

Adopting A Research Methodology in Management Sciences: An Appropriate Guide for Postgraduate Researchers

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Abstract

Most postgraduate researchers from management sciences find it difficult in establishing their research philosophies and paradigms within the boundaries of research approaches in social and management sciences. This has resulted in methodological unfitness in most postgraduate thesis and dissertations. Therefore, this paper provides theoretical evidence from the literature the numerous research philosophies and paradigms underpinning social and management sciences research. Consequently, the paper pinpoint and presents the most appropriate research methodology and method for adoption by postgraduate researchers based on the philosophical assumptions and paradigm identified. Moreover, the paper clearly discussed the ontological, epistemological, human nature and methodological dimensions associated with management sciences research. The paper outlines three philosophies namely, positivism, interpretivism and pragmatic dimensions as strands of the research philosophies in social and management sciences for adoption by researchers. Lastly, the paper identified and explained mixed methodology as the current global research practices in management sciences. The paper recommends that postgraduate researchers in management sciences should be encouraged to underpin their thesis and dissertations with philosophical viewpoints and adopt mixed methodology associated with pragmatism which views social reality in pluralistic lens. Thus, when pragmatic approach is used, a researcher will be considered to be standing on his two feet.

Keywords: Research Philosophy, Management Sciences, Postgraduate Researchers

1. Introduction

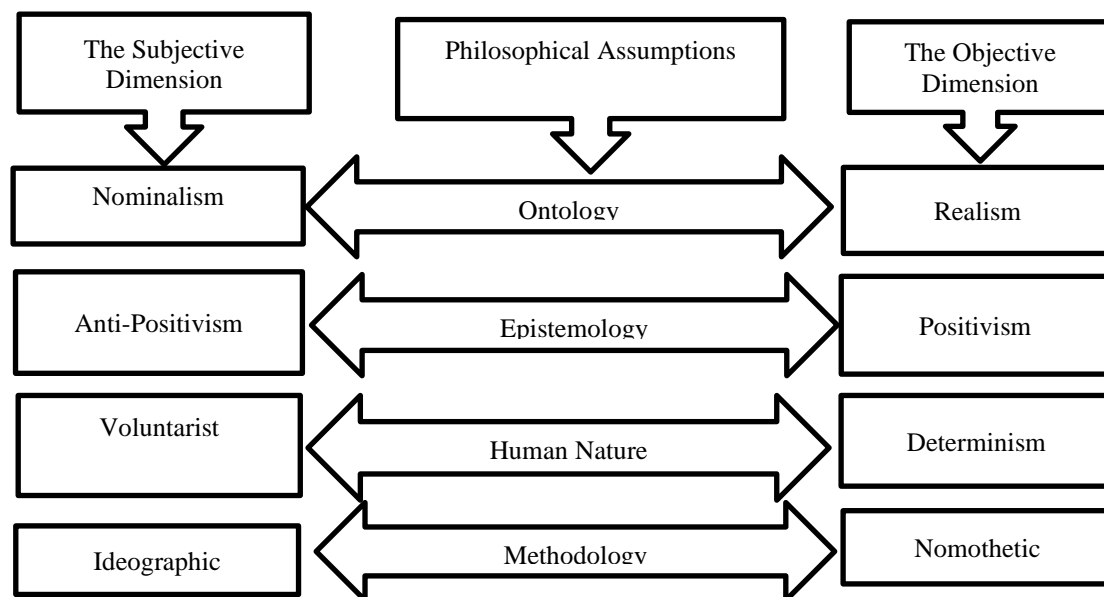
In broader terms, research has been defined as “a systematic and methodological process of inquiry and investigation with a view to increasing knowledge” (Collis & Hussey, 2013, p.2). Management science research deals with scientific process of decision making in solving problems (Cook,1968). According to Burrell & Morgan (1979) framework, social science research is underpinned by different sets of meta-theoretical assumptions about the nature of social science and the nature of society. Social and management sciences are viewed as the study of how people behave and the impact their actions would made on the world around them (Burrell & Morgan, 1979; Blaikie, 2010; Collis & Hussey, 2014). This suggests that the study of social and management sciences necessitates the researcher to understand the ways of

reasoning and belief of people. To do that, the researcher has to make some philosophical assumptions. These meta-theoretical assumptions are the two extreme standpoints: the subjective-objective dimensions.

