

Qualitative/Quantitative Methodological Dilemma in Accounting Research: Whence and Whither?

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Abstract

Purpose

The concern of this paper is methodological. It reports on how and why there is a debate regarding most relevant approach in the accounting research “quantitative and qualitative”; what are the solutions proposed; how the proposed solutions are affecting researcher's ontology, epistemology, and method choice.

Design/methodology/approach

The paper is based on the dialectical tradition. Dialectical thinking is deployed through dealing in details with positivistic critiques to the post-positivistic approach and vice-versa. Having been stimulated by these critiques, this paper explains the emergence of middle range solutions that emerged as proper solutions to this methodological dilemma.

Findings

The paper concludes that middle range solutions such as abductive reasoning and triangulation of both theory and methods increased the debate between the two blocks and despite of these debates qualitative and quantitative business research have the same importance as they give a different view of the studied phenomenon.

Originality/value

The novelty of this research is the creation of a holistic review of the qualitative-quantitative methodological dilemma. Through explaining the reasons and solutions proposed for this dilemma the current research represent a valuable resource for future researchers to better position their methodological choice. This work would also be on interest to practitioners interested in keeping up with academic literature.

Keywords: Qualitative, Quantitative, Abductive, mixed-method, triangulation, dilemma.

1. Introduction

Any empirical research is no better than the methodology it adopts – hence the need to outline the methods adopted to collect, analyse, and interpret the empirical data. In accounting research, there are two main methodological perspectives: Quantitative (positivist) and Qualitative (post-positivist). Positivist perspective treats the world as physical or natural world. Scholars following this approach use methods belongs mainly to the natural sciences and they utilise these methods to locate, explain and predict social regularities and patterns. (Diab, 2016, p. 61).

Quantitative researcher usually deploys statistical techniques to test some hypotheses and to analyse data that were collected by methods like questionnaires and surveys. Surveys and questionnaires are widely used in accounting research and are called “mainstream functional studies” (Wickramasinghe, 2011). However, the use of these tools has been criticised by ‘critical’ accounting scholars as incapable of capturing the core business activities and accounting practices in

different contexts: for example, Scapens (1990) notes, that surveys cannot give a deep view of Managerial Accounting Practices. Hence, positivism methods allows only the detection of variations between variables investigated, which means losing the detailed analysis of reasons behind the gaps that emerged (Baker & Bettner, 1997, p. 293; Diab, 2016, p. 62). This may give a wrong perception that we are claiming that positivistic researchers cannot explain cultural and contextual subjective issues, while what is argued that they are giving explanations which lacks to in-depth analysis of the surrounding complex subjective issues, that led to the change in the patterns of behaviour that were measured statistically and were found significant in the analysis.

On the contrary, post-positivist perspective concentrates on the subjective experiences of individuals and exploring the social world as its main concern of study. Having said this, qualitative researchers deploy methods that allow them to get insights into individuals' inner world, for example, they may use ethnographic case studies and in-depth interviews (Hopper & Powell, 1985). This block sees that qualitative approach has a number of advantages (Diab, 2016, pp. 63-64):

First, it entails engaging the researcher within the studied research field. Through this engagement, the researcher can capsule, understand and interpret the realm of accounting in a way that reflects the studied context. Moreover, inductivism in this approach entails that the researcher is a participant in the production of knowledge through his/her reflexivity. Reflexivity comes from engaging in data collection, coding and analysis. in other words, the researcher is not just an outside

observer that is detached from the data collection and analysis like what happens in positivist research (Bryman, 1984, 2005, 2007b; Bryman, 2012; Burchell et al., 1980; Chua, 1986; Mason, 2002; Ryan et al., 2002).

Secondly, as interpretive research concentrates on the subjective angle of accounting greater emphasis is placed on beliefs, perceptions, the participants daily lives, and what motivates them to engage in this course of action (Burchell et al., 1985; Burrell & Morgan, 1979; Hopper & Powell, 1985). Having said this, qualitative research that focuses on individual actors, can help researchers better understand the subjective social phenomena rather than understanding the objective mechanisms of the phenomena. This view is crucial in accounting, hence, organizational studies could be better comprehended by illustrating and highlighting the subjective meaning of the various actors that are intertwined in the action process (Burchell et al., 1980).

Finally, qualitative research includes lots of effort to collect, code, analyse and summarize research results. This effort allows researchers to get in-depth understanding of the studied events and actions that would have rather been impossible (Diab, 2016). Accordingly, qualitative research helps the researcher to see the complex web of patterns, events, and actions. This comprehensive holistic view, in turn, makes sense of the contextual ramifications that surrounds the relation between accounting rules, and routines (Lukka, 2007; Vaivio, 2008).

