

# Finance Practices Of Large Construction Firms In Ghana: Methodological Perspectives For Postgraduate Researchers

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## ABSTRACT

*Conducting research is a process of combining a set of principles, outlooks and ideas with a collection of specific practices, techniques and strategies to produce and legitimize knowledge. In this paper, knowledge is shared with postgraduate students pursuing various studies in management and finance regarding research methodology. Integrated approach of conducting quality research in this field through personal experience and reference to scholarly works is advocated by the paper. The paper is concerned with methodological considerations adopted for emblematic doctoral research work in the area of construction finance. The discussion focuses mainly on attentive issues such as research philosophies, research approaches and research techniques. The paper concludes by recommending postgraduate researchers to situate their research within theoretical, philosophical and empirical relevance, which would require holistic adoption and adaptation of apposite research methodology.*

**Keywords:** Finance, Management, Methodology, Philosophy, Postgraduate, Research Technique

## INTRODUCTION

The growth and development of construction industry is pivotal on the overall financial performance of the firms that operate in the industry and how these firms finance their major investment activities. In view of this, there has been a growing concern to bring stakeholders to the knowledge of how to holistically resolve attempts to

meet the financing needs of construction firms in Ghana. However, confronting this challenge would require a careful probe into the complex dynamics within the contextual framework, which the firms' financing practices is positioned. Approaches to management and finance research and knowledge creation would involve a varied combination of key processes of observation, reflection, theory conjecturing and testing of theories. It is therefore reasonable to stress that conducting research in management and finance would require situating the study within the appropriate philosophical background. This suggests that research should be organized systematically to make the best use of the opportunities and available resources. As such, many different theories of knowledge or paradigms would compete for methodological primacy. Accordingly, researchers draw from one or more traditions when designing research projects in a way which remains sensitive to the theoretical and philosophical foundations upon which the enquiry is based. However, Seymour et al (1995; 1997; 1998) reported that, the extent of management research has been subject to the ascendancy of positivism and quantitative method. This has promoted orthodoxy of the application of the natural science methods in the study of social phenomena and an attendant focus on explaining human behaviour (Fellows and Liu, 2003). In contrast, proponents of interpretivism, as an alternative paradigm, espouse the importance of understanding human behaviour. This has an emphasis on the empathetic comprehension of human action rather than the forces which shape it (Bryman and Bell, 2003;

Dainty, 2007). This perspective arguably has the potential to provide complementary insights enriching understanding of the perspectives of those who work in this sector. Nearly thirteen years ago, some of the leading researchers within the management and finance research community debated the merits and demerits of different theoretical and philosophical perspectives on methodologies from different research paradigms. This debate was initiated by two papers in particular, thus, Seymour and Rooke (1995) and Seymour et al (1997), which questioned the dominance of the rationalist position which seemingly underpinned most research within management and finance community, suggesting that this tacitly endorsed the very attitudes in need of change in the construction industry. They suggested that the culture of research must change if management and finance researchers were to have an influence on the construction industry. Seymour et al (1997) further questioned the dominance of the scientific theorizing associated with realist ontological and epistemological positions given that the 'object' of most management and finance research is people and their social interactions.

These papers invoked a vigorous and somewhat polarized response around the relative merits of different research approaches. Seymour and his colleagues were accused of being 'anti-scientific' and of propagating an approach which has yet to yield productive output, theories or progress (Runeson, 1997). Further, they were accused of promoting an approach more akin to consultancy than research, and of advocating methods which they themselves have widely criticized within the sociological literature (Harriss, 1998). Again, Seymour and Rooke (1995) were accused of setting out battle lines in the way that they dichotomized rationalist and interpretive paradigms to the detriment of research standards (Raftery, et al 1997). Seymour and his colleagues defended their position by counter claiming that Raftery *et al* themselves undermined standards by failing to recognize that different methods suit different purposes and that their position was symptomatic of the widespread confusion over terms such as

'method', 'methodology' and 'paradigm' (Rooke, et al 1997). They also questioned Runeson's definition of 'science', defending the rigour of methods associated with the interpretive paradigm and their value in establishing the meaning ascribed by the actors studied (Seymour, et al 1998).