The subjective-objective dimensions of social science research provide the bases on how the world is viewed by the four sets of philosophical assumptions and these are: ontology, epistemology, human nature and methodology. The first three sets of philosophical assumptions play a significant role in determining the latter. In other words, the type of methodology to be adopted in undertaking a particular research is shaped by the ontology, epistemological and the nature of the researcher.

According to Burrell & Morgan (1979), the subjective dimension is considered to be ontologically nominalist, epistemologically anti-objectivist. It also considers human nature as a voluntarist. On the other hand, the objective dimension has the attributes of realism, objectivism and determinism as ontological, epistemological and human nature respectively. Figure 1 below gives the diagrammatic view of the four sets of philosophical assumptions based on the subjective-objective dimension to social science research, as suggested by Burrell & Morgan (1979).

Figure 1 The subjective-Objective Dimensions to Social Science Research



Source: Burrell and Morgan, 1979: p.3

1.2 Justification for the Study

As indicated in Figure 1 above, much of research strands in social sciences are founded on two extremes of objective and subjective philosophical dimensions by Burrell & Morgan (1979). These dimensions represent branches of social world-views, which analyse contesting standpoints of social reality that is underpinned by philosophical assumptions, approaches and sociology of society. Consensually, the work of Burrell & Morgan (1979) was considered as the foundation of social science research. Given the above explanation, there seems to be cross connection between the subjective-objective, which resulted to the basic paradigms that aid in constructing social reality in social science. The important aspect of these paradigms is that they provide the platform of accommodating one's perception on social reality. It also provides direction to the area of the research and a means of contrasting the differences and similarities with other studies to determine the depth and biasness' of the research area. Also, these

paradigms give the theoretical and intellectual boundary for determining the way in which the world is viewed and analysed.

Despite the significant contribution of Burrell & Morgan (1979) framework to the social science research (Laughling, 1995; Chua, 1986; Ryan, Scapens & Theobald, 2002; Saunders, Lewis & Thornhill, 2012), it has been a subject of severe criticism by several scholars in the discipline (Willmott, 1993; Hopper & Powell, 1985). The framework of Burrell & Morgan (1979) were criticised for stating that the paradigms are contradictory and thus be considered as mutually exclusive; adopting one has inevitably forbade using others (p.25).

This statement made by Burrell & Morgan (1979) were labelled been narrow which appeared not to represent the dynamic and multi-faceted nature of social ideas, social experience and social reality (Waziri, 2016, Willmott, 1993). Thus, the partition of the subjective-objective dimensions may have denied proponents of mixed methods research in using the framework (Willmott, 1993). For this reason, Gioia and Pitrie (1990) advocated that the social science paradigms should be elastic, porous and interconnected and be considered as continuums. It is on this basis that researchers seeking to combine subjective-objective in their studies consider the Burrell and Morgan framework irrelevant (Waziri, 2016). Despite the above criticism, the Burrell and Morgan framework is considered as the philosophical and theoretical foundation of social science research (Chua, 1986). Other social science disciplines such as management sciences used the Burrell and Morgan framework in building their taxonomy of research (Hopper & Powell, 1985; Hassan, 2012).

Thus, social science research could be undertaken following both confirmatory methods associated with quantitative research and exploratory method associated with qualitative method. Therefore, choosing either the subjective or objective divide could result in adopting different methodologies of conducting research even on the same phenomenon. Most social and management sciences researchers relied on the work of Burrell & Morgan (1976) of using single research method, which may be having certain limitations (Yeasmin & Rahman, 2012). Similarly, radical critiques have criticised these extremes dimensions (Keller, 1985; Rose, 1983). This suggests that science itself is not immune to subjectivity of the researcher as claimed by Burrell & Morgan (1979), and Collis & Hussey (2009).