It is apparent from this brief review that there is a long-standing debate between the qualitative and quantitative researchers. What needs more clarification is: what are the reasons behind this? And what are

the proposed solutions, and to where these debates are taking us? These issues will be dealt with in details in the remaining of the paper. This paper is thus divided into five main sections. Section 2 discusses what does a research strategy mean and how it relates to both qualitative and quantitative research and how this produces different use of theory. Section 3 provides a description of the abductive methodology as an alternative middle range that supports qualitative research against quantitative research critiques. Section 4 discusses other middle range solutions that tried to get the benefits of both schools in one place. Section 5 summarizes and concludes the paper.

2. Research Strategy and Research Methodology

Research strategy is concerned with, the logic through which the researcher is intending to answer his research questions. It may be called ‘the methodological strategy’ (Mason, 2002, p. 30). Although, there is no consensus about an agreed definition of what is strategy. Yet, it is agreed that it is the umbrella which the whole project of research will work underneath (Neuman, 2007).

The logic behind research is concerned with whether the research will use qualitative or quantitative path (Bryman, 2012), as well as the ontological and epistemological stance (Bryman, 2012; Mason, 2002; Ritchie et al., 2013). In addition, to the relation between theory and the research and whether the research will use inductive or deductive approach (Bryman, 2012). Finally, this logic and its components will affect the design and method(s) that will be used throughout the research stages to follow and seek to explain the ‘intellectual puzzle’ (Mason, 2002, p. 13).

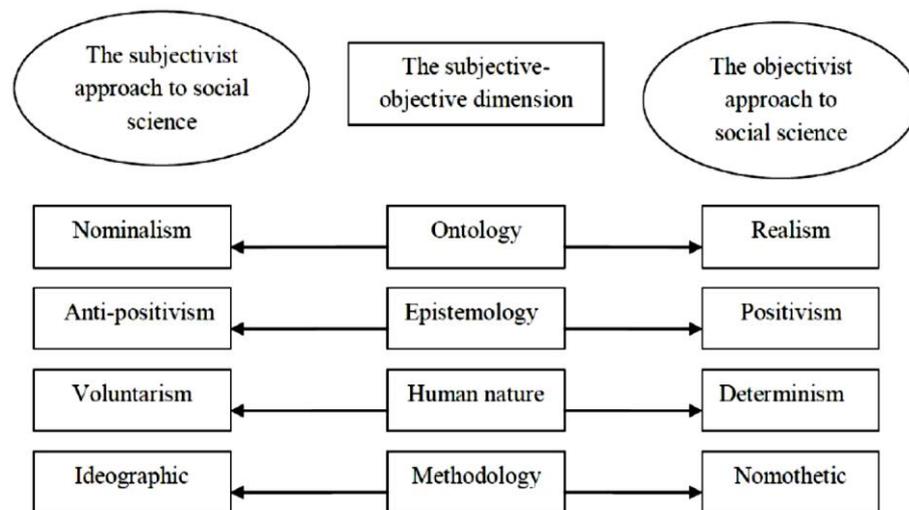
For Burrell and Morgan (1979), the social science consists of four distinct but related dimensions namely: the nature of an organizational phenomenon (ontology), when researchers make claims about what is knowledge (Creswell, 2003); the nature of knowledge, and how the researcher intends to know it (epistemology); the human nature; and process of studying (methodology) (Hopper & Powell, 1985). These four elements are summarized in figure (1) below.

Choosing a strategy is not enough to continue the study, as it is not the only decision to be taken while you are making accounting research. There are two other important decisions to be taken, namely, research design and research method decision (Bryman, 2012).

Research design represents the structure that guides the collection, and the analysis of data. Moreover, every empirical research has its design which may be expressed explicitly or applied implicitly through the processes to connect the empirical data with the predefined research questions (Yin, 2009). Accordingly, the design “is an action plan for getting from ‘here’ to ‘there’, where ‘here’ may be defined as the initial set of questions to be answered, and ‘there’ is some set of conclusions” (Yin, 2009, p. 19).

From a different view, the research design could be seen as a coherent framework or a blueprint that deals with research questions, type of data that are relevant to their questions, how to link these data to the propositions predetermined in the research questions, how to interpret what will be collected. Finally, making timetable for these steps (Ritchie *et al.*, 2013).

Figure (1) assumption about the nature of social science



Taken from: - Burrell and Morgan (1979) Sociological Paradigms and Organisational Analysis, Heinemann Educational Books, London, p.3.

Yet, Bryman (2012), took another dimension in explaining research design, as he described it with relation to which decision you will take with regard to research dimension in the fieldwork and its related dimensions. Like the phenomenon of study, casual connections, generalization and as you decide about issues like this you should have chosen your path whether to use for example experimental, survey, or case study.

