come together to submit a joint bid for public contracts. Therefore, the research will be making recommendations on how inexperience or new SMEs can have better opportunities for participating in the public procurement marketplaces.

7.4.4. Negative attitudes

There were 4 respondents who said that public buyers had negative attitudes to consortium bidding in general. Their comments suggest also that buyers in public organisations were often reluctant to award contracts to consortium bidders because

they might not always offer the lowest price. The following extracts describe respondents' views on this issue:

“I also feel that the best value for money is not offered as one company usually apply a percentage onto the price offered by the partner company to cover administrative costs. This leads to SMEs not being able to compete effectively with larger companies who are better suited to offer the full scope of works” (SME 22).

“Our company has reached out to various public-sector agencies and we get signs indicating that they are not too keen on the idea of sourcing from small businesses...” (SME 28)

The above comments highlight the existence of pro-large supplier attitude in the public-sector market, which is another relevant issue to be considered when developing a framework for SME participation in public procurement (as aimed in this present research). Usually, public organisations are required by the government to cut public expenditure (Flynn and Davis, 2015) and conduct procurement processes in the most efficient way (OECD, 2007), with the aim of achieving best value for money (Brammer and Walker, 2011). However, such decisions or practices offer an incentive for buyers to avoid giving priority to improving SME participation in public procurement. In addition, dealing with a group of suppliers may not be administratively expedient for public buyers (Loader, 2011) which can make them reluctant to accept consortium bids.

7.5. Contracts finder

Respondents (n=33) raised a few concerns regarding the contracts finder. The comments provided by respondents were divided into the following three themes: poor implementation; usability; and functionality. These themes are presented and discussed in more detail below.

7.5.1. Poor implementation

Inappropriate application/use was another common theme identified by respondents (11 out of 33), in their observations about contracts finder, although a few (4) respondents said that the portal had been a valuable tool for identifying opportunities but had not been applied appropriately as directed by the government to help improve access to contract opportunities for SMEs. One respondent stated that:

“...I doubt if the procurement officers publish contract adverts on the contracts finders and even when they do, there are insufficient details available to enable us decide whether to bid for the contract or not. Something must be done to enforce compliance in this area because we may have missed some important tender opportunities...” (SME 9)

There were other respondents (7) who said that they explore other avenues to obtain information about contract opportunities, for example, by subscribing to alternative portals, which advertised public tenders. Extracts from comments made by respondents, representing this view are shown below:

“We usually work on the assumption that if you do not know the client and thus did not know an opportunity was coming to market then there is no point in bidding – I see little value in search / data bases” (SME 32)

“Although it allows you to see what has been made available, it is not updated as quickly. Therefore, tender submission dates can be squeezed due to the delay in the adverts appearing” (SME 15)

Considering the comments above, there is an undisputed agreement amongst respondents that contracts finder was not being fully utilised to make public contracts more accessible to SMEs. This observation is important, and it can possibly have profound implications for improving participation in public procurement. Improper policy implementation can lead to loss of business opportunity for SMEs, especially when the contract opportunity that was lost could have been very lucrative or life changing.

7.5.2. Usability

Respondents (15 out of 33) mentioned the issue of usability in their description of weaknesses of the contracts finder. They observed that, filters used for searching tender opportunities on the portal were not easy to use, resulting in opportunities being lost. To find the right contract opportunity, some respondents (6 of 15) said they used bid tracking subscription services to keep them updated on public sector opportunities, as contracts finder did not capture everything. The following comments from respondents serve to emphasise this point:

“I have been using a Contract Finder but have recently opted out of the service because. In theory it is great, however the search and auto-email functionality has so far failed to work correctly, meaning that we must search

manually through the site and have missed a number of opportunities. We rely on a third party website called 'Tenders Direct' that filters every tender opportunity across the UK for us" (SME 4).

"We have discovered that the contract Finder is less than ideal, public organisations like NHS trusts don't usually advertise future opportunities and when they do, there little information available for you to make useful decisions. So it is it merely one means of getting information but it does not capture everything. We use other method. For example we request a freedom of information on potential procurement opportunities" (SME 12).

The above comments suggest that contracts finder was not sufficiently effective and reliable in providing information on existing contract opportunities in the public sector, and further highlighted the transactional costs that SMEs may incur due to usability issues. This reinforces the finding of quantitative analysis (see section 6.6.3), where SMEs reported level of agreement with statement 14; that is, "it is less wearisome to search for information about tender opportunities on the contract finder". Ballard (2015) has observed that public-sector bodies can exclude vital information when advertising contract opportunities on the portal; "the Cabinet Office published procurement documentation with blank questionnaires, zeroed pricing matrices and unsigned, uncompleted templates of the agreements it made for a £200m document storage deal it signed with Capita, TNT and three other suppliers on 3 April 2012". The above quotation is resonant with the finding of the present study, notwithstanding the methodological differences. For example, Ballard's finding was based on secondary data as against the present study that used empirical primary data.

In attempting to meet the aim of the present study, the view expressed by respondents about the usability and user-friendliness of the contracts finder portal has been given due consideration in chapter 8. It is critical for SMEs to detect contract opportunities easily and to determine the most suitable ones for them to pursue within the public sector. Otherwise, there is a likelihood for SMEs to be frustrated and discouraged from doing business with public organisations if they cannot find opportunities that are suitable for them on the contracts finder or if the portal contains little information to help them decide which contracts to bid on.

7.5.3. Functionality

There were 6 respondents who commented about the functionalities of contracts finder, particularly on the lack of networking features to enable online communication and collaboration amongst users. One respondent said:

“Using “Contract Finder” has not influenced our participation in procurement processes because it doesn’t provide any obvious means for SMEs to band together in making joint bids. Our team is very small team and it’s increasingly becoming harder to take part in public sector contracts because due to our limited capacity. Public buyers often consider us incapable to meet their contracts requirement even when we demonstrate that we are skilful in those areas” SME 2

Considering the foregoing, SME respondents seem to have a desire for connecting with firms on the contracts finder to explore jointly opportunities, but currently impossible. This concern cannot be overlooked because social networking offers opportunity for knowledge exchange amongst peers and essential for the development of dynamic capabilities (Helfat and Peteraf, 2015) in SMEs. Similarly, Michaelides *et al.* (2013) examine the impact of Web 2.0 on the collaborative ability of a firm. They discovered that SMEs increase their co-operative efforts whenever there is an online tool to aid interactions. Therefore, it would be necessary to consider how the contracts finder could be redesigned to enable SMEs interact, linkup and collaborate with each other. This idea will be explored further in the subsequent chapter (8). The researcher will consider the possibility of modifying contracts finder to improve online inter-firm collaboration amongst SMEs to facilitate knowledge interchange for improving participation in public procurement.

7.6. Division of contract into lots

Respondents (n = 36) raised several concerns regarding division of contract into lots. The following key themes signify the most frequently reported issues of concern by the respondents: ineffective; uncertainty; compliance breaches; and disincentive. These four themes are presented and discussed in more detail below.

7.6.1. Ineffective

There were 11 respondents who commented that the “division of contracts into lots” was ineffective because the tender specifications still favoured larger companies, and

as such, it was not really creating a level playing field for SMEs. Two respondents specifically recounted how they have been unsuccessful in trying to bid for contracts, which were subdivided into different lots:

Although lots allow SME's to access different contract opportunities, but I still would not say it is a level playing field because the chips are stacked in larger companies favour in terms of technical assessment.” SME 8

“Lot contracts are not easier to win because the process still favours larger companies in terms of technical specifications and the procurement officers usually choose larger suppliers anyway” SME 14.

Based on the foregoing statements, the act of dividing contracts into small lots does not appear to be successful in creating a level playing field for SME participation in procurement, as intended by the UK government. While this policy makes public contracts attractive to SMEs, it has also introduced a form of competition between small and larger firms. Reijonen, Tammi and Saastamoinen (2014) has observed that public buyers faced additional administrative burdens when engaging SMEs in public procurement. Likewise, increasing the numbers of lots in tenders might induce inefficiencies into the procurement process, given the additional time and effort that would be required from public buyers to evaluate multiple lots of tender submissions. The observed lack of a level playing field can also be due to procurers' preferences for larger suppliers (Loader, 2011, 2013). Notwithstanding the division of contracts into lots, the absence of a level playing field can result if the lot requirements are designed to favour large firms or if they were too complex to attract SMEs' interests.

7.6.2. Uncertainty

There were 13 respondents who commented that, although, division of contract into lots offered them an opportunity to bid for contracts in arrears of their relative strengths or scope of practice, there was still no certainty of success. Hence, the fact that this policy did not guarantee that SMEs would win more tenders, was an issue of concern for these respondents. In fact, one respondent referred to the division of contract into lots as 'another way of excluding SME from public contracts', given that all firms, irrespective of size still must compete to win any of the contract lots. Some of the narrative comments provided by respondents are presented below:

“We are able to select lots that are specific to our organisations services and size, which in turn has increased the amount of opportunities we can tender for but we are hardly able to win such contracts” SME 19.

“Getting into the public sector market as a supplier is something we have attempted periodically over the years and we have considered bidding for lots in this type of contracts to achieve this. Yet, we have never been successful” SME 14.

What these comments seem to suggest is that the division of contracts into lots offers SMEs a better opportunity to bid for work in areas of their expertise but does not shade them from facing competition from large firms who have purportedly dominated the public procurement marketplace. The findings here, corresponds with other research such as that of Glas and Eßig (2018) which was based on quantitative data and found that splitting tenders into multiple lots did not significantly increase SMEs’ success rate in public procurement. However, unlike Glas and Eßig, the present study used qualitative data which helped the researcher to determine the probable reasons as to why the act of dividing a tender into lots did not seem to improve the success rate of SMEs in public tendering.

In fact, there is evidence suggesting that small firms do not have the capacity to compete at the same level with larger firms given their limited size and resources (Devos *et al.*, 2014). Considering the foregoing and given that competition is often considered as the most important objective of every procurement practice (Chong *et al.*, 2014; Trepte, 2004), it can be concluded that SMEs would have less likelihood of success in public procurement, even if the contracts were being divided into lots. The finding presented here is very important, bearing in mind that the present research aims to develop a framework that can help address the problem of SME underrepresentation in public procurement markets. This will be addressed by the researcher in a later chapter of this thesis.

On the contrary, SMEs’ inability to win public tenders might be due to the reluctance of public buyers to split tenders into lots lack of implementation. Smith and Hobbs (2001) had once observed that public organisations took delight in the bundling together of contract opportunities to enable them to negotiate better costs from suppliers. This further suggests a need for assessing the real impact of the division of contracts into lots as a policy to improve SME participation in public procurement. SME

can be further discouraged from trading with the public sector if they continually lose more tenders than they win after investing much resources, energy and time to compete for contract opportunities.

7.6.3. Poor implementation

There were 6 respondents who were concerned about of the process of bidding for contracts with multiple lots because it often lacked clarity and presented additional burdens on the bidders. However, there was a few SME respondents (2 out of 6) who acknowledged that, this policy had enabled them to gain greater access to public contracts opportunities, but they also mentioned that responding to a tender with lots was difficult and slow because, in many cases, the public buyers did not divide the contract into lots appropriately. For example, one respondent commented:

“the lots seem to be arbitrary and separations of some topics from others do not make sense. Often the qualification questionnaire is not separated, which results in having to complete the qualification questionnaire for each lot along with the technical/quality and commercial questionnaires. Procurement officers should understand this better and have qualification questionnaires for all lots, with links to the technical and commercial envelopes for each lot”
SME 26

Another respondent indicated that:

“It allowed greater participation in tenders, as we are able to bid for lots, which we can deliver and not bid for ones that we cannot - if there were no lots we would not be able to bid. However, it often does not clarify whether the financial requirements for all the lots is different from the requirements from specific lots” SME 15

The above comment is suggesting the need for effective implementation of this policy requiring that public buyers should split tenders into lots in order to attract SME participation. Therefore, it is critical to the aim of the present study to ensure that such a policy measure is less ambiguous for SMEs to use, and take advantage of to improve participation in public procurement. However, it is important to note that poor implementation of policy can be due to many factors such as lack of professionalism as well as poor time management amongst public procurers (Loader, 2013). Furthermore, the recent financial challenges facing the public sector in the UK (The Institute for Fiscal Studies, 2015), might be a probable reason for the poor implementation of SME-friendly policies in generally. Research has shown that when

faced with such financial pressure, organisations might begin to rank value for money (Brammer and Walker, 2011) and the need to save costs, over and above support for small businesses (Loader, 2007).

7.6.4. Disincentive

There were 6 respondents who commented that public buyers seemed to show less interest in dividing tenders into lots. Some (3 out of 6) of the respondents described instances where they had to turn away opportunities because the tenders were not divided into lots. One respondent emphasised this issue by saying:

“They don't do it - bundling unconnected items into one lot is still rampant and this is one of the biggest things to hamper SMEs and favour large corporations... take for example waste bags; buyers in the public sector repeatedly bundle woven multi-use bags, specialist compostable bags, and general polythene bags into one. These are disparate products!” SME30.

Three other respondents said that the lack of enthusiasm amongst public buyers can be associated with the administrative burden and resource requirements for managing a multi-supplier lot. The following quotes illustrate their opinion more explicitly:

“buyers in the public sector have not been eager to work with SME's in this context because having to manage multiple supplier makes their job more difficult for them” (SME 5).

“Dividing contracts into smaller lots may make it easier to bid, but it does not make it any easier to win, even if the SME is offering a better quality of service. Buyers are used to working with bigger firms; I suggest its much safer for them to be dealing with one big supplier” (SME 25).

The views shared by respondents above suggest that public buyers were not motivated to split contract into lots because there were no incentives to do so. This reinforces the findings in previous sections necessitating the need to improve compliance with policy measures adopted to promote SME participation in public procurement in the UK. Therefore, there is a need for behavioural change amongst public buyers to drive better compliance with government policies. In addition, public procurers might be less enthusiastic to divide contracts into smaller lots if they were lacking the necessary expertise to do so (Loader, 2013). Hence, it is important to explore education and skills development opportunities that can help improve

compliance with government policies. This has been considered in the recommendations offered by the researcher in Chapter 8.

7.7. Subcontracting

Respondents (n=49) raised several concerns about subcontracting. The following themes signify the most frequently reported issues of concern by the respondents: unfair treatment; profit squeeze; favouritism; inaccessibility; Innovation barrier and Intellectual property risk. These six themes are now presented and discussed in more detail.

7.7.1. Unfair treatment

The view that subcontracting put SMEs in a parasitic relationship with prime contractors in the public sector was prevalent among the respondents (15). For example, one respondent observed that subcontractors who worked on public sector projects were usually compelled to work according to the wishes of their prime contractors. As a result, subcontractors were not receiving maximum benefits from the contracts because the large (prime) contractors, who had more power to dictate the terms of relationship, treated the subcontractors unfairly. One respondent portrayed this argument thus:

*“No it is an absolute disgrace. An insult to expert SMEs and a complete rip off to the taxpayer. It is also a manipulation of the figures of work going to SMEs. If there is one thing I vehemently disagree with it is having to go through big firms. We left the big firms because of their nastiness, unscrupulous and greed”
SME 13*

In emphasising this point further, another respondent described SME subcontractors like this:

‘Small business subcontractors are slaves to the prime who will always limit the work-share and rates to their benefit’ SME 21

The above comments suggest that subcontracting is not resulting into mutually beneficial and equitable relationship between the prime and subcontractors. According to Welbourne and Pardo-del-Val (2009), large firms placed less importance on relationships than smaller companies did, and this may contribute to the unhealthy relationship observed between the prime and subcontractors. Alternatively, prime

contractors who supposedly have invested time and resources to win public contract might want to dictate the terms of relationship with smaller subcontractors at all times, particularly regarding benefit sharing. This is where the risk-taking dimension of entrepreneurial orientation (Kusumawardhani, McCarthy and Perera, 2009) could be relevant, because SMEs have been regarded as open to risk taking (Duong, 2009). For example, if SMEs can build better proactive risk-taking culture (Hosen et al, 2004) they may be able to discern the attitudes of the prime contractors and avoid dealing with those that with unfair behaviour or bullying tendencies.

Bazyar et al (2013) discovered that benefit sharing in inter-firm relationship is influenced by a firm's perception about roles and the risks. For this study, this could mean that SMEs might be discouraged from participating in public procurement through subcontracting arrangements if they observe that the prime contracts placed lesser value on building a mutually beneficial relationship with the subcontractors. Similarly, Carayannis and Sipp (2005) has argued, that subcontracting can facilitate skill transfer from large firms to smaller sub-contractors. This also suggest that the quality of relationships that exist between these parties might affect knowledge sharing behaviours (Sankowska, 2013). Therefore, this study will consider avenues through which both SMEs and large firms in subcontracting arrangements can develop better relational capital in order to facilitate mutual knowledge interchange, for improved participation in public procurement.

Unfair treatment in subcontracting arrangements needs addressing because it can be a potential barrier to knowledge sharing between the prime contractor and a subcontractor. Even though SMEs are known to be enthusiastic about skills acquisition (Gessinger, 2009), the finding here shows that the likelihood of developing new skills via engagement subcontracting will hinge on the quality of relationship that subcontractors have with prime contractors. This issue has be given due consideration in Chapter (8), by proposing different approach to cooperative bidding between small and large firms in the public sector market.

7.7.2. Profit squeeze

There were 7 respondents who commented that subcontractors did not have the powers to influence contract pricing and they might need to reduce their profit margin to enable the prime contractors to remain competitive when bidding for public contracts. They linked the profitability issue was due to the imbalanced relationship between subcontractors and the large contractors. One respondent reinforced this point:

“Whilst subcontracting has provided us with some work as a subcontractor, it can also mean we take on the delivery at a much-reduced margin as the major bid winner takes the lion's share. We try to keep cost down but the main contractor typically; puts a margin on our services by 25%to 50% so we end up lost the job. So, it does directly add value to the public-sector clients but cost”
SME 15

The above comment indicates that SMEs who sought to participate in public procurement through subcontracting opportunities might not be have been able to make as much profit as they could have made. This provides a clear need for ensuring that SMEs that are involved in subcontracting should get a fair share of the profits from public sector works. Research findings in existing literature (e.g. Sweet *et al.*, 2014; Yonge, 2013) have shown that large prime contractors used their size to exploit smaller subcontractors. Such exploitation could reduce an SME's bargaining power and benefit sharing in a subcontracting arrangement; given the limited sizes and resources to challenge the decisions made by the prime contractor.

One important question raised by the current findings is how SMEs can be protected from the potential threat of exploitation by larger prime contractors. This underscores the importance of investing in structural capital such as cost accounting systems that can help SMEs to improve understanding the potential for generating profit from engaging in subcontracting project. However, Joshi, Cahill and Sidhu (2010) has suggested that argue that the possession of human capital has positive impact on a firm's financial returns. Hence, SMEs might need the support of professional cost accountants to help protect against profit losses while working on subcontracting projects.

7.7.3. Favouritism

There were respondents (10) who said that there was a lack of transparency in the subcontractor selection process because, most often, the prime contractors usually worked with sub-contractors they were familiar with and rarely appoint new subcontractors to work with them on public sector projects. One respondent expanded on this by saying:

“There are some large private organisations that offer a total management solution within certain trusts. These organisations allegedly sub contract the work out but it is very difficult to get hold of the correct person and to become part of their approved suppliers list. This is because they do not have to conform to the public sector rules. These large private companies should not be allowed to offer total management contracts as they are milking the government dry and only seem to sub contract to the large blue chip enterprises, which is unfair on SMEs” SME 1

The comment above suggests that SMEs might face problems in getting subcontracting opportunities in the public sector because they do not have prior relationship with the prime contractors. This confirms previous quantitative findings (in section 6.6.6), where a third (33.5%) of SMEs disagreed (strongly disagree or disagree) with the statement that subcontracting “is a less difficult route for SMEs to participate in public procurement markets”. The finding here is somewhat worrying because subcontracting has been suggested as a vital technique for increasing SME participation in public procurement (Institute for Sustainability, 2012). Therefore, there is a need for public buyers to be more open and transparent with their subcontracting selection approach. Approaches to tackle this issue will be recommended in subsequent chapter of this thesis (see Chapter 8).

7.7.4. Inaccessibility

Some respondents (7) said that they hardly had access to subcontracting opportunities in the public sector. Three respondents specifically said that they did not know where such subcontracting opportunities had been advertised, unless they reached out to the existing prime contractors in the public sector. As suggested by one of the respondents, SMEs might not realize the benefits associated with this policy measure if they had limited visibility of contract opportunities:

“It hasn't, as prime contractors only pay lip service to the needs of the local SME supply chain. There needs to be stronger clauses invoked by the public sector to ensure that indirect supply chain opportunities are transparent and available” SME 18

Another respondent indicated:

“There are limited opportunities for SMEs to collaborate with large firms through subcontract route because larger companies are believed to always keep the tender to themselves. Often, we were made to think that the major firms are more experienced in bid submission and their scale assists their success rate but in reality, they are unable to deliver without then turning to small firms such as ours” SME 11.

Although, Booth (2013) reported that some large firms have signed up to advertise their government subcontracting opportunities on contracts finder, it appears that this practice is not widespread amongst the prime contractors, as claimed by respondents in the present study. This might be because large firm prime contractors as private entities are not usually required to follow the transparency procedures contained in the UK's Public Contracts Regulations 2015 when selecting their subcontractors. To address this issue, the government should extend control further down the supply chain, by instructing prime contractors to publish all subcontract opportunities linked to public works on contracts finder. Secondly, public organisations need to require prime contractors to disclose how their subcontractors are being selected. These approaches have been recommended in chapter 8 for increasing transparency of subcontracting opportunities, with a view to increase SME participation in public procurement. Furthermore, increasing transparency of subcontract opportunities would not only benefit the SMEs, but would help public organisations to monitor traceability along the whole supply chains (Kraisintu and Zhang, 2011).

7.7.5. Innovation Barrier

There were a few respondents (4) who said that participating in subcontracting impair SMEs' innovation propensity. According to them, SMEs who act as subcontractors may not be able to develop new offering/product for the public-sector client, without passing through or seeking approval of the prime contractor. One respondent who is currently acting as a subcontractor on public sector contract, said:

“Subcontracting encourages a very distant relationship with the public procurers and the contract management team. This widens the gap between

our firm and the public-sector client and offer us no opportunities to pitch innovative ideas to marketplaces” SME 22

Another respondent noted that:

“it is difficult for sub-contractors to communicate with or introduce novel ideas to buyers in public organisations.... you cannot bypass the prime contractor to communicate with the public sector” (SME, 3).

The opinion shared by respondents here is in line with Uyarra et al (2014) who identified that lack of interaction with procuring organisations is a factor restricting suppliers’ ability to sell innovate ideas through the public procurement process. This finding has important implication for testing the aim of this research, because, innovation is a core competence of small businesses (Georghiou *et al.*, 2014), and if SMEs are more able to pitch new ideas/solutions to the public-sector clients, they might have a better chance of participation in the procurement process. This leads to an important question: how can SME work in collaboration with large firm offer innovative solutions directly to the public sector clients?

The researcher has put forward a number of recommendations to address this in chapter 8, including one which proposes that large firms should be incentivised to bid in cooperation with SMEs as against bringing them in as subcontractors. This perhaps might encourage SMEs to pitch their innovative ideas to the marketplace in a more positive and confident manner.

7.7.6. Intellectual property risk

The notion that subcontractors might lose proprietary information due to imitation by prime contractors was prevalent amongst the respondents (7). This signifies a possible reason why some SMEs seemed to dislike selling to the public sector through a subcontracting route, as observed in the previous section. One respondent said that SMEs with specialist niche solutions could easily be exploited given that subcontractors were usually answerable to prime contractors, not to the government:

“The whole government procurement approach is rigged against the SME. Not surprising as the ones advising government are major firms. Subcontracting only allows major firms to plagiarise SMEs niche products and then rule them out of the competition” SME 10

The finding reported here also calls attention to the intellectual property risk faced by SME subcontractors in the public-sector markets, which might be a likely reason why SMEs conveyed a dislike for subcontracting, as highlighted by Loader and Norton (2015). Apart from the fact that protection of trade secrets is critical to the SME success in general (Jensen and Webster, 2006), Norton (2011) has suggested a need for protecting subcontractors' intellectual property in public sector contracts. The critical question therefore is: how can small business subcontractors avoid risk losing valuable intellectual capital such as proprietary information, patent or trade secret from large firm prime contractors?