In order to keep pace with social dynamism, social science researches are motivated to move away from the traditional strict adherence of either being quantitative (objective) or qualitative (subjective) (Johnson & Christensen, 2010). This is referred to as the mixed method of research designed to achieve the objective of providing complex and full understanding of investigated phenomenon from multiple perspectives. This is consistent with the argument that although the two methods are substantively distinctive, they are compatible (Bryman, 2004; 2015). Agreeing with their views, Blaikie (2010) states that mixed methods are becoming popular because of the growing recognition of paradigmatic pluralism in social science research. In addition, Saunders, Lewis & Thornhill (2012) states that combination of methods; philosophies and paradigms are considered as pragmatism in the research literature. Currently, the combination of paradigms, quantitative and qualitative research techniques, methods, approaches, into a single study are encouraged because it produces better outcome (Sale, Lohfeld & Brazil 2002; Johnson & Onwuegbuzie, 2004; Creswell, 2013; Bryman, 2015). Miles & Huberman (1994:4) in Kyari (2013: 143) states as thus:

“In epistemological debates, it is tempting to operate at the poles. But in the actual practice of empirical research, we believe that all of us ... are closer to the centre with multiple overlaps” ... an increasing number of researchers now see the world with more pragmatic, ecumenical eyes”.

Similarly, “it is difficult to select a single method allowing to fully diagnose the given problem. It is necessary to employ diverse research methods allowing to provide answers to the posed problem. Thus, it is a necessity to make use of numerous methods and research approaches” (Dźwigoł, 2018, p. 424).

Thus, the use of multiple methods is seen as capable of enhancing confidence (Yeasmin & Rahman, 2012; Bryman, 2015) and precision in the ensuing findings (Denzin, 1978; Bryman, 2004, 2015). Similarly, it is argued that findings from two or more independent measurement processes greatly reduce uncertainties of interpretation (Sechrest, et al., 1966). Thus, literature strands are arguing for the use of multiple methods so that the deficiencies of one method could be overcome by the other (Yeasmin & Rahman, 2012). This could be supported by documented evidence that by combining different theories, data, methods and observers, the weakness or inherent biases in using only one of these could be overcome (Yeasmin & Rahman, 2012). In this way, researchers become more confident of their results; uncover different dimensions of investigated phenomenon; by its comprehensiveness, theoretical triangulation could serve as a critical test for competing theories and could lead to synthesis of theories (Jick, 1979).

Notably, mixed methods, data and combined theories have been the global practices in social science research. Moreover, social and management sciences researchers at postgraduate level in most developed countries review, understand and situate their studies within the boundaries of a philosophical dimensions and paradigms. However, the reverse is the case amongst most postgraduate researchers in developing countries especially in Nigeria. They seem not to be encouraged to review, understand and present research philosophies in their studies. Also, most of the thesis and dissertations in social and management sciences still use single methodological approach.

Therefore, this paper aims to provide an insight into the research philosophies in social science with a view of exposing management science researchers in adopting a specific research philosophy in conducting their research. Also, the paper gives a broad view on mixed methodology as the global best practice in management sciences. The paper is structured into four sections. The next section discusses conceptual reviews while section three captures the theoretical analysis and discussions and lastly, the conclusion in section four.

2. Conceptual Reviews

Ontological assumptions attempt to define what constitute a valid knowledge. In other words, it defines the nature and elements that supposed to be existent in order to recognize a social reality. According to Blaikie (2010), ontological assumptions are based on three distinctive viewpoints: the idealist, realist and cautious realist. The proponents that recognize knowledge to have emanated from the perception of human experience and mind construct are identified as the idealist. However, in the context of Burrell and Morgan (1979), they are considered as nominalism ontology, which falls within the subjective dimension. On the other hand, the objective-dimension is of the view that the knowledge of the social reality is derived from either independent of the human consciousness or dependent of human mind-set. This explains the ontological assumptions of realism, which considers human being as a product of the society that has no influence over the social reality. In determining what constitute a valid knowledge, the realist believe that it is the only through hypothesis testing that causal explanation about the social reality can be made.

However, Kuhn (1970) argues that valid knowledge of social reality is derived from both human intellect and those things defined by reality, which are independent to human perception. Similarly, Blaikie (2010) states as thus:

“The world is not a universe of facts that exist independently of the observer; theoretical statements do not describe reality, they depend on assumptions embedded in theoretical constructs and common-sense thinking. Truth is based not on evidence but on the consensus that could be expected in an ideal speech situation” (p.180).