In this regard, this paper attempts to outline available research philosophies and approaches, while logically justifying the use of apposite research methodology to investigate the strategic decision choices and decision criteria involved with contractors' financing practices in Ghana and to examine the determinants or factors that influence their financing practices. For this purpose, the hierarchical model of research methodology developed by Kagioglou et al (1998) is adopted, highlighting the main components of the arguments to justify the selection of appropriate philosophical stance, research approach and research techniques. The paper is organized as follows. First, as a backdrop to the paper, coverage of the local construction industry and its contribution to the economy of Ghana is provided. Secondly, the problem domain coupled with the initiation of research objectives and questions for the study that justified the methodology adopted are presented. The methodology adopted in conducting the main research is discussed thoroughly.

## RESEARCH PROBLEM

The author's interest in the financial aspects of construction projects and financing practices of construction firms from a contractor's point of view was the main force behind this research. This interest has been intensified over the years as the author saw for himself both positive and negative effects of finance on construction projects while working as a consultant to contractors in Ghana. Despite the significant role of financial issues, financing practices and financial choices play in the day-to-day business operations firms, it is hard to find any empirical research, which investigates and analyzes the financing practices of construction firms in Ghana particularly with equipment finance. This has created a huge research gap in terms of industry bottlenecks and what could be done to

remove these setbacks and potential problems. With the rising need of construction firms for accessible and competitive finance options to boost their business operations and accommodate the finance of their investment activities, a research study, which includes reference to their current practices and the problems, will have a significant contribution to the literature in this field. There is also a general perception that finance gap exists among construction firms and financial institutions in Ghana.

Whilst some researchers identified financing gaps in developed countries, others were of the view that there are no such gaps. Unfortunately, there are no indications of empirical studies in developing countries that attempt to validate the above claims. There is no idea of what factors might cause this imbalance and possible measures to bridge the finance gap are not known. This has created empirical research gap in Ghana and a study conducted in this line will be meaningful. Again, it has also been established that the ability for managers of construction corporations to assimilate financial data, integrate financial and accounting data into business operations and make informed financing decisions depend largely on the level of their financial capability. However, the variables that contribute to better understanding and application of financial information into financial decision remain unexplored. Literature is completely silent on the need to achieve financial capability and no empirical study has been conducted in this respect. This has created an empirical research gap in Ghana. Such empirical knowledge is important because it would offer policy makers deep insight about the industry and how they could garner considerable efforts to meet potential challenges.

Finally, it should be recognized that both theoretical and empirical studies on firms' financing practices have generated many results that attempt to explain the determinants of financing choices. Some few empirical studies utilized macroeconomic variables such as interest rate, tax, and inflation to explain firms' decision to choose between debt and equity. These variables change from country to country and

their results may not be able to explain directly the situation in the context of a developing country like Ghana, where there is visible volatility of these variables. It is clear that most of these studies so far discussed in the preceding sections to date were based on data from developed countries with no trace of empirical studies that provide evidence from developing countries. It is possible that other factors or determinants would explain the financing choices and practices of construction firms better in developing countries apart from those mentioned earlier in literature. Unfortunately, no empirical research has attempted to explore these new possibilities. This suggests that there is still more work to be done in developing countries and that is the precise challenge of embarking on this study. The need to fully understand the financing practices, problems and how best stakeholders could integrate efforts to achieve the financial stability, growth and success of the firm provided a personal challenge in doing this research.

#### RESEARCH AIM, OBJECTIVES AND QUESTIONS

As in any other empirical study, the investigation needed theories, which provided the framework for the systematic analysis and accumulation of the existing stock of knowledge, as well as to serve as a guide for developing research directions. This involved defining the problem; identifying essential variables of the studies; formulating research questions, establishing the research goal and objectives; determining the data gathering techniques and choosing the drivers for data analysis once gathered and providing solution to the problem. The primary goal of the research was to investigate the strategic decision choices and decision criteria involved with contractors' financing practices in Ghana and to examine the determinants or factors that influence their financing practices. Wahab (1996) has stressed that meaningful research in the area of firm's finance must bring us to a better understanding of the characteristics of the firm, financing needs and constraint. The aim of the study was therefore to contribute to a better understanding of the finance practices and problems of these large construction firms. In order to achieve the above goal, the following objectives were articulated:

1. To outline alternative financing techniques

available for equipment acquisition; and to conduct a strategic evaluation to determine how large construction firms in Ghana finance equipment purchase.

2. To identify whether there is a lending gap in financing equipment acquisition with the view to developing strategies to bridge any identifiable gaps.
3. To identify the underpinning financial variables that affect firms' financial conditions, establish their significance and examine managements' proficiency in these variables.
4. To derive the determinants of financing strategy and empirically examine how these factors influence financing decision choices of construction firms.