However, it is one thing to have a right; it is another thing to have the capacity to execute that right. For example, seeking legal advice in intellectual property law requires significant resource commitments that many SMEs cannot afford. In addition, due to the resource constraints inherent in SMEs, they might lack financial muscle to hire an in-house lawyer for the same purpose. Therefore, the government needs to intervene either to require that subcontractors and prime contractors must sign Intellectual Property Ownership Agreement prior to commencement of public contracts, or by establishing a training program for SMEs on how to protect intellectual property in a subcontracting relationship

7.8. Summary of key qualitative research findings

This section presents a summary of key qualitative findings by collating the main themes discussed in sections 7.2 – 7.7 into groups of similar themes as represented in figure 7.2, and discussed below in sections 7.8.1 – 7.8.5. These are key issues that should be addressed so as to improve SME participation in public procurement, and have been taken into considerations when developing the framework in Chapter 8.

7.8.1 Implementation and compliance issues

Findings from this chapter also supported those of earlier studies (e.g. Flynn and Davis, 2015; Flynn, 2016) show that lack of implementation and non-compliance are the most common issues raised by SMEs about the policy measures being implemented in the public sector. These issues consist of improper policy application (administrative negligence), non-compliance, negative attitudes of public buyers, and disincentive to derive implementation (as shown in figure 7.2). All of these are relevant

to putting SME-friendly procurement policies into practice. Therefore, additional efforts should be made to improve public buyers' compliance with the policy measures aimed at improving SME participation in public procurement. This is most essential because it is not just the contents of the policy documents that eventually might aid SMEs' participation in public sector procurement and winning contracts (Flynn, 2016; Kidalov and Snider, 2011), but public buyers' adherence to them.

Historically, researchers (e.g. Berger and Luckmann, 1966; Meyer and Rowan, 1977) have believed that regulations or government policies must be complied with by public organisations/agencies. However, perspectives from the agency theory (e.g. Hotte *et al.*, 2016; Flynn and Davis, 2015) have shown that agents (i.e. public organisations) can exercise some choice or compromise over the compliance requirements from their principle (e.g. the government), depending on the circumstances that exist when a decision is being made. Therefore, the question for further consideration in this thesis is; what do we need to do to ensure effective implementation of SME-friendly procurement policies within the public sectors? Without ensuring compliance and wider implementation of these policy measures, the participation of SMEs in public procurement might not improve to a satisfactory level. In Chapter 8, the researcher has recommended several approaches to help facilitate implementation of key policy measures for improving SME participation in public procurement.

Furthermore, the qualitative findings also show that there is an indication that policy implementation is low because public buyers have negative attitude towards small suppliers (see section 7.4.4). For instance, SME respondents reported that technical specifications are often skewed in favour of large firms, irrespective of whether the tender is divided into lots or not (see section 7.2.1). This might be the reason why SMEs were uncertain about the effect of the division of contracts into lots on participation in procurement (as discussed in section 6.8.5). It is important to note that public buyers are the people delegated to implement government's policies to support SMEs in public procurement; hence, some approaches have been suggested to help create attitude change for improved compliance with SME-procurement policy measures. Please see further details in subsequent sections (8.1.3 and 8.1.4), under Chapter 8.

7.8.2 Experiential barrier

It was apparent from the research findings that SMEs are probably unlikely to compete successfully against large firms in a tender process, regardless of key policy measures, because lack of related experience of selling to public sector was vital for participation in procurement. This is evident in respondents' concern that firms seeking to compete for public contracts are usually required to provide proofs of previous experience or success in delivering a similar contract in a public-sector setting. Specifically, one of the major drawbacks of SME-friendly procurement measures is that they cannot help SMEs overcome the experiential barrier they face when competing for contracts in the public procurement markets. Therefore, experiential barrier represents a kind of paradox: SMEs need experience of supplying the public sector to participate in public tendering (Loader, 2011), but they also need to win a contract first to acquire such experience!

Consequently, the researcher will be recommending approaches to tackle experiential barrier faced by SMEs in public procurement in a later Chapter (section 8.3). This is arguably, a key factor that cannot be ignored because it can potentially discourage start-ups or new small businesses from participating in public procurement markets. Even if consortium bidding offers an opportunity for SMEs to come together to submit a joint bid, firms still need the necessary experience to collaborate for this purpose. Hence, if a SME is not given the opportunity to participate in public procurement, how can it get a track record of contract delivery in the public sector? Essentially, experiential barrier is a major hurdle that young/new SMEs must jump in order to participate effectively in public procurement. However, as yet, none of the existing SME-friendly procurement policy of the UK government is attempting to address this problem.

7.8.2. SME participation is not guaranteed

The idea that key policy measures do not guarantee SMEs participation in and success in public tenders was an important concern for respondents and this requires further consideration. The principles of competition is one of the overarching philosophies governing the public procurement practise in the UK (e.g Arrowsmith et al, 2000; Onuret al, 2012; Sanchez-Graells, 2010; Thai, 2006).Therefore, SMEs are still expected to compete with large firms irrespective of the key policy measures, and

given the resource limitations in SMEs (Loader, 2011; 2013; 2015), it is perhaps unlikely that they can participate effectively in public procurement. The key finding here thus exposes the limitations of the policy measures that are being implemented currently in UK's public organisations to increase SME participation in public procurement.

The findings also uphold the argument in a recent study by Andrecka and Trybus (2017). In their study, Andrecka and Trybus reviewed of secondary data, as against the use of quantitative data from primary sources, which was implemented in the present study. Irrespective of the methodological differences, both past research and present findings arrive at a conclusion that, those key measures and public procurement reforms, particularly in EU countries like the UK, cannot be regarded as actions favouring the small business sector.

Considering the competition focus of public procurement practice (Arrowsmith, 2010), the current approach to promoting SME participation in public procurement has inherent flaws (as identified in previous sections 7.8 -7.8.5), which cannot be ignore completely. However, there are some techniques, which might guarantee participation in public procurement for SMEs, without compromising competition in the UK's public procurement market (see details in subsequent Chapter 8). It is worth mentioning that the argument put forward in this thesis is not to suggest that SMEs should be spoon-fed to win public sector contracts, however, it emphasises the need for more fairness and justice in government's approach to increasing the rate of SME participation in public procurement. Therefore, in Chapter 8, the research will make recommendations on how government can use its coercive power to create equitable access to public sector contracts; instead of focusing only on the current policy measures, which only seek to level the playing field for both small and large firms competing for contracts in the public sector.

7.8.3. A disinclination for subcontracting

Another important finding from this research is the apparent lack of desire amongst SMEs to trade with the public sector indirectly through subcontracting opportunities. This view is premised on the various concerns expressed regarding subcontracting; e.g. unfair treatment of subcontractors, squeeze on profit margins for subcontractors,

lack of transparency in subcontractor's selection process, potential intellectual property risk, subcontractors cannot derive innovative ideas to the public-sector clients and difficulties in accessing information about subcontracting opportunities. Each of these issues can make subcontracting potentially discouraging and demotivating to SMEs. Although, research (Thomassen et al, 2014; FreshMinds, 2008) has shown that SMEs have more potential to benefits from public sector spending via subcontracts, but Loader and Norton (2015) revealed that SMEs supplying the UK's heritage sector would prefer to contract directly with public organisations rather than via the subcontracting route. If SMEs' continue to have negative experience while supplying larger public contractors, their enthusiasm towards subcontracting in the public sector can diminish.

A recent fallout from the liquidation of Carillion Construction Ltd corroborates the findings discussed here. Carillion is a leading construction services corporation in the UK and has been awarded contracts by the government such as the construction of HS2 high-speed rail line (Wesleyan Bank, 2018). The company had financial problems towards the end of 2017 and become insolvent on 15 January 2018. The insolvency had a serious impact on the cash flow of about 30,000 subcontractors/suppliers working on various contracts that the government has awarded to Carillion. However, even though the UK public procurement regulation requires that prime contractors should pay their subcontractors within 30 days, Carillion did not comply with this payment term.

Rather, the company applied a different and much longer payment terms of 120 days with their subcontractors (mostly SMEs) that work on government projects¹⁶. Although the government has set up a taskforce to advice on how impacts of Carillion's liquidation can be mitigated (Gov.uk, 2018), there is a need for more proactive approaches to tackle late payments from prime contractors to subcontractors. The discussions in Chapter 8 (section 8.1.7) offer recommendations that can help address the challenges of subcontracting in order increase SMEs' desire for participating in public procurement.

¹⁶ How Carillion Used A U.K. Government Scheme To Rip Off Its Suppliers.
<https://www.forbes.com/sites/francescoppola/2018/01/30/how-carillion-used-a-u-k-government-scheme-to-rip-off-its-suppliers/amp/>

7.8.4. Underutilisation of consortium bidding

Another important finding of this study as discussed in section 7.4 was that SMEs are constrained by certain factors from utilising consortium bidding to improve participation in public procurement. These factors are related to networking constraints; lack of understanding; experiential barrier; and negative attitudes of public buyers. Despite these limiting factors, evidence (see section 7.5.3) from the present study shows that SMEs have desire to use the contracts finders for on line social interaction and collaboration. Furthermore, the quantitative findings in Chapter 6 (see section 6.8.3) showed that SMEs have positive attitudes towards consortium bidding because it enables them to pull together resources and capabilities in joint tender for public contracts. Yet, those who seek to form a consortium for public tendering purpose may still find it difficult to identify potential partners for such collaboration relationship.

Apparently, it has been discovered in the present study that SMEs need to improve understanding about the process of consortium bidding, then develop relational capabilities and networking skills to leverage this for better participation in public procurement. These issues must be addressed for turning policy intentions of the UK government into outcomes that can ultimately reduce the underrepresentation of SMEs in public procurement markets. Considering the foregoing, some approaches have been proposed in subsequent Chapter 8, to help SMEs overcome the challenges preventing them from taking full advantage of consortium bidding and the benefits it offers (see further details in section 8.1.5). Additionally, in previous studies (e.g. Loader and Norton, 2015; Holmes et al, 2009), it was discovered that SMEs were less willing to participate in public procurement through consortium arrangement but prefer to sell directly to public sector organisations. Hence, in the present study, the researcher extends previous findings by identify the factors that might have influenced SMEs' unwillingness for using consortium bidding to participate in public procurement.

7.9. Conclusion

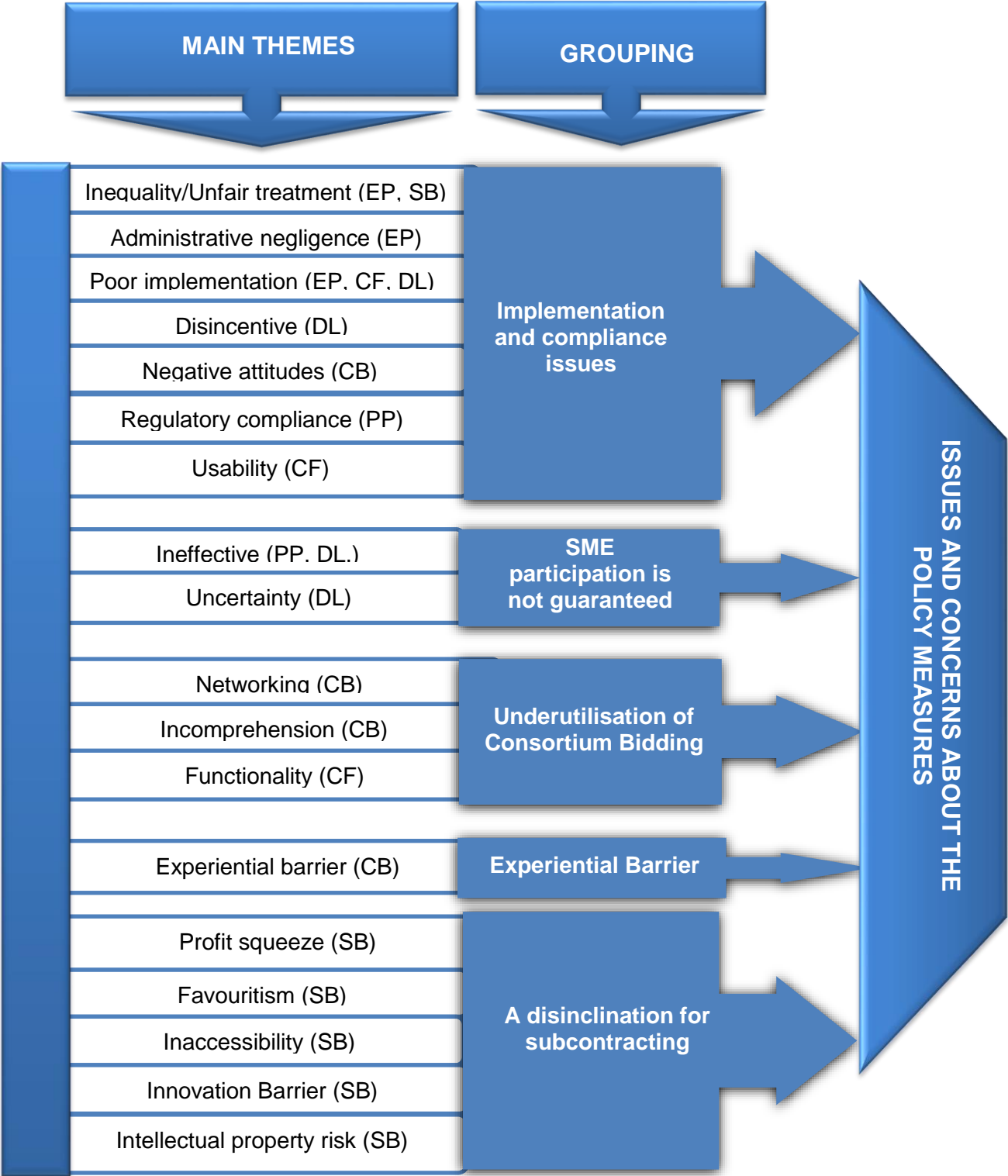
This chapter presents the results from the analysis of qualitative data collected from SME respondents through open-ended survey questions. Thematic analysis was adopted as a method for identifying, classifying, and reporting themes that emerged within the data. This data analysis followed three key steps namely data familiarisation,

thematic coding and data summarisation. The prevalent themes were critically evaluated and discussed, supported with direct quotations from respondents' comments to illustrate key research findings. The key qualitative findings are summarised in figure 7.2 and discussed in sections 7.8.1 – 7.8.5, and thus represent key issues or drawbacks of key policy measures that are being implemented in the UK to promote SME participation in public procurement.

The overall conclusion from the research findings is that; even though the policy measures seem good in principles, there are several limitations that make them inadequate to effectively increase the participation of SMEs in public procurement. These include; implementation and compliance issues, experiential barrier, uncertainties, disinclination for subcontracting and underutilisation of consortium bidding. The issues mentioned above must be resolved to improve SME participation in public procurement. If not talked, these may further impose limitations on SMEs' propensity to participate in public procurement. Therefore, in attempting to develop a framework for SME participation in public procurement, the researcher has put forward a set of recommendations (in Chapter 8), to address the key issues in this study.

Furthermore, the qualitative findings offer possible explanations for the quantitative findings in Chapter 6, where SMEs have reported low rate of participation in public procurement, despite expressing some optimism about the key policy measures examined. For instance, it reveals that SMEs might need to develop additional capabilities to maximise the benefits associated with the policy measures, particularly regarding the use of consortium bidding to increase participation in public procurement. Hence, the findings presented in this chapter can help provide a better understanding of key factors for consideration to resolve the underrepresentation of SMEs in public procurement markets in the UK.

Figure 7. 2 A summary of qualitative findings



KEY
 Elimination of PQQ for smaller contracts (EP);
 Prompt payment rule (PP);
 Consortium bidding (CB);
 Contracts finder (CF);
 Subcontracting (SB);
 Division of contract into lots (DL)

CHAPTER 8

8.0. Recommendations to help improve SME participation in public procurement.

8.1. Introduction

This chapter proposes recommendations for addressing key issues identified in previous chapters (6 and 7), with a view to improving SME participation in public procurement. Looking at the findings in sections 7.2 - 7.8.1, there is evidence to suggest that increasing efforts are needed from the government to ensure that public organisations in the UK improve compliance with the policy measure being implemented. In addition, the findings suggest that SMEs themselves have a role to play in implementing actions to make the best use of the policy measures. For example, the research findings (see detailed discussion in sections 7.8.2, 7.8.3 and 7.8.5) show that SMEs might have to make use of their internal resources and capabilities to address issues relating to experiential barrier, disinclination for subcontracting and underutilisation of consortium bidding. The foregoing therefore provide support for drawing lessons from the RBV concepts (as reviewed in chapter 2), to inform recommendations for improving SME participation in public procurement. Based on research findings from this study and theoretical insights, sections 8.1.2 – 8.1.7 below presents the proposed recommendations to help improve SME participation in public procurement.

8.1.2 Bridging the policy–practice gaps through capacity development and training for public buyers.

One of the key findings from this research was that public buyers lacked adequate knowledge and skills for effective implementation of the policy measures designed to support SMEs in public procurement. SME respondents most commonly reported this issue as a key factor influencing public buyers' non-compliance with the policy measures (see sections 7.2.4, 7.3.4, 7.4.8 and 7.7.4). If the public buyers are incompetent enough to show the level of compliance expected by policy makers, it is probably unlikely that policy measures for promoting SME participation in public procurement would yield tangible results. Some scholars (e.g. Flynn and Davis, 2015; Loader, 2018) have indicated comparable results in their research that government's intentions towards

the small business sector have not been matched with the wider implementation of a SME-friendly procurement policy. The key reasons identified in this study were that public buyer's lack enthusiasm and enough expertise to implement the policy measures correctly.

In the light of the above, it may be useful to design and implement capacity development programmes for public buyers; which can help them to build the necessary skills for getting the policy measures implemented appropriately. It is only when the policy measures are complied with and translated into actions that the goal of improving SME participation in public procurement can be achieved. The section (8.1.2.1) below describes suggested approaches to help build capacity of public buyers for effective implementation of SME-friendly policy measures.

8.1.2.1 Approaches to help build capacity of public buyers

Training and capacity development offers an opportunity to enhance regulatory compliance amounts public buyers and bridge the policy-practice divide. Public buyers would need some training to increase knowledge on the value of engaging with small suppliers and to improve their expertise and professional skills in relation to facilitating SMEs in public procurement. Government should design and launch training programmes to bridge knowledge and skill gaps about the various measures/strategies to facilitate SME participation in public procurement and the advantages inherent in using them. This can be added to the existing list of courses that civil servants and other public service professionals can access through the Crown Commercial Service¹⁷. The need for training and development in this regard cannot be overemphasised because it is an investment in ability of employees that drives implementation of governments' policies to enhance SME participation in public procurement.

Also, training is vital to prevent improper application of SME-policy measures amongst public buyers. Courses and training sessions should be organised to help public buyers improve understanding of the benefits of SME-friendly procurement policies

¹⁷ Commercial and procurement training; <https://www.gov.uk/guidance/commercial-and-procurement-training>

and how they can be implemented effectively. Such training can be in form of mandatory continuing professional development requirements for both existing and newly recruited employees working in the procurement function. This would provide public buyers with an opportunity to refresh their understanding and be conversant with SME-friendly policy measures, apart from helping them to enhance expertise and professional skills generally.

Flynn and Davis (2016) raised a similar point recently, emphasising the need for reframing the narrative about the significance of SME access to public sector. The authors mentioned that public sector buyers might take SME participation in public procurement more seriously if its strategic importance is well understood, for example, it is evident that small suppliers are more flexible and can offer better quality and innovative products/services than their large firm counterparts (Woldesenbet et al., 2011). Therefore, if public buyers are well trained and fully aware of the strategic benefits associated with the SME-friendly policy, they are perhaps likely to embrace small suppliers and increase level of compliance with the policy measures.

8.1.3 Addressing the problem of conflicting priorities arising from implementation of government policies in support of SMEs

An important finding of this study was that public buyers have various competing demands on their time which tend to shift their attention from adopting SME-friendly procurement measures (see sections 7.2.2 and 7.8.2). For example, the issue of conflicting priorities comes into action when, on the one hand, public buyers are required to help more SMEs win contracts; on the other hand, they are expected to focus on efficiency in public procurement and achieve cost savings. In addition, there is also a common view amongst the respondents (see section 7.2.2) that implementation of SME-friendly policy measures may impose additional costs, time and administrative inconveniences on public organisations.

The finding is consistent with previous research (e.g. Erridge, 2007; Kidalov and Snider, 2011; Loader, 2011; Morgan, 2008) indicating that government policy objectives on SMEs are conflicting and incoherent with the demands from buyers to deliver procurement savings. The above scenario shows an example of the principal-agent problem (Schmitz, 2013) that may occur between the government as initiator of

policy measures to support SMEs, and public-sector agencies/organisations that are expected to implement those policy. Where such problem arises, the agents must choose which policies should be given superior priority.

If the conflicting priority objectives faced by public buyers are not properly addressed, their ability or willingness to comply with government policy for SMEs participation might be compromised. For example, there is potential trade-off here between complying with policies to increase SMEs participation in public procurement, and a continued business relationship with larger suppliers, which might offer better prices than SMEs (Flynn and Davis, 2016). This conflicting priority need to be properly addressed so that public buyers can strike a balance between commercial and social objectives of public procurement; i.e. pursuing cost savings and increasing SME participation. The government has key role to play here; not just to enforce policy but to develop proactive engagement approaches that would require inputs from public buyers (as policy implementers) as to how SMEs can be supported in public procurement. The section (8.1.3.1) below describes suggested approaches to address the problem of conflicting priorities that might impede effective implementation of SME-friendly procurement policy measures.

8.1.3.1 Approaches to address the problem of conflicting priorities

Although it might be difficult to eliminate the existence of agency problem totally (Schmitz, 2013), a combination of coercive and cooperative approaches to policy implementation (Himma, 2016) can help to reduce the effect of conflicting priorities facing public buyers when putting SME-friendly policy measures into practice. So far, the Public Contracts Regulations 2015 only requires all public-sector bodies in the UK to implement key measures to facilitate access and participation of SME in public procurement¹⁸; with little or no consequences for noncompliance. The government should amend this to include better enforcement with stricter (financial) penalties for all public organisations that do not comply with the policy requirements. While the use of coercive force is necessary, it does not create a sense of institutional balance

¹⁸ Procurement Policy Note –Reforms to make public procurement more accessible to SMEs more accessible to SMEs in the UK.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/405020/PPN_reforms_to_make_public_procurement_more_accessible_to_SMEs.pdf

(Rowan, 1982), that is needed to drive mutual benefits for the government as a regulator and the policy implementers in public organisations.

Therefore, a cooperative approach to policy implementation can be adopted as complementary mechanism to coercive approach for enforcing SME-friendly procurement policies. This can involve a form of bottom-up approach to policy formulation (Earnhart and Glicksman, 2015), through which the government can promote idea generation and cooperation of key stakeholders within the public procurement community on how SME-friendly procurement policies can be best implemented. There is a possibility to align dissimilar policy objectives and induce better compliance behaviour within the public sector through a combination of coercive and cooperative approaches (Himma, 2016) to implementation of SME-friendly policy measures.

8.1.4 Improve enthusiasm and commitment of public organisations towards engagement with SMEs.

In Chapter 7, a major concern raised by SME respondents was that public organisations show low enthusiasm to implement the relevant policy measures. They observed that procurement specification /requirements are skewed often towards large firms; showing the antipathy for SMEs in the public sector (see sections 7.2.1, 7.4.4 and 7.6.4). Therefore, it is important to develop initiatives that can help public organisations drive behavioural change in their buyers to do more business with SMEs. For example, public organisations might need to link employee performance objectives to level of engagement with small suppliers so that buyers can develop enthusiasm for the policy measures to improve SMEs participation in public procurement.

The literature has shown that there is a link between employee motivation and performance in the public sector (e.g. Bureau and Mougeot, 2007; Weiner, 2010; Scroggins, 2015). Similarly, according to Incentive theory of Motivation (Scroggins, 2015), peoples' propensity for compliance can be driven by external reward. Also, public buyers are likely to accord greater value to attracting small suppliers if their actions are rewarded. This suggests an avenue to derive pro-SMEs culture in the

public sector through an incentive system. The section (8.1.4.1) below recommends how incentives systems can be used to motivate public sector employees towards engagement with SMEs.

8.1.4.1 Approaches to motivate public sector employees towards engagement with SMEs.

Considering the above, there is a need to motivate pro-SME behaviours amongst public buyers through an appropriate reward/incentive system. Although there is a possibility for using an incentive-based strategy to improve public buyers' motivation towards engaging more with small suppliers, it should be noted that reward and incentive do not guarantee performance, as Murphy (2011) has highlighted. In addition, a person's decision to act in a certain way is influenced by the degree to which he/she believe the action will have foreseeable consequences (Dever, 2016).