These suggest that a researcher may by moving along the continuum to understand reality from different perspectives either from subjective or objective extreme ends. This movement is termed as pluralism of reality, which appreciates both the objective and subjective and intersubjective reality and their interrelations (Johnson and Christensen, 2010). In this context, a researcher moves back and forth in understanding reality. The universe is seen as evolving rather than static. External forces do not determine humans; rather through intelligence, humans are capable of shaping experience (Maxcy, 2003, p.63). Similarly, Laughlin (1995) recognizes the existence of material reality distinct from our interpretations does not dismiss inevitable bias in perceptive understanding. He terms this as middle range ontological assumption. Closely associated with ontological assumptions are epistemological assumptions.

The epistemological assumption defines the way within which knowledge of the world reality can be obtained and judged. It states the methodology and methods to be adopted in producing reliable, legitimate and sufficient knowledge. However, the nature of the knowledge to be generated is underpinned by the ontological assumptions. According to Blaikie (2010) for instance, the epistemologies of the positivism paradigm attempt to generate valid social knowledge via scientific procedures. On the other hand, generating social reality from the perspective of interpretivists is underpinned by human experience, reasons and intuition.

Blaikie (2010) has identified three broad classifications of epistemological assumption, which outline procedures for obtaining a valid knowledge. These are: constructionism, empiricism and falsificationism. The constructionism relates to the belief that social reality emanates from human ideas, which are presented from personal understanding. Contrary to constructionism, the empiricism and falsificationism opined that human ideas have to be subjected to scientific test to be a valid knowledge. In other words, the presentation of ideas using scientific concepts and theories help in eliminating elements of human biasness in order to infuse accuracy. Constructionism disagrees with the view of both falsificationism and empiricism. The proponents of constructionism believe that social reality is a matter of mind construct; it is neither discovered through scientific method nor produced from reasoning. But rather, the researcher tries to create and not to discover the object based on his personal perspective.

However, the use of scientific methods, quantitative data and variable provides adequate information that may be deemed vital for understanding the problem under investigation (Blaikie, 2010: 168). However, radical critiques have criticised the objective science (objective dimension) as being anti-feminist (Keller, 1985; Rose, 1983). This suggests that science itself is not immune to subjectivity of the researcher as claimed by Burrell & Morgan (1979), and Collis & Hussey (2009).

Based on the above, moving along the continuum of the two extreme ends of positivism and anti-positivism epistemological divides is preferred in order to generate a valid knowledge. Hence, the pragmatism epistemological assumptions are introduced (Johnston & Christensen, 2010). Similarly, the pragmatic epistemological assumption of Johnston & Christensen (2010) is consistent with the middle range epistemological assumption of Laughlin (1995) who argues that in an attempt to obtain knowledge, generalisations about reality are possible, although not guaranteed to exist, yet these will always be skeletal requiring empirical details in order to be meaningful (Laughlin, 1995).

The epistemological assumption of pragmatism is mixture of universal and community standards or specific needs based standards pragmatic justification implying that what works for whom in a specific context (Johnston & Christensen, 2010). In this way, the importance of subjective meaning and theorisation of empirical observations are recognised without surrendering to rigid methodological adherence (Modell, Morris & Scapens, 2007). However, it is argued that this epistemological thought is too vague as a ground for justification of mixed methods (Maxcy, 2003). The next philosophical assumption after epistemology is the human nature.

The philosophical assumption about the human nature as stated by Burrell & Morgan (1979) could be either voluntarist or determinist. This human nature defines how human beings generally interact with their environment. In the perspective of Burrell & Morgan (1979), human nature, explain whether the environment has any significant influence in determining man perception and his intellectual ability or vice-versa. It determines whether human beings and their experiences are products of the environment or they dictate and control the environment. However, human beings naturally view social reality and respond to situation either in mechanistic or deterministic fashion from the perspective of their environmental beliefs, culture and norms. Similar to ontological and epistemological assumptions, moving along the continuums of the subjective – objective perspectives on human nature assumption could be applied.