However, Collis and Hussey (2003) suggested the choice of research questions instead of hypotheses as the appropriate method of defining research propositions in phenomenological study. The preference of research questions for this study is further justified by the exploratory nature of this research. The following research questions were therefore articulated based on the identified theoretical gaps, to fulfil the stated aims and objectives of the study. This takes the form of four 'grand tour' questions (Collis and Hussey, 2003), each with sub 'questions'.

1. What are the current finance practices of large contractors in Ghana?
  - i. In the context of Ghana, which of the finance methods is mostly used?
  - ii. What are the industry problems and how can they be removed?
2. Is there a gap in the lending system regarding construction finance?
  - iii. What is the nature of the gap?
  - iv. What are the main causes of these gaps if any?
  - v. What are the strategies that should be put in place to close those gaps?
3. What are the underpinning financial variables that affect the financial Condition of construction firms?
  - vi. Are decision-makers proficient in these variables?

vii. Are these variables significant in the acquisition decisions?

4. What are the determinants that influence financing strategy of firms?

viii. How does each determinant explain the decision to use one finance strategy?

#### RESEARCH METHODOLOGY

Thurairajah et al (2006) quoted Collis and Hussey (2003) referring research methodology as the overall approach to the design process from the theoretical underpinnings to the collection of data and analysis of the data. The conceptual model in Figure 1 below maintains the direction and cohesion of elements in representing a holistic research methodology (Kagioglou et al (1998). Within this nested approach, the research philosophy found at the outer ring guides and energizes the inner research approaches and research techniques. In order to distinguish between the different types of research, it is important to discuss the diversity of methods employed as a backdrop to this research. In broad terms, researchers adopt either an objective 'engineering orientation' where the emphasis is on discovering something factual about the world it focuses on, or a subjectivist approach where the aim is to understand how different realities are constituted. This notwithstanding, the choice of research methodology must not be influenced by more popular adopted scientific strategies, but rather careful consideration should be given to the relevance and usefulness of the research and the researcher must select the most befitting strategy to accomplish his purpose (Wahab, 1996).

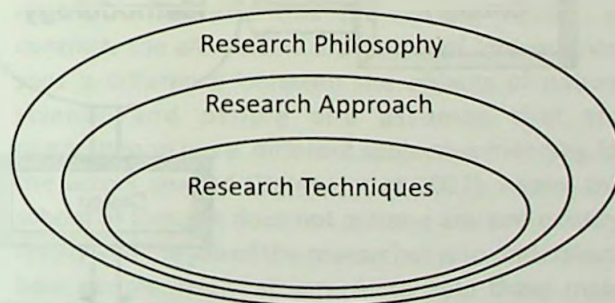


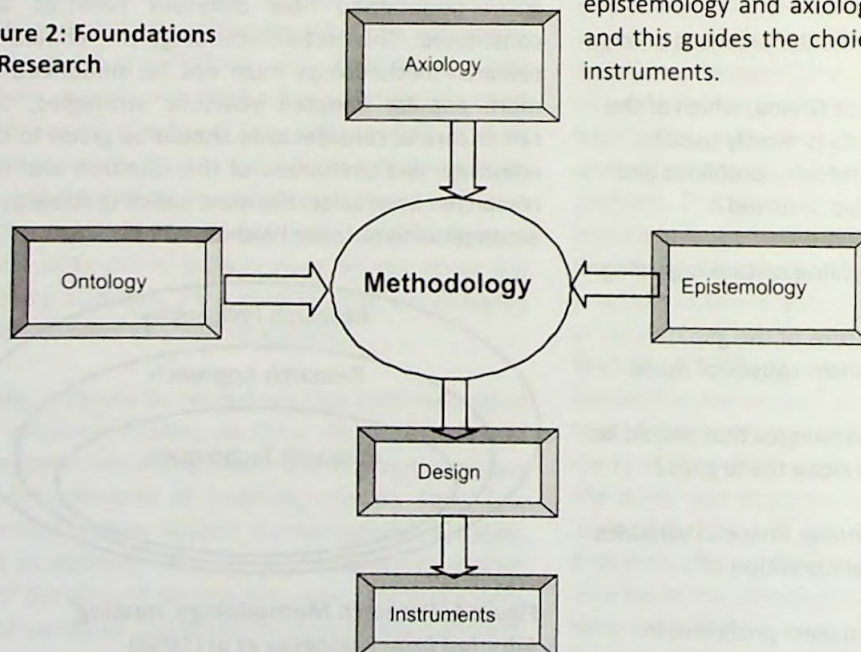
Figure 1: Research Methodology 'nesting'  
Adopted from Kagioglou et al (1998)