Therefore, it is important to identify the expectations of the buyers' population in the public sector about increasing SME participation in procurement. This can help determine the degree to which the use of incentives can increase motivation for implementing SME-friendly procurement policy measures. Apart from the fact that some incentives are more motivating than others, incentives can take many forms; monetary rewards (e.g. draws, vouchers) non-monetary incentives such as awards, special recognition, promotional and new employment opportunities. Hence, it is vital to determine which type of incentives is probably likely to influence a change in buyers' attitude towards engaging with small suppliers in the long run.

8.1.5 Develop SMEs' ability to take full advantage of consortium bidding

A key finding from this study (in section 6.8.3.) was that SMEs generally expressed positive attitudes towards "consortium bidding" because its helps improve the bidder's capability to meet the minimum technical requirements for a public tender, as well as meeting the geographic spread required for delivering the contracts. This finding supports the literature (e.g. Cabinet Office, 2012e; Flynn and Davis, 2015) suggesting that consortium bidding can provide an alternative route for SMEs to participate better in public procurement processes. For example, if the requirement for tendering is too high for a single SME to meet owing to their resource limitations, consortium bidding offer a way out by allowing two or more firms to team up to bid for procurement tender.

On the contrary, SMEs commented that consortium bidding (in section 7.4.6) is not really an easy route to participate in public procurement because it necessitates collaboration between different firms and trust building, which would require efforts and time. Though this finding contradicts the notion that SMEs have positive attitude towards consortium bidding as discovered from the quantitative survey data (in section 6.8.3), it extends the findings of previous research (e.g. Loader and Norton, 2015; Holmes et al., 2009) by showing the likely reasons why SMEs might be unwilling to contract with the public sector through consortium bidding route.

Therefore, SMEs might need to develop and deploy certain capabilities, which will enable them to find the right partners to collaborate with when bidding for public contracts. Consistent with DC theory assumption, they need better resource acquisition and learning networking capabilities (Borch and Madsen, 2007) to harness the benefits of consortium bidding. Although SMEs can develop these capabilities on their own, there might be need for support from external stakeholders in the public procurement community. For example, the government, public sector organisations and groups that engage with or support small businesses (e.g. chambers of commerce, sector/industry associations, SME networks or umbrella organisations) can act as change agents in this context.

Furthermore, researchers (e.g. Charband and Navimipour, 2016; Lai and Chen, 2014) have shown that participation in online communities enables knowledge sharing activities between firms. This presents a likely solution to solve another critical issue discovered in this study; that SMEs lack understanding about the way consortium bidding works and how its benefits can be exploited to the fullest. For example, SMEs might need to develop better quest for knowledge i.e. learning orientation (Kreiser et al., 2013) to enable them acquire skills for forming a consortium to bid for public contracts. In addition, the need for SMEs to invest in organisational capital (Blankenburg, 2018) such as information systems and technology to aid knowledge exploration online, cannot be overemphasised. The section (8.1.5.1) below describes approaches that SMEs can use to overcome the constraints limiting them from maximizing the benefits consortium bidding.

8.1.5.1. Approaches to help SMEs harness the benefits of consortium bidding

The government should create platforms to help SMEs towards greater collaboration, particularly regarding their participation in public procurement. These could be operationalised through an online medium enabling SMEs to come together in an informal environment and discuss opportunities for collaboration in tendering for public contracts. This can represent a new way for SMEs to discover like-minded firms with complimentary resources and capabilities for improving participation in public procurement. Beyond the opportunities for interactions on such an online platform, SME owners/managers can share information, knowledge, or experience about public bidding in general. The UK government launched a similar initiative named “Solutions Exchange¹⁹” to support market engagement with suppliers online. Although this portal does not exist anymore, it presents opportunities for public organisations to share future procurement requirements or challenges with the supply market, enabling potential suppliers to also pitch innovative ideas back to the public sector.

Furthermore, other organisations such as the Federation of Small Businesses, the British Chambers of Commerce, can play complementary roles by providing public procurement related training, networking events and workshops, for addressing key challenges involved in consortium bidding. These events can help improve relational capital in SMEs (Daou, Karuranga and Su, 2014) enabling them to be better equipped to exchange knowledge through networking and cooperative working for improved participation in public procurement. Similarly, there is a corroborating evidence in the literature (e.g. Loader, 2013) that support the recommendation in this thesis that SMEs must admit responsibility for taking actions to improve participation. For example, SMEs can source information and skills from external partners to complement its internal resource base to take full advantage of consortium bidding and achieve competitive advantage in public tendering.

Hence, the need for SMEs to develop a culture of cooperation, which is another key element of dynamic capabilities (Barney et al., 2001; Teece, 2014) and intellectual capital (Carlos and Martos, 2012), cannot be overemphasised. This leads to the next point about the role of cooperatives in SMEs growth and development has also been

¹⁹ Solutions Exchange <http://solutions-exchange.cabinetoffice.gov.uk/>

acknowledged by researchers (e.g. Nwankwo et al., 2012; Levy et al., 2003). The cooperative organisation structure may offer a viable opportunity for SME managers to tap into diversity of talent, capability and experience of their colleagues, to acquire the resource configuration needed to pursue consortium bidding

8.1.6 Increase the share of micro-enterprises in winning public contracts.

A key finding from the present study was that, while SMEs expressed positive attitudes to all key policy measures, they reported low level of participation and success in public tendering (in sections 6.3.5 – 6.3.7). When the quantitative survey results were broken into different categories of SMEs (as presented in sections 6.3.5 and 6.3.7), the underrepresentation becomes pronounced amongst the micro-sized businesses (i.e. firms with less than 10 employees and an annual turnover below £2 million). This finding agrees with results of previous quantitative surveys (e.g. Flynn, McDevitt and Davis, 2013; Thomassen et al., 2014). However, notwithstanding the similarities among these findings, the use of different research methods such as case study or interview might lead to contradictory findings.

Nevertheless, there is evidence (e.g. Flynn, 2016) suggesting that it is less likely for micro-sized businesses to outcompete larger firms in procurement markets, without a different form of government intervention. First, micro-sized businesses are the least resource advantaged when compared with the small-sized and medium-sized firms, and they have experienced the least rate of successful outcomes in bidding for public contracts, in general (Flynn and Davis, 2015). This also implies that the underrepresentation of SMEs, more importantly, micro-businesses in public procurement markets in the UK, needs specific attention. Therefore, it is recommended in this thesis that the government should give priority to micro-sized businesses to enable them to get better share of public sector contracts.

The importance of such priority cannot be overemphasized because 96% of the 5.5 million businesses in the UK are micro-enterprises (Rhodes, 2016), and an attempt to focus on increasing their participation in public procurement can yield much impact on the entire business sector of the economy. The SME-friendly procurement policies adopted currently in the UK seek to create 'level playing field' for all firms that compete

for public sector contracts (Flynn and Davis, 2015). However, these policy measures matter little when participation rates are low, and limited also in ensuring success for micro-enterprises because they cannot contend with large companies on the same term (Kreiser et al, 2013). The section (8.1.6.1) below describes approaches through which the government can increase the share of micro-enterprises in winning public contracts.

8.1.6.1. Approaches to increase the share of micro-enterprises in winning public contracts.

The government should be imposing a mandatory target for all public organisations in the UK to set aside at least 20% of their procurement spending for micro businesses. As discovered from the literature review, this is an interventionist approach similar to preferential treatments directed at minority groups such as women owned businesses and socially excluded groups in countries like USA, China, India, South Africa and Kenya public procurement systems (see section 2.6.2). The proposed 20% spending target for micro-businesses must be legally obligatory for public organisations to meet and they should provide details of performance against this annually. It is expected that this approach might guarantee some level of participation and success for micro-businesses in the UK's public procurement marketplace.

It is important to state here that the UK government might need a change in policy direction to take this proposal forward because the EU legislation, which currently guides public procurement processes in the all European countries (including the UK) does not allow the use of preferential treatment or positive discrimination for small businesses (Flynn, 2016; Loader, 2013). More interestingly however is the fact that the forthcoming exit of the United Kingdom from the European Union, offers an opportunity for the government to develop its small business sector by embracing a positive discrimination system in public procurement. Hence, this might be the appropriate time for government of UK to consider how preferential treatment can be used to rectify the underrepresentation of micro businesses in the public procurement market.

In addition, it has been argued (e.g. Bannock and Peacock, 1989; Glover, 2008) that offering preferential treatment for SMEs in public procurement will harm market competition, and unfair to larger firms that compete for public contracts. However, micro-enterprises, whose contributions to economic growth and development in the aspects of job creation and innovation, poverty reduction has been well acknowledged (e.g. Davis and Brady, 2015; Loader, 2015; Etuk, Etuk, and Michael, 2014), are more unfairly treated in the public procurement markets. Latest available statistics shows the SME sector accounts for 60% of all private sector employment in the UK, while the micro enterprises represent 95.5% of all SMEs in the country. Yet, current share of micro enterprises in winning public contracts is low.

The UK government has articulated its aspiration that 33% of public procurement expenditure will reach the SME sector by 2020 (National Audit Office, 2016), but this remains "more rhetoric than reality" (Flynn and Davis, 2015) because it is not mandatory for public organisations and there are no consequences for their non-compliance. Moreover, the aspiration target announced by the government seems to present SMEs as one homogeneous unit or entity and did not account for comparisons of what proportion of the proposed procurement spending target would get to firms of different sizes (e.g. micro-sized, small-sized and medium-sized firms). There is a potential risk that such lack of consideration for heterogeneous nature of small firms might limit government's ability to track or report performance and progress against set targets, possibly leading to an unfair distribution of public procurement spending in the UK's SME population.

Therefore, the interventionist approach proposed here can influence the equitable distribution of government spending through public procurement to the SME sector. Through this, the government may possibly guarantee that 20% of its procurement spending will go to micro-enterprises, which account for 5.5 million (96%) businesses and 33% of employment in the UK (Rhodes, 2017).

8.1.7 Encourage large firms to collaborate with SMEs when bidding for public contracts.

Key findings from the research revealed that the policy measures implemented in the public sector do not guarantee the participation or success of SMEs in public tenders, because, all firms regardless of their size, must still bid for contracts (see sections 7.6.2 and 7.8.3). Likewise, it was discovered that SMEs who do not have previous experience of selling to public sector can fail the qualification stage of the public tendering process, due to experiential barrier (see sections 6.5, 7.4.3 and 7.8.2). This key finding provides some empirical support for the claim that past performance records is an important requirement for supplier selection (Saastamoinen et al, 2017 ;Loader, 2013). These findings have profound implication for start-ups or inexperienced SMEs, as it can increase their improbability for success in bidding for public contracts.

The ability of a firm to modify its resource base for sustained competitive advantage is a key assumption of dynamic capability view (Helfat et al, 2007), which presents a potentially unique way to address the above-mentioned issue. This suggests that SMEs can work together with larger firms to improve their resource base (Burgstaller and Wagner, 2015) and capabilities for participating in public procurement. In addition, it offers a way to avoid some of the challenges facing SMEs as subcontractors, such as loss of proprietary information, lack of opportunity to develop and sell innovative solutions directly to public-sector clients and unfair treatments in terms of profit sharing with large firm prime contractors (see further details in sections 7.7 – 7.7.6).

The current recommendation corroborates the finding of a recent study by Fujitsu (2013) suggesting that SMEs have high desire to collaborate with large enterprise to bid together for contracts in the private sector. The study revealed that “58% of SME respondents believe that small and large suppliers should work together to win business and 62% of those who have collaborated with big business before see benefit in doing so”. Nevertheless, co-operative bidding between SMEs and larger firms rarely happens in public procurement marketplaces. Typically, collaboration often occur in form of subcontracting; a route that SMEs are less willing to take in doing business with public sector organisations (Loader and Norton, 2015).

Therefore, rather than going through the challenges of subcontracting (as identified in sections 7.7), SMEs can bring forth their niche skills and experience to form strategic alliances with large firms to bid directly for public sector contracts. However, the ability to work as a team is a key success factor for both SMEs and large business that seek to bid for public contracts in this manner. It must be noted however that certain elements of relational capital (Downe, Loke and Sambasivan, 2012) and learning orientation (Beyene et al, 2016) like teamwork, open-mindedness and shared vision would be needed to sustain such inter-firm relationships.

By working in partnership with larger firms SMEs might be able to gain direct access to bigger contracts which they would not otherwise have done by bidding on their own or via subcontracting arrangements. However, larger firms also have a tendency of protecting their technical secrets (Shapiro, 2000), and this attitude can affect their level of open-mindedness and propensity to cooperate with SMEs to bid for public contracts. Therefore, there is a need for shared vision between SMEs and large firms to reduce the perceived risks of work together (Bazyar et al, 2013) in delivering public contracts, and to aid equitable sharing of benefits. Otherwise, larger firms might hold a view that since SMEs have limited resources, they can be intimidated and treated unfairly because they are better equipped with resources, capital and public bidding experience.

In the light of the above, there is need for the procuring organisations or government to intervene and safeguard SMEs from being exploited in the benefit sharing agreements, which might come with the joint bidding arrangements. For example, a reward scheme can be used to influence the behaviour of larger firms to enter into healthy collaborative bidding with SMEs. The section (8.1.7.1) below describes other practical approaches on how tendering together would work for large firms and SMEs.

8.1.7.1. Approaches to encourage large firms to work together with SMEs

It is illogical to assume that large firms and SMEs will always want to collaborate/work with each other in this context because it is not in their (i.e. the large firms) best interest to work with smaller businesses due to the capacity restrictions that SMEs might place on them. In addition, SMEs may also have inefficient systems, processes, resources

or infrastructure to deal with large-scale contracts. Hence, getting both parties to join up may be challenging without the intervention of government. There is a need for alignment of interest and availability of incentives to enable large organisations to collaborate with SMEs and tender jointly for public contracts. For example, the government can mandate public organisations to include “partnership with SMEs” as part of the criteria weightings that form the bases for bid evaluation decision. There might be a way to incentivise large firms that choose to collaborate with an SME to bid jointly for public procurement opportunities.

Incentivising large firms to collaborate with SMEs to submit a bid jointly for public procurement opportunities is a pull strategy. It can motivate large firms to start seeking for SMEs who they can partner with to increase their likelihood of success in public tendering. However, making sure that both parties consistently perform the requirements of the contract can be another challenge. Therefore, large firms and SMEs that are submitting a joint bid must have some basic rules to follow. First, it would be necessary for public buyers to ask the collaborating bidders to submit a well-structured plan showing how they intend to work co-operatively in delivering the contract. Secondly, every large firm seeking to bid for public contracts should be asked to identify their SME partner in the tender, and disclose the profit or risk sharing ratios agreement that the two parties have signed.

As mentioned earlier, this can help to prevent the SME from being exploited by their larger partners who probably would have more bargaining power because of their relative higher contribution in terms of capital and resources to the bidding process. It is important to ensure that benefit sharing between large firm and SME collaborating to tender for public contracts are agreed and equitable. In addition, parent (large) companies must not be allowed to choose their subsidiary SME firms as partners to collaborate with to bid for public contracts.

Furthermore, the role of non-governmental organizations (NGOs) and agents representing small businesses in the UK such as the Federation of Small Businesses, the British Chambers of Commerce cannot be overemphasized in the achievement of this goal. They can facilitate the coming together of SMEs with potential large firm

partners through “matchmaking” events, designed specially to link two or more firms together for pursuing public tenders. Likewise, priority should be given to large firms and new SMEs or start-up that collaborate to bid for tender opportunities.

Through this, SMEs with little or no prior experience of public tendering can pick up new skills from the larger partners as they work together in preparing and submitting their bid. This can provide a potential solution for addressing the problem of ‘experiential barrier’ identified in previously chapter (identified in section 7.4.3), which arises when an SME lacks the prior experience necessary to bid for public contracts.

8.1.8 Establish SME-targeted approach to public procurement planning

The findings of this study suggest that public buyers may possibly be cheery picking larger firms over small businesses as suppliers, unless the government holds every public organisation accountable for including SMEs in their tenders. This is because SMEs reported that public buyers have a culture of awarding contracts to larger suppliers (see the findings in sections 7.2.1 and 7.4.4). The fact that large firms as supplier are better positioned to meet the requirements of public tenders (Flynn and Davis, 2015), could be a key motivating factor behind the pro-large supplier attitude of public sector buyers. Likewise, it is possible that when a specific type of tender presents itself, perhaps only a few small suppliers have the capacity or complete product/service range to fulfil the requirements of the tender. To address these issues, the section (8.1.8.1) below highlight the importance of implementing a targeted approach to public procurement planning.

8.1.8.1 Approaches to implementing SME-targeted procurement planning

The government should mandate public organisations in the UK to identify and distinguish from the procurement planning stage, what proportion of contract range are suitable for SMEs. This seems to portray a more proactive approach for public organisations to consider how SMEs can be engaged as suppliers, as against the current policy that only requires them to publish the proportion of contract awarded to SMEs. Therefore, starting from the procurement planning stage, public organisations will need to stipulate the supply opportunities which suitable for SMEs, and then publish the details on contracts finder. This is important because past studies (Glover,

2008; GHK, 2010) have shown that that not all contracts that are advertised by public organisations are suitable for small businesses. In fact, SMEs confirms that they have to explore different medium/websites to ensure that they identify contract opportunities suitable for their business.

8.1.9 Reducing the transactional costs associated with using contracts finder

The contracts finder is a centralised website for advertising public tender opportunities of all sizes and value in the UK; but a key finding of this study in Chapter 7 (see section 7.5) was that; contracts finder poses usability challenges for SMEs. It was also discovered from the research findings that most public organisations and their prime contractors often do not comply with the government's directives on transparency of existing contract opportunities, particularly regarding the advertisement of subcontracting works on contracts finder. This have important implications for increasing access to contracts which are suitable for small businesses. For example, SME reported in this study that they have consequently missed several opportunities because it takes time to search and detect relevant contracts opportunities on contracts finder.

Some of the issues highlighted above is currently being addressed through the “new changes to encourage small businesses to apply for government contracts” in the UK e.g.: the “requirements mean suppliers will have to advertise subcontracting opportunities via the Contracts Finder website, and to provide the government with data showing how businesses in their supply chain, including small businesses, are benefiting from supplying to central government” (Cabinet Office, 2018b). Notwithstanding, findings from the present study suggest that there is more to do to upgrading the contracts finder portal in terms of usability and user-friendliness in order to reduce associated transaction costs.

8. 2. The proposed framework to help improve SMEs participation in public procurement in the UK

This section provides a clear rationale for developing a framework to improve SMEs participation in public procurement. So far, in attempting to facilitate the participation of SMEs in public procurement, the UK government has adopted some key policy measures, which were analysed in the previous Chapters 6 and 7. The inference that can be deduced from the findings in these chapters is that;

Key policy measures being implemented in the public sector seems good from the perspectives of the SMEs, but it is not enough to effectively increase their participation in public procurement. The first noticeable reason for this (based on the research findings in sections 6.3.5 and 6.3.7) was that SMEs' participation as well as success rate in public procurement remains low, despite the implementation of policy measures to support them. In addition, findings from Chapter 7 suggest that the policy measures do not guarantee participation for SMEs, but suitable for reducing discrimination against small suppliers. This is considered as a major drawback of SME-friendly procurement policies adopted in the UK government, because they are designed to help create a level playing field for all firms (irrespective of sizes) bidding for contracts (e.g. Flynn, 2016; Loader, 2018).

Furthermore, the fact that the key policy measures do not necessarily preclude a competition between small suppliers and larger suppliers was a major concern for SMEs (see Chapter 7 findings). In other words, all firms (irrespective of their sizes) seeking to do business with public sector will need a contest of some sort, despite the evidence (e.g. Devos et al., 2014; Rostek, 2015) indicating that SMEs may not be able to compete effectively with larger firms on the same terms due to their size and resource limitations. Hence, large firms possibly may continue to have the edge over SMEs when bidding for contracts, given that competition is central to public procurement (Arrowsmith, 2010), and that key policy measures neither decrease nor remove the need for such competition (see further details in sections 7.3.3, 7.6.1 and 7.6.2).

In addition, the qualitative research findings show that there are some key implementation and compliance issues, which need to be addressed to translate

government policy to practice about SMEs participation in public procurement. These issues were addressed appropriately in Chapter 8 based on key findings from the empirical study (in Chapters 6 and 7) and insights gained through discussion of the literature review and theoretical framework in Chapters 2 and 4. One of the important lessons about RBV concepts was that SMEs could leverage their internal resources and capabilities to improve participation in public procurement. For example, to maximise the benefits of consortium bidding, SME owners/managers might need to develop relational capabilities, which can enable them to engage in strategic collaborations with other colleagues, and as result gain access into external knowledge sources to complement existing skill sets (as suggested in section 8.1.7).

In the light of the above, it can be argued that the policies measures, which are currently being implemented by public organisations in the UK, are essential, but not sufficient to effectively increase the participation of SMEs in public procurement. Therefore, this thesis argues for a more holistic approach to solving problem of under-representation of SMEs in public procurement in the UK. This consequently led to the development of a framework, for increasing participation of SMEs in public procurement, based on the research findings. The constructive research approach was adopted as a technique for developing the framework. This approach is also known as design research and has historically (Kasanen et al., 1993) been a problem-solving technique for analysing and design solutions to improve an existing system (see Chapter 3 for more details on the principles that guide the framework development).

For a research study to pass the constructive research approach, it must identify the key issues to be addressed and link them to suggested solutions (Oyegoke, 2011). Equally, the key approaches put forward by the researcher in sections 8.1 – 8.1.8.1 are recommended and linked to key research findings in section 7. Thus, Table 8.1 presents a summary of the key issues about the policy measures (see discussions in previous sections 7.2-7.8), the corresponding suggested approaches for improvement and further identifies the various parties responsible for executing the approaches.

Table 8.1 Key issues about the policy measures, recommendations and responsibilities

S/N	Key Issues	Suggested Approaches	Responsibility
1.	Inappropriate application/use of policy measures	<p>Bridging the policy–practice gaps through capacity development and training for public buyers:</p> <ul style="list-style-type: none"> - Develop skills and expertise of public buyers to improve effective implementation of policy measures - Make SME-friendly policy an important integral element of continuous professional development programmes for buyers - Ensure wider communication of the benefits associated with SME-friendly procurement policies 	<p>Government</p> <p>The public sector</p>
2.	Policy compliance is perceived to be limited	<p>Drive better compliance behaviour amongst public buyers:</p> <ul style="list-style-type: none"> - Use a combination of coercive and cooperative approaches to enforce compliance - Adopt of bottom-up model of policy formulation - Engage wider stakeholders to help refine the existing measures to address the problem of conflicting priorities - Introduce stricter penalties for noncompliance 	Government
3.	Public buyers often exhibit pro-large suppliers attitude	<p>Encourage pro-SME behaviours amongst public buyers:</p> <ul style="list-style-type: none"> - Introduce reward/incentive system to motivate pro-SME behaviours amongst public buyers - Showcase the strategic benefits of engaging small suppliers to public buyers regularly 	Government

4.	SMEs have less desire for subcontracting opportunities and those who do not have previous experience of selling to public sector are more likely to be unsuccessful in tendering	<p>Address experiential barrier, and lack of preference for subcontracting:</p> <ul style="list-style-type: none"> - Introduce alternative avenues for SMEs to sell directly to government, as opposed to subcontracting - Encourage large firms to work in partnership with SMEs when bidding for public contracts - Organise “matchmaking” events to link SMEs with potential large firm partners <p>Set basic rules for the partnership:</p> <ul style="list-style-type: none"> - Mandate collaborating partners to disclose their profit or risk sharing ratios agreement - Use appropriate incentives to motivate large firms to collaborate with SMEs - Give extra scores for bid submitted jointly by a larger firm and a start-ups SME 	<p>Government</p> <p>The public sector</p> <p>Large businesses</p>
5.	SMEs underrepresentation in public procurement is most pronounced amongst the micro-sized businesses	<p>Increase the share of micro-enterprises in winning public contracts:</p> <ul style="list-style-type: none"> - Adopt a system of positive discrimination (interventionist) to guarantee participation of micro businesses: - Require public sector organisations to set aside at least 20% of their procurement spending for micro businesses - Make the achievement of this target a legally binding obligation for public organisations - Track and report performance 	Government

6.	<p>SMEs lacking adequate ability to maximise the benefits associated with consortium bidding</p>	<p>Develop SMEs' ability to take advantage of consortium bidding:</p> <ul style="list-style-type: none"> - Promote collaborative relationships amongst SMEs - Create an online platform where SMEs can connect with each other to explore and identify potential partner for consortium bidding - Provide enabling environment for SMEs to share information, knowledge, or experience about using consortium bidding. <p>SMEs to develop better relational/networking capabilities:</p> <ul style="list-style-type: none"> - SMEs should leverage the internet to seek out for like-minded small businesses with complementary capability - SMEs to form or joining cooperatives to tap into diversity of talent and capability <p>Change agents should support SMEs to resolve skills and capacity constrains:</p> <ul style="list-style-type: none"> - Organise networking events, seminars and workshops on how SMEs can bid jointly effectively. 	<p>Government</p> <p>SME owner/manager</p> <p>SME agents/representative organisations</p> <p>Government</p>
7.	<p>Contracts finder poses usability challenges for SMEs</p> <ul style="list-style-type: none"> • SMEs find themselves having to search information displayed in different medium/websites to ensure that they identify contract opportunities 	<p>Establish a centralised/dedicated website for public sectors to publish specific type of tenders suitable for SMEs:</p> <ul style="list-style-type: none"> - Public organisations in the UK to identify what proportion of their contract portfolio would be suitable for SMEs in their annual procurement plans - Upgrade the contracts finder by optimising or creating a new feature for its search engine to help SMEs detect relevant contract opportunities more efficiently 	<p>Government</p> <p>The public sector</p> <p>Large businesses (prime contractors)</p>

	suitable for their business <ul style="list-style-type: none"> Public buyers often do not publish call for tenders related to specialist skills of SMEs 		
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8.2.1. Designing the framework

Seeing that SMEs' level of participation in public procurement still remains low despite the various key policy measures by which the UK government attempts to support them (i.e. SMEs) in public procurement markets, a framework has been developed as shown in figure 8.1 below. As previously indicated, the proposed framework assembles and integrates the suggested approaches (in sections 8.1 – 8.1.7.1) into four (4) different but interrelated key pathways. Each pathway within the Framework is accompanied by approaches (see tables 8.1 – 8.4), can offer possibilities to improve SME participation in public procurement. Furthermore, insights derived from the literature and key findings from this research suggest that the combined efforts of different players in the public procurement community such as government, public organisations, SMEs themselves and organisations that support small-businesses, would be needed to improve SMEs participation in public procurement, effectivity.