It is revealed that human nature is dynamic, complex, and partially predictable (Johnston & Christensen, 2010). Human nature and behaviour are influenced by multiple factors such as the environment, nature, freewill and chance and both must be taken into consideration in social science studies. This perspective recognizes multiple factors that could influence human nature; thus, human nature rather than being purely voluntarism or deterministic, is combination of both. Ontological, epistemological and human nature assumptions as outlined above are reported as having implications on choosing a methodology for conducting research (Burrell & Morgan, 1979); below is an outline of the methodological debate.

The methodological assumption dictates the ways and means in which a researcher designs to undertake a study in order to obtain knowledge about the social reality (Hassard, 1991; Jonker & Pennink, 2010). However, Ryan, Scapens & Theobald (2002) argued that, adopting a research methodology depends on the philosophical assumptions by the researcher. As explained earlier, these philosophical assumptions are mere personal construct coined to suit researcher's ways of reasoning and belief that are in most cases not totally objective (Hopper & Powell, 1985). Thus, research methodology is the reflection of the philosophical assumptions of researcher's paradigm in order to achieve the research aim and objectives. Blaikie (2010) considers research strategies to mean research methodology.

According to Burrell & Morgan (1979), researcher's methodological assumption could be either ideographic or nomothetic depending on the philosophical assumptions adopted. Within the ideographic assumption, it stresses on generating knowledge from data collected during fieldwork while nomothetic methodological assumption emphasises on testing hypotheses and theory with data. Thus, social science research could be undertaken following both confirmatory methods associated with quantitative research and exploratory method associated with qualitative method. Therefore, choosing either the subjective or objective divide or moving along these divides such as pragmatism could result in adopting different methodologies of conducting research even on the same phenomenon.

However, in order to keep pace with social dynamism, social and management sciences researchers are motivated to move away from the traditional strict adherence of either being quantitative (objective) or qualitative (subjective) (Johnson & Christensen, 2010). This is

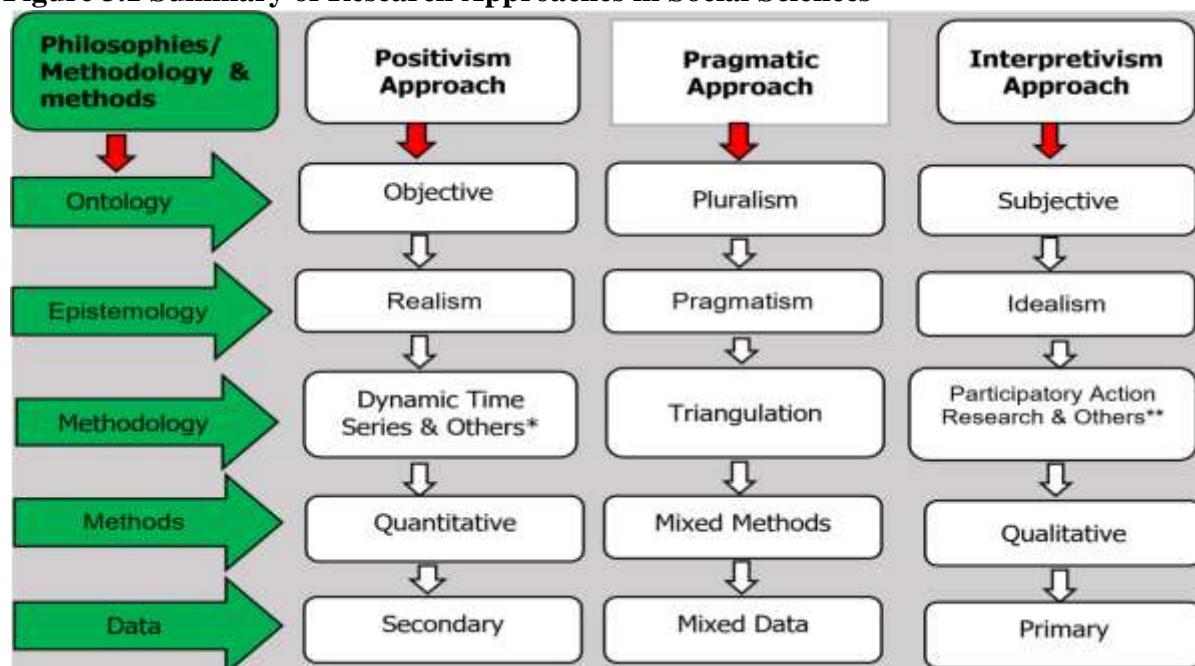
referred to as the mixed method of research designed to achieve the objective of providing complex and full understanding of investigated phenomenon from multiple perspectives. This is consistent with the argument that although the two methods are substantively distinctive, they are compatible (Bryman, 2004; 2015). Agreeing with their views, Blaikie (2010) states that mixed methods are becoming popular because of the growing recognition of paradigmatic pluralism in social science research. In addition, Saunders, Lewis & Thornhill (2012) states that combination of methods; philosophies and paradigms are considered as pragmatism in the research literature.