However, Kumar (1995) stressed the importance of review of methodologies and reported that: to make original contribution to knowledge, the review should demonstrate that the researcher has a comprehensive grasp of existing knowledge on methodological underpinnings. Later, Wahab (1996) emphatically stated that the central research strategy to good and quality research is the preference given to available data and methodological tools. A recent report by Dainty (2007) confirmed this by stating that understanding the influence of competing methodologies is fundamental to understanding the contribution it makes to knowledge. With this in mind, it became imperative to review literature relating to questionnaire design, interview and case study design and data analysis. The positive contribution of the review was the stimulation of fresh thinking about a range of issues relevant to methodological concerns of studies in management and finance research. The progress towards this goal was guided by the state of the researcher to move ahead with a rationalized and guided-process of conceptualization, measurements, data collection, data analyses and documentation involved in undertaking the study.

## RESEARCH PHILOSOPHY

As earlier mentioned, the aim of the study was to advance knowledge and increase the understanding of financing practices of construction firms in Ghana. A fundamental question confronting anyone doing research is therefore, to construct a philosophical position and orientation towards the enquiry (Dainty, 2007). The research philosophy is principally concerned with the assumptions that a researcher brings to an investigation (Dainty, 2007). Situating the study within its appropriate philosophical tradition requires consideration of the contrasting implications of positivism and social constructionism traditions. Apparently, situating this research within its appropriate philosophical tradition would require discussions on the diversity of available philosophical continuum as a backdrop to this research. According to Creswell (1994) and Collis and Hussey (2003), philosophical thinking revolves around ontological, epistemological, axiological and methodological assumptions. While ontological, epistemological and axiological assumptions position the philosophical stance of a research, rhetorical and methodological assumptions are concerned with language and process of the research respectively (Thurairajah, et al 2006). As shown in Figure 2, ontology, epistemology and axiology influence methodology and this guides the choice of research design and instruments.

**Figure 2: Foundations of Research**



In *ontological position*, the researcher is to decide whether the reality is objective and external to the researcher, or socially constructed and only understood by examining the perceptions of the human actors (Collis and Hussey, 2003 and Thurairajah, et al 2006). Although there is considerable blurring of research philosophy, it should be noted that, two main traditions of philosophies exist namely; positivism and social constructionism (Thurairajah, et al 2006; Harty and Leiringer, 2007 and Dainty, 2007). While positivists argue that the world exists externally and its

literature. However, these variables have not been utilized in explaining the financing practices of construction firms in the context of developing countries. Accordingly, it was anticipated that integration of some of the variables could measure the same underlying dimensions which would require investigation. The research also viewed the investigation to be conducted as practical rather than abstract. However, the study does not support extreme pre-existing realist tradition but aims to interpret and understand how construction firms can address the challenges associated with their financing practices and needs.

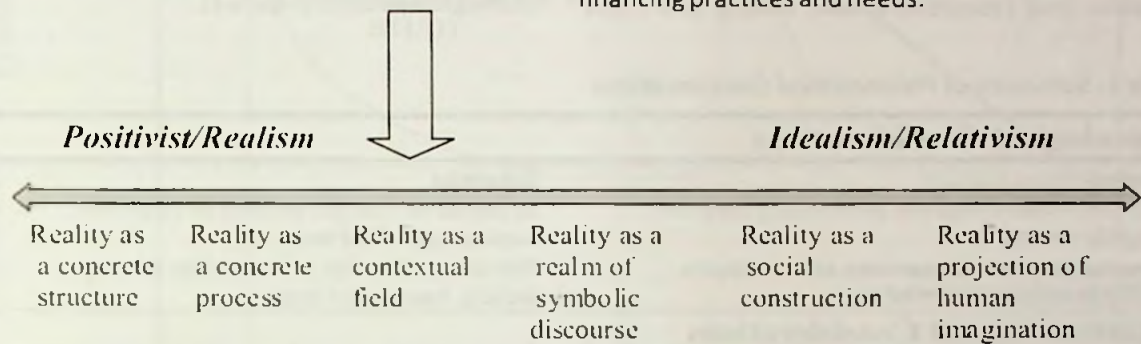


Figure 3: Continuum of Core Ontological, Adopted and Adapted from Thurairajah et al (2006)