Research methods do not represent neutral data collection tools, hence, they are closely related to how the researcher envisions the interrelation between the nature of a social phenomenon and the relevant methodology to examine it (Bryman, 2012). In other words, if the research is nomothetic positive research then we will need surveys or structured interviews to be tested statistically, and if the research is ideographic symbolic research then we will need observations, documentations, and semi and unstructured interviews to understand and interpret the symbols.

To sum up, Research strategy refers to “the overall approach to the research process, from the theoretical underpinning to the collection and analysis of the data” (Collis & Hussey, 2003, p. 55). Research methods, on the other hand, refer to the data gathering tools that are used by the researcher to know how the interactions are going (Bailey, 1994). Others define research methods as the general orientation of the conduct of research and refer to it as research strategy the research strategy that a researcher employs aiming to investigate a phenomenon (Ryan et al., 2002). A research strategy is associated with specific ontological and epistemological assumptions. It therefore determines the relationship between theory and method. Chua (1986) points out that the ontology of knowledge lies before and governs the subsequent epistemological and methodological assumptions. Having said this, the next two subsections will deal in details with explaining the above paragraph, in order to stand on solid soil of what a theory is? How and why it is used?

2.1 The Use of Theory: Different Uses for Different Purposes

Almost all accounting researchers have a theory that is moving them while they are doing their research. Hence, stating a knowledge claim means the researcher started with certain assumptions about what will be studied and how as ‘there is no such thing as a totally objective or value-free investigation’ (Hopper & Powell, 1985, p. 429). This does not suggest that theories are the moving force and controlling element that force researchers to have some views about the studied phenomena and the surrounding context. However, the research could have greater sociological impact when viewed in relation to theoretical concerns (Mohamed Metwally, 2016, p. 2).

Having previous assumptions and beliefs about the world affects the research direction (Hopper et al., 1995; Hoque & Hopper, 1994), questions, and approach. The last two likely derive from the researcher's ontological and epistemological assumptions as early mentioned (Metwally Mohamed, 2017).

In simple terms, the research paradigm is closely related to the nature of social science and the nature of society (Burrell & Morgan, 1979; Hopper & Powell, 1985). The former is best represented in terms of four main interrelated parts: ontology, epistemology, human nature, and methodology. While the later concentrates on the regulation and order in the studied society (Mohamed Metwally, 2016, p. 3):

“[O]ne is concerned with regulation, order and stability and sets out to explain why society tends to hold together, the other focuses on the fundamental divisions of interest, conflicts and unequal distributions of power that provide the potential for radical change.”(Hopper & Powell, 1985, p. 432)

From the above brief introduction, it may seem that linking theory to research is a straight forward matter, while it is not. Hence, what do we mean by theory needs further clarification. Is it grand theories or data explaining partial abstracted theories? Another main concern with mentioning the term theory is the theory being built or being tested or being used to clarify social or behavioural phenomenon. As an attempt to answer these questions we will need to make a proper clarification of what is inductive and deductive theory as each has a meaning; way of doing things; and reasons behind them.

2.2 Deduction and Induction

In accounting research, there are two dominant approaches to using a theory. These are deductive which is used to theory testing and inductive that is employed in theory building (Bonoma, 1985; Romano, 1989). In most of methodological writings (e.g. Bryman, 2005; Bryman, 2012; Mohamed Metwally, 2016; Saunders, 2011; Wickramasinghe, 2011) the deductive approach represents the positivist paradigm while the inductive approach represents the post-positivist paradigm (Easterby-Smith et al., 1991). These two approaches see the reality differently as a result collect the information for the research and analyse it differently. Nevertheless, the main questions are which method is the dominant method in accounting research? and Why? Why there is a continuous debate regarding the research methodology compatibility in each course of research? Why the paper reviewer or thesis examiners search for methodology section especially in the piece of research?

Answering the above questions needs an archaeology of the emergence of the two schools (Qualitative/inductive and Quantitative/deductive) to understand many issues related to the emergence and evolution of modern business science and its methodology. This archaeology will go back to the 19th century, when positivism was the dominant trend (Larrañaga, 2017).