Therefore, the framework acknowledges the respective roles of policy makers, policy implementers (the public sector), policy beneficiaries (i.e. SMEs), small business support groups as well as larger businesses. If the suggested approaches in the framework are executed by the respective players/actors, SMEs participation in public procurement might increase. The four key pathways of the framework are discussed below;

8.2.1.1. PATHWAY 1: Enhance the implementation of existing policy measures to facilitate SMEs participation

The first pathway in the framework brings together suggested approaches (as shown in table 8.2), which can help translate government policy intentions regarding SMEs participation in public procurement, in to reality. It offers possible ways to resolve the

potential factors limiting effective implementation of policy measures designed to support SMEs in public procurement in the UK. Given that public sector buyers, as policy implementers would have to bear responsibility for the realisation of such policy goals (Flynn and Davis, 2015; Soudry, 2007), the approaches for ensuring policy compliance are also included in this pathway. It is therefore proposed that if the approaches recommended in Section 8.1.2.1 - 8.1.2.4 are implemented to drive compliance with existing policy measures, government’s intentions towards increasing SMEs participation in public procurement may possibly be achieved.

Table 8.2 Sources of framework components - the 1st pathway

Framework Components		Reference/Source (within the thesis)
1st pathway to improve SME participation in public procurement	Approaches	
Enhance the implementation of existing policy measures to facilitate SMEs participation	Develop skills and expertise of public buyers	Section 8.1.2.1
	Facilitate wider communication of the benefits associated with SME-friendly procurement policies	Section 8.1.2.1
	Adopt bottom-up model of policy formulation	Section 8.1.3.1
	Introduce stricter penalties for noncompliance to policy measures	Section 8.1.3.1
	Communicate the strategic benefits of engaging small suppliers to public buyers regularly	Section 8.1.2.1
	Make SME-friendly policy an important integral element of continuous professional development programmes for buyers	Section 8.1.2.1
	Introduce reward/incentive system	Section 8.1.4.1

8.2.1.2. PATHWAY 2: Increase the capacity of SMEs to maximise the benefits of consortium bidding

The second pathway in the framework takes into consideration the approaches (as shown in table 8.3), which can help SMEs to maximise the benefits of consortium bidding. Empirical findings from the survey (section 7.4) provide the basis for this as

SMEs have reported difficulties in forming collaborations with other firms, due to several reasons like lack of trust, complementarity, power and control. Therefore, this section contains some techniques to address these constraints, so that SMEs can take full advantage of consortium bidding to improve participation in public procurement. For example, the literature review (section 2.6.6.3) identified elements of dynamic capabilities (e.g. learning capability, relational capability and networking), which might help SMEs to use consortium bidding effectively while competing for public sector contracts. Particularly, with regards to tapping into external resource base of other small firms to exploit their complementary capabilities for submitting a joint bid.

Table 8.3 Sources of framework components – the 2nd pathway

Framework Components		Reference/Source (within the thesis)
2 nd pathway to improve SME participation in public procurement	Approaches	
Increase the capacity of SMEs to make the most of consortium bidding	Develop higher relational/networking capabilities	Section 8.1.5.1
	Leverage the internet to connect with other firms	Section 8.1.5.1
	SMEs to form or join cooperatives	Section 8.1.5.1
	Support SMEs to resolve their skills and capacity constraints	Section 8.1.5.1
	Organise networking events, seminars and workshops	Section 8.1.5.1
	Create an online platform where SMEs can connect with each other	Section 8.1.5.1
	Provide enabling environment for SMEs to share information, knowledge, or experience	Section 8.1.5.1

Therefore, considering the above discussion, it is proposed that, the amount of relational capabilities at a firm's disposal will determine its ability to linkup with other small firms to mobilise additional resources and remedy any resource limitations that might have prevented them from participating effectively in public procurement through consortium bidding.

Furthermore, this pathway, amongst other things highlights the need for SMEs to admit responsibility for implementing actions to improve success in public procurement, like Loader (2013) has emphasised. For example, it enumerates approaches to enable SMEs linking up with suitable counterparts to share information and knowledge /experiences, which might increase their probability of winning a contract through consortium bidding. In addition, the framework (the second pathway) stresses the need for small business support groups (e.g. Federation of Small Businesses, the British Chambers of Commerce, sector/industry associations, SME networks or umbrella organisations) to increase the capacity of SMEs through training, seminars and networking event.

8.2.1.3. PATHWAY 3: Targeted approaches to support SMEs in public procurement

The third pathway suggests two broad approaches to increase SME participation in public procurement (as shown in table 8.4), namely positive discrimination, particularly for micro-sized businesses and a targeted system for directing SMEs to suitable procurement opportunities. Therefore, the first set of approaches contained in this pathway focus on what the government should do to make microenterprises the primary target of its policy agenda. For instance, by adopting positive discrimination (Loader, 2013) to give preferential treatment to specific group of SMEs that are underrepresented in public procurement market. The research finding (in sections 6.3.5 and 6.3.6.) provide a rationale for this, showing that SMEs underrepresentation in public sector procurement was most pronounced amongst micro-enterprises. While these are firms with less than 10 employees, they are numerically the dominant group of SMEs in the UK's economy (Rhodes, 2016).

Therefore, pathway 3 in the framework proposes that the UK government should mandate public sector organisations to set aside at least 20% of their procurement spending for micro businesses. To make the spending target a legally binding commitment for public organisations, a regulation would probably be necessary. It is expected that through positive discrimination; the government can guarantee that certain proportion of public sector contracts (by value) is awarded to micro-enterprises. Given the large size, complexity, capital and resource requirements of some public tenders, they might not be suitable for small suppliers. It is therefore pertinent to have

a process that helps SMEs identify opportunities which can match their skills and capabilities.

Table 8. 4 Sources of framework components – 3rd third pathway

Framework Components			Reference/Source (within the thesis)
3 rd pathway to improve SME participation in public procurement		Approaches	
Targeted approaches to support SMEs in public procurement	Positive discrimination	Set aside at least 20% of procurement spending for micro businesses	Section 8.1.6.1
		Make the achievement of the set aside target a legally binding commitment	Section 8.1.6.1
		Track and report performance on direct spending with micro-businesses	Section 8.1.6.1
	A targeted system for directing SMEs to suitable contract opportunities	Identify tenders that are suitable for SMEs in annual procurement plans.	Section 8.1.8.1
		Optimise the contracts finder to help SMEs detect relevant contract opportunities more efficiently	Section 8.1.9

Consequently, the other set of approaches in this pathway comprise actions that need to be implemented by government and the public sector to enable SMEs find contract opportunities that might be suitable for them to perform. This proposes a targeted system of procurement planning that requires public organisations to identify which of their tender opportunities might be suitable for SMEs, and then advertise the opportunities on a dedicated portal/website. Therefore, considering the foregoing, the 3rd pathway of the framework posits that, the more able the government can make it obligatory for large firms who act as prime public contractors to publish subcontracting opportunities on a dedicated website, the better the SMEs ability to access opportunities down the public- sector supply chain.

8.2.1.4. PATHWAY 4: SME- Led public tendering

The 4th pathway in the framework is labelled “SME-Led Procurement”. This is proposing that large firms who tender for public contract should be encouraged to collaborate with SMEs to submit a joint bid (as shown in table 8.5 and discussed in section 8.1.7.1). This is predicated on the fact that SMEs need alternative route to participate directly in public procurement rather than going through subcontracting route. The findings (in section 7.7) shows that SMEs seem displeased with participating in subcontracting because it often come with some key challenges such as unfair treatment by prime contractors, risk of losing intellectual property and low bargaining power (see full discussion about these challenges in section 7.2.5).

Table 8.5 Sources of framework components – the 4th pathway

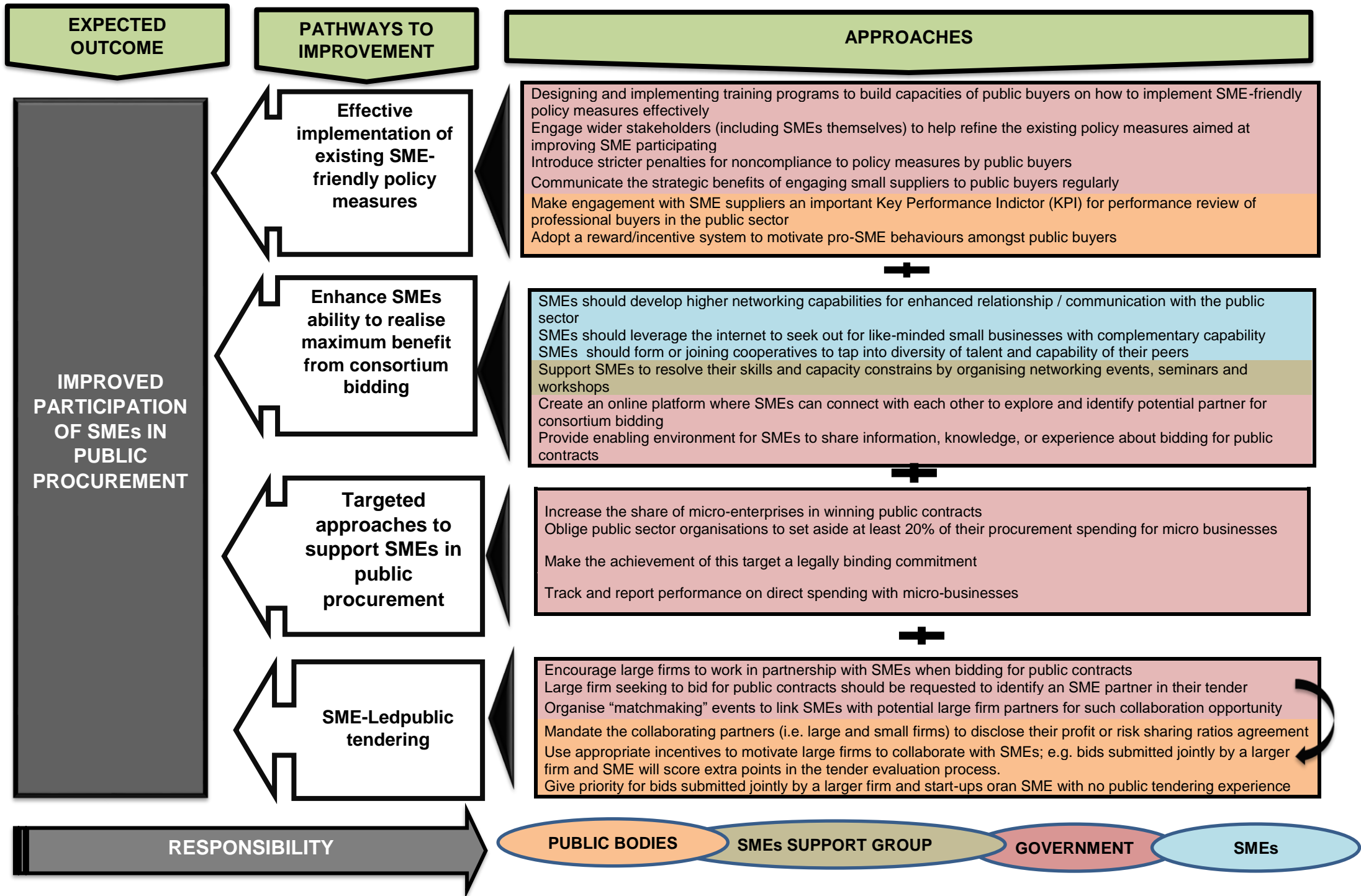
Framework Components		Reference/Source (within the thesis)
4 th pathway to improve SME participation in public procurement	Approaches	
SME-Led public tendering	Encourage large firms to collaborate with SMEs when bidding for public contracts	Section 8.1.7.1
	Organise “matchmaking” events	Section 8.1.7.1
	Mandate collaborating partners to disclose their profit or risk sharing ratios agreement	Section 8.1.7.1
	Use appropriate incentives to motivate large firms to collaborate with SMEs	Section 8.1.7.1
	Give extra scores for bid submitted jointly by a larger firm and start-ups and young SMEs	Section 8.1.7.1

Hence, the proposed “SME-Led Procurement” route offers potential opportunities for SMEs to avoid the above-mentioned challenges. Also, SMEs with no experience of public bidding can overcome the potential experiential barriers that may hinder their participation in public procurement. To achieve this, the government should facilitate and organise “**matchmaking**” events – forums where SMEs can linkup with potential

large firm partners for such collaboration opportunity. Furthermore, there is need for appropriate incentives to help encourage large firms to co-operate, as against compete with SMEs when tendering for public contracts. For example, collaborating with SMEs in this context should be included in scoring criteria for tender evaluation to encourage potential large firm bidders. The implication of this is that some large firms may perhaps be attracted to working with small firms to increase their chances of success in public procurement. For example, large firms are likely to engage more with SMEs when bidding for public contracts if public buyers can promise to give additional scores (during the tender evaluation) to bidders that collaborate with SMEs to submit a bid.

Furthermore, the 4th pathway presents a win-win situation for SMEs and the large firms, as it emphasises cooperation between supposedly competing firms in the public procurement markets. Hence, the benefits associated with this pathway are not for SMEs alone. For example, an increasing amount of specialist talent resides in smaller organisations, and it is in the best interest of larger firms to be able to collaborate and tap into this capability.

Figure 8.1 The framework



Finally, it is important to state that the framework has a wider range of key target audiences and beneficiaries. While the target audience of this framework is principally policy makers and procurement practitioners in the public sector who wish to improve the rate of participation of SMEs in procurement, key beneficiaries would be SMEs owners and managers who need to enhance their skills and ability to get maximum benefits from government's policies. Small business agents/representatives, whose objective is to provide support and advice for SMEs regarding how to sell to the public sector, might find the framework useful.

8.3. Preliminary validation of the proposed framework

One of the fundamental principles of the constructive research design (i.e. the approach adopted for framework development in this study), is to test the viability or usefulness of any solution proposed to resolve issues identified in a research study (Oyegoke, 2011). Therefore, the researcher considered it important to examine the validity of the framework presented in figure 8.1 and its components. Consequently, a focus group was conducted consisting of 6 participants to validate the framework. The purpose of the validation was to assess the practical application of the framework; whether it is a plausible tool to increase SMEs participation in public procurement in the UK.

8.3.1. Focus group process and participants

All participants in the focus group are familiar with the research topic. Some of them have practical knowledge and understanding of the research theme, while others have been involved in the survey study at the initial stage of the research. Hence, they are all familiar with the key aim of the research. Table 8.6 shows the profile and experience of participants in the focus group. Prior to the focus group session, a copy of the developed framework explained in Section 8.2.1, including the component details were sent to each participant. This was to enable the participants to review the framework independently and prepare any questions they may have ahead of the focus group discussion. The focus group was moderated by the researcher who began the session by presenting the framework verbally to the participants. The presentation, which lasted for about 10 minutes, was aimed to provide the participants with an overview of the proposed framework. This was considered vital to enhance the participants' familiarity and understanding with the framework and its complements.

Table 8.6 Profile of participants in the focus group

Participant code	Business type	Job title	Experience in public procurement (yr.)
FGP -1	Public sector	Procurement manager	11
FGP -2	Public sector	Procurement manager	21
FGP -3	SME	Owner	13
FGP -4	SME support group	Director	18
FGP -5	Large business	Business manager	9
FGP -6	Academia	Research fellow	6

At the focus group discussion, the 6 participants in attendance were provided with a document comprising the framework and the following key questions to guide the conversation:

1. Do you think this is a practicable framework, if so why, if not why not?
2. What are the strengths of this framework?
3. What are the weaknesses of the framework?
4. And how can the framework components be improved or modified to address the weakness?

Then, the participants were then asked to share their views and discuss the framework and its components. The notes taken during the focus group discussion were studied and analysed through qualitatively content analysis to present the findings. The section (8.3.2.) below presents the findings of the focus group discussion supported with representative quotes from participants (without revealing their identity) in order to maintain anonymity.

8.3.2. Feedback on preliminary validation of the framework

This section presents the findings from feedbacks to the proposed framework (in figure 8.1). Comments on each components of the framework are discussed below:

The main part of the focus group session was devoted to the first question, i.e. *“Do you think this is a practicable framework, if so why, if not why not?”* because the

essence of the validation study is to ensure that the proposed framework is indeed implementable as possible tool to increase SMEs participation in public procurement in the UK. In response to this question, the focus group participants unanimously agreed that the framework seems very sensible and will undoubtedly be useful because it represents a theory of change which shows how the proposed approaches feed through to the desired outcome. One of the participants said:

“..the fact that the framework components require actions to be taken at all levels, and by all key stakeholders, such as public buyers, large firms and SMEs themselves, is the right way to engage, promote and change behaviours” FGP-2.

What the above comment implies is that SMEs may have the primary responsibility to attempt to partake in public procurement, but they are less likely to be successful in this context if the different stakeholders or actors (mentioned previously) do not take some responsibility, where/when necessary, to support them. For example, public buyers can be held accountable for including/ excluding SMEs in tenders, and this mean that more opportunities will be given to the SMEs and public procurement teams will have fewer opportunities to cherry pick who they want to use as suppliers. Furthermore, participants in the focus group believed the framework is a good start to drive the debate connecting public procurement with development of the small business sector, because it provides a general overview of the approaches that can be employed by the authorities and SME's to support participation. Another participant commented that:

“...You have listed the issues succinctly and on paper it should work. Increasingly we are seeing the aggregation of the supply chain to larger & larger organisations with the result of more and more splinter start-ups/SMEs appearing. Having ‘matchmaking’ events to link smaller SMEs together or SMEs and larger organisations together is a really good idea, and I think it’s the way to...” FGP-6.

One participant commented that:

“ .. In principle your framework seems very sensible. I agree with the provisions for imposition of stricter penalties for non-inclusion of SMEs. Another point is that while all the tenders I have seen give detail as to what considerations will form the basis of their decision i.e. 40% cost, 60% technical expertise etc. I have never seen any weighting at all mentioning SMEs...”FGP-4

What can be deduced from the above comments is that the proposed framework, if implemented, has the potential to transform the way SMEs are being supported to participate better in public procurement. As one of the participants said; this can empower SMEs to uncover new opportunities for participating in public procurement markets, which were not existing as such within the UK’s government policy actions for SMEs. We cannot overemphasise the importance of opening the public procurement markets to more SMEs, particularly in terms of improving public spending efficiency and value for money; i.e. public buyers are better positioned to secure the best value for money when various types of suppliers (large and small) participate in the tendering process. Nevertheless, the focus group participants pointed out that there are certain issues, which might hinder the proposed framework from yielding its intended outcomes i.e. result in increased participation of SME participation in public procurement in the UK. Table 8.7 below, summarises participants comments on the strengths and weakness of the framework components.

Table 8.7 Feedback about the strengths and weaknesses the framework components

Framework components	What are the strengths of this framework?	What are the weaknesses /limitations of the framework?
Pathway 1: Effective implementation of existing SME-friendly policy measures	<ul style="list-style-type: none"> • Offers possible approaches to address challenges that public-sector face around implementing government policies to help SMEs participate better in public procurement. • The use of incentives can be very effective discouraging buyers from choosing the well-known (larger) suppliers and renewing contracts year on year which is excluding a lot of competitors from bidding (SMEs). 	<ul style="list-style-type: none"> • Different procurement events demand different supplier selections policies due to complexities in the market and the nature of operations and services being provided by different public bodies. Hence, the approaches suggested here to help enhance policy compliance amongst are not exhaustive. So, expediency could influence how individual public sector are act in accordance with the existing SME-friendly policy measures. • Government has to align interests and incentives before this will work.

		<ul style="list-style-type: none"> • There will be varying levels of experience and abilities from public buyers to implement these approaches
<p>Pathway 2:</p> <p>Enhance SMEs ability to realise maximum benefit from consortium bidding</p>	<ul style="list-style-type: none"> • SMEs are possibly able to be more equipped to cope with the demands of a large-scale contractual requirement. • Emphasises what SMEs can do to improve their chances of winning contracts via consortium bidding – not all about what government is doing to encourage SME 	<ul style="list-style-type: none"> • How to get visibility and educate the small businesses representatives like chambers of commerce on their roles as highlighted in the framework. • Time for SME owners to implement the recommended approaches.
<p>Pathway 3:</p> <p>Targeted approaches to support SMEs in public procurement</p>	<ul style="list-style-type: none"> • Positive discrimination is good, but it might just be impractical because authorities need to get the best deal from the best supplier at the end of the day. • Changing the behaviours of the purchasing clients and the prime contractors around advertisement of opportunities suitable for SMEs • The use of directives for public procurement bodies to encourage the participation of SMEs through measurement of content of work going to these organisations. 	<ul style="list-style-type: none"> • Obliging public sector organisations to set aside at least 20% of their procurement spending for micro businesses is not a realistic expectation. A high 20% proportion of micro-cap contractors might decrease the public sector’s ability to achieve diversity/equality targets. • It presupposes that SMEs have a divine right to secure public sector work, but they need to earn the right to win contracts. The framework, which is, in essence, commendable, seem to focus less on how a SME should proceed to stand a chance to secure their business. • Positive discrimination may have companies crying foul play, unless there are applicable regulations • It does not mandate prime contractors to publish subcontracting opportunities suitable for SMEs

<p>Pathway 4:</p> <p>SME-Led public tendering</p>	<ul style="list-style-type: none"> • Ultimately the only authentic way of ensuring change is to make this initiative commercially attractive to both the SMEs and large firms, and the approaches proposed here will address that. The availability of incentives where large organisations collaborate with SMEs and tender jointly. • Excellent transparency for all potential SMEs and ability to compete for business directly across the UK whereas before they would not be able to. • Having ‘matchmaking’ events to link smaller SMEs together or SMEs and larger organisations together is a really innovative idea. Particularly, with the ability of providing SMEs with valuable information that will make them empowered to have confidence in the public procurement system. 	<ul style="list-style-type: none"> • Large firms may withhold co-operating with the SMEs due to fear of losing market share. For example, large some OEM firms have a tendency of protecting their supply chains making it hard to SMEs to break them when public bodies tender for requirements such as spares and components particularly in the Rail Industry where the infrastructure is publicly maintained. • It worth big companies setting up a series of microcaps and linking them as a consortium. • Government/public sector may have limited powers to force the co-operation between SMEs and large firms
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Furthermore, participants’ opinions were sought on ways to overcome the weakness (identified in table 8.7 above). Consequently, the following modifications or improvements were suggested to the framework proposed initially in figure 8.1:

8.3.2.1 The researcher was advised to consider the legal implications and challenges of enforcing this framework, particularly how positive discrimination will sit with the EU Public Procurement Regulations e.g. This was given due consideration in the amendments of approaches in pathway 3, which recognises the need to make the spending target a legally binding commitment for public organisations.