properties should be measured through objective methods, social constructionists hold the view that the reality is not objective and exterior but is socially constructed and given meaning by people. However, Johnson and Duberly (2000) referred positivist ontological assumptions as realist whilst Gummesson (1991) maintained social constructionist as idealist or relativist. In ontological position, the researcher is to decide whether the reality is objective and external to the researcher, or socially constructed and only understood by examining the perceptions of the human actors (Collis and Hussey, 2003; Thurairajah, et al 2006). These two ontological assumptions are known as realist (Johnson and Duberly, 2000) and idealist/relativism (Gummesson, 1991). There are two strands of ontology, mainly; *objectivist ontology and constructivist ontology*. At the ontological level, this research adopted a *realist position* as indicated in Figure 3. This is because the variables that explain the financing practices of firms largely existed in

*Epistemological positioning* deals with questions about how and what is possible to know (Thurairajah, et al 2006). One side of the epistemological continuum is bounded by the positivist view that the methods of the natural sciences should be applied to the study of natural phenomena. This school of thought assumes that there is a reality which exists independently of the observer and hence the job of the researcher is merely to identify this pre-existing reality. In contrast, the alternative orthodoxy of interpretivist sees a difference between the objects of natural science and people and assumes that the phenomenon has a different subjective meaning for the actors studied (Dainty, et al 2007). Again, this school of thought does not assume any pre-existing reality and the job of the researcher is to understand how people invent structures to help them make sense in what is happening around them (Thurairajah, et al 2006). Epistemologically, this research was of the belief that the complex

interactions of financing practices of construction firms could be explored through a systematic but simplified steady approach. The conduct of the research could also be carried out without bias and that objective conclusions could be drawn from data collected from an isolated position. The adopted epistemological position in this research was, therefore, *positivist tradition*.

**Axiological positioning** is concerned with values. Positivists believe that science and process is value free. At the other extreme, social constructionists consider that researchers have values, and these

values help to determine what are recognized as facts and the interpretations which are drawn from them (Collis and Hussey, 2003).

By considering the argument put forward in relation to the objectives stated, the study assumes an idealist view in ontological assumptions, whilst holding social constructionist stance in epistemological undertakings with value laden axiological position. While taking a realist view in ontological assumptions, it holds positivist stance in epistemological undertakings with value free axiological position (Figure 4).

Table 1: Summary of Philosophical Considerations

<b>Ontological Considerations</b>	
<b>Realist</b> External world comprises pre-existing hard and tangible structures <b>Structures exist independent of individual's ability to acquire knowledge</b>	<b>Relativist</b> Existence of multiple realities as subjective construction of the mind Perception of reality is directed by varying socially transmitted terms
<b>Epistemological Considerations</b>	
<b>Positivist</b> Application of natural science methods to the study of social reality and beyond World conforms to the laws of causation and complex issues can be resolved by reductionism	<b>Interpretivist</b> Absence of universal truth and emphasis on realism of context Understanding and interpretation come from researcher's own frame of reference
<b>Axiological Considerations</b>	
<b>Positivist</b> Science and process are value free	<b>Social Constructionist</b> Researchers values influence research

Source: Adopted and Modified from Baiden (2006)

#### RESEARCH APPROACH AND TECHNIQUES

Research approach and strategy are about organizing research activity embodying data collection in ways that are most likely to achieve the research aims (Thurairajah, et al 2006). Making decisions about research approach, strategy and design is fundamental to both the philosophy underpinning the research and the contributions that the research is likely to make (Thurairajah, et al 2006; Harty and Leiringer, 2007; Dainty, 2007). These in turn influence the actual research methods that are used to investigate the problem and to collect, analyse and interpret data. A continuum of methods that underlie philosophical position of

research is largely manifested as experiment, survey, case study, interviews, action research and ethnography. In other words, research methods cannot be viewed in isolation from the ontological, epistemological and axiological position adopted by the researcher (Dainty, 2007). In broad terms, the term 'research design' refers to the process of situating the researcher in the empirical world and connecting research questions to data. It describes the ways which the data will be collected and analysed in order to answer the research questions posed and so provides a framework for undertaking the research (Bryman and Bell, 2003). Research techniques include both data collection and data