2.1 Theoretical Analysis and Discussion

It is argued that the nature of the social phenomenon to be explored determines the appropriate research approach, including philosophical assumptions to be adopted (Morgan & Smirrich, 1980; Hassan, 2012) and methodological choice (Gill & Johnson, 2010). Thus, the purpose of a study specifies its philosophical assumptions, which in turn determine its methodology (Hussey and Hussey, 1997). For instance, if the aim of the study is to determine the effect of the independent variables on the dependent variable, the objective dimension of a research is used to empirically evaluate these relationships. However, if it is solely a perception studies, the subjective philosophical dimension is used. The subjective dimension focuses on qualitative studies that involves the collection of primary data using questionnaires, interviews, and focus group discussions. Lastly, the pragmatic approach of research combines both the objective and subjective philosophical dimensions. In other words, it quantitatively evaluates the relationship between variables and goes further to either corroborate the quantitative findings and or solicit for further insights into the subject matter.

Thus, the combination of the objective-subjective philosophical dimensions of social and management sciences via quantitative measurements and qualitative data from surveys give a robust understanding of the research problem from a multiple and diverse perspectives. Overall, the research approach, methodology and methods in social and management sciences, as highlighted can be summarised below.

Figure 3.1 Summary of Research Approaches in Social Sciences



Source: Waziri (2016)

Notes: According to Collins & Hussey (2014), * Experimental research, surveys; cross-sectional studies; and longitudinal studies are documented as methodologies associated with positivism. On the other hand, ** Grounded theory; hermeneutics; ethnography; participative enquiry; action research; case studies; feminist, gender and ethnicity studies are recognized as studies associated with interpretive research approach/paradigm.

The most relevant is the pragmatic dimension. Ontologically, this philosophy believes in the existence of pluralism of reality, which appreciates objective, subjective and intersubjective realities and their interrelations (Johnson & Christensen, 2010). Thus, the researcher moves back and forth in understanding reality (Maxcy, 2003). To conduct this kind of study, the researcher is expected to obtain both quantitative and qualitative data. The quantitative approach is a research method associated with positivist who believes in objective reality. On the other hand, the supportive qualitative analysis via surveys is a research method associated with interpretivists that believe in subjective reality (Collis & Hussey, 2014).

Therefore, a researcher will attempt to test hypotheses and answer research questions (Johnston and Christensen, 2010). This position is consistent with Laughlin (1995) who advocates for the middle of the range approach between the objective and subjective dichotomy or moving along back and forth between realism and idealist on the objective-subjective dichotomy developed by Blaikie (2010). Closely following ontological assumption is epistemological assumption.

Based on the epistemological assumption, the suited ontological stand is pragmatic epistemological assumption, which defines what works in specific contexts and the use of universal standards and specific needs standards in order to answer the hypotheses and research questions (Johnston & Christensen, 2010). Thus, the importance of theory laden empirical observations and subjective meaning in generating valid knowledge are recognized (Johnson & Onwuegbuzie, 2004). This could be argued as moving along the continuum instead of being at either of the two extreme ends of positivism and anti-positivism epistemological divides.

