

Coordinating Management disciplines to write the Philosophical, Logical and Theoretical Paradigms in Postgraduate Research

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ABSTRACT: Research is one of core requirement at postgraduate level whose immediate key output is a dissertation/thesis. This condition in postgraduate training is intended to provide the learner with a skills-set and knowledge to independently carry-on and conduct research projects for informed decision making at operational and/or strategic levels. Likewise, completion of the research project demonstrates the candidate's competence to assembling empirical evidence, use of logic to form conceptual connection between evidence and explanation. Where the research area is around general management and business situation, results are expected to provide answers, explanations, make comparisons and arrive at generalizations which can be used to extend theory. This article contributes towards improving the postgraduate (young) researcher's understanding the purpose of research philosophy, logic and theorization; in conceptualization, assembling empirical evidence, discussion of results and conclusion in general management and business research.

KEYWORDS: *Research Philosophy, Research Logic, Research Theory, Deductive and Inductive approaches*

I. INTRODUCTION

Scientific knowledge is considered to form based on logical and conceptual connection between empirical evidence and explanation (Kelvin, 2013). Use of logic implies that there are rules guiding the generation of argument in research. On the other hand, the term conceptual implies use of ideas and principles to guide argument. Hence the logical and conceptual connectivity between empirical evidence and explanation define the research rigor. As a result, empirical research is the accepted scientific approach to knowledge generation and now a compulsory condition for the award of postgraduate degrees world-over. However, this condition often puts postgraduate candidates at risk of delaying and sometimes failing to complete their courses. Also, while doing research the cost of error and research integrity can be high while the number of trials required in empirical research can be expensive. Accordingly, researchers face a challenge to practice intellectual critical reasoning as an essential part of their research projects (Crossan, 2003). In particular, the research skills include theoretical logic, abstract thinking, and reflection. While theoretical logic is about following a way of thinking about cause-effect of related events in order to describe the implicit inductive and deductive consequences of observed phenomena; abstract thinking deals with objects, principles and ideas that are not physically present 'here and now' in order to arrive at the deeper meaning of things and a bigger picture; and reflection concerns a researchers' reasoning process to make meaning of an experience. Hence, through application the 3 skills-set, the researcher's competence is demonstrated in identifying a suitable research area; setting research objectives; locating, organizing and critically analyzing the relevant secondary data and authoritative literature; devising an appropriate research methodology; analyzing the primary data and drawing on the literature in the field; drawing conclusions, making relevant recommendations and indications of areas for further research. From this stand point, a postgraduate researcher in general management and business has to engage in intellectual research process to form conceptual connectivity between evidence collected and explanation of observed phenomena. This article contributes towards improving insights of postgraduate researchers about use of research philosophy, logic and theorization in general management and business.

II. RESEARCH PHILOSOPHY

In layman's terms, research means the search for knowledge. According to Williams (2007), research is sometimes erroneously regarded as the gathering information, documenting of facts, and look through previously collected data for information. Contrary to this opinion, research is the process of collecting,

analyzing, and interpreting data in order to understand a phenomenon and use the knowledge generated to devise new applications (Leedy & Omrod, 2015). Thus, the postgraduate research process like in the University postgraduate handbook (MUST, 2017) is scientific and follows a predetermined procedure. The research process is systematic - involves problem definition, stating the research objectives, literature review, methodology, data analysis and writing-up the findings, all of which takes place within an established framework.

As argued by Saunders, Lewis & Thornhill (2014), the research framework guides the researcher to have an idea of what the study should contain, what is to be left out, the intellectual reasoning and interpretation to be drawn from the collected data. Saunders, Lewis & Thornhill (2014) further observe that the research process starts with stating the research problem about a specific phenomenon of interest. Logically developing the problem requires the researcher to go through the following constructive thinking and reflective steps of penning: [1] the desired state, [2] the current situation, [3] the gap revealed between 1 and 2 and [4] the hook, which is the motivating point of the study. Accordingly, a clearly stated management/business research question directs a researcher's attention, thoughts and efforts towards the most suitable methodology to find answer to the problem of the phenomenon of interest.