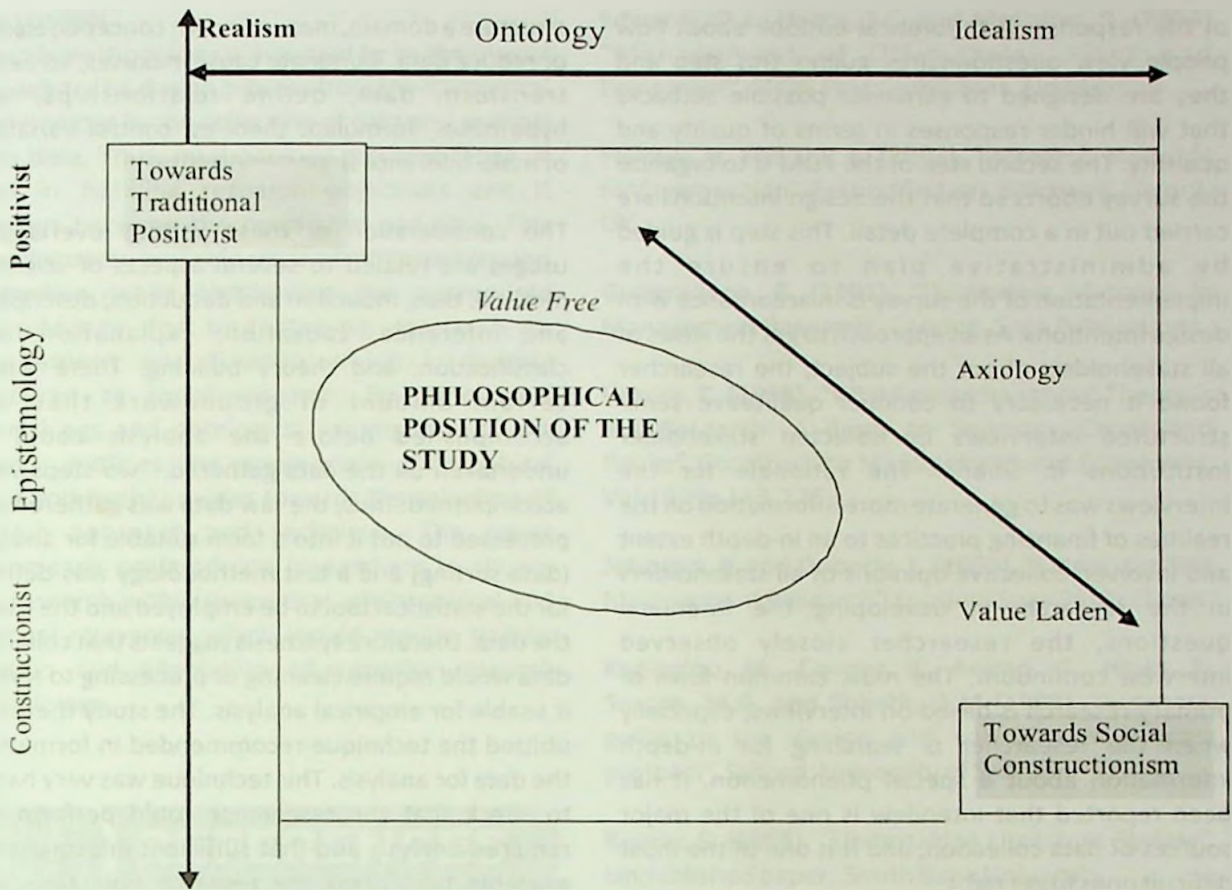


Figure 4: Philosophical Assumptions, Adopted and Adapted from Collis and Hussey (2003)

analysis, which belong to the inner ring of the nested research methodology presented earlier. Data collection and analysis are developed together in an iterative process (Thurairajah, et al 2006). Intended data collection techniques depict the ways and means to fulfil the aims and objectives of the study by carefully addressing the research questions and concerns.

As could be expected given the polarized debate which divides those in the positivist and interpretivist camps, combining methodologies is not without its critics. Indeed, a range of philosophical, cultural and psychological hurdles confront the multi-paradigm approach which renders it a highly problematic undertaking. Both methods have their own strengths and weaknesses and the logical intersection of their respective strengths and weaknesses that justified the

rationale for integrating them, thereby achieving the best possible output and results (Bryman, 1992). Accordingly, Brannen (1992) described multiple research strategy as the most appropriate ways in which problems are conceptualized and studied. Despite the popularity of questionnaires among researchers and the fact that questionnaires have been widely explored in literature as a good method of collecting both qualitative and quantitative research data, its use needs tact and careful considerations.