- 8.3.2.2 It was suggested that, some mandatory principles should be included in the framework, whereby public-sector bodies should publish (i.e. on the internet/their website) what percentage of procurement goes to small businesses, by category. This was given due consideration in the amendments of approaches linked to pathways 1 and 3, requiring that public bodies should publish proportion of their contracts (by value) that is awarded to SMEs in general, and to micro-businesses.
- 8.3.2.3 It was suggested that, pathway 1 should relate to pathway 2 because until the public-sector accept bidders to collaborate, SMEs on their own may not be permitted to submit a jointly tender. This was given due consideration, as pathways 1 and 2 are now linked to each other within the framework.
- 8.3.2.4 In view of pathway 4 that requires SMEs to cooperate with large firms to tender jointly for public contracts, it was suggested that, the collaborative organisations (small and large) who have been successful in a tender should be audited by the contracting authority during contract implementation stages to confirm that they work together all the way. This was given due consideration in the amendments of approaches related to pathways 4.
- 8.3.2.5 It was generally agreed among the participations that every tender should mandate a 10% exclusive micro business spend, and that the application process should be much simpler and less demanding for micro businesses. This was given due consideration in pathways 3.
- 8.3.2.6 The focus group participants unanimously agreed that the framework call for actions at a multiple level to improve SMEs participation in public procurement, but they observed that large businesses was missing in the Responsibility Matrix and should be included. Consequently, the Responsibility Matrix in the framework was amended to include large businesses.

8.3.2.7 It was recommended that numbers should be assigned to each pathway to enable people (i.e. end users or beneficiaries) identify what sections of the framework is relevant to them. This suggestion was considered in the revised version of the framework.

8.3.2.8 Participants suggest that government should mandate prime contractors to publish subcontracting opportunities suitable for SMEs on the dedicated website proposed in pathway 4. This suggestion was given due consideration in the revised version of the framework.

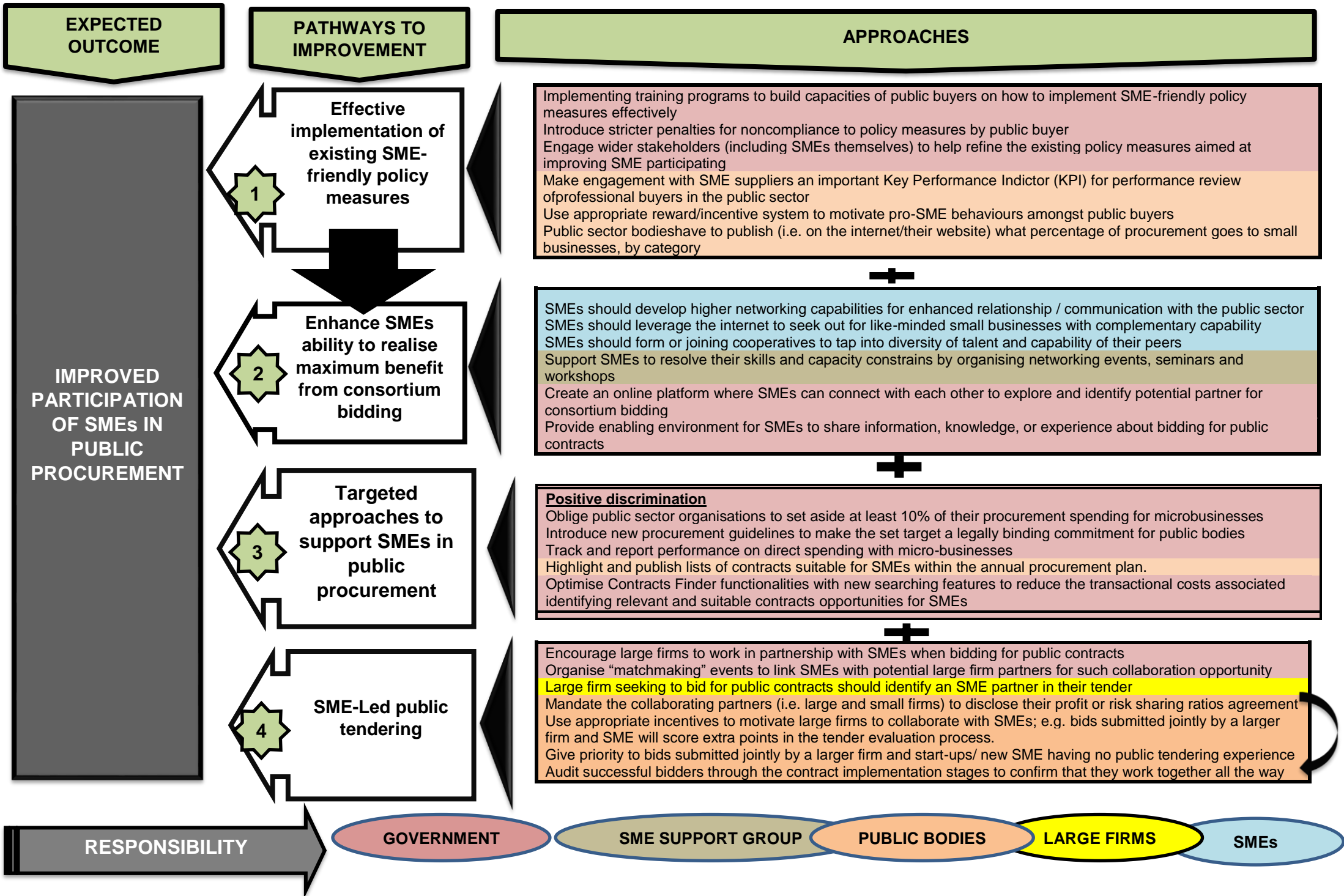
Overall, the participants generally agreed that the framework (proposed in figure 8.1) identifies key and realistic approaches, which offer opportunities likely to improve the participation of SMEs in public procurement. It was concluded that the framework is all encompassing because it suggests innovative ideas to increase SME participation in public procurement along with approaches that could be taken to improve outcomes from existing SME-friendly procurement measures.

Furthermore, the participants considered it appropriate (as suggested in the framework) that promoting the participation of SMEs in public procurement should be a shared responsibility between the government, public organisations, SMEs themselves, large firms who worked as prime contractors on public sector jobs, and other relevant stakeholders such as organisations that support small businesses (e.g. industry associations/networks, chambers of commerce). Such a call for collective actions from different stakeholder groups mentioned above, was a considered a welcome development because it offers a more robust approach to improving SMEs in public procurement in the UK.

8.3.3. The revised and validated framework

The original framework has been reviewed and modified in accordance with the suggestions of the focus group. The revised version of the framework is presented in figure 8.2.

Figure 8.2 Revised version of the framework



8.4. Chapter summary

This chapter presented a framework that can help to improve the participation of SMEs in public procurement. The framework was developed by incorporating key findings of the survey with relevant literature. The chapter starts by suggesting some approaches (in sections 8.1 – 8.1.8.1) to address key issues arising from survey findings (quantitative and qualitative) presented in previous chapters (6 and 7). The recommended approaches were then synthesised into 4 pathways and incorporated into a framework that offers different possibilities to improve SME participation in public procurement. A preliminary validation of the proposed framework was conducted via a focus group, and has been confirmed workable by the participants, although with some limitations. Consequently, the original framework was amended and improved.

As one participant said at the focus group session that: *“I fully support this framework and really want to see it develop if this is something that you are considering bringing into the public world of procurement” FGP-1*. This is suggesting that this investigation can be taken further by getting buy-in from public procurement stakeholders in the UK to implement the framework. Therefore, it is pertinent that the proposed framework is put into practice through further validation studies in future to determine whether its components would lead to the right sort of outcomes as anticipated. Through this, the framework can be disseminated amongst policy makers, public sector bodies, SMEs and other stakeholders representing small businesses in the UK, such as the chambers of commerce. This, in turn can lead to policy change in the context of engaging with more SMEs in public procurement. Finally, this chapter has contributed towards the achievement of research objective 6 of this investigation.

CHAPTER 9

9.0. Conclusions and recommendations

9.1. Introduction

This chapter presents the overall summary and conclusions of the research and it is divided into five sections. The first section provides an overview of the study, and it reiterates the aim and objectives of the study. The second section presents a discussion on how the research objectives were achieved by answering the related research questions. Discussions regarding the key contributions of the research in terms of knowledge (i.e. theory and literature), methodology, practice and policy implications are presented in the third section. The fourth section highlights some key limitations of the research (observed by the researcher), and recommendations for further work. Finally, the fifth section presents a summary conclusion of this chapter.

9.2. An Overview of the Research

The importance of public procurement in promoting SMEs growth is gradually becoming a topical issue in academic and policy circles. Having recognised the potential contributions that SMEs can make to a country's economy and their multiplier effects on wealth creation and poverty reduction, many governments around the globe have put small business at the heart of their National Planning Policy processes (Flynn, 2016). In the UK for instance, the government has adopted some key policy measures to facilitate the participation of SMEs in public procurement. These include directives that public-sector organisations should simplify the tender documents to ease the process of bidding, split contracts into lots, advertise all contract opportunities on a centralised website (contracts finder), accept consortium bidding and promote subcontracting opportunities.

Notwithstanding the foregoing, SME participation rate in public procurement is still relatively low (e.g. Loader and Norton, 2015; McKeivitt and Davis, 2015), and their share in winning public contracts is significantly lower than their contribution to economic development (Davis and Brady, 2015; Loader, 2015). Therefore, the aim of this research is to develop a framework for improving SME participation in public procurement markets. To achieve this aim, the researcher reviewed the literature to

identify the key policy measures adopted to promote SMEs participation in the UK (**research objective 1**) and examined the level of awareness and attitudes of SMEs towards the key policy measures identified in the literature (**research objectives 2 and 3**). In addition, key issues/concerns to be addressed about the policy measure as perceived by SMEs, were identified and analysed (**research objective 4**).

Furthermore, despite evidence (e.g. Teece, 2007, 2016) on how firm's internal characteristics such as resources and capabilities can have a strong influence on business performance, this perspective is rarely addressed in the literature on SMEs and public procurement (i.e. Tammi, Saastamoinen and Reijonen, 2014; Reijonen, Tammi and Saastamoinen, 2014). Therefore, given that the aim of this study is to develop a framework to increase SME participation in public procurement, the researcher considers it important to review relevant literature on factors (other than government policies measures) that affect SMEs business performance (**research objective 5**).

Consequently, approaches for improving SMEs participation in public procurement were recommended to develop the proposed framework (**research objective 6**). The framework can serve as a guide to procurement experts, policy makers and researchers on how the underrepresentation of SMEs in public procurement markets can be addressed in many ways. The broader impact of increased participation of SMEs on a nation's economy cannot be overemphasised. By doing more business with SME suppliers, the government can increase availability of innovative products and high-quality services, in addition to obtaining value for money in public spending.

9.3. Achievement of research aim and objectives

The overall aim of this research is to develop a framework for improving SME participation in public procurement markets; this has been achieved by the researcher as presented in figure 8.2. There are six key research objectives designed to achieve the research aim, which are then linked to the six research questions, explicitly listed in Chapter 1 (see sections 1.4 - 1.5). Table 9.1 provides a summary of how data were collected and analysed (i.e. the methods used, and processes followed) to ensure that the research objectives are met.

Table 9.1 Meeting the research aim and objectives – methods and processes

Research aim: is to develop a framework for improving SME participation in public procurement markets.			
Research objectives	Corresponding research questions	Method of achievement	Related chapters in thesis
Research objective 1	Research question 1	- Literature review	Chapter 2
Research objective 2	Research question 2	- Survey (quantitative)	Chapters 5 and 6
Research objective 3	Research question 3	- Survey (quantitative)	Chapters 5 and 6
Research objective 4	Research question 4	- Survey (qualitative)	Chapters 7
Research objective 5	Research question 5	- Literature review	Chapters 2
Research objective 6	Research question 6	- Synthesis of research findings - Focus group	Chapters 2, 3, 4, 5, 6, 7 and 8

Research objective 1: To identify key policy measures to promote SME participation in public procurement in the UK

The first objective was achieved by conducting a critically review of the literature focusing on government policies and measures to support SME in public procurement, particularly those being implemented within the public sector in the UK (as presented in section 2.6.3). It provided a better context for understanding the interventions designed to reduce the barriers limiting SMEs participation and success rate in public procurement. Based on the literature review, a number of policy measures were found and six (6) of these were notable because they are necessary requirements of the UK's public procurement regulations, and due to their high frequency of occurrence in the reviewed articles and literature (see detailed discussion in section 2.6.4).

In addition, these key policy measures have legal backing through the UK public procurement law. Table 2.3 presents a summary of the features and potential benefits of each policy measures. Nevertheless, the issue of SMEs underrepresentation in

public procurement market is still becoming persistent in the literature, which underscores the need for improving SME participation. The underrepresentation was further established in this research as the findings in Chapter 6 (sections 6.3.5 – 6.3.7) and Chapter 7 indicate that it has not yet been resolved. This offers a theoretical justification for examining ways to increase the participation of SMEs in public procurement – as proposed in the framework development.

Research objective 2: To examine SMEs' awareness of key policy measures designed to improve participation in public procurement.

The above-mentioned research objective was achieved by conducting a survey regarding the awareness of policy measures amongst SMEs, as presented in sections 6.4 - 6.5. The empirical evidence from analysis of survey data suggests that majority of SMEs are aware of key policy measures designed to improve participation in public procurement in the UK²⁰. This finding is different to recent research findings reported by Loader (2018) that many SMEs in the UK are not aware of measures available to help them improve participation in public procurement. The difference in findings here could be due to difference in method of data collection; the present study is based on quantitative methodology using a survey, whereas Loader (2018)'s argument was made from reviews of previous literature.

Furthermore, the results of chi-square tests show that there was no significant difference (at chosen significance level $\alpha = 0.05$) between groups regarding awareness of policy measures, when the data were grouped by firm size, and firm age. However, the results show that a significant difference (at chosen significance level $\alpha = 0.05$) exist between SMEs when grouped by level of experience in public sector tendering. Essentially, SMEs who are less experienced about public procurement reported low awareness of the following three key policy measures' "elimination of PQQ for smaller contracts", "consortium bidding and "division of contracts into lots". These findings provided a better understanding on the awareness of SMEs about key policy measures designed to facilitate their participation in public procurement.

²⁰>60% of all SMEs were aware of any of the policy measure examined in this study.

It also suggests the fact that attention is needed to improve level of policy awareness of amongst SMEs who have little or no experience of public tendering. The framework proposed in figure 8.2 proposes different ways of dealing with this problem. Furthermore, it is important for SMEs of any kind to be knowledgeable about the policies, which are available for their benefits towards participation in public procurement. With such knowledge, they can discover and take advantage of the associated benefits.

Research objective 3: *To evaluate the attitude of SMEs towards key policy measures, with reference to their rate of participation in public procurement.*

The third objective was achieved by examining attitudes towards the key policy measures in a survey of SMEs competing for contract opportunities in public organisations. In the first phase (chapter 2), a literature review was conducted to identify set of key attributes and potential benefits for each of the six policy measures. Then, the variables identified in the literature were incorporated into a questionnaire, which was used to examine attitudes of SMEs using 5-likert scale measure. Although overall SMEs show a fairly positive attitude²¹ regarding their opinion of the benefits associated with these policy measures, but the self-reported participation rates in public procurement is still small. 27% of SMEs never tendered for public sector contracts a period of one year and 41.3% had participated for less than five times a year.

It was deduced from the findings above that SMEs are optimistic about the policy measures and the associated benefits, but such may not necessarily translate into them being able to improve participation in public procurement. The evidence collected in Chapter 7 can help explain this surprising finding by identifying some reasons why the policy measures does not seem to yield the expected improvement in outcomes. Particularly regarding poor implementation of the policy measures and a lack of capacity amongst SMEs to take full advantage of the benefits associated. Consequently, these were important issues considered in the development of the framework because it provided additional rationale for suggesting ways (in Chapter 8)

²¹Seeing that the mean level of agreement scores on the questionnaire items/statements range from 3.46 to 4.09 (using a 5-point Likert scale).

to improve effectiveness of key policy measures adopted to facilitate SMEs participation in public procurement in the UK.

Objective 4: *To examine key issues and concerns about the policy measures, in order to recognise whether opportunity for improvement exists.*

The fourth objective was achieved through a qualitative analysis of responses provided to open-ended survey questions in Chapter 7, which revealed key issues of most concern to SMEs about the policy measures. The findings of the qualitative study suggest that SME-friendly procurement policies are not well implemented by public organisations in the UK. This was linked to a range of factors that hinder the effective implementation of government policy such as lack of enforcement to drive compliance, public buyers lack the needed skills, negative attitude toward small suppliers and implementation cost. The suggested approaches to improve implementation of policy measures to facilitate better participation of SMEs in public procurement were discussed in Chapter 8 and incorporated into the proposed framework in section 8.2.

Furthermore, some limitations and drawbacks were identified about the policy measures, which made them inadequate to effectively increase the participation of SMEs in public procurement. First, competition between SMEs and larger suppliers is indispensable, despite evidence (e.g. Rostek, 2015) showing that small firms cannot compete effectively with larger firms, due to their size and resource limitations. In addition, it was discovered (see section 7.4) that SMEs lack the set of capabilities to take advantage of policy measures such as consortium bidding, contracts finder and subcontracting, when bidding for public contracts. Therefore, recommendations were made to tackle these issues (see sections 8.1.5 – 8.1.8). The findings of the quantitative survey in Chapter 7 supplement the findings of the qualitative survey in Chapter 6 and, together with the insights offered by literature review provided a comprehensive understanding of the crucial factors that should be considered in the development of a framework to improve SME participation in public procurement.

Objective 5: *To undertake a literature review on the roles of firm's resources and capabilities in improving SME participation in public procurement.*

The fifth objective was achieved by reviewing the relevant literature relating to the resources and capabilities that can be exploited by the firm to gain competitive

advantage in the market place. These include a discussion in Chapter 2 (Sections 2.6.6 – 2.7) on the relevance of firm's resource base, dynamic capabilities, market orientation and entrepreneurial orientation in determining SME's activity and performance in public tendering. The resultant findings provide a better understanding of the internal factors that could influence the likelihood of SME participation in public procurement markets, which are rarely considered in studies that deal with the emergent SME-public procurement nexus.

Furthermore, the need for SMEs to develop relational capability for effective collaboration in consortium bidding and subcontracting purposes were acknowledged. Similarly, this research argues that SMEs who possess higher levels of dynamic and relational capabilities might possibly link up with the public sector to find useful information for improving participation in public procurement. Therefore, the literature review in Sections 2.6.6 – 2.7, offered some insight into some internal firm factors which can complement government's policies towards improving SMEs. It suggests that any debate on SME performance in public procurement market will be deficient without consideration given to the internal resources and capabilities, which can deliver comparative advantage to a firm. Therefore, a key consideration when developing the proposed framework (in figure 8.2) was approaches that can help SMEs themselves implement actions to increase participation in public procurement.

Objective 6: *To develop and validate a framework that can provide guidance for government, policy makers and public organisations to identify the areas for improvement in their approach to increasing SME participation in public procurement.*

The sixth objective was achieved by proposing a framework that has four key pathways, each with its own approaches to help improve SME participation in public procurement. The development of the framework is discussed and presented in Sections 8.2 but the Chapters 2, 3, 6 and 7 contribute towards it as well. As discussed in Chapter 4, the framework was developed using the principles of Constructive Research Approach (Pasian, 2015); which were implemented in the following chapters sequentially; Chapter 1 set the scene for the study by presenting the research rationale and problem, while the literature review in Chapter 2 together with Chapters 3, 4 and 5 offers a comprehensive understanding of the phenomenon being

investigated, justified the theory behind the research and informed the questionnaires used for data collection.

The key findings obtained from Chapter 6 and 7 suggested issues or concerns which need to be addressed in order to improve SME participation in public procurement. Several recommended approaches to address these issues were presented and discussed in Chapter 8, culminating into the framework developed and presented in figure 8.1. Then, a preliminary pilot of the proposed framework was conducted by a focus group that validated its feasibility. The framework was revised, improved and presented in figure 8.2. This offers a range of possible avenues which can be considered in addressing the underrepresentation of SMEs in public procurement.

9.4. Research contributions and implications

This section presents the potential contributions of this research to body of knowledge, methodology and practice.

9.4.1. Contributions to the body of knowledge

- i. It was observed from the literature review that no previous research had put forwards a framework or guide to address the underrepresentation of SMEs in public procurement in the UK. Therefore, this research is considered one of the pioneer studies to explore and develop new knowledge in the area, as it has proposed a framework with different pathways and approaches, which the UK government, public procurement experts and policy makers might consider when addressing the underrepresentation of SMEs in public procurement.
- ii. Essentially, **the central contribution of this research is the development of a novel framework to help improve SME participation effectively in public procurement.** The framework is developed based on empirical data and lessons drawn from the literature to provide abroad view of the approaches that can help improve SME participation in public procurement in the UK.
- iii. Furthermore, the research, through the proposed framework, has made a unique contribution to the use of public procurement as a policy tool to develop the small business sector, as it has argued for collective action from diverse stakeholders to promote SME participation in public procurement in the UK,

which has been rarely acknowledged in previous researches. Particularly, in the framework development, the research has proposed that responsibility to increase engagement with SMEs in procurement should not just be the obligation of public sector organisations, but large firms can be made accountable for promoting the participation of small businesses in this regard.

- iv.** This study also contributes to the emerging literature on the nexus between SMEs and public procurement by providing insights into the level of awareness and attitudes of SMEs towards key policy measures adopted by the government to open up public procurement markets to small businesses in UK. There is a dearth of scholarly articles analysing SME-friendly procurement policies from the perspectives of small businesses in the UK. Similarly, this research has contributed to knowledge by presenting evidence on how the heterogeneity in SMEs with regard to firm size, firm age (years of trading) and level of experience in tendering for public contracts, reflect in the level of awareness and attitude about the policy measures implemented in the public sector. The few relevant studies (e.g. Loader, 2013, 2015, 2017) conducted in the UK context seem to have analysed SMEs with little or no consideration for their heterogeneous nature.
- v.** Although some literatures (e.g. Kidalov and Snider, 2011; Reis and Cabral, 2015; Stake, 2014) have claimed that government policies and actions for promoting SME participation in public procurement are ineffective and their implementation is more "rhetoric" than reality (Flynn and Davis, 2015). However, many of these studies did not attempt to study and explain the reasons why this happens. This research contributes to knowledge in this aspect by providing evidence on some issues and concerns requiring attention for translating policy intentions regarding SME participation in public procurement, into expected outcomes.
- vi.** Likewise, the research contributes to existing literature as it offers recommendations to help bridge the gap between policy and practice by emphasising the need for increasing enforcement and effective implementation of these policies across the public sector. It also suggests approaches such as

capacity building for public buyers and the use of incentives to improve compliance with the policy measures aimed at promoting SME participation in public procurement. The key issues identified in this research as presented in Chapter 7, can provide further insight in determining the limitations or drawbacks of policy measures designed to stimulate SME participation in public procurement. Therefore, findings from this research can supplement previously accumulated knowledge on the factors that can support or impede effective implementation of SME-friendly policy.

- vii. Based on findings of a systematic literature review conducted by Flynn and Davis (2014), not much research in the field public procurement research has theoretical groundings. Their study reveals that research in this field is still lacking theoretical rigour: 71% of studies published in the field of public procurement are not theoretically grounded. This research contributes to theory in this area by combining the ideas from two theories, i.e. Institutional Theory and Resource Based View (RBV) to support the development of a framework a framework. As discussed in Chapter 4, these two theories are dissimilar but can play complementary role in understanding the factors that influence SME participation in public procurement. According to Flynn and Davis (2014), the combination of multiple theories in a single study like this research is rarely seen in existing literature that explores the link between SMEs and public procurement.

9.4.2. Implications for Policy and Practice

- i. This research has key implications for policy and practice by providing insight into SMEs' experiences (i.e. awareness, attitudes and concerns) of the government' policies and measures designed to promote participation in public procurement in the UK. It uncovers the potential drawbacks/limitations of SME-friendly procurement policies currently being implemented and suggests improvements in the areas that need further attention. These might offer some guidance to policy makers and procurement managers as regards where they need to focus on for making the implementation of existing SME-friendly procurement policies, more effective.