Given that a researcher is a communicator, the research results should be effectively communicated and appreciated by other scholars and the general public. For this reason, a management/business researcher should state the philosophical approach used in answering the research question. By doing so, the researcher is able to validate the research outcome. According to Crossan (2013), it is the nature of research questions (hypotheses) that best demonstrate the value of understanding philosophy. Smith (1998) earlier observed that a simplistic style and innocent manner of questioning and proposal development always produces confusion and instability in developing research ideas about the world view. To overcome the above limitation this article contributes towards the postgraduate researchers' understanding and development of the philosophical underpinning of their projects.

To conceptualise a study, the researcher must engage in circular philosophical questioning (Crossan, 2013). Questioning encourages critical thinking and prompts the origination of appropriate research questions in relation to the research area and topic. Thus, research philosophy refers to a researcher's world view and represents the foundation on which the research procedure is built. According to Saunders, et al. (2009), research studies are underpinned by two main research philosophies namely: ontology and epistemology. In essence, a postgraduate business/management researcher chooses a philosophical orientation of the study since each of these has a different procedure for a research study. According to Pathirage, Amaratunga, & Haigh, (2016), epistemology is concerned with theory of knowledge, ontological assumptions about nature of reality and axiological purposes (theory of value) describes. While conceptualising the research project, the three states about the researcher's world view should be stated. Hence, clear philosophical description of the research project bridges problem formulation, description of theoretical framework, methodology and links empirical evidence with explanation of research phenomena. Easterby-Smith, Thorpe, & Jackson, (2008) cautions that not thinking through on philosophical issues that guide a research study, may not necessarily be critical, but it can gravely affect the quality of research design and study outcomes.

2.1 Ontology

Ontology describes the nature of reality, that is, 'what' knowledge is and the researcher's assumptions about reality. Ontology basically considers the researcher's assumptions of the way the world operates and commitment to specific views (Pathirage, Amaratunga, & Haigh, 2016). Saunders, et al., (2009) identified two researcher's perspectives of ontology being '**objectivism**' and '**subjectivism**'. '**Objectivism**' view portrays the researcher's position that in reality, social entities exist external to social actors that are concerned with their existence. For example, the objectivists' believe that a business entity is a social actor and is external functioning independently of its employees. Thus, an objectivist researcher studies the observed management phenomena independently to arrive at objective evidence. In principle, business quantitative related studies assume ontological objectivism. On the other hand, a 'Subjectivism' researcher believes that social phenomena are created from the perceptions and consequent actions of the social actors that are concerned with their existence. Therefore, the ontology for such studies is based on respondent opinions/perceptions of social reality and each respondent represents a portion of social reality since primary data collected is based on the perceptions and opinions of each respondents. The objective of such studies is to validate subjective interpretations, meanings and understanding of given research phenomena. Subjectivist researchers adopt qualitative methodological approach.

2.2 Epistemology

Epistemology describes the nature of knowledge and its contents. According to Saunders, et al., (2009) epistemology concerns the nature, origins and limits of human knowledge. The kind of knowledge referred to is propositional knowledge of (knowledge –that explains for example $2 + 2 = 4$) as opposed to knowledge to explain how to add $2 + 2 = 4$ (Edmund, 1963). Basically in business research, epistemology explains the theory of knowledge for a given business research phenomena of interest i.e. knowing what we do, what justifies us in believing what we do, and what standards of evidence to use in seeking truths about human experience and the world. In essence, epistemology describes the researcher's positioning about the reality and assumptions about knowledge getting and acceptance (Pathirage, Amaratunga, &Haigh, 2016). Thus, epistemological assumptions prepare the researcher to control the study approach, increases validity of the results and ensure that knowledge produced from the research process is cumulative (Girod-Seville &Perret, 2001). In essence, a business researcher to understand the nature, value and status of scientific knowledge expected from a research study should either be a positivist or interpretivist as explained below:

i. Positivism

Positivism is rationally connected to pure scientific rules and based on facts in order to satisfy the four requirements of falsifiability, logical consistency, relative explanatory power, and survival (Pathirage, Amaratunga, &Haigh, 2016). Positivism researchers conform to empirical observations that are falsifiable and the research theoretical propositions must be directly connected to one another. Also, the theory must explicitly explain or predict competing theory and the explanatory theory should withstand empirical tests. Positivism also aims at measuring the variables of a social phenomenon through quantification, and strongly maintains that methodological procedures of natural sciences are adaptable to social sciences (Bell, 1993). The positivist researcher assumes that humans and physical matter in research are similar and that both can use similar measurement techniques. Hence, this explains why the positivist researcher conveniently formulates a research study by following a three-step procedure of diagnosis (problem generation), design (methodology), and change (application of findings).

Further, the positivist may conduct research by testing theory, with the purpose of increasing the predictive understanding of specific phenomena. Saunders et al., (2009) highlighted that only observable facts that have been developed based on a hypothesis that was drawn relying on the principles of a current theory will lead to credible research results. Based on these explanations, the positivist can be regarded as an ideology that regards only research outcomes that rely on credible and identifiable scientific procedures. In spite of its popularity positivism has weaknesses which weaken its relevance in the field of management and business research and social science in general (Saunders et al., 2009). The most notable weakness is that it over simplifies the real world into experimental situations, difficult to apply in reality.

ii. Interpretivism

The Interpretivism paradigm emphasises the examination of text to determine entrenched meanings, especially regarding how people use language and symbols to define and construct social practices in order to understand people's actions and behaviours (Balarabe Kura, 2012). Interpretivism draws upon concepts that positivists ignore such as self 'consciousness', 'freedom of choice', and 'meanings'. From the interpretivism perspective, the world is perceived through trends and logic of situations but not the laws of social reality, since it is easier to understand people's perceptions which can be used to explain their behaviours by conducting a detailed, qualitative study. This means that interpretivists try to appreciate knowledge based on social reality from the perspective of detailed understanding and interpretation of means (Balarabe Kura, 2012). Interpretivists focus on the full complexity of human sense-making as the situation emerges, and does not predefine dependent and independent variables.

Interpretivism uses research methods such as participant and non-participant observation to understand facts of interaction within their context. They also believe that social reality is based on subjective interpretation of actions. Interpretivists are criticised in terms of difficulties arising in establishing validity, reliability, and generalisations in social research, and there are also concerns about the researcher's intrusion in the lives of the participants as they interpret due to bias. However, interpretivists have argued that interpretations are part of scientific knowledge in their own right, although interpretation of reality depends upon the researcher (Balarabe Kura, 2012). Although they emphasise meaning and interpretation of reality through understanding of behaviours and experiences of people, they tend to overlook the ecological influence on their subjects and research (Balarabe Kura, 2012).

III. RESEARCH LOGIC

Research logic refers to the two broad reasoning methods of research - the deductive and inductive approaches. Each of these approaches of reasoning has a different conceptual research design as explained below:

3.1 Deductive Approach

Deductive research approach works from more general to the specific. It proceeds from theory to data (theory, method, data, findings) and is usually referred to as top-down approach (Balarabe Kura, 2012). Specifically, it involves the formulation of hypothesis based on existing theory, and then designing a research strategy to test the hypothesis. Deductive research approach works by means of hypotheses which can be derived from the suggestion of theory, which means that it involves deducing conclusions from propositions. The deductive research approach is the dominant approach in the natural sciences in which laws remain the basis of explanation, permits the anticipation of phenomena, predicts their occurrence and therefore permits them to be controlled. Accordingly, Robson (2011) introduces the procedure through which deductive research can be implemented:

1. Deducing a problem and hence hypothesis (research questions) from the theory
2. Expressing the hypothesis in operational terms
3. Testing the operational hypothesis
4. Examining the specific outcome of the inquiry
5. If necessary, modifying the theory

3.2 Inductive Approach

The inductive approach refers to the procedure in which theory would follow the data. The inductive research builds theory by collecting qualitative data from personal interviews with the aim of understanding what is happening within a particular circumstance. They explained further that the researcher relies on the data that has been collected such as personal interviews to build theory with the aim of understanding what is happening within a particular circumstance. Basically, the inductive approach involves sense-making from a research data, and the result of this process would be the formulation of a theory Saunders et al., (2009).