In the 19th century, the main interest was in physical facts as it was the emergence of science. Scientists aimed to prove that using the same methods was possible to carrying out social research in general and business research specifically with having the same stability and reliability as it occurs in the natural sciences. At that time, using

statistics and surveys was the dominant trend that almost all researchers were employed (Larrañaga, 2017). This is not to say that what was done at that time was not true or to criticize it as there is:

“[A] great scope for the use of statistics and surveys to discover behavioural trends, to predict direction or trajectories chosen by people, and even to establish certain chains of causality. An early example of the use of statistical analysis in sociology is “suicide”...by Emile Durkheim”(Larrañaga, 2017, p. 78)

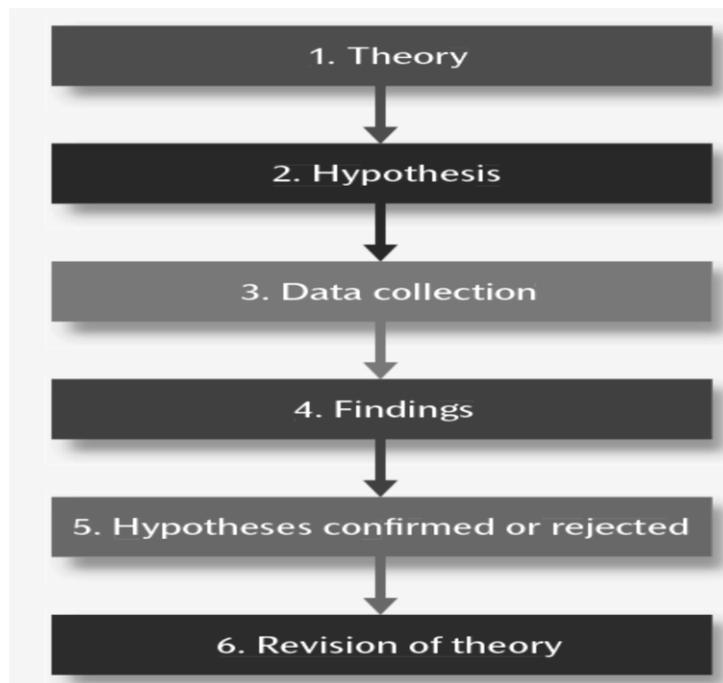
By the end of the 19th century, it was possible for accounting researchers to deal with management and accounting issues - which include many social facts- as things or events, just like the experiments that can be carried out in natural sciences in isolation of the context and human subjectivity factors. Accordingly, business scholars thought that the social phenomenon, despite the significant differences with the natural sciences, could be subject to similar methods as the scholars in the field of natural sciences do (Larrañaga, 2017).

The positivist/deductive paradigm lasted as standalone methodology in research almost till late 1950s. Deductive theory entails that theory should come first and be followed by research, this research attempts to confirm or refuse the early built hypotheses through empirical research (Bryman, 2012). This functionalist way of research uses statistical/quantitative methods of data collection and analysis to verify and confirm theories, without any concern to contextual, behavioural, and other subjective factors (Kasturiratne, 2016, p. 24; Wickramasinghe, 2011).

The last step in deductive approach includes some inductive operation. This happens when the researcher infers the implications of the research findings in the theory. In other words, the findings are used to clarify, highlight and modify the theory. This is usually made when the researcher is discussing his/her research implications. However, there is induction in the deductive approach, yet it is done with a deductive orientation (Bryman, 2012, p. 24). Figure 2 below summarizes the deductive approach steps in business research.

Having said this, it seems that the deductive process appears very straight forward linear steps to be followed by researchers in a clear, logical sequence. However, there are many instances where this is not the case. Hence, researchers' view of the theory may change over the research journey as a result of the data collected or the analysis results. Accordingly, theory may change because of these factors totally as it may imply new theoretical ideas or findings that may change the whole research direction after all (Mohamed Metwally, 2016).

Figure (2) The logical structure of the quantitative research process



(Source: Bryman, 2012, p. 24)

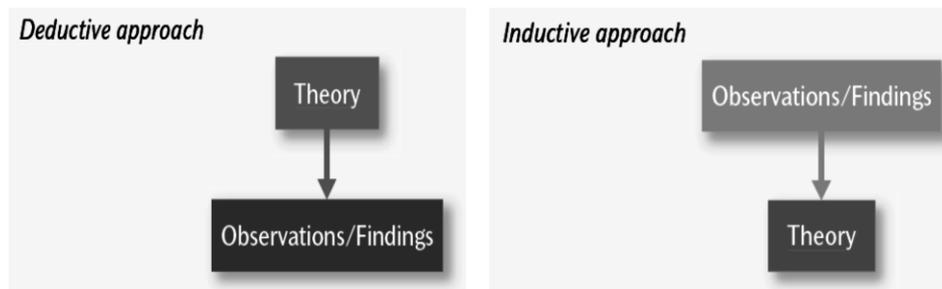
Since, long standalone theory, deductivism became the mainstream view of the relationship between theory and accounting research. Yet, some researchers prefer a different approach in relation to theory. This research type is primarily deploying the *inductive* theory.

An inductive approach entails that observations and data collection should come first and to be followed by theory building, this means the theory is the *outcome* of research rather than being the start of it in the deductive approach. Figure (3) below will show the core difference between inductivism and deductivism.

From Figure (3) below it is apparent that the differences are the starting-points and endpoints of the research. Moreover, inductive is almost the opposite of the deductive approach. However, this clear

clarification is not clear cut like as it seems. Hence, each approach has part of the other. As earlier mentioned in this section deduction entails an element of induction, also I will add that the inductive process is also entailing an element of deduction. The deduction phase starts with the researcher's theoretical reflection, hence, the researcher could need to collect more data in order to know, highlight, and clarify the circumstances in which his/her theory will keep holding as one part. Such move is called iterative process. Iteration involves moving back and forward between data and theory till reaching the best model and explanations (Bryman, 2012).

Figure (3) Difference between inductive and deductive approach



(Source: Bryman, 2012, p. 26)

Inductive/qualitative research can give little generalizations which is one of the main critiques made against it by deductive approach researchers. Yet, inductive research is so crucial in accounting research as Mason (2002, p. 1) clarified:

“Through qualitative [inductive] research we can explore a wide array of dimensions of the social world, including the texture and weave of everyday life, the understandings,

experiences and imaginings of our research participants, the ways that social processes, institutions, discourses or relationships work, and the significance of the meanings that they generate. We can do all of this qualitatively by using methodologies that celebrate richness, depth, nuance, context, multi-dimensionality and complexity rather than being embarrassed or inconvenienced by them.”

Qualitative/inductive research is not a new innovation within accounting research. Interpretive accounting research was affected to a great extent by interpretive sociologists such as Max Weber. Writers like Weber emphasised the role of symbols, images and human interactions, which affect people’s everyday practices. Wickramasinghe and Alawattage (2007) argue that symbolic interactionism theory was the starting point for such approach in business research. Symbolic interactionism differentiated between two interrelated perspectives: pragmatism and behaviourism. The former entails ontology that there is no given reality ‘out there’: rather, the reality is what the people create through their daily-life acts. Having said this, the epistemology and methods should concentrate on people’s understanding and its related activities, incident or/and situation in question that surrounded the activities under study. Behaviourism is not very far from this ontological and epistemological position as it supports the same main issues.

Following the rise of this new theory the 1980s witnessed enormous research that concentrated on how accounting is instantiated in such symbolic and social acts (e.g. Berry *et al.*, 1985; Boland Jr, 1989; Burchell *et al.*, 1980; Burchell *et al.*, 1985; Covaleski *et al.*,

1996). Interpretive sociology which denotes that there is a crucial role for human conscious in creating meanings and values of events was their main concern in this era research. Through doing so, these researchers instantiated a new accounting research trend that focuses on interpretations of such events and things and explained their meanings and reflections rather than assessing the technical processes and functional statistical superficial explanations of the reality (Wickramasinghe, 2011, p. 9).

The emergence of this new school of researching has not appeared in isolation of the research community. The main point to stress on here that quantitative scholars that were using positivistic technique (e.g. surveys) were required to prove certain hypotheses while doing so they realised that the social phenomena are not so close to the natural sciences. In addition, how post-positivistic researchers were starting with social facts was more difficult for them to understand as for them this cannot be regarded as valid knowledge claims. Moreover, positivistic scholars realised that causal explanations did not necessarily explain the reasons behind occurring specific results. This situation left them in need to reinvestigate what do we mean by research? (Larrañaga, 2017).

However, of the previously mentioned limitations in the quantitative research, mainstream researchers started criticizing the newly emerging inductive/qualitative research for not being replicable, reliable, generalizable, or even valid studies (c.f. Bryman, 2005; Bryman, 2012; Lukka & Modell, 2010). On the other hand, qualitative researchers as the weak new emerging party tried to reply to these critiques one by one, replying to such critiques required the Abductive

reasoning as proper methodological defensive move- will be discussed in details in the next section (Metwally Mohamed, 2017).

3. Abductive Reasoning Approach

Abductive reasoning refers to some sort of interactive creative process of intervention that is made by the researcher with the purpose of producing new hypotheses and theories based on surprising research evidence. In other words, through abduction, the researcher is led away from old to new theoretical insights (Timmermans & Tavory, 2012, p. 170). This creative process was needed urgently by qualitative researchers to reply to critiques made against their methodology by positivistic school. Accordingly, in order to be able to clarify what abductive is and why inductive qualitative researchers may need it? we will need to discuss at first how qualitative researchers replied to the mentioned above critiques (e.g. generalization, and validity) in the next subsection, and then we will move to the abductive methodology as leading the way out for better theorizing.

3.1 In Defence of Qualitative Research

A qualitative case study is now a well-known research design and the time to defend it have gone (Ahrens *et al.*, 2008; Cooper, 2007; Parker, 2012). In response, to all early mentioned critiques Parker (2012, p. 59) noted:

“[I]n terms of reflexivity and rigour, the response...is that the qualitative researcher inhabits a different domain, embracing and becoming involved in the world of the researched (rather than seeking to be removed and

independent), and seeking to produce credible accounts and interpretations (rather than assuring replicability through notions of validity and reliability). The qualitative research mission and agenda is different, in that its focus and outcomes privilege critique, theory development, uniqueness and context. While not rejecting notions of replicability where they can be delivered, our greater concern is with identifying and unpacking the unique and the different. On these grounds we embrace what the quantitative tradition avoids, and explain and evaluate our research in different term.”

Many qualitative researchers agree with Parker’s proposition that qualitative research is different from quantitative functional research. Moreover, some qualitative case study scholars tend to ignore what positivist researchers call case study limitations while they were writing their methodology books or articles (e.g. Dul & Hak, 2007; Hancock *et al.*, 2006; Stake, 1995). Accordingly, what positivist researchers call case limitations represent ‘prejudice against case study’ (Yin, 2009).

In addition to the previous discussion Mohamed Metwally (2016, p. 7) has replied to these critiques one by one as he stated:

“Regarding generalization and replication critiques [qualitative] case studies allegedly do not allow these. While I believe that such critiques are rooted in positivist ontological and epistemological stances...asking qualitative case studies to make generalizations and replications reveals a misconception about reasons for

doing qualitative studies. Case studies' main purpose is not to make practical replications and generalizations...Validity construction in qualitative research has different approaches. Yin (2009) proposed that validity construction comes from multiple sources of evidence in data collection...internal validity remains crucial and arrives through pattern matching, explanation building, and time series analysis. Finally, reliability comes through using case study protocol and producing data bases while collecting data."

The positivist quantitative case-based research in accounting is usually evaluated in terms of their construct validity, internal validity, external validity, and reliability (Yin, 2009), it is argued that qualitative case-based research in accounting is better judged based on a different set of criteria that better matches the ontological and epistemological standpoints of these studies (Ryan *et al.*, 2002). Ryan *et al.* (2002) and Scapens (2004) suggest that these criteria should cover the procedural reliability of the concerned research, and its external and contextual validities (Mohamed Metwally, 2016).

Procedural reliability refers to the researcher's ability to develop and implement a good research design which clearly addresses the specified research questions (Ryan *et al.*, 2002, p. 155). External validity refers to the generalizability of the theoretical ideas developed by the researcher through his/her case-based research (theoretical generalization) and to the transferability of research findings both within and across

contexts. Finally, contextual validity, which replaces the traditional idea of internal validity, refers to the credibility of the case study's evidence and the conclusions that are drawn therefrom (Ryan *et al.*, 2002, pp. 155-156). This covers a number of elements. It covers the validity of each piece of empirical evidence collected, the validity of the sources of this evidence, and the validity of the researcher's interpretations of the evidence. Validity critique is our main concern in the next subsection as abductive reasoning is used especially for validation of theorization.

3.2 Emic/Etic and Abduction

Abductive reasoning is mobilized in qualitative case research to support its theorizing position against validity critique. Hence, Lukka and Modell (2010) offered abductive reasoning along with deploying combinations between emic/etic as a proper strategy for enhancing the validity of interpretive accounting research. The mix between inductive/deductive and emic/etic resolves what they called "validity crisis" (c.f. Efferin & Hopper, 2007; Wickramasinghe, 2011).

The emic perspective refers to deep understanding and interpretation of culture, values, and perceptions of a certain society. Accordingly, the **emic view** concentrates on the intrinsic inner dimension of culture; these dimensions should be differentiating this culture of society from others. The emic view is often considered as the insider's point of view. Having said this, studies that deploy an emic perspective often include more detailed and culturally rich information. Such rich information requires collecting data with methods that are

able to penetrate the life of the decedents like ethnographic or phenomenological case studies (Efferin & Hopper, 2007; Wickramasinghe, 2011).

In contrast, the etic perspective concentrates on the differences between societies based on the application of predetermined theories. Etic researchers do not represent insiders as they represent exogenous researchers as they develop meanings of descriptions from outside. In other words, the etic perspective is data gathering by *outsiders* that yield questions posed by outsiders. Etic studies suffer a severe limitation if they are done on their own, hence, when an outsider is observing the dependents, they tend to act in different behaviours or daily routine when they are being observed. Moreover, it is very hard for an outsider to have access to the core of private rituals in the observed group or society, which may challenge the efforts for understanding the cultural aspects and its effect on the research phenomenon that being studied. (Wickramasinghe, 2011).

The crucial question at that point, are we building on emic views and developing etic categories, or vice versa? Hence, each of the two views sees the world and engages with it differently. Efferin and Hopper (2007, p. 225) illustrated that their

“inclinations to emic research were tempered by a desire to engage with prior etic research, build knowledge cumulatively, and use theories in a complementary, pluralistic manner.... Hence, grounded data was analysed using etic categories from prior research whilst using emic

analysis to create new categories and concepts when etic categories did not suffice” (Efferin & Hopper, 2007, p. 225)

The above statement represents a question and dilemma that faces any interpretive accounting researcher. Here, this paper proposes that there is no other solution other than combining both emic and etic views together in order to reach a valid qualitative research. According to Wickramasinghe (2011), qualitative researchers should be cautious when making such combination, as how much etic vs emic and with which one should we start depend on several aspects such as; the researcher background and understanding to the phenomenon under research; the nature of the society or community access; and the degree of engagement with the community members and their rituals and mundane practices.

Both strategies mentioned by Efferin and Hopper (2007) and Lukka and Modell (2010) emphasise how to make a valid piece of research. What the above discussion shows is that emic/etic have some differences affect the researcher decision to adopt an epistemological strategy to investigate a social phenomenon. Yet, on both emic/etic, we may deploy and follow abductive reasoning (Wickramasinghe, 2011).

Following Abduction either on etic/emic seeks fitting the situation between what is observed in terms of facts and the methodological rules that should be adopted. As Peirce (1934:171) highlighted:

“Abduction is the process of forming an explanatory hypothesis. It is the only logical operation which introduces

any new ideas” (Cited in: Timmermans & Tavory, 2012, p. 171)

Accordingly, abductive reasoning can be best explained as the process by which the researcher tries to reach novel theoretical insights. While producing these insights the researcher tends to reshape the research findings in contrast to existing theories. In this process the researcher perceives the phenomenon as related to other observations that have a cause and effect hidden from view, or as similar to other phenomena already experienced and explained in other situations, which will lead at the end to creating new general descriptions. Moreover, abductive reasoning is broader than way of researching as general public are using it their everyday life when they are faced by surprising issues, as human behaviour tends to change expectations when faced by such surprises (Dubois & Gadde, 2002).

Abductive is different from just a mixture between deductive and inductive research approaches. Abduction is more beneficial to research when the researcher’s main goal is to discover new results and theoretical insights. Hence, Abduction is similar to ‘grounded theory’ as it concentrates on producing new concepts and theories, rather than confirming existing ones (Dubois & Gadde, 2002; Timmermans & Tavory, 2012).

4. Middle-Range Triangulation

Abductive reasoning is not the only middle-range solution that was proposed for the qualitative/quantitative methodological dilemma. Hence, mixed-method research (triangulation of methods) and triangulation of theories were also proposed as proper solutions.

Triangulation in general was proposed by some of the accounting researchers who see that combining theories or/and methods from qualitative and quantitative research will give better understanding of organisational phenomenon such as managerial accounting practice (e.g. Diab, 2016; Hoque & Hopper, 1994; Mohamed Metwally, 2016).

Such researchers see that single theory or research method is inadequate for understanding and interpreting the complex realm surrounding accounting practice. Using triangulations will produce more holistic understanding (Bryman, 2007a; Creswell, 2003; Hammond, 2005), and more deep and generalizable interpretations of how accounting systems operate within their context (Hopper & Hoque, 2006). This section will introduce what is meant by triangulation; the reasons behind it; its limitations; and critiques.

Triangulations can be classified to theory triangulation, and data triangulation (Hopper & Hoque, 2006). Each of these types has a meaning and purpose which is different from the other, while they all share the same limitations (Bryman, 2007a, 2007b; Bryman, 2012; Hopper & Hoque, 2006).

4.1 Theoretical Triangulation

Theoretical triangulation entails deploying and mixing various factors from a variety of theoretical perspectives to examine the same or different angles of research problem. Researchers deploying and producing such theoretical triangulations believe that a single theoretical paradigm is inadequate for understanding and interpreting comprehensive complex issues that surround accounting practices.

According to Hopper and Hoque (2006), there are two types of theoretical triangulation. One is what they called ‘within-same tradition’, the other is mixing issues from theories with different paradigm. The former represent using theories with no differences in their epistemological, ontological and philosophical assumptions for example mixing qualitative/qualitative or quantitative/quantitative theories. The later represent mixing theories, which have different ontology and epistemology. In other words, these researchers mix qualitative and quantitative theories together.

This research paper has no intention to classify, criticize, or prove the superiority of one type of theoretical triangulations over the other. In other words, we will follow Hopper and Hoque (2006) proposition that we should accept both types of theoretical triangulations, as each has its importance and proper use. Accordingly, we reject the view that see the impossibility of mixing theories from different paradigms, hence theories with different ontologies and epistemologies if mixed will lead the researcher to abandon one of or more of the mixed theories core methodological beliefs (see Burrell & Morgan, 1979; Chua, 1986; Hopper & Powell, 1985).

The reason behind following Hopper and Hoque (2006) is that theoretical triangulation can offer alternative interpretations of the studied phenomena. Moreover, each of the mixed theories can give interpretation and explanation insights on various different dimensions of the gathered data. These comprehensive and holistic results will not be reached with the use of a single theory as it will not cover all the multifaceted intertwined issues in accounting and organizational operations. Having said this, we see mixed theories as complementary

rather than contradictory, even though they may have different paradigms.

4.2 Data Triangulation

Data triangulation entails using a mix of data sources within the same course of study. This strategy may mix methods qualitative/qualitative like unstructured or semi-structured interviews with observations or ethnographic enquires; quantitative/quantitative methods like structured interviews, and surveys; or mixes both qualitative and quantitative methods including interviews, detailed observations and questionnaires. The main reason for such triangulation is reaching richer information about the studied phenomena and having proper checks of research validity (Hopper & Hoque, 2006).

According to Bryman (2007b) researchers tend to use mixed method research for various reasons. The most important reasons proposed are:

- 1) *Offset*: by offset they mean that researchers tend to use mixed method to generate a methodology that get advantage of each research method's advantages and strength that will offset the weaknesses of the other(s). This way of doing research is based on that each method has its strength and weakness and that seeking perfection would entail mixing methods that can cover the weaknesses of the other(s).
- 2) *Completeness*: which means that the researcher can bring together a more comprehensive and holistic enquiry about the studied phenomena if both quantitative and qualitative research methods are mixed rather than being deployed separately.

- 3) *Different research questions*: sometimes research questions dictate the mixing. As some of the research questions like how and why questions cannot be answered unless using qualitative methods, while what, how much, to what extent needs quantitative enquiry to be answered. Accordingly, some studies have a mix of both question types in their enquiry, which in turn needs mixed method.
- 4) *Explanation of unexpected or strange results*: sometimes the researcher may need to mix methods to explain the results generated by the other. For example, a researcher may need some semi-structured interviews or participant observations to explain some unexpected relations that resulted from analysing questionnaires.
- 5) *Credibility and validity*: applying mixed method research by some researchers is made to enhance the integrity and validity of findings.

4.3. Triangulation Critiques

While middle range solutions were initiated with an intention to resolve inadequacies in both qualitative and quantitative research, yet it had been criticized by both schools. One of the main critiques is that mixing different methods or theories may lead to mixing different philosophies that can lead to superficial use of both theory and methodology which leads at the end to research incoherence (Bryman, 2012; Hopper & Hoque, 2006).

Many scholars discuss the barriers, controversies, and critiques related to mixed method research (e.g. Bryman, 2007a; Collis & Hussey, 2003; Creswell, 2011). These scholars and others mentioned

many critiques to mixed method research, the more important critiques are: Is mixed method a new approach to research?; the paradigm debate when mixing qualitative and quantitative research as mentioned earlier in the paper; does mixed method represent a benefit to positivistic or post-positivistic studies?; mixed method is seen to add little value to old methods namely qualitative and quantitative; rigour and reliability of the mixed method was criticized as it ignores the differences between theories and methods.

5. Conclusion

In a study of this kind, there were key critiques, concerns, and solutions. It began by defining what a research strategy is and how this relates to the use of theory, which in turn produces the deductive theory testing and inductive theory building. From this, I justified the need for abductive reasoning as a proper solution for critiques against qualitative research. I also clarified certain issues related to the use of abduction, of these issues the emic/etic perspectives and how to combine them for better validation. Section 4 described in more detail the middle range triangulations, through identifying the difference between theoretical and data triangulations, critiques and debates the mixed method research produced. What this concludes is that our knowledge of accounting and organizations is not guaranteed by a single method that separates the objective from the subjective. Hence, mixed method research and theoretical triangulations now exist as a research theme.

Having said this, we see that the differentiation between subjectivism and the objectivism should have been gone by the emergence of new middle ranges like triangulations, mixed method research and abduction. Yet, we conclude that the emergence of these

new themes in methodological circuits increased the debate and critiques between the methodological schools, which in turn increased the qualitative/quantitative methodological dilemma instead of resolving it. Finally, it is recommended that dealing with these issues in accounting research should be treated with caution, as there is no clear cut of what is right and wrong in methodology. What matters that the researcher produces a coherent reliable piece of research that reflects what has been done clearly. In other words, there is no superiority of one of these methodologies over the other, what determines which methodology will be used is the research enquiry being posed and its questions and how the researcher tends to answer them.

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