- ii. The proposed framework can be used as useful tool to identify ways for enhancing compliance with and wider implementation of SME-friendly policies to yield desired outcomes – in which different categories of SMEs (i.e. micro, small and medium-sized firms) can get equitable access to the public procurement markets. It also suggests that collective efforts and actions are required from different players or stakeholders in the public procurement community, such as the government, public buyers, SMEs support groups and large firms to improve SME participation rate in public procurement. The framework came at the right time; given that one of the topical and prominent issues in Global Agenda for Sustainable Development²² is how develop SME capabilities to access business opportunities in the public sector.
- iii. In addition, the proposed framework suggests anew alternate approach to increase SME participation in public procurement, such as the “SME-Led approach” which suggest the need for incentivising large firms to collaborate with SMEs when bidding for public contracts. This might offer a potential win-win solution to both SMEs and the large firms competing in the public procurement markets.
- iv. Although the framework was initially developed for consideration in the UK’s public procurement systems, it can be adapted for implementation in any jurisdiction (such as EU countries) where the public procurement principles is like or the same with the UK. Countries in EU can use the framework as a guide to identify novel approaches to improve the participation of SMEs in public procurement, which may complement their existing policies in this area. Similarly, since SMEs in both the developed and developing countries face comparable challenges in accessing public sector contracts (Akenroye and Aju, 2013b), the framework proposed in this study is potentially suitable for developing countries. This might guide decision makers in their public procurement systems to set a strategic action plan for engaging more with SMEs as suppliers.

²²United Nations; Sustainable Development Agenda.
<http://www.un.org/sustainabledevelopment/>

9.5. Limitations of the research

According to Yin (2003), all research studies have limitations, which could be placed upon the researcher. The present research is not an exception because it contains some limitations, which need to be addressed, as presented below:

- i. In the present study, survey was the main data collection method. This involves a questionnaire encompassing open-ended and close-ended questions. In the case of open-ended questions, participants could share opinion through written responses. Although, in few cases, the respondents provided vague comments to the open-ended questions, but the researcher has already addressed this issue by means of follow-up interviews with the relevant respondents asking them to clarify and confirm their initial comments. This enabled the researcher to obtain additional information as a complement to the qualitative data obtained from the open-ended questions. However, there is a need and opportunity for future investigations to use in-depth interviews or/and case study of SMEs to elaborate further on the nature of participation in public procurement.
- ii. The level of access to appropriate data was a key limitation because the research problem being investigated is about the larger population of small businesses in the UK. Yet, this limitation is being addressed as the researcher collected data from SMEs in a cross-sectional survey, which allowed for inference making about the sample population at one point in time, through extrapolation. Hence, the statistical test of validity that was presented 5.7.1.2, has shown that the study sample size is representative of the SME population, and that the findings from this research could be generalised. Nevertheless, to improve sample representativeness in future research to test the findings of this study in a longitudinal survey that comprises much large sample size.
- iii. Lastly, the researcher would like to emphasise how important it is for one person to collect data from various participations and analysed them within a specified period in which this PhD programme must be completed. Therefore, other individuals conducting this research in team might interpret the

participants' views differently and present the findings in a separate way as well. Yet, the researcher has tried to address this limitation by taking the necessary steps for ensuring validity and reliability of the findings (see further details in sections 4.9 - 4.9.2)

9.6. Recommendations for Further Research

The research and limitations (as presented in section 9.5) offer some future research considerations in the field of SME participation in public procurement. This section therefore presents the recommendation for further research studies, as indicated below:

- i.** The proposed framework has been validated preliminarily (as presented in section 8.3) to test its feasibility; but this is not sufficient. Further investigations should evaluate practical adoption of the approaches proposed within the framework. This can be done in the UK or in different contexts/countries to extend to examine the generalisability of the research findings and specifically the framework.
- ii.** Additional research should be conducted to further confirm, improve or negate the findings in this study, to enhance generalisation of the results in different public-sector entities in the UK, and elsewhere in other jurisdictions that adopt the EU public procurement rules. This can help determine whether the research findings would have similar or different implications in another type of public sector within the UK or different regions of the EU. The public-sector market place is not homogeneous; it consists of different institutions with different organisational cultures, objectives and modes of operation. It is worth bearing in mind that the idiosyncratic features of a public organisation would influence its procurement practices and consequently impact the reported experience of their SME suppliers.
- iii.** Similarly, a country's political, economic, social and legal institutional structures will either inhibit or facilitate SME participation in public procurement. This offers another opportunity to explore how the nature and culture of public sector organisations in different countries can influence SMEs participation in public

procurement. There are opportunities for future research to compare the approaches adopted to support SMEs in public procurement in developed and under developed countries, to capture the possibility for transferring best practices across countries and continents.

- iv. Considering the extensive debate on barriers facing SMEs in public procurement markets, much of the studies featured in the literature seem to focus on government policies and interventions being implemented to address these barriers. Only a few studies (e.g Tammi, Saastamoinen and Reijonen, 2014; Reijonen, Tammi and Saastamoinen, 2016) have examined the relationship between firm's internal capabilities, strategic orientations and the participation of SME in public procurement. Therefore, future research can examine how the different concepts mentioned above interact with each other to collectively affect the performance of SMEs when competing for public sector contracts.
- v. While there is a rapidly growing body of literature discussing "demand side" approaches to enhancing SME participation in public procurement, through policy interventions of governments (Flynn, McDevitt and Davis, 2013, 2014, 2015, 2016; Loader, 2018), such as the policies included in the present study, yet there is limited research investigating the possible interactions between the resources and capabilities possessed by firms and the different types of SME-friendly policy of the government. This area has not been well understood and much work is needed in this area.
- vi. In terms of methodology, there is paucity in qualitative research in this subject area; however, a considerable amount of qualitative research (e.g. Loader, 2013, 2015, and 2017) has used meta-analysis and semi-structured interviews to examine barriers facing SMEs in public procurement. There is a potential for adopting other types of qualitative methods like phenomenography to examine the diverse ways in which SMEs consider government policy measures as vital sources of competitive advantage when bidding for public sector contracts, as against hinge on their capabilities and internal resources, capabilities. Lamb, Sandberg, and Liesch (2011) provide guidance on use of phenomenography to

examine the internationalisation practices of SME owner-managers in Australia. Adopting this methodology might offer new findings to complement the existing quantitative evidence that other researchers (e.g. Reijonen, Tammi and Saastamoinen, 2016; Tammi, Saastamoinen and Reijonen, 2014), have provided about SME activity in public sector tendering, using statistical models and multivariate analysis.

9.7. Conclusion of research

Presently, the proportion of public procurement spending that reaches SMEs is below the Government's mandate²³. The latest data from a longitudinal survey, conducted by Federation of Small Businesses (FSB) shows that only 23% of SMEs had worked for the public sector in the UK, over the last year (FSB, 2017). From the same report, it was estimated that the number of SMEs that expressed an interest in bidding for a public contract in the latest 12-month period, had fallen by 10%. Similar, the findings from this study show that 54.7% of SME did not win public sector contract over a period of 12 months, and 27.1% of SMEs had never competed for public contracts within a twelve months period, whilst 41.2% have participated no more than 5 times/year.

Considering the foregoing, it can be deduced that SME participation in public procurement is far from improving, despite the UK government policy actions to increase the extent of doing with small business. Thus, the above finding reinforces the aim of the present research, which is to develop a framework for improving SME participation in public procurement.

It emerged from the research findings (as evident in Chapters 6 and 7) that SMEs are aware of the key policy measure and optimistic (fairly) about the opportunities that they present with regards to participation in public procurement. Yet, SME participation is low. Given the above finding, it can be argued that key policy measures being implemented by UK public organisations are seen good in principle, but results (in Chapter 7) further show that certain issues are associated with these policies that must

²³SMEs in UK receive a comparatively little share (27%) of government procurement spending, while government has set a target of increasing procurement spend with SMEs to 33% by 2020.

be addressed. First, the SME-friendly procurement policies on their own cannot yield expected results unless there are strategies in place to ensure effective regulatory compliance and enforcement.

Again, the existing policy measures neither offer lasting solution for the experiential barriers that young SMEs might face in the public procurement market (see section 7.2.3 for further detail), nor reduce the degree of competition between small and larger firms in the public procurement marketplaces. This is important since SMEs are possibly unlikely to effectively compete with larger firms on the same terms due to their size and resource limitations (e.g. Rostek, 2015). In addition, SMEs need to develop the capabilities necessary (see sections 8.1.5.1 and 8.2.1.2 for further detail) to take full advantage of the existing policy measures to enhance participation in public procurement. Ultimately, current UK policy measures are deficient if no adequate progress has been made towards increasing the rate at which SMEs can bid or participate in a public tendering process.

Therefore, this thesis has suggested some approaches in Chapter 8 to address the above-mentioned issues, and as a result a framework is proposed (in figure 8.2) to improve participation of SMEs in public procurement. The framework offers four (4) different but interrelated pathways (see tables 8.1 – 8.4) through which SME participation in public procurement can be improved. Although the framework development followed the constructive research approach principles (see Chapter 3 for further detail), researcher identified two theories namely Institutional Theory and Resource Base View, which offer the theoretical rational to suggest approaches on how SMEs participation in public procurement can be enhanced, through the framework. Institutional Theory was adopted as a conceptual basis to analyse the UK government's key policies to promote SME participation in public procurement.

The Resource Based View, on the other hand, was used as a guiding framework for the literature review (in sections 2.6.6 – 2.7) to identify relevant resources and capabilities available within a firm, which might help SMEs to improve participation in public tendering. It is important to state that these two theories present divergent perspectives relating to SMEs participation in public procurement, as had been applied in the previous studies (e.g. Flynn and Davis, 2014; Loader, 2018). On the contrary,

however, this thesis argues that the Institutional Theory and Resource Base View provide complementary perspectives on how to understand SMEs participation in public procurement. Therefore, the ideas in the framework were proposed by drawing on key lessons from these theories (see sections 8.2.1.1 and 8.2.1.4 for further detail).

Furthermore, SMEs are known for their innovativeness, operational flexibility and responsiveness (Georghiou et al., 2014). The public sector can benefit from these by increasing the rate at which it procures goods and services from small businesses. In addition, SMEs participation in public procurement brings more competition for contracts, resulting to greater value for money and cost savings opportunities for public sector organisations.

9.8. Chapter summary

This chapter has provided a summary of the thesis, the achievement of its objectives, contributions to knowledge, limitations and directions for future investigation. The aim of this research has been addressed through the development a framework that contains four pathways which can help improve SME participation in public procurement. In addition, the research implications for policy and practice, particularly concerning how public procurement can be used as a tool to support the development of SMEs.

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LIST OF APPENDIXES

Appendix 1 (consent letter to access NHS supplier database)

St Helens and Knowsley Teaching Hospitals 
NHS Trust

St. Helens and Knowsley Teaching Hospitals NHS Trust,
Whiston Hospital,
Level 1 Nightingale House,
Warrington Rd.
Prescot,
Merseyside
L35 5DR

Temidayo Akenroye
Postgraduate Research Student
College of Business and Law
University of Salford,
UK

1st June 2016

RE: A Research on SMEs participation in Procurement in NHS Trusts

Dear Temi,

Thank you for the request to be involved in your work 'to examine SMEs perceptions on the measures implemented to increase their participation in public procurement in the UK'

We would be happy to share our list of our suppliers, although we cannot identify SMEs directly from this list. We would also be happy to allow you to speak to these suppliers.

All data collected must be confidential to this Trust or anonymised to prevent identification.

We would also welcome being able to view any findings you may come across.

Good luck with the project.

Yours Faithfully,



Chris McNamara
Deputy Head of Procurement
St. Helens and Knowsley Teaching Hospitals NHS Trust,

Appendix 2: First draft of the questionnaire

LETTER TO PARTICIPATE IN PRE-TESTING OF SURVEY

Research Topic: *An Investigation into the Key Measures for Supporting the Participation of Small and Medium Enterprises (SMEs) In Public Procurement*

Researcher: Temidayo Akenroye

Dear Sir/Ma

I am conducting a study a research to towards completion of Doctorate Degree (i.e. PhD) in the University of Salford.

I am conducting a research to examine the current policy measures being implement to support Small and Medium Enterprises (SMEs) in public procurement in the UK, with the aim of developing a framework to improve their participation.

I am inviting you to participate in the PRE-TESTING of the survey instrument. For this purpose, I would appreciate if you can complete the whole survey instrument and take note of the following:

- 1. The time it takes to complete the questionnaire*
- 2. And record the time you spent*
- 3. Identify any difficulties you have encountered in answering the questions*
- 4. Any observation on whether the questions are understandable or grammatically correct.*
- 5. Any observation on format?*
- 6. Take some time to reflect on your experience of the survey instrument itself and identify suggestions for further improvements. The following aspects could be included in your comments: inappropriateness of items, lack of clarity, vagueness in language etc. (you can asterisk any of this comments in the right hand margin of the questions/items)*

I really appreciate your time and interest towards this exercise, I am keen to seeing your feedback and response soon. I intend to consider your suggested changes/improvements in the revised version of the survey instrument.

Please do not hesitate to contact me if you need further clarification

Please return the completed questionnaire with your comments by email to:
t.o.akenroye@edu.salford.ac.uk

Regards

Temi Akenroye (07961261926)

QUESTIONNAIRE (INITIAL DRAFT)

Instruction:

Please read each item carefully, and then tick the answer that best represents your opinion.

SECTION A: RESPONDENT'S PROFILE

1. Which of the following best describes your position within your company?

Company Owner Director Manager Officer Others (please specify)

2. Which of the following best describes the role you play when your company is competing for contracts in the NHS?

- I am involved in the search for contract opportunities
 I am involved in preparing bid responses
 I am involved in post tendering activities (i.e. negotiation, contract implementation)
 I have never been involved
 Others (please specify)

3. How many years of experience do you have with playing the role identified in (3) above?

Less than 1 1-4 5 – 9 10 -14 15 & above

4. Which one of the following best describes your education level?

University Degree Diploma Professional Qualifications GCSE or A-Level
 Others (please specify)

SECTION B: ORGANISATIONAL PROFILE AND TENDERING EXPERIENCE

Please tick the answer that represents the appropriate responses regarding your company.

5. How old is your company (in years)?

Less than 1 1–5 6–10 11–20 21+

6. How many employees does your company currently have?

Micro (1–9) Small (10–49) Medium (50–249) Large (over 250)

7. Approximately what percentage of your company's total annual revenue is attributable to income from public sector contract?

0% (none), Up to 20%, 21% to 39%, 40% to 59%, 60% or more ,
 Don't know

8. How often does your company seek tender requests in the NHS?'

Never Daily Weekly Monthly Yearly

9. How many times did your company actually submit bids for NHS tenders in the last 12 months?

- Not at all, Less than 5 times, 5 to 10 times, 11 to 20 times, 21 to 30 times,
 More than 30 times

10. Which of the following best describes your company’s experience in bidding from contracts in the NHS?

- Never, 6 – 9 years, 10 – 14 years, 15 – 19 years, 20 and above years

11. What is the average value of NHS contracts sought by your company in the last 12 months?

- £1 – £25,000, £25,001 – £50,000, £50,001– £100,000, Over £100,001

SECTION C: POLICY MEASURES FOR IMPROVING SME PARTICIPATION IN PUBLIC PROCUREMENT

A. POLICY MEASURE 1: *ELIMINATION OF PQQ FOR SMALL CONTRACTS*

DESCRIPTION: The UK government requires public organisations (e.g. NHS Trusts) to make some changes to the documents accompanying their tenders e.g.:

- To remove Pre-Qualification Questionnaires (PQQ) stage for public contracts below £106,047
- To adopt a standard PQQ form for public contracts above £106,047 (OJEU)

(1) Are you aware of the “*elimination of PQQ for small contracts*”, described above?

Please choose only one of the following:

- Yes (if you answered “**Yes**”, go to question 2)
 No (if you answered “**No**”, go to B)

(2) To what extent do you agree or disagree with the following statements about the “*elimination of PQQ for small contracts*”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It makes the procurement process less time-consuming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps make the supplier eligibility criteria less difficult to meet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps make the specification /tender requirements less strict	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

It reduces the administrative burden placed on the bidders	<input type="checkbox"/>	<input type="checkbox"/>	3 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps ensure that selection criteria are proportionate to the contract sizes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5 <input type="checkbox"/>

(3) What are your concerns about this policy: “elimination of PQQ for small contracts”?

Please write your answer here:

B. POLICY MEASURE 2: THE PROMPT PAYMENT RULE

DESCRIPTION: *The UK Public Contracts Regulations requires public agencies/organisations to ensure that contractors and subcontractors should be paid within 30 days of an undisputed invoice, and that 80% of undisputed invoices are paid within 5 working days. The regulation enables contractors to claim statutory interest for late payments from public sector organisations.*

(4) Are you aware of the “Prompt Payment Rule”, as described above?

Please choose only one of the following:

Yes (if you answered “Yes”, go to question 5)

No (if you answered “No”, go to C)

(5) To what extent do you agree or disagree with the following statements about the “Prompt Payment Rule”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It helps ensure that payments to contractors are not delayed unnecessarily.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It enhances prompt payments to sub-contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The statutory right to claim interest on late payment encourages small companies to do more business with the public sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps smaller contractors to control the cash flow for their businesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(6) In your opinion, has your company been receiving payments within 30 days of invoicing to the NHS, in the last 12 months?

Yes No

(7) What are your concerns about this policy: “Prompt Payment Rule”?

Please write your answer here:

C. POLICY MEASURE 3: CONSORTIUM BIDDING

The UK government has identified Consortium Bidding alternative route for SMEs to better participate in public procurement processes. Consortium Bidding allows collaboration between two or more organisations to bid for public sector contracts. As a group, the collaborating bidders should be able to prove that they fulfill the level of capacity required to tender for the public contract. In this case, it is not necessary that the collaborating bidders have any formal or joint venture arrangements to enable them bid jointly.

(8) Are you aware of “Consortium Bidding”, as described above?

Please choose only one of the following:

Yes (if you answered “Yes”, go to question 9)

No (if you answered “No”, go to D)

(9) To what extent do you agree or disagree with the following statements about “Consortium Bidding”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It encourages more than one SME to combine resources to bid for public contracts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It enhances SMEs’ ability to prepare high quality bids by combining capabilities with their peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It encourages SMEs to partner with large companies in bidding for complex tenders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It encourages SMEs to share specialist knowledge with their peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(10) In the last 12 months, did your company submit a consortium bid in response to a call for tenders published by the NHS?

Yes No

(11) What are your concerns about this policy: “Consortium Bidding”?

Please write your answer here:

D. POLICY MEASURE 4: THE CONTRACT FINDER

Contract finder is a central advertising web-portal for contract opportunities in the UK public sector, designed for public sector organisations to publish information/documents about existing contract opportunities, as well as contracts that have been awarded. On the contract finder, companies (big or small) who seek to do business with the public sector can register and search for information about contract opportunities free of charge.

(12) Are you aware of the “Contract Finder”, as described above?

Please choose only one of the following:

Yes (if you answered “Yes”, go to question 13)

No (if you answered “No”, go to E)

(13) To what extent do you agree or disagree with the following statements about the “Contract Finder”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It helps SMEs to keep an eye on forthcoming procurement opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It makes searching for information about new and existing opportunities, less wearisome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It makes searching for information about new and existing opportunities, less time consuming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It increases transparency of sub-contracting opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By making the tender documents available online for download, the procurement process is simplified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(14) How often do you use “contract finder”?

Never Daily Weekly Monthly Yearly

(15) What are your concerns about this policy measure: “Contract Finder”?

Please write your answer here:

E. POLICY MEASURE 5:DIVISION OF CONTRACT INTO LOTS

This is a UK government policy that requires all public organisations to consider the sub-division of larger contracts into smaller lots to improve SMEs participation in the procurement process. It is believed that a large contract size often creates difficulties for SMEs when competing with larger companies, because small suppliers may not have the resources and competence to meet the contract requirements.

Please choose only one of the following:

Yes (if you answered “Yes”, go to question 17)

No (if you answered “No”, go to F)

(17) To what extent do you agree or disagree with the following statements about “Division of Contract into Lots”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It enables SMEs to compete on the same level with larger companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More accessible smaller size contracts would be available for SMEs, to enable them participate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It encourages SMEs to bid for various contracts within a single procurement exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It enables SMEs to choose the type of contract opportunities that are relevant to their competencies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(18)What are your concerns about this policy: “Division of Contract into Lots”?

Please write your answer here:

F. POLICY MEASURE 6:SUB-CONTRACTING

Subcontracting is being considered as a way to encourage the involvement of SMEs in the public procurement. In the UK, the public procurement regulations have provisions on the use of sub-contractors to deliver some or all of the contract requirements. The government encourages public agencies and their prime contractors to enhance the visibility of relevant subcontracting opportunities for the benefit of SMEs.

(19)Are you aware of the “Sub-Contracting Opportunities”, as described above?

Please choose only one of the following:

- Yes (if you answered “Yes”, go to question 20)
 No (if you answered “No”, go to G)

(20) To what extent do you agree or disagree with the following statements about Sub-Contracting Opportunities”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It is a less difficult route for SMEs to participate in public procurement markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It offers the relevant experience that SMEs can use later to qualify for more contract opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps facilitate skill transfer from prime contractors to their sub-contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It enables SMEs to broaden the range of skills of offerings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(21) Has your company been engaged as a subcontractor to the NHS, in the last 12 months?

- Yes No

(22) What are your concerns about this policy: “Sub-Contracting Opportunities”?

Please write your answer here:

This is the end of the survey. Thank you very much for your time.



N.B

If you wish, we will send you the summary of the findings from this research. Please provide your email address here:

Appendix 3 (Final version of the questionnaire)

The Questionnaire

**DEVELOPMENT OF A FRAMEWORK FOR SME PARTICIPATION IN PUBLIC
PROCUREMENT, IN THE UK**

Dear Respondents,

I am conducting a research project towards completion of Doctorate Degree (i.e. PhD) in the University of Salford. The aim of the research is to investigate key policy measures to support Small and Medium Enterprises (SMEs)²⁴ in public procurement process in the UK.

Specifically, the research will be seeking views of owners/employees of SMEs who compete for contract opportunities in NHS Trusts, in the North West of England. Therefore, you are invited to take part in this study because of your knowledge and experience with the procurement processes in the NHS Trusts. That is, you are familiar with the following activities: searching for contract opportunities OR bid preparation and submission OR execution of public contract.

Through your participation, I eventually hope to understand SMEs level of awareness about the key policy measures being implemented to improve their participation in public procurement, and evaluate the extent and how different types of SMEs have actually benefited from these policy measures.

I hope you will take a few minutes to complete this questionnaire. Your participation is important in the effort to help develop a framework to help SMEs maximise the potential benefits of the policy measures.

Please, note that participation in this research is voluntary, your responses will be treated in confidence and I promise not to disclose your personal details or the name of the company you work for.

Compensation:

By participating in this survey, you will have the chance to win (via a draw) draw to a £30 Amazon gift card

Sincerely,

Temidayo Akenroye

Temidayo Akenroye, PhD Researcher, Salford Business School, The Crescent, Salford, University of Salford, Salford M5 4NT, United Kingdom. Email: **t.o.akenroye@edu.salford.ac.uk**

²⁴ The UK government defines SMEs as enterprises which employ fewer than 250 employees and which have an annual turnover not exceeding £50 million

Instruction:

Please read each item carefully, and then tick the answer that best represents your opinion.

SECTION A: RESPONDENT'S PROFILE

12. Which of the following best describes your position within your company?

- Company Owner Director Manager Officer Others(please specify)

13. Which of the following best describes the role you play when your company is competing for contracts in the NHS?

- I am involved in the search for contract opportunities
 I am involved in preparing bid responses
 I am involved in post tendering activities (i.e. negotiation, contract implementation)
 I have never been involved
 Others (Please specify)

14. How many years of experience do you have with playing the role identified in (3) above?

- Less than 1 1-4 5 – 9 10 -14 15 & above

15. Which one of the following best describes your education level?

- University Degree Diploma Professional Qualifications GCSE or A-Level
 Others (Please specify)

16. Which of the sector(s) below best describes your company?

- Services Construction Manufacturing
 Others (Please specify)

SECTION B: ORGANISATIONAL PROFILE AND TENDERING EXPERIENCE

Please tick the answer that represents the appropriate responses regarding your company.

17. How long has your company been in business?

- Less than 1 1–5 6–10 11–20 21+

18. How many employees does your company currently have?

- Micro (1–9) Small (10–49) Medium (50–249) Large (over 250)

19. Roughly, what percentage of your company's total annual revenue is attributable to income from public sector contract?