Conversely, the pragmatic epistemological assumption according to Johnston & Christensen (2010) & Laughlin (1995) is an attempt to obtain knowledge generalisations about reality are possible, although not guaranteed to exist, yet these will always be skeletal requiring empirical details in order to be meaningful. Therefore, in mixed research, the quantitative data is capable of revealing causal relationships between constituents of the social world (Collis & Hussey, 2014). While the qualitative data obtained from surveys justifies the anti-positivist/interpretivist ontological dimension. Thus, both quantitative and qualitative findings are important in arriving at valid knowledge in research. Assumptions on human nature are also acknowledged as important in undertaking social science research.

On human nature, a study can take a position that stresses human nature as being dynamic, complex, and partially predictable (Johnston & Christensen, 2010). In this regard, human nature and behaviour are influenced by multiple factors such as the environment, nature freewill and chance and all these should be taken into consideration in social science studies. Therefore, human nature and behaviour are neither mechanistically determined (determinism) by the environment nor totally free willed (voluntarism); rather, combination of both produces human nature and behaviour. Within the context of mixed study, the perceptions of experts, professional and stakeholders can be sought on the subject matter. Being humans, the views expressed by them is done under free-will. However, the tendencies for environmental influences may not be discarded. Based on the chosen ontological, epistemological, and human nature assumptions, the methodological choice is subsequently presented underneath.

On the one hand of the methodological continuum, is nomothetic approach to social science which values established systematic protocols, techniques as well as hypothesis testing and theories with data as a basis of understanding the social reality as suggested by Burrell &

Morgan, (1979). On the other hand, ideographic approach, which emphasizes that in order to understand the social world, first-hand information, should be obtained about the investigated subject matter. Therefore, mixed study is underpinned by both philosophies (mixture of ideographic and nomothetic assumptions) in undertaking research of this nature.

Thus, quantitative time-series data from secondary sources, which is analysed using either regression, panel or any statistical approach, represents nomothetic approach. Conversely, the surveys conducted with selected experts, professionals and stakeholders is an attempt to get first-hand information in order to further understand the problems under investigation. From this perspective, the methodology of the research could be seen as following the pragmatic approach.

3. Conclusion

This paper has reviewed research methodology and methods in social science. The review revealed the philosophical assumptions and paradigms underpinning social science research. On this basis, the pragmatic paradigm (mixture of both subjective and objective philosophical approaches of social science research) was suggested as philosophical stands for conducting research in management sciences. Consequently, mixed method as the research methodology and research methods respectively. Consistent with research approach adopted, the studies in management sciences should be collecting mixed types of data, both secondary and primary. In that way, studies conducted will have a robust findings and the researchers will have the opportunity to be conversant will both positivist and interpretivists dimensions of research in management sciences. Thus, when pragmatic approach is used, a researcher will be considered to be standing on his two feet.

References

- Barriball, K. & While, A. (1994). Collecting data using a semi-structured interview: a discussion paper. *Journal of Advanced Nursing*, 19 (2), 328-335.
- Biddle, C. & Schafft, K.A. (2015). Axiology and anomaly in the practice of mixed methods work pragmatism, valuation, and the transformative paradigm. *Journal of Mixed Methods Research*, 9(4), 20-334.
- Biesta, G. (2010). Pragmatism and the philosophical foundations of mixed methods research. *Sage handbook of mixed methods in social and behavioural research. Second edition*, 95-118.
- Blaikie, N. (2000). *Designing social research*. Oxford: Blackwell.
- Bogdan, R.C. & Biklen, S.K. (1982). *Qualitative research methods for education*.
- Burrell, G. & Morgan, G., (1979). *Sociological paradigms and organisational analysis*. London: Heinemann.
- Cook, D. (1968). An Overview of Management Science in Educational Research.
- Chua, W.F. (1986). Radical developments in accounting thought. *Accounting review*, 601-632.
- Collis, J. & Hussey, R. (2014). *Business research: A practical guide for undergraduate and postgraduate students*. 4th ed. Hampshire, England: Palgrave Macmillan.
- Creswell, J.W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Crook, C. & Garratt, D. (2005). *The positivism paradigm in contemporary social science research*. Research methods in the social sciences. London: Sage Publication LTD.
- Denzin, N.K. (1978). *The research act: A theoretical introduction to sociological methods*. New York. McGraw-Hill.
- Dźwigoł, H., & Dźwigoł-Barosz, M. (2018). Scientific research methodology in management sciences. *Financial and credit activity problems of theory and practice*, 2(25), 424-437.