The approach followed in most business research studies tends toward the deductive research. This is because the deductive research aligns with the positivism which supports a scientific approach to manage a research study. Deductive research has previously been supported by Gill & Johnson's (2002) explanation that learning involves reflecting upon specific past experiences and through the development of conceptual and theoretical concepts. Hence, through deductive method, business research is implemented based on the theoretical assumption that: "You cannot measure what you do not define" (Kelvin, 2013), "If you cannot measure it, you cannot manage it" Peter Drucker as cited by (Behn, 2005: 1), consequently, "If you cannot measure it, you cannot improve it" (Kelvin, 2013). In more details: "If you don't measure results, you can't tell success from failure" (evaluate); "If you can't see success, you can't reward it" (motivate); "If you can't see success, you can't learn from it" (lean); "If you can demonstrate results, you can win public support" (promote) (Behn, 2003: 600). These concepts explain why the underpinning research design in deductive research follows the process of: introduction to the study, literature review, methodology and the development of a framework for measuring the performance of the study variables, preliminary data collection, the main survey, data analysis, results, interpretation and conclusion. Data is collected to test the hypothesis and the results are analysed using the Analysis of Variance (ANOVA), the t-test, and the Chi-square test with the aid of the SPSS statistical software. The results are used to develop a performance measurement framework, which sometimes is validated using the interview approach. The specific procedure followed is:

Table 1: Deductive approach procedure

1. Problem definition (Theory)
2. Hypothesis/Research questions
3. Research design
4. Measurement of concepts
5. Select research area/site(s)
6. Select research subjects/respondents
7. Data Collection
8. Processing data
9. Analysing data
10. Findings/conclusions
11. Write up findings/ conclusions

Source: Postgraduate Handbook, Mbarara University of Science and Technology, 2017