0% (none), Up to 20%, 21% to 39%, 40% to 59%, 60% or more , Don't know

20. How often does your company seek public tender opportunities?

Never Daily Weekly Monthly Yearly Don't know

21. How many times did your company actually submit bids for public tenders in the last 12 months?

Not at all, Less than 5 times, 5 to 10 times, 11 to 20 times, 21 to 30 times,
More than 30 times

22. In the last 12 months, how many NHS bid/tender did you win?

None 1-5 6-10 11-20 21-30 Don't know

23. How many years of experience does your company has in bidding for public contracts?

Never, 6 – 9 years, 10 – 14 years, 15 – 19 years, 20 and above years

24. What is the average value of contracts sought by your company in the last 12 months?

£1 – £25,000, £25,001 – £50,000, £50,001– £100,000, Over £100,001

SECTION C: POLICY MEASURES FOR IMPROVING SME PARTICIPATION IN PUBLIC PROCUREMENT

G. POLICY MEASURE 1: *ELIMINATION OF PQQ FOR SMALLER CONTRACTS*

DESCRIPTION: *The UK government requires public organisations (e.g. NHS Trusts) to make some changes to the documents accompanying their tenders e.g.:*

- *To remove Pre-Qualification Questionnaires (PQQ) stage for public contracts below £106,047*
- *To adopt a standard PQQ form for public contracts above £106,047 (OJEU)*
- *To allow self-certification by bidders and only the winning bidder will need to provide*

(23)Are you aware of the “Elimination of PQQ for smaller contracts”, described above?

Please choose only one of the following:

Yes (if you answered “Yes”, go to question 2)

No (if you answered “No”, go to **POLICY MEASURE 2**)

(24)To what extent do you agree or disagree with the following statements about the “Changes to Public Tender Documents”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It makes the procurement process less time-consuming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps to make the supplier eligibility criteria less difficult to meet by allowing bidders to self-certify their ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It reduces the administrative burden placed on the bidders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps to ensure that selection criteria are proportionate to the contract sizes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(25)What are your concerns about the policy that requires the elimination of PQQ for smaller contracts and why?

Please write your answer here:

(26)What do you consider as key drawbacks of the policy that requires the elimination of PQQ for smaller contracts and why?

Please write your answer here:

H. POLICY MEASURE 2: THE PROMPT PAYMENT RULE

DESCRIPTION: *The UK Public Contracts Regulations requires public agencies/organisations to ensure that contractors and subcontractors should be paid within 30 days of an undisputed invoice, and that 80% of undisputed invoices are paid within 5 working days. The regulation enables contractors to claim statutory interest for late payments from public sector organisations.*

(27)Are you aware of the “Prompt Payment Rule”, as described above?

Please choose only one of the following:

Yes (if you answered “Yes”, go to question 6)

No (if you answered “No”, go to **POLICY MEASURE 3**)

(28) To what extent do you agree or disagree with the following statements about the “Prompt Payment Rule”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
<i>It helps ensure that payments to contractors are not delayed unnecessarily.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It inspires existing contractors to be on the lookout for new contract opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Firms that haven't been competing for public tenders may be motivated to do so	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps to improve the cash flow of contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps to keep subcontractors healthy					

(29) Has your company been receiving payments within 30 days of invoicing?

Yes No Not a current public sector supplier Don't know

(30) What are your concerns about “Prompt Payment Rule” and why?

Please write your answer here:

(31) What do you consider as key drawbacks of the “Prompt Payment Rule” and why?

Please write your answer here:

I. POLICY MEASURE 3: CONSORTIUM BIDDING

The UK government has identified Consortium Bidding alternative route for SMEs to better participate in public procurement processes. Consortium Bidding allows collaboration between two or more organisations to bid for public sector contracts. As a group, the collaborating bidders should be able to prove that they fulfil the level of capacity required to tender for the public contract. In this case, it is not necessary that the collaborating bidders have any formal or joint venture arrangements to enable them bid jointly.

(32)Are you aware of “Consortium Bidding”, as described above?

Please choose only one of the following:

Yes (if you answered “Yes”, go to question 11)

No (if you answered “No”, go to **POLICY MEASURE 4**)

(33)To what extent do you agree or disagree with the following statements about “Consortium Bidding”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It helps to improve the bidder’s technical capacity to meet the minimum requirements for the tender	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It enables the bidder to meet the geographic spread required for contract delivery performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It enables the bidder to prepare high quality bid/proposal by combining expertise with peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps the bidder to develop skill to tender independently for future contract opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(34)In the last 12 months, did your company submit a “consortium bid”?

Yes No

(35)What are your concerns about “Consortium Bidding and why?

Please write your answer here:

(36)What do you consider as key drawbacks of the ““Consortium Bidding” and why?

Please write your answer here:

J. POLICY MEASURE 4: THE CONTRACT FINDER

Contract finder is a central advertising web-portal for contract opportunities in the UK public sector, designed for public sector organisations to publish information/documents about existing contract opportunities, as well as contracts that have been awarded. On the contract finder, companies (big or small) who seek to do business with the public sector can register and search for information about contract opportunities free of charge.

(37) Are you aware of the “Contract Finder”, as described above?

Please choose only one of the following:

- Yes (if you answered “Yes”, go to question 16)
 No (if you answered “No”, go to **POLICY MEASURE 5**)

(38) To what extent do you agree or disagree with the following statements about the “Contract Finder”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It helps prospective bidders to keep an eye on forthcoming tender opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is less wearisome to search for information about existing tender opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It makes searching for contract information less time consuming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps to increase transparency of sub-contracting opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps to simplify the procurement process					

(39) Do you use “contract finder” to seek information about public tenders/contracts?

- Yes No

(40) What are your concerns about “Contracts Finder” and why?

Please write your answer here:

(41)What do you consider as key drawbacks of the “Contracts Finder” and why?

Please write your answer here:

K. POLICY MEASURE 5: DIVISION OF CONTRACT INTO LOTS

This is a UK government policy that requires all public organisations to consider the sub-division of larger contracts into smaller lots to improve SMEs participation in the procurement process. It is believed that a large contract size often creates difficulties for SMEs when competing with larger companies, because small suppliers may not have the resources and competence to meet the contract requirements.

(42)Are you aware of the “Division of Contract into Lots”, as described above?

Please choose only one of the following:

- Yes (if you answered “Yes”, go to question 21)
No (if you answered “No”, go to **POLICY MEASURE 6**)

(43) To what extent do you agree or disagree with the following statements about “Division of Contract into Lots”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It enables SMEs to compete on the same level with larger companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It enables SMEs to compete on the same level with larger companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It offers opportunities for SMEs to bid for more than one contracts within a single procurement exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It enables SMEs to bid for contract opportunities that are relevant to their competencies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smaller contract sizes would be opened up to SMEs					

(44) What are your concerns about “Division of Contract into Lots” and why?

Please write your answer here:

(45)What do you consider as key drawbacks of the “Division of Contract into Lots” and why?

Please write your answer here:

L. POLICY MEASURE 6: Sub-Contracting Opportunities

Subcontracting is being considered as a way to encourage the involvement of SMEs in the public procurement. In the UK, the public procurement regulations have provisions on the use of sub-contractors to deliver some or all of the contract requirements. The government encourages public agencies and their prime contractors to enhance the visibility of relevant subcontracting opportunities for the benefit of SMEs.

(46)the “Sub-Contracting Opportunities”, as described above?

Please choose only one of the following:

- Yes (if you answered “Yes”, go to question 25)
 No

(47)To what extent do you agree or disagree with the following statements about Sub-Contracting Opportunities”?

Please choose the appropriate response for each statement:

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
It offers opportunities for SMEs to get some relevant experience for future tender competition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It helps to facilitate skill transfer from large firms to SME sub-contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is a less difficult route for SMEs to participate in public procurement markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(48) What are your concerns about “Sub-Contracting” and why?

Please write your answer here:

(49)What do you consider as key drawbacks of “Sub-Contracting” and why?

This is the end of the survey. Thank you very much for your time.



N.B

If you wish, we will send you the summary of the findings from this research. Please provide your email address here: _____

Appendix 4 (Approval of your research ethics application)

University of
Salford
MANCHESTER

Research, Innovation and Academic
Engagement Ethical Approval Panel

Research Centres Support Team
G0.3 Joule House
University of Salford
M5 4WT

T +44(0)161 295 7012

www.salford.ac.uk/

20 July 2016

Dear Temidayo,

RE: ETHICS APPLICATION 16/17 - An Investigation of Key Policy Measures Adopted To Support Small and Medium Enterprises (SMEs) In Public Procurement in the United Kingdom

Based on the information that you provided, I am pleased to inform you that your application SBS 16/17 has been approved.

If there are any changes to the project or its methodology, please inform the Panel as soon as possible by contacting SBS-ResearchEthics@salford.ac.uk.

Yours sincerely,



Professor David F. Percy
Chair of the Staff and Postgraduate Research Ethics Panel
Salford Business School

Appendix 5: themes identified from qualitative data analysis

THEMES	POLICY MEASURES						SAMPLE DESCRIPTION OF THE THEMES
	<i>EP</i>	<i>PP</i>	<i>CB</i>	<i>CF</i>	<i>DL</i>	<i>SC</i>	
	(N = 39)	(N= 33)	(N = 40)	(N = 33)	(N = 36)	(N = 49)	
Inequality	11						<i>...the qualification requirements are skewed in favour large suppliers.</i>
Administrative negligence	10						<i>....tenders submitted by bidders are rarely fact checked.</i>
Poor implementation	18						<i>....loads of documents are still requested from bidders during the procurement process</i>
Regulatory compliance (public buyers)		13					<i>....public-sector bodies completely ignore the prompt payment rule and still delay payments to suppliers</i>
Regulatory compliance (prime contractors)		9					<i>....most prime contractors don't pay their subcontractors on time in accordance to the prompt payment rule</i>
Ineffective		11					<i>....the 30days payment policy is a common/standard practice in the private sector, and therefore, there is nothing special about it</i>
Networking			14				<i>....finding the right collaborating partner can be difficult</i>
Incomprehension			10				<i>....SMEs don't have good understanding of how consortium bidding operates</i>
Experiential barrier			12				<i>....bidders are still required to provide experience of success in delivering public contract</i>
Negative attitudes			4				<i>.....are not too keen on the idea of sourcing from small businesses..."</i>
Poor implementation				11			<i>.....there are insufficient details available to enable us decide whether to bid for the contract or not".</i>
Usability				15			<i>....the search and auto-email functionality has so far failed to work correctly, meaning that suppliers have to search manually through the site and have missed a number of opportunities</i>

Functionality				6			<i>.....the lack of networking features to enable online communication and collaboration amongst users</i>
Ineffective					11		<i>.... not creating a level playing field because the chips are stacked in larger companies favour in terms of technical assessment</i>
Uncertainty					13		<i>....it does not guarantee that SMEs would win more tenders</i>
Poor implementation					6		<i>.... responding to a tender with lots is difficult and slow because, in many cases, the public buyers did not slit the contract into lots appropriately</i>
Disincentive					6		<i>.... lack of enthusiasm amongst public buyers to split contract into lots</i>
Unfair treatment						15	<i>..... large (prime) contractors, who have more power to dictate the terms of relationship, treat the subcontractors unfairly</i>
Profit squeeze						7	<i>.... subcontractors might need to reduce their profit margin to enable the prime contractors to remain competitive</i>
Favouritism						10	<i>... lack of transparency in the subcontractor selection process</i>
Inaccessibility						7	<i>... SMEs often do not know where subcontracting opportunities are advertised</i>
Innovation Barrier						4	<i>.... it is difficult for sub-contractors to communicate with or introduce novel ideas to buyers in public organisations</i>
Intellectual property risk						6	<i>.....subcontractors with specialist niche solutions can easily be exploited by the prime contractor</i>

N.B:

N = Total number of respondents that provided comments to open-ended questions

KEYS:

Elimination of PQQ – **EP**; Prompt payment- **PP**; Consortium bidding - **CB**; Contracts finder – **CF**; Division of contract into lots – **DL**

Sub-contracting – **SC**

RESPONSES TO OPEN-ENDED SURVEY QUESTIONS (SAMPLE)

Respondents (examples)	<u>QUESTION 3:</u> What are your concerns about “Elimination of PQQ” and Why:	<u>QUESTION 4:</u> What do you consider as key draw backs of “Elimination of PQQ” and Why?
	SAMPLE RESPONSES:	SAMPLE RESPONSES:
SME respondent 1	<i>Since is less time consuming we can tender for more business but I have not seen any using these approaches yet</i>	<i>It has had no effect on our rate of participation, except that bids are slightly quicker to prepare. However, some documents are still requested with the single stage tender. Questions are more standardised and the electronic portal saves previous answers to the qualification questionnaire, which saves time.</i>
SME respondent 2	<i>We have a selection criterion based on services rather than the size of documentation therefor the key is working with the right trusts where we can add value. If a tender is solely focussed on price (fees) even if the document is small we wouldn't necessarily partake. Although, there is reduced administration and duplication of information but the system is still skewed to bigger suppliers.</i>	<i>The opacity of tender opportunities and onerous procurement processes have dissuaded us from tendering for U.K. Public sector work. Our participation remains the same - we continue to apply for any opportunities that are relevant to the services we provide regardless of the removal of PQQ</i>
SME respondent 3	<i>Of course, the changes have made it easier to bid, many NHS organisations still require PQQs (earlier this year), therefore making it harder for people to show</i>	<i>It has very slightly reduced the level of bureaucracy and time required - but not much. Companies still must fill in an SQ each time they bid for public contracts. They should only have</i>

	<i>quality and less likely for high quality providers to be selected.</i>	<i>to fill this in once and it should be available to all public-sector organisations.</i>
SME respondent 4	<i>The main impact of the changes is to encourage "body shopping" companies to collect freelancers and ship them out on contracts. They employ a good tender writer and there is no risk because there is no fact checking takes place on tender responses. Evidence of quality is no longer important as quality cannot be proven in the new tendering process.</i>	<i>It should make the process marginally quicker, but too early to say. The main issue is government's framework contracts. My experience dictates that's unless you are on these frameworks, you can't tender for significant NHS contracts. Again, we must tender for the work anyway as we are forced to go for low value low margin work. This gets us boxed in away from the big players.</i>

Respondents (examples)	QUESTION 8:	QUESTION 9:
	<i>What are your concerns about “Prompt Payment Rule” and Why:</i>	<i>What do you consider as key draw backs of “Prompt Payment Rule” and Why?</i>
	SAMPLE RESPONSES:	SAMPLE RESPONSES:
SME respondent 5	<i>Our participation remains the same - we continue to apply for any opportunities that are relevant to the services we provide regardless of this rule.</i>	<i>30 days is seen as minimum industry standard and not exemplar and thus by itself will not necessarily attract more interest to bid</i>
SME respondent 6	<i>It doesn't work we wait for payment for more than 6 months and always wait 3 months. But it would have given us confidence to look for more contracts in this area</i>	<i>The rule makes no difference. We see NHS trusts consistently miss payment dates. We do not specifically look for Public Sector opportunities because the response usually takes a lot of resource and SME's rarely win much business in this area</i>
SME respondent 7	<i>We are always advised to target public sector tender opportunities as a priority due to the security surrounding invoices being paid on time. Cash flow is crucial to the success of any business and therefore we are pro-active regarding tenders. However, we have had some Trusts take over 90 days to pay us. CCGs pay within 60 days in most cases. Very few pay within 30 days.</i>	<i>Not one iota. Most government departments we deal with pay within 30 days anyway, and when they subcontract to a private sector service provider they are utterly appalling, some take 90 days - look at Amey's track record of CCJs etc. Currently unless we put the Gvt dept on stop we don't get paid, so there IS no change, and no change to our participation etc.</i>
SME respondent 8	<i>Our experience of Government Bodies (for which we do most of our work) is that their very poor administration stops them paying invoices but the invoices are not seen as outside the 30 day window as they only start counting once they are ready to pay.</i>	<i>Prompt payment is small factor, relationships are important and that results in good work and prompt payment. It hasn't directly influenced us, however we have begun to see some public organisations acting directly against this, due to their financial situations.</i>

Respondents (examples)	<u>QUESTION 13:</u> <i>What are your concerns about “Consortium Bidding” and Why:</i>	<u>QUESTION 14:</u> <i>What do you consider as key draw backs of “Consortium Bidding” and Why?</i>
	SAMPLE RESPONSES:	SAMPLE RESPONSES:
SME respondent 9	<i>We have not had any experience in consortium bidding and to be honest although it sounds plausible, we often hear that it is not always an effective solution due to the limited control over other companies that take part.</i>	<i>The primary issue is that once a contractor is in, it is almost impossible to win contracts without direct case studies in the NHS for instance. The public needs to open up to new thinking by genuinely considering new suppliers rather than the current rigged tenders.</i>
SME respondent 10	<i>We do not participate in consortium bidding as we generally feel that this is not the best way to win business and maintain/develop an on going b2b relationship. But this may open doors for new suppliers to bid for national contracts that we would not be able to bid for otherwise</i>	<i>For one public sector bid we did offer to share the work with a much larger organisation. However they refused to share so we bid alone and then won the work. I think consortium bids only really work if each partner has a gap in their capabilities that the other one fills making the partnership mutually dependant. If you are just sharing the same practice I am not sure of the benefits to any of the stakeholders. We are unlikely to ever lead a consortium bid.</i>
SME respondent 11	<i>My company would never consider consortium bidding. I don't understand how the NHS or government expects SME consortium's to come about and I don't understand it's relevance to distributors of medical devices?</i>	<i>it is necessary to be a large company to afford to bid for NHS contracts. We are therefore the smaller subcontractor. Large companies rarely if ever use smaller subcontractors like us. Therefore, to us, consortium bidding is simply another way of excluding us from NHS contracts.</i>
SME respondent 12	<i>Define 'consortium'? It complicates the procurement process beyond belief, makes it harder to bid not easier, harder to work together</i>	<i>Consortium bidding is fine in theory but in practice, not bidding contractors will work collaborative with their competitors to win a bid. Finding like minded consortium</i>

	<i>(eg Buyer will only communicate with and invoice etc the lead member anyway) Such a nightmare we ignore it.</i>	<i>members would prove challenging, and am not really sure how to go about becoming involved, it is too much hassle having to work with other bidders and buyers appear to be sceptical about consortium bidding and regard it as an increased risk.</i>
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Respondents (examples)	QUESTION 18: <i>What are your concerns about the “Contracts Finder” and Why:</i>	QUESTION 19: <i>What do you consider as key draw backs of the “Contracts Finder” and Why:?</i>
	SAMPLE RESPONSES:	SAMPLE RESPONSES:
SME respondent 13	<i>I do not personally use contract finder in my current role but we use other methods. Again, It is not the primary e-tendering portal for the type of service we offer. Therefore it merely means I have to check more portals to identify all potential contract opportunities.</i>	<i>I have been using a Contract Finder but have recently opted out of the service because 1. There are too many opportunities advertises that have to be filtered, 2. A subscription is usually required to gain extra info about opportunities, 3, There's little point in doing it when there are so few wins</i>
SME respondent 14	<i>It is a good tool for identifying opportunities but has not really influenced our participation in procurement processes as we rely on registration with several procurement portals so it is just an additional search tool.</i>	<i>Although it allows you to see what has been made available, it is not updated as quickly as other portals that suppliers have to pay to be subscribed to. Therefore due dates can be squeezed due to the delay in the adverts appearing</i>
SME respondent 15	<i>Not used it yet, as there are so many different contract finder sites, no small business really knows which are</i>	<i>In theory it is great, however the search and auto-email functionality has so far failed to work correctly,</i>

	<i>legitimate or not? The alerts from Contract Finder are not always easy to understand and result in opportunities being missed. We rely on a third party website called 'Tenders Direct' that filter every tender opportunity across the UK for us.</i>	<i>meaning that we have to search manually through the site and have missed a number of opportunities. So I tend to use bid tracking subscription service to track public sector bids, as contract finder does not capture everything</i>
SME respondent 16	<i>We are still missing some tenders because public sector bodies are not using appropriate channels, particularly tenders that call for specialist skills but go out through restricted frameworks</i>	<i>I do not believe that it provides any obvious means for SMEs to band together in making bids. but if you mean 'tender trackers' et al, then we use them all the time. Several of them. So this is what I envisaged while making the responses above. These alternatives make finding suitable contacts easier</i>

Respondents (examples)	QUESTION 22:	QUESTION 23:
	<i>What are your concerns about “Division of Contracts into Lots” and Why?</i>	<i>What do you consider as key draw backs of “Division of Contracts into Lots” and Why?</i>
	SAMPLE RESPONSES:	SAMPLE RESPONSES:
SME respondent 17	<i>It is useful for certain services e.g. training and education, where we can bid for only the services we offer. For some contracts, however, the lots seem to be arbitrary and separations of some topics from others does not make sense. Often the qualification questionnaire is not separated, which results in having to complete the qualification questionnaire for each lot along with the technical/quality and commercial questionnaires. Procurement officers should understand this better and have qualification questionnaires for all lots, with links to the technical and commercial envelopes for each lot.</i>	<i>Division into lots is sometimes difficult - it's hard to be clear exactly which work should go where. When used for procurement frameworks, it can result in more work, and in loss of opportunities - for example if I am on one lot, but work is released on another lot.</i>
SME respondent 18	<i>Never seen this applied in the NHS.. too many still use portmanteau tenders which demand consortia or exclude SMEs. All tenders should be divided into smaller lots for this exact reason. We have had to turn away countless opportunities because they were not divided up into lots. Even though we could facilitate 90% of the tender/ lot requirement we had to withdraw interest because of the other 10% that we could not carry out.</i>	<i>In practice dividing into lots seems to make very little difference to a buyer's likelihood of using an SME. Therefore it has not influenced our participation in procurement processes. For instance, I still wouldn't say it is a level playing field as the chips are stacked in larger companies favour in terms of pre-qualification or technical assessment.</i>

<p>SME respondent 19</p>	<p><i>They don't do it, so it doesn't. Bundling unconnected items into one lot is still rampant, is one of the biggest things to hamper SMEs and favour large corporations.. take for example waste bags... Woven multi-use bags, specialist compostable bags, and general polythene bags are bundled into one. Completely disparate products! BTW your fourth question was obvious, and was a statement anyway. This doesn't feel like post-grad data to be honest?</i></p>	<p><i>Dividing contracts into smaller lots may make it easier to bid, but it does not make it any easier to win as buyers usually choose bigger firms because it is easier and safer to buy from one firm even if SME quality is better. We have already bid for lots in this type of contracts. However in most cases the tender is given to a single large supplier and teh lot structure is ignored.</i></p>
<p>SME respondent 20</p>	<p><i>Allowed greater participation in tenders as able to bid for lots which we can deliver and not bid for ones which we cannot - if there were no lots we would not be able to bid. We can resource them and our specialist skills are more persuasive in a focused tender. But its frustrating as still have to spend a large amount of time preparing PPQ's as a large organisation when a micro sized company we can't always afford the time. So, It makes the process more onerous and means that we would have to bid more often.</i></p>	<p><i>I think a change in attitude from procurers needs to take place because they fear having to manage multiple suppliers which makes their job more difficult so in my experience they have not been eager to work with SME's</i></p>

Respondents (examples)	QUESTION 26:	QUESTION 27:
	<i>What are your concerns about “Sub-Contracting Opportunities” and Why?</i>	<i>What do you consider as key draw backs of “Sub-Contracting Opportunities” and Why?</i>
	SAMPLE RESPONSES:	SAMPLE RESPONSES:
SME respondent 21	<i>We do not sub-contract any asbestos removal activities and only engage sub-contractors to provide specialist services that we do not offer, such as, asbestos trained/licenced scaffolders, electricians, plumbers. The difficulty with sub-contracting is that the Prime Contractor has the relationship and the sub-contractor is just commanded to do things. They cannot offer innovations because they do not have a close understanding of the customer.</i>	<i>It doesn't add value to you service only cost to the public sectors .we try to keep cost down the main contractor typically puts a margin on our services by 25%to 50% so we end up lost the job. Whilst this has provided us with some work as a subcontractor it can also mean we take on the delivery at a much reduced margin as the major bid winner takes the lion's share. Often we find the major firms are more experienced in bid submission and their scale assists their success rate but in reality they are totally unable to deliver without then turning to firms such as ours.</i>
SME respondent 22	<i>Sub-contracting creates or encourages a very distant relationship with the public-sector contract management team and sub-contractors find it difficult to be heard - the lead contractor is given priority access to the purchasing team, sometimes to the detriment of sub-contractors</i>	<i>The prime contractors only pay lip service to the needs of the local SME supply chain. There needs to be stronger clauses invoked by the public sector to ensure that indirect supply chain opportunities are transparent and available</i>
SME respondent 23	<i>Subcontracting over-complicates the process, gives buyers a lack of confidence, and helps large firms steal niche products and experience from SMEs. Your skill transfer question is about-face. Also, for an SME, this is a necessary evil to gain access to larger</i>	<i>The whole government procurement approach is rigged against the SME. Not surprising as the ones advising government are major firms. Subcontracting only</i>