In order to obtain full use of the benefits of survey questionnaires and minimize associated weaknesses, this research adapted the Total Design Method (TDM). According to Wahab (1996), the implementation of the TDM involves two steps. The first step is to identify each aspect of the survey process that may affect either the quality or quantity



of the response. A theoretical outlook about how people view questionnaires guides this step and they are designed to eliminate possible setbacks that will hinder responses in terms of quality and quantity. The second step of the TDM is to organize the survey efforts so that the design intentions are carried out in a complete detail. This step is guided by administrative plan to ensure the implementation of the survey is in accordance with design intentions. As an approach to get the views of all stakeholders about the subject, the researcher found it necessary to conduct qualitative semi-structured interviews on selected stakeholder institutions in Ghana. The rationale for the interviews was to generate more information on the realities of financing practices to an in-depth extent and involved collective opinions of all stakeholders in the research. In developing the interview questions, the researcher closely observed interview continuum. The most common form of primary research is based on interviews, especially when the researcher is searching for in-depth information about a special phenomenon. It has been reported that interview is one of the major sources of data collection, and it is one of the most difficult ones to get right.

However, data analysis consists of examining, categorizing, tabulating, testing or otherwise integrating both quantitative and qualitative evidence to address the initial research objectives and questions of the study (Thurairajah, et al 2006). In this research, defining the general analytic strategy by relying on theoretical propositions was preferred over setting up a framework based on rival explanations. Due to the explanatory nature of the study, 'Explanation Building Analytic Technique' (EBAT) was more suitable and was therefore adopted for this research. The explanations were made possible by closely observing and interpreting the quantitative results presented by factor analysis. Factor analysis is a standard mathematical procedure that aims at transforming a large set of variables that are possibly correlated into a smaller number of uncorrelated variables called *principal components* and could be applied in order to do one or more of the following: explore a content area,

structure a domain, map unknown concepts, classify or reduce data, illuminate causal nexuses, screen or transform data, define relationships, test hypotheses, formulate theories, control variables, or make inferences.

The consideration of these various overlapping usages are related to several aspects of scientific method, thus, induction and deduction; description and inference; causation, explanation, and classification; and theory building. There was a certain amount of groundwork that was accomplished before the analysis could be undertaken on the data gathered. Two steps were accomplished: thus, the raw data was gathered and processed to put it into a form suitable for analysis (data sorting) and a test methodology was defined for the statistical tool to be employed and the use of the data. Literature synthesis suggests that collected data would require cleaning or processing to render it usable for empirical analysis. The study therefore utilized the technique recommended in formatting the data for analysis. This technique was very handy to check that the researcher could perform the required analysis and that sufficient information is available to address the research objectives and concerns.

This technique utilized a four-scale classifications scheme and this is illustrated in a tabular form. The first column of the table lists all research objectives. This was to ensure that the researcher is clear about the data that has been collected. The second column of the table identifies which specific question(s) on the questionnaire would address which objective. This was useful in two ways, first, it ensured all objectives were addressed on the questionnaire and two, it allowed the researcher to ensure that every question on the questionnaire is necessary. The third column of the table identifies the level of data and scale of measurement for the various data collected. The final column of the table identifies the proposed data analytic technique that was performed on the data. It helped the researcher to clearly define and specify the kind of analysis performed on each question, thereby making the process quite simple.

## CONCLUSION

Research methodology is assumed to be the overall approach to the design process from the theoretical underpinnings to the collection of data and analysis of the data. Thus, methodology provides sense of vision in fulfilling research objectives and it interplays between the researcher and data. This paper discusses available research philosophies and approaches, while highlighting the appropriate methodology for undertaking research in management and finance which is largely considered as social research. Epistemological undertakings and ontological assumptions of the research outlines the appropriate philosophical stance and further guides towards the selection of research approach and technique. The paper recommends postgraduate researchers to situate their research within theoretical, philosophical and empirical relevance, which would require holistic adoption and adaptation of apposite research methodology.

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in partial fulfilment of the requirements for the award of Doctor of Philosophy of Loughborough University, UK

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