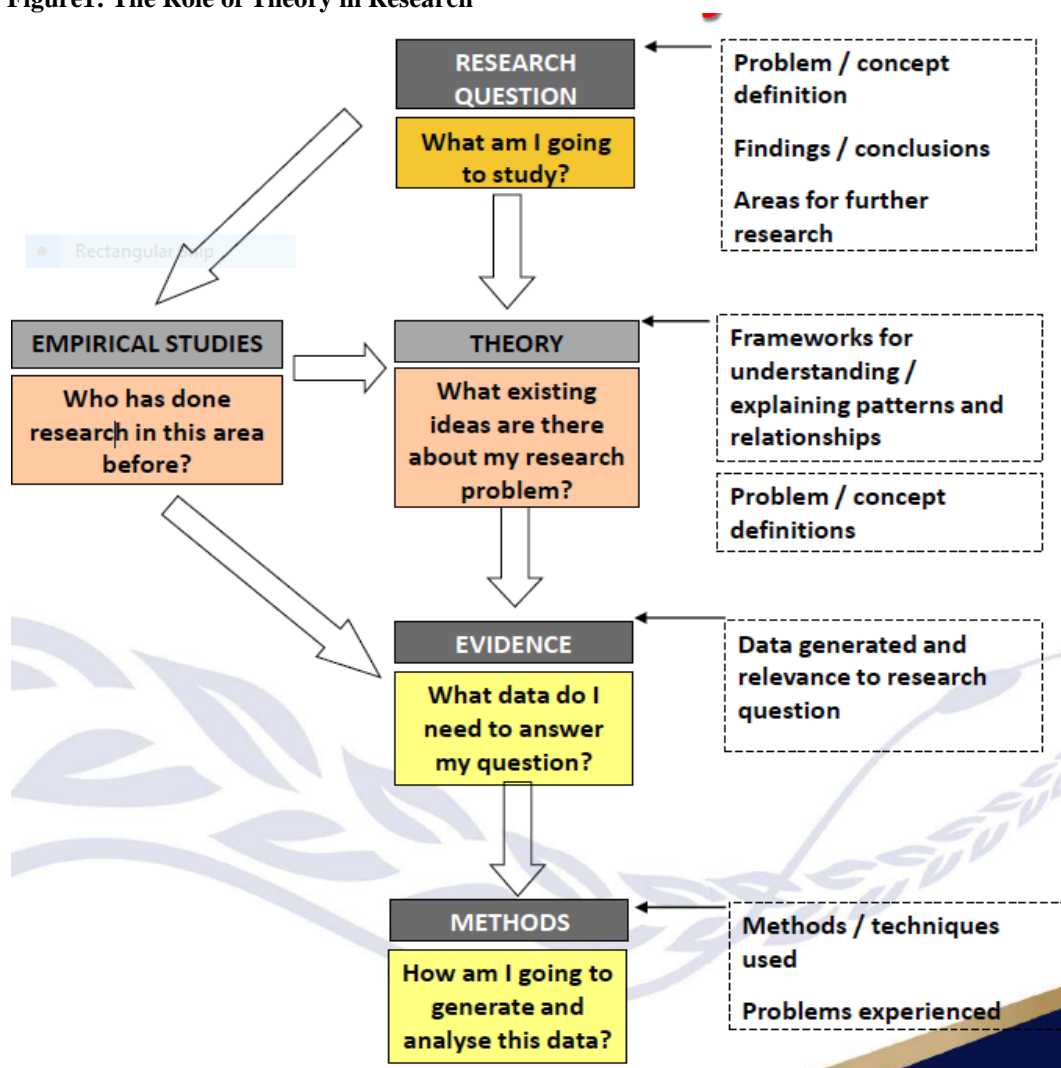
IV. RESEARCH THEORY

The depth of the theoretical base which underpins a research discipline underscores the maturity level achieved by scholars within the area of research. One of the characteristics of a mature discipline is the presence of a sound theoretical base. Previous researchers have made several efforts to define theory, and this has resulted in its description in several diverse ways based on different philosophical views. From a general perspective, a theory is: *"an ordered set of assertions about a generic behaviour or structure assumed to hold throughout a significantly broad range of specific instances (Saunders et al., 2009)"*. Also Gill and Johnson (2002) define theory as a network of suppositions advanced to enhance the conceptualisation and explanation of a specific social or natural phenomenon. From this perspective, research theory guides the researcher to (Neuman, 1997):

- (a) Make sense of research data in relation to research objectives
- (b) Connect a single study to the immense base of knowledge to which other researchers contribute (connect results and literature review)
- (c) increase awareness of interconnections and of the broader significance of data (connect objectives, literature review, results, conclusions, policy implications and recommendations)

In a deductive approach, theory guides the research design and the interpretation of results. Thus, hypotheses (research questions) represent a contention/debate regarding the connections existing between two or more concepts. So, concepts in research represent the pieces of theories to form a hypothesis (research question). Theory may also be described as a model, framework, and a collection of propositions or hypotheses to gain understanding a given phenomenon (Pathirage, Amaratunga, & Haigh, 2016). Below, figure 1 demonstrates the centrality of theory in deductive business research.

Figure1: The Role of Theory in Research



Source: Christopher E. Sunday (2016). The role of theory in research, University of the Western cape, South Africa. Available on: <https://www.uwc.ac.za/Students/.../The%20role%20of%20theory%20in%20research.p...>

V. CONCLUSION

Academic writing relates to a clearly structured approach to justify and validate facts, theories and opinions presented to form an intellectual argument. Therefore, a postgraduate researcher in general management and business demonstrates the research philosophy, logic and theorization to present a worthy intellectual argument underpinning knowledge generation. Also, the thesis/dissertations demonstrates intellectual rigor beyond clarity of expression, grammar, use of citation and referencing. Hence, a researcher being a critical reader is guided by philosophical questioning to demonstrate how valid literature is, and how relevant it is to the research topic and the entire research process. Never simply accept what is read in literature; instead, at all times, a researcher has to articulate the philosophical orientation behind the methods employed. In addition, researchers painstakingly argue for, and justify each decision taken to collection data and write the research report.

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