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Management Accounting Research: Theories and Methodological Issues

Alhashmi Aboubaker Lasyoud*
Lawrence Awopetu†

Abstract

It is this paper's objective to determine the concerns related to theories and methodologies that underpin the study of management accounting. The literature on management accounting includes various theories and methodologies followed by many researchers in this field of research. The paper presents the frameworks utilized to classify these theories. Each theory is explained, and its related criticism is presented to highlight the applicability of these theories in providing the required results when used as a base for research methodology in management accounting. It also reviews frameworks followed by previous studies on accounting research including Burrell and Morgan's (1979) framework and Laughlin's (1995) middle-range thinking approach. Although the framework by Burrell and Morgan is widely used for classification of theories, some scholars criticized this framework. The framework developed by Laughlin (1995) is beneficial for categorizing accounting research and selecting a proper methodology for research studies in accounting. Even though Laughlin's middle-range thinking approach has better practicality compared to the framework of Burrell and Morgan, the researchers found a limitation in his framework. Therefore, further studies are required to evaluate the applicability of different theories and frameworks to research interests and objectives in management accounting

Keywords: theory, methodology, research methods, management accounting.

I. INTRODUCTION

The role of a management accountant has undergone many changes in the past few years. A management accountant has evolved from merely being a scorekeeper to an essential source of consultation support in business organizations. In fact, when business owners realized that management accountants could provide significant accounting information, they began to support accountants' role. Thus, management accounting has developed to become an independent field (Scapens, 1991). In the 1980s, management accounting faced great challenges caused by advances in technologies, which made conventional methods for cost accounting inefficient (Kamal, 2015). Since the 1990s, a great number of researchers had conducted research studies on management accounting (Alsharari, 2019). However, the majority of the existing research considers management accounting change to be an existing reality without giving much attention to why and how this change is achieved. This paper seeks to track the phases of development in management accounting as well as reasons for the transformation in management accounting. There are two key sections in this study. The first section presents the review on main theories underpinning the change in management accounting. The second section explains the different frameworks useful in classifying management accounting

* School of Business Administration, University of South Carolina Aiken, Aiken, South Carolina, USA. E-mail: Alhashmi.Lasyoud@usca.edu.
† School of Business and Management, University of Arkansas at Pine Bluff, Pine Bluff, Arkansas, USA. E-mail: awopetul@uapb.edu.

study. Tracking the history of development in management accounting will help providing a clear understanding about the latest development in the study of management accounting.

Management accounting research plays a crucial role in addressing the evolving needs of the business world and advancing accounting education. To effectively choose themes and research approaches that cater to these needs, researchers must consider several factors.

Firstly, themes selected for research should be aligned with contemporary challenges faced by businesses. As highlighted by Chen et al. (2020), "Management accounting research should focus on addressing current issues such as sustainability, digital transformation, and global economic uncertainty, ensuring the relevance and applicability of research findings to real-world contexts."

Secondly, researchers should prioritize research approaches that offer practical insights and solutions for business practitioners. According to Malmi and Brown (2008), "Management accounting research should emphasize the development of practical tools, frameworks, and methodologies that can be readily implemented by businesses to enhance decision-making and performance management."

Thirdly, interdisciplinary collaboration is essential for addressing complex business problems. Collaborating with experts from related fields such as finance, operations management, and information technology enriches research endeavors and fosters innovation. As advocated by Burns and Vaivio (2001), "interdisciplinary collaboration enables management accounting researchers to integrate diverse perspectives and methodologies, leading to holistic solutions that address multifaceted business challenges."

Finally, engagement with accounting education is vital for nurturing future accounting professionals equipped with the necessary knowledge and skills. Researchers should disseminate their findings through academic publications, textbooks, and teaching materials to enrich accounting education curricula. As emphasized by Atkinson et al. (2012), "Management accounting research should contribute to the development of accounting education by providing relevant case studies, practical examples, and pedagogical insights that enhance students' learning experiences and prepare them for the complexities of the modern business environment."