- Easterby-Smith, M., Thorpe, R. & Lowe, A. (2002). *Management research methods*. London: Sage Publications.
- Feilzer, M.Y. (2010). Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. *Journal of mixed methods research*, 4(1), 6-16.
- Gill, J. and Johnson, P. (2010). *Research methods for managers*. Sage.
- Gioia, D. A., & Pitre, E. (1990). Multiparadigm perspectives on theory building. *Academy of management review*, 15(4), 584-602.
- Goldkuhl, G. (2012). Pragmatism vs interpretivism in qualitative information systems research. *European Journal of Information Systems*, 21(2), 135-146.
- Hopper, T. & Powell, A. (1985). Making sense of research into the organizational and social aspects of management accounting: A review of its underlying assumptions [1]. *Journal of management Studies*, 22(5), 429-465.
- Hussey, J. & Hussey, R. (1997). *Business research*. Hampshire: Palgrave.
- Jankowicz, D. (2011). Research methods for business and management. *Edinburgh Business School*.
- Jick, T.D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative science quarterly*, 602-611.
- Johnson, B. & Turner, L.A. (2003). Data collection strategies in mixed methods research. *Handbook of mixed methods in social and behavioral research*, 297-319.
- Johnson, R. B., & Christensen, L. B. (2010). *Educational research: Quantitative, qualitative, and mixed approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Johnson, R.B. and Onwuegbuzie, A.J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, 33(7), 14-26.
- Johnson, R. B. (2017). Dialectical pluralism: A metaparadigm whose time has come. *Journal of Mixed Methods Research*, 11(2), 156-173.
- Jonker, J. & Pennink, B. (2010). *The essence of research methodology: A concise guide for Master and PhD Students in Management Science*. Berlin: Springer-Verlag.
- Kuhn, T.S. (1970). Logic of discovery or psychology of research. *Criticism and the Growth of Knowledge*, 1-23.
- Kyari, A.K. (2013). *A theoretical and empirical investigation into the design and implementation of an appropriate tax regime: An evaluation of Nigeria's petroleum taxation arrangements*. PhD thesis. Robert Gordon University, Aberdeen.
- Lancaster, G. (2005). *Research methods in management: A concise introduction to research in management and business consultancy*. Oxford: Elsevier ButterworthHeinemann.
- Laughlin, R. (1995). Empirical research in accounting: Alternative approaches and a case for "middle-range" thinking. *Accounting, Auditing & Accountability Journal*, 8(1), 63-87.
- Maxcy, S.J. (2003). Pragmatic threads in mixed methods research in the social sciences: The search for multiple modes of inquiry and the end of the philosophy of formalism. *Handbook of mixed methods in social and behavioural research*, (51-89).
- Miles, M.B. & Huberman, A.M. (1994). *Qualitative Data Analysis*, 2nd ed. Thousand Oaks, California: SAGE.
- Modell, S., Morris, R. & Scapens, B. (2007). Mixing qualitative and quantitative methods in management accounting research: A critical realist approach. *Social Science Research Network*. [online]. Available from:

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.131.7799&rep=rep1&type=pdf> [Accessed 19/11/2014].

- Morgan, D.L. (2007). Paradigms lost and pragmatism regained methodological implications of combining qualitative and quantitative methods. *Journal of mixed methods research*, 1(1), 48-76.
- Morgan, G. & Smircich, L. (1980). The case for qualitative research. *Academy of management review*, 5(4), 491-500.
- Ryan, B., Scapens, R.W. & Theobald, M. (2002). *Research method and methodology in finance and accounting*. London: Thomson.
- Tashakkori, A. & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Sage. Thousand Oaks.
- Waziri, B.Z. (2016). An empirical investigation of the impact of global energy transition on Nigerian oil and gas exports (Doctoral dissertation, Abertay University, UK).
- Yeasmin, S. & Rahman, K.F. (2012). Triangulation research method as the tool of social science research. *BUP Journal*, 1(1), 154-163.