	<i>projects, for example through Consultancy One. However many buyers regard subcontracting as an increased risk and mark it down.</i>	<i>allows major firms to plagiarise SMEs intellectual property and then rule them out of the competition.</i>
SME respondent 24	<i>No one has ever approached us to carry out work for a public tender as a sub contractor. There are some large private organisations that offer a total management solution within certain trusts. These organisations allegedly sub contract the work out but it is very difficult to get hold of the correct person and to become part of their approved suppliers list. This is because they do not have to conform to the public sector rules. These large private companies should not be allowed to offer total management contracts as they are milking the government dry and only seem to sub contract to the large blue chip enterprises which is unfair on SMEs.</i>	<i>No it is an absolute disgrace. An insult to expert SMEs and a complete rip off to the tax payer. It is also a manipulation of the figures of work going to SMEs. If there is one thing I vehemently disagree with it is having to go through big firms. We left the big firms because of their nastiness unscrupulous and greed. Hence, subcontracting means that we are bound by pricing and terms of the prime contractor, and cannot have a close advisory relationship with the client.</i>

Appendix 6: Cross-tabulation and Chi-square tests results

Table 6.2 Cross-tabulation

Policy measure 1: Elimination of PQQ for smaller contracts					Chi-Square Tests
SME groups	Awareness of policy measure	YES	NO	TOTAL	
	All SMEs	82 59.9%	55 40.1%	137 100%	$\chi^2= 1.685$ df= 2 p = .431
Size	Medium (50–249)	31 59.6%	16 40.4%	47 100%	
	Small (10–49)	13 51.5%	23 48.5%	57 100%	
	Micro (1–9)	17 66.7%	16 33.3%	33 100%	
Age	Less than 1 year	2 66.7%	1 33.3%	3 100%	$\chi^2= 5.170$ df= 4 p = .270
	1–5 years	6 35.3%	11 64.7%	17 100%	
	6–10 years	8 57.1%	6 42.9%	14 100%	
	11–20 years	29 63.0%	17 37.0%	46 100%	
	Over 20 years	37 64.9%	20 35.1%	57 100%	
Public tendering experience	1 – 5 years	27 56.3%	21 43.8%	48 100%	$\chi^2= 23.453$ df= 5 p = .001
	6 – 9 years	14 93.3%	1 6.7%	15 100%	
	10 – 14 years	11 57.9%	8 42.1%	19 100%	
	15 – and above years	24 77.4%	7 22.6%	31 100%	
	Don't know	2 28.6%	5 71.4%	7 100%	
	Never	4 23.5%	13 76.5%	17 100%	

Table 6.3 Cross-tabulation

Policy measure 2: Prompt payment rule					Chi-Square Tests
SME groups	Awareness of policy measure	YES	NO	TOTAL	
	All SMEs	92 67.2%	45 32.8%	137 100%	$\chi^2= 19.707$ df= 2 p = .001
Size	Medium (50–249)	20 42.6%	27 57.4%	47 100%	
	Small (10–49)	27	12 21.1%	57 100%	
	Micro (1–9)	45 78.9%	6 18.2%	33 100%	
Age	Less than 1 year	2 66.7%	1 33.3%	3 100%	$\chi^2= 4.015$ df= 4 p = .404
	1–5 years	10 58.8%	7 41.2%	17 100%	
	6–10 years	12 85.7%	2 14.3%	14 100%	
	11–20 years	33 71.7%	13 28.3%	46 100%	
	Over 20 years	35 61.4%	22 38.6%	57 100%	
Public tendering experience	1 – 5 years	32 66.7%	16 33.3%	48 100%	$\chi^2= 4.423$ df= 5 p = .490
	6 – 9 years	12 80.0%	3 20.0%	15 100%	
	10 – 14 years	15 78.9%	4 21.1%	19 100%	
	15 – and above years	19 61.3%	12 38.7%	31 100%	
	Don't know	5 71.4%	2 28.6%	7 100%	
	Never	9 52.9%	8 47.1%	17 100%	

Table 6.4 Cross-tabulation

Policy measure 3: Consortium bidding					Chi-Square Tests
SME groups	Awareness of policy measure	YES	NO	TOTAL	
	All SMEs	111 81.0%	26 19.0%	137 100%	$\chi^2 = 2.383$ df = 2 p = .304
Size	Medium (50–249)	38 80.9%	9 19.1%	47 100%	
	Small (10–49)	49 86.0%	8 14.0%	57 100%	
	Micro (1–9)	24 72.7%	9 27.3%	33 100%	
Age	Less than 1 year	2 66.7%	1 33.3%	3 100%	$\chi^2 = 7.724$ df = 4 p = .102
	1–5 years	10 58.8%	7 41.2%	17 100%	
	6–10 years	12 85.7%	2 14.3%	14 100%	
	11–20 years	37 80.4%	9 19.6%	46 100%	
	Over 20 years	50 87.7%	7 12.3%	57 100%	
Public tendering experience	1 – 5 years	40 83.3%	8 16.7%	48 100%	$\chi^2 = 15.200$ df = 5 p = .010
	6 – 9 years	13 86.7%	2 13.3%	15 100%	
	10 – 14 years	16 84.2%	3 15.8%	19 100%	
	15 – and above years	28 90.3%	3 9.7%	31 100%	
	Don't know	6 85.7%	1 14.3%	7 100%	
	Never	8 47.1%	9 52.9%	17 100%	

Table 6.5 Cross-tabulation

Policy measure 4: Contracts finder					Chi-Square Tests
SME groups	Awareness of policy measure	YES	NO	TOTAL	
	All SMEs	106 77.4%	31 22.6%	137 100%	
Size	Medium (50–249)	35 74.5%	12 25.5%	47 100%	$\chi^2= 2.859$ df= 2 p = .239
	Small (10–49)	48 84.2%	9 15.8%	57 100%	
	Micro (1–9)	23 69.7%	10 30.3%	33 100%	
Age	Less than 1 year	3 100%	0 0.0%	3 100%	$\chi^2= 3.603$ df= 4 p = .462
	1–5 years	11 64.7%	6 35.3%	17 100%	
	6–10 years	10 71.4%	4 28.6%	14 100%	
	11–20 years	35 76.1%	11 23.9%	46 100%	
	Over 20 years	47 82.5%	10 17.5%	57 100%	
Public tendering experience	1 – 5 years	39 81.3%	9 18.8%	48 100%	$\chi^2= 4.661$ df= 5 p = .459
	6 – 9 years	13 86.7%	2 13.3%	15 100%	
	10 – 14 years	15 78.9%	4 21.1%	19 100%	
	15 – and above years	24 77.4%	7 22.6%	31 100%	
	Don't know	5 71.4%	2 28.6%	7 100%	
	Never	10 58.8%	7 41.2%	17 100%	

Table 6.6 Cross-tabulation

Policy measure 5: Division of contracts into lots					Chi-Square Tests
SME groups	Awareness of policy measure	YES	NO	TOTAL	
	All SMEs	106 77.4%	31 22.6%	137 100%	$\chi^2 = 6.168$ df= 2 p = .046
Size	Medium (50–249)	41 87.2%	6 12.8%	47 100%	
	Small (10–49)	44 77.2%	13 22.8%	57 100%	
	Micro (1–9)	21 63.6%	12 36.4%	33 100%	
Age	Less than 1 year	3 100%	0 0.0%	3 100%	$\chi^2 = 9.763$ df= 4 p = .045
	1–5 years	12 70.6%	5 29.4%	17 100%	
	6–10 years	7 50.0%	7 50.0%	14 100%	
	11–20 years	35 76.1%	11 23.9%	46 100%	
	Over 20 years	49 86.0%	8 14.0%	57 100%	
Public tendering experience	1 – 5 years	38 79.2%	10 20.8%	48 100%	$\chi^2 = 15.532$ df= 5 p = .008
	6 – 9 years	13 86.7%	2 13.3%	15 100%	
	10 – 14 years	15 78.9%	4 21.1%	19 100%	
	15 – and above years	27 87.1%	4 12.9%	31 100%	
	Don't know	6 85.7%	1 14.3%	7 100%	
	Never	7 41.2%	10 58.8%	17 100%	

Table 6.7 Cross-tabulation

Policy measure 6: Subcontracting					Chi-Square Tests
SME groups	Awareness of policy measure	YES	NO	TOTAL	
	All SMEs	113 82.5%	24 17.5%	137 100%	$\chi^2 = 0.877$ df= 2 p = .645
Size	Medium (50–249)	38 80.9%	9 19.1%	47 100%	
	Small (10–49)	49 86.0%	8 14.0%	57 100%	
	Micro (1–9)	26 78.8%	7 21.2%	33 100%	
Age	Less than 1 year	2 66.7%	1 33.3%	3 100%	$\chi^2 = 3.235$ df= 4 p = .519
	1–5 years	14 82.4%	3 17.6%	17 100%	
	6–10 years	10 71.4%	4 28.6%	14 100%	
	11–20 years	41 89.1%	5 10.9%	46 100%	
	Over 20 years	46 80.7%	11 19.3%	57 100%	
Public tendering experience	1 – 5 years	41 85.4%	7 14.6%	48 100%	$\chi^2 = 2.388$ df= 5 p = .793
	6 – 9 years	13 86.7%	2 13.3%	15 100%	
	10 – 14 years	15 78.9%	4 21.1%	19 100%	
	15 – and above years	26 83.9%	5 16.1%	31 100%	
	Don't know	6 85.7%	1 14.3%	7 100%	
	Never	12 70.6%	5 29.4%	17 100%	

Appendix 7 The Mean Rank Table for SMEs grouped by firm size

SME size (number of employees)		N	Mean Rank
Statement 1	Micro	33	74.35
	Small	57	57.86
	Medium	47	78.76
	Total	137	
Statement 2	Micro	33	65.12
	Small	57	70.07
	Medium	47	70.43
	Total	137	
Statement 3	Micro	33	73.91
	Small	57	60.11
	Medium	47	76.33
	Total	137	
Statement 4	Micro	33	66.18
	Small	57	65.19
	Medium	47	75.6
	Total	137	
Statement 5	Micro	33	75.85
	Small	57	66.12
	Medium	47	67.68
	Total	137	
Statement 6	Micro	33	82.73
	Small	57	69.76
	Medium	47	58.44
	Total	137	
Statement 7	Micro	33	71.79
	Small	57	63.46
	Medium	47	73.77
	Total	137	
Statement 8	Micro	33	74.94
	Small	57	61.35
	Medium	47	74.11
	Total	137	
Statement 9	Micro	33	59.12
	Small	57	67.14
	Medium	47	78.19
	Total	137	

Statement 10	Micro	33	63.29
	Small	57	65.52
	Medium	47	77.23
	Total	137	
Statement 11	Micro	33	64.02
	Small	57	62.61
	Medium	47	80.26
	Total	137	
Statement 12	Micro	33	65.71
	Small	57	63.36
	Medium	47	78.15
	Total	137	
Statement 13	Micro	33	66.58
	Small	57	65.96
	Medium	47	74.39
	Total	137	
Statement 14	Micro	33	72.47
	Small	57	66.88
	Medium	47	69.14
	Total	137	
Statement 15	Micro	33	72.55
	Small	57	64.69
	Medium	47	71.73
	Total	137	
Statement 16	Micro	33	68.58
	Small	57	64.8
	Medium	47	74.39
	Total	137	
Statement 17	Micro	33	73.58
	Small	57	65.37
	Medium	47	70.19
	Total	137	
Statement 18	Micro	33	55.61
	Small	57	69.13
	Medium	47	78.24
	Total	137	
Statement 19	Micro	33	58.18
	Small	57	71.81
	Medium	47	73.19
	Total	137	
Statement 20	Micro	33	56.59

	Small	57	78.81
	Medium	47	65.82
	Total	137	
Statement 21	Micro	33	70.23
	Small	57	69.86
	Medium	47	67.1
	Total	137	
Statement 22	Micro	33	69.64
	Small	57	61.87
	Medium	47	77.2
	Total	137	
Statement 23	Micro	33	65.14
	Small	57	59.48
	Medium	47	83.26
	Total	137	
Statement 24	Micro	33	55.48
	Small	57	68.84
	Medium	47	78.68

Appendix Table 8. The Mean Rank Table for SMEs grouped by age

Firm age (years of trading)		N	Mean Rank
Statement 1	Less than 1 year	3	97.3
	1–5 years	17	65.1
	6–10 years	14	65.3
	11–20 years	46	61.4
	Over 20 years	57	75.7
	Total	137	
Statement 2	Less than 1 year	3	89
	1–5 years	17	82.2
	6–10 years	14	65.4
	11–20 years	46	60.5
	Over 20 years	57	71.7
	Total	137	
Statement 3	Less than 1 year	3	87.8
	1–5 years	17	74.8
	6–10 years	14	65.6
	11–20 years	46	56.4
	Over 20 years	57	77.3
	Total	137	
Statement 4	Less than 1 year	3	83
	1–5 years	17	75.2
	6–10 years	14	61.6
	11–20 years	46	57.8
	Over 20 years	57	77.3
	Total	137	
Statement 5	Less than 1 year	3	87.7
	1–5 years	17	64.3
	6–10 years	14	63.6
	11–20 years	46	70.4
	Over 20 years	57	69.7
	Total	137	
Statement 6	Less than 1 year	3	63.2
	1–5 years	17	65.3
	6–10 years	14	80.4
	11–20 years	46	64
	Over 20 years	57	71.7
	Total	137	

Statement 7	Less than 1 year	3	46.3
	1–5 years	17	50.4
	6–10 years	14	70.7
	11–20 years	46	76.3
	Over 20 years	57	69.4
	Total	137	
Statement 8	Less than 1 year	3	58
	1–5 years	17	49.7
	6–10 years	14	73.9
	11–20 years	46	71.1
	Over 20 years	57	72.5
	Total	137	
Statement 9	Less than 1 year	3	81
	1–5 years	17	69
	6–10 years	14	54.6
	11–20 years	46	68.9
	Over 20 years	57	72
	Total	137	
Statement 10	Less than 1 year	3	57.8
	1–5 years	17	53.2
	6–10 years	14	69.3
	11–20 years	46	66.7
	Over 20 years	57	76.1
	Total	137	
Statement 11	Less than 1 year	3	49.8
	1–5 years	17	55.7
	6–10 years	14	77.8
	11–20 years	46	56.4
	Over 20 years	57	82
	Total	137	
Statement 12	Less than 1 year	3	83.2
	1–5 years	17	81.6
	6–10 years	14	66.5
	11–20 years	46	60.3
	Over 20 years	57	72.1
	Total	137	
Statement 13	Less than 1 year	3	97.2
	1–5 years	17	75.5
	6–10 years	14	63.1
	11–20 years	46	66.1
	Over 20 years	57	69.4

	Total	137	
Statement 14	Less than 1 year	3	78.5
	1–5 years	17	84.2
	6–10 years	14	67.9
	11–20 years	46	64.7
	Over 20 years	57	67.7
	Total	137	
Statement 15	Less than 1 year	3	62.5
	1–5 years	17	74.5
	6–10 years	14	80
	11–20 years	46	61.2
	Over 20 years	57	71.3
	Total	137	
Statement 16	Less than 1 year	3	72
	1–5 years	17	77.2
	6–10 years	14	79.7
	11–20 years	46	64.1
	Over 20 years	57	67.7
	Total	137	
Statement 17	Less than 1 year	3	65.3
	1–5 years	17	64.3
	6–10 years	14	50.4
	11–20 years	46	73
	Over 20 years	57	71.9
	Total	137	
Statement 18	Less than 1 year	3	82
	1–5 years	17	70.7
	6–10 years	14	50.3
	11–20 years	46	71.5
	Over 20 years	57	70.4
	Total	137	
Statement 19	Less than 1 year	3	72.7
	1–5 years	17	75.4
	6–10 years	14	54.3
	11–20 years	46	71.6
	Over 20 years	57	68.4
	Total	137	
Statement 20	Less than 1 year	3	58.5
	1–5 years	17	69.6
	6–10 years	14	76.3
	11–20 years	46	73.3

	Over 20 years	57	64.1
	Total	137	
Statement 21	Less than 1 year	3	66
	1–5 years	17	69.7
	6–10 years	14	74.7
	11–20 years	46	66.5
	Over 20 years	57	69.6
	Total	137	
Statement 22	Less than 1 year	3	75
	1–5 years	17	69.4
	6–10 years	14	67.6
	11–20 years	46	65.5
	Over 20 years	57	71.7
	Total	137	
Statement 23	Less than 1 year	3	83
	1–5 years	17	74.4
	6–10 years	14	62.6
	11–20 years	46	62.1
	Over 20 years	57	73.8
	Total	137	
Statement 24	Less than 1 year	3	75.2
	1–5 years	17	61
	6–10 years	14	61.7
	11–20 years	46	71.9
	Over 20 years	57	70.5
	Total	137	

Appendix Table 9. Table for SMEs grouped by public tendering experience

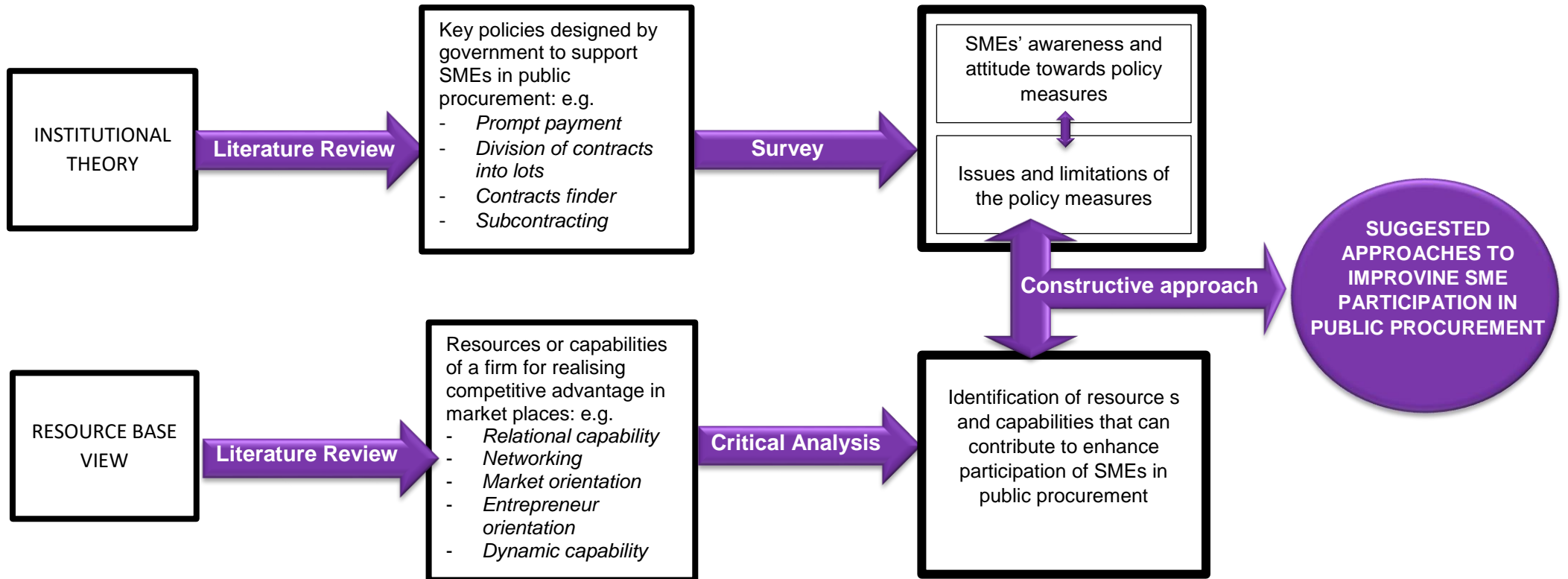
Public tendering experience		N	Mean Rank
Statement 1	Never	17	52.41
	1 – 5 years	48	71.65
	6 – 9 years	34	73.37
	10 – 14 years,	30	69.43
	15 – and above years	7	58.36
	Total	136	
Statement 2	Never	17	71.94
	1 – 5 years	48	69.21
	6 – 9 years	34	72.43
	10 – 14 years,	30	60.05
	15 – and above years	7	72.43
	Total	136	
Statement 3	Never	17	55.88
	1 – 5 years	48	69.13
	6 – 9 years	34	76.65
	10 – 14 years,	30	63.03
	15 – and above years	7	78.71
	Total	136	
Statement 4	Never	17	63.12
	1 – 5 years	48	60.98
	6 – 9 years	34	83.75
	10 – 14 years,	30	62.92
	15 – and above years	7	83
	Total	136	
Statement 5	Never	17	77.76
	1 – 5 years	48	68.63
	6 – 9 years	34	63.28
	10 – 14 years,	30	68.78
	15 – and above years	7	69.29
	Total	136	
Statement 6	Never	17	70.82
	1 – 5 years	48	71.74
	6 – 9 years	34	68.31
	10 – 14 years,	30	64.28
	15 – and above years	7	59.64
	Total	136	
Statement 7	Never	17	56.03

	1 – 5 years	48	67.5
	6 – 9 years	34	79.81
	10 – 14 years,	30	59.87
	15 – and above years	7	87.71
	Total	136	
Statement 8	Never	17	49
	1 – 5 years	48	67.22
	6 – 9 years	34	80.13
	10 – 14 years,	30	65.73
	15 – and above years	7	80
	Total	136	
Statement 9	Never	17	78.88
	1 – 5 years	48	57.04
	6 – 9 years	34	76.01
	10 – 14 years,	30	69.75
	15 – and above years	7	80
	Total	136	
Statement 10	Never	17	74.29
	1 – 5 years	48	58.23
	6 – 9 years	34	79.06
	10 – 14 years,	30	68.3
	15 – and above years	7	74.43
	Total	136	
Statement 11	Never	17	57.97
	1 – 5 years	48	62.66
	6 – 9 years	34	77.24
	10 – 14 years,	30	71.72
	15 – and above years	7	77.93
	Total	136	
Statement 12	Never	17	52.97
	1 – 5 years	48	64.77
	6 – 9 years	34	72.07
	10 – 14 years,	30	78.58
	15 – and above years	7	71.21
	Total	136	
Statement 13	Never	17	62.88
	1 – 5 years	48	68.24
	6 – 9 years	34	69.41
	10 – 14 years,	30	72.58
	15 – and above years	7	62
	Total	136	

Statement 14	Never	17	65.71
	1 – 5 years	48	68.66
	6 – 9 years	34	74.19
	10 – 14 years,	30	65.5
	15 – and above years	7	59.43
	Total	136	
Statement 15	Never	17	65.32
	1 – 5 years	48	74.73
	6 – 9 years	34	67.57
	10 – 14 years,	30	63.88
	15 – and above years	7	57.79
	Total	136	
Statement 16	Never	17	50.44
	1 – 5 years	48	75.14
	6 – 9 years	34	72.66
	10 – 14 years,	30	64
	15 – and above years	7	65.93
	Total	136	
Statement 17	Never	17	58
	1 – 5 years	48	69.97
	6 – 9 years	34	82.49
	10 – 14 years,	30	55.7
	15 – and above years	7	70.86
	Total	136	
Statement 18	Never	17	62.85
	1 – 5 years	48	69.74
	6 – 9 years	34	69.75
	10 – 14 years,	30	71.1
	15 – and above years	7	56.5
	Total	136	
Statement 19	Never	17	63.59
	1 – 5 years	48	72.16
	6 – 9 years	34	72.79
	10 – 14 years,	30	66.08
	15 – and above years	7	44.86
	Total	136	
Statement 20	Never	17	68.12
	1 – 5 years	48	70.35
	6 – 9 years	34	74.75
	10 – 14 years,	30	64.88
	15 – and above years	7	41.86

	Total	136	
Statement 21	Never	17	60
	1 – 5 years	48	76.24
	6 – 9 years	34	68.09
	10 – 14 years,	30	59.58
	15 – and above years	7	76.29
	Total	136	
Statement 22	Never	17	67.68
	1 – 5 years	48	64.76
	6 – 9 years	34	75.12
	10 – 14 years,	30	62.08
	15 – and above years	7	91.5
	Total	136	
Statement 23	Never	17	69.03
	1 – 5 years	48	62.81
	6 – 9 years	34	73.37
	10 – 14 years,	30	69.1
	15 – and above years	7	80
	Total	136	
Statement 24	Never	17	67.94
	1 – 5 years	48	64.88
	6 – 9 years	34	71.09
	10 – 14 years,	30	69.43
	15 – and above years	7	78.14
	Total	136	

The theoretical framework



Source: developed by the author