In summary, management accounting researchers can effectively choose themes and research approaches that meet the needs of the business world and contribute to the development of accounting education by aligning research with contemporary challenges, prioritizing practical implications, engaging in interdisciplinary collaboration, leveraging technological advancements, and fostering engagement with accounting education.

II. LITERATURE REVIEW

2.1. Management Accounting Research Perspectives

The investigation of how external and internal influences result in a change in business organizations is presented in this section. Apparently, individuals are always the key factor in any type of transformation. This is because transformation is a behavioral process. Nonetheless, there are certainly other components in the process of change that need to be investigated and identified. The transformation of management accounting is seen by most research as being an outcome, and not a process. It is found that the reasons and the ways by which change in management accounting takes place are not being sufficiently investigated by research. The current management accounting systems and practices have undergone several developmental stages to emerge and survive (see for example, Alsharari, 2019). These developmental stages have not been examined carefully by researchers (Burns & Scapens, 2000; Lasyoud & Alsharari, 2017). In analyzing the transformation process of management accounting, a number of social theories should be first determined and clarified (Hopper & Bui, 2016). The analysis on management accounting would usually utilize social theories (Hopper & Bui, 2016; Jack, 2016). The most prominent theories related to the change process of management accounting include Foucault's theory, contingency theory, structuration theory, critical theory, actor-network theory, and institutional theory. The subsequent sub-sections will discuss the abovementioned theories.

The study underscores the importance of understanding and navigating the complex interplay between external and internal influences on organizational transformation. Management accounting research perspectives that integrate these dimensions offer valuable insights for organizational leaders, policymakers, and practitioners seeking to navigate transformation effectively and sustainably in today's dynamic business environment.

2.2. Neoclassical Economic Theory

The neo-classical theory is concerned with the total behavior of a business organization in the market. It suggests that the instant interaction of people with environmental changes is based on their decision-making skills (Scapens & Burns, 2000). There are two main notions upon which the theory of neo-classical economics is based upon, those are equilibrium and rationality. This consequently leads to some complexities when used to analyze management accounting change (Scapens & Burns, 2000). The neo-classical economic theory suffers from another limitation when it is used to analyze the transformation process in management accounting. Specifically, the theory does not give explanations for managers' organizational attitudes (Scapens, 1994).

These limitations are caused by the static approach and mechanic thinking of the neo-classical theory. Based on the neo-classical theory, the analysis of change does not consider knowledge, choice, purpose and qualitative change (Hodgson, 1993). Therefore, it is argued for analysis on management accounting's systems and practices, the application of neo classical theory may not be suitable (Macintosh & Scapens, 1990; Burns & Scapens, 2000). Significantly, the neo-classical assumptions have been subject to amendments by new institutionalists regarding economic consistency (Burns & Scapens, 2000).

The neoclassical economic theory has long been influential in shaping management accounting practices and theories, particularly in understanding decision-making processes within organizations. Gjerde and Greve (2020) provide a recent comprehensive review and synthesis of the application of neoclassical economics in management accounting, shedding light on its implications for organizational decision-making and performance evaluation. They highlight how management accounting practices, such as activity-based costing (ABC) and variance analysis, are grounded in neoclassical principles of marginal analysis and optimization. For example, ABC seeks to allocate costs to activities based on their consumption by cost objects, aligning with the neoclassical notion of efficient resource allocation.

2.3. Structuration Theory

In the 1980s, researchers in the management accounting field started to use the structuration theory in their studies. Although this theory adds minimally to research on alternative management accounting, its impact is significant (Baxter & Chua, 2003,

p. 100). It is also claimed by Coad et al. (2016) that structuration theory's full potential is yet to be realized because of the absence of a critical evaluation of the theory.

The structuration theory focuses on how individuals and society are related (Giddens, 1984; Dyck & Kearns, 2014). It explains the connection of structure and agency, with the formation of social behavior. The theory postulates that social structures are always the bases upon which human agents decide their actions. In addition, the theory states that societies develop due to the interaction of human actions and social structure. According to the structuration theory, signification, domination, and legitimation are the three structural dimensions used for analyzing social systems (Giddens, 1984). Stones and Jack (2016) explained that they used structuration theory in analyzing the monetary policy undertaken by the British during 1970s. This is because the Giddens' theory (structuration theory) enabled them to connect the historical macro pressure of politics on human beings everywhere and any time. To make it possible for researchers in the management accounting field to understand the systems and practices applied in the field, their theoretical models used the structuration theory (Macintosh & Scapens, 1990). Moreover, many researchers have used the structuration theory for their research on alternative management accounting practices. Conrad (2005) utilized Gidden's theory in examining the outcomes of regulating organizational change and management control change in gas companies. He suggested that Gidden's theory can analyze organizational change, and considers the interaction that exists in human agency and social structure in examining the regulation of social order and production.

However, the structuration theory is not capable of investigating the change process as argued by Rains and Bonito (2017). They claimed that Gidden's theory ignores historical data. Moreover, Burns and Scapens (2000) also confirmed that this theory cannot explore the change process in management accounting after conducting two case studies using structuration theory and institutionalization. Similarly, Uddin and Tsamenyi (2005) investigated changes in performance and budget control in Ghana food distribution corporation (GFDC) using the structuration theory's dialectic control. They concluded that the budgetary practices of the company were not subject to significant change except for the reporting practices. Budgeting was still procrastinated, politicized and impractical. Accordingly, reporting to the monitoring agency does not lead to the desirable improvement in accountability and performance control.

2.4. Contingency Theory

In 1960s, the contingency theory was formulated under the organization theory. However, in the 1970s, researchers in the accounting area started to use the contingency theory as a base for conducting their studies (Otley, 1980). The theory focuses on determining the particular characteristics of accounting systems related to external and internal factors impacting the business entity including technology, environment, power, size, and more (Covaleski et al., 1996; Haldma & Laats, 2002).

Many researchers have used contingency theory to examine management accounting change. For instance, Innes and Mitchell (1990) presented a model for the investigation of transformation process that occurs within the management accounting's systems and practices utilized in seven electronic companies. They came to the conclusion that the companies under study experienced change due to three contingent variables. They included these factors, namely motivators, catalysts, and facilitators in their suggested framework of management accounting change. A more detailed framework was presented afterward by Cobb et al. (1995) who augmented Innes and Mitchell's model through the addition of three variables. Leaders' role, momentum and barriers hindering change are the three factors newly added to the framework. Cobb et al. (1995) argued that without leaders' help and the momentum for change, motivators, catalysts and facilitators are not capable of making a change in spite of their ability to provide the potential for change.

Furthermore, the framework of Cobb et al. (1995) was used by Kasurinen (2002) in explaining obstacles facing transformation in management accounting in the balanced scorecard system. The most significant aspect about his model is the categorization of obstacles into confusers, frustration and delayers. The three models developed by Innes and Mitchell (1990), Cobb et al. (1995) and Kasurinen (2002) assumed that three kinds of contingent factors (motivators, catalysts and facilitators) influence management accounting systems. Motivator means the motivating characteristic of production technology, market competition and organizational structure. Meanwhile, catalyst means unimpressive financial achievement, low competitiveness of a product as well as loss of market share because they are directly related to change. Facilitators cover the facilitating capacity of resources of accounting personnel, computing resources, and independence.

However, the contingency theory has been receiving criticism. First, the poor generalizability of its findings makes the theory impractical. In addition, these findings' prescriptive inferences are not accurate when they are individually analyzed (Wickramasinghe & Alawattage, 2007). Second, the cross-sectional analysis used by the contingency theory relies on a survey and does not provide a detailed knowledge on the way the accounting system exists within companies (Otley, 1980; Hopper & Powell, 1985). Third, all the relationships examined by the contingency theory framework are dealt as linear and unidirectional (Wickramasinghe & Alawttage, 2007). Finally, the number of contingent factors affecting organizations is not clearly determined or agreed upon by the different researchers (Fisher, 1995).

Haldma and Laats (2002) further explore the application of Contingency Theory to management accounting change. They highlight the importance of considering contingent factors, such as organizational size, industry dynamics, and technological capabilities, when implementing accounting change initiatives. By understanding these contingencies, organizations can better navigate the complexities of change and adapt their accounting systems to align with strategic objectives. A study by Chong and Eggleton (2012) examined the use of budgeting practices in Malaysian manufacturing companies. They found that the use of traditional budgeting practices was influenced by the organization's size, structure, and external environment. Their findings support the contingency theory's view that management accounting practices should be tailored to fit the organization's specific circumstances.

2.5. Institutional Theory

The Institutional theory of organizations considers organizations to be the examples of bigger institutions. According to the theory, institution means the common beliefs and rules shaping organizational designs and practices. Therefore, obeying institutionalized system is regarded as a way of achieving legitimacy and certainty (Berthod, 2017). Moll et al. (2006) categorized the different effects of institutional theory on management accounting research into three types: New Institutional Sociology (NIS), Old Institutional Economics (OIE), and New Institutional Economics (NIE). The most commonly utilized among the three sub theories to examine management accounting change is the Old Institutional Economics (OIE). In some studies, the OIE is used as a base for generating a framework in determining the change in management accounting (Burns & Scapens, 2000). Based on OIE, management accounting change is considered an alteration in organizational rules and regulations. However, the OIE is criticized for being more suitable for examining change inside business entities (Burns, 2000). In addition, it is claimed that the OIE is based on descriptive behavioristic terms (Rutherford, 1995).

Regarding the NIS theory, it relies on the conception that homogenization among organizations may be the result of external factors (Moll et al., 2006). In general, the NIS theory is used to investigate the alteration in management accounting practices caused by external forces including political pressures and changes in governmental and cultural rules and regulations (Alsharari et al., 2015; Alsharari, 2019). The NIS has been used in several studies to illustrate how different internal and external factors could result in changes to management accounting and control systems (Lasyoud et al., 2018). Significantly, the NIS theory has several drawbacks in examining management accounting change and resistance to change (Collier, 1999). The NIS is not able to detect the discrepancies inside the institutional environment, the institutional actors' power, and the resistance to change caused by power differences. In addition, the organizational level of analysis stated by the NIS theory cannot provide ground for explaining how conflicting interests could be resolved through managers' weak cooperation (Collier, 1999).

For overcoming the limitations of the NIS theory, some studies use a combination of new institutional sociology (NIS) and old institutional economics (OIE). As an example, Siti- Nabiha and Scapens (2005) used the OIE and NIS to investigate how stability and change are related in management accounting systems of a gas corporation in Asia. They came to the conclusion that by an evolutionary process of change, stability and change can be intertwined, which means that they are not always opposing forces. Similarly, OIE and NIS were also used together by Ma and Tayles (2009) to determine change-related factors that facilitate the implementation of strategic management accounting in an established pharmaceutical firm in England. The study's findings indicated that management accountants do play a strategic function in strategic decision-making's process. In addition, Alsharari et al. (2015) indicated that merging NIS, OIS and Hardy's power mobilization framework is an efficient way to recognize the socioeconomic and political nature of institutional change.

Several recent studies have highlighted the role of institutional theory in management accounting change. Hoque et al. (2001) examined the role of institutional pressures in the adoption of management accounting practices in Australian public sector organizations. They found that organizations were influenced by both coercive and normative pressures in adopting these practices. They also highlighted the role of professional bodies in disseminating new management accounting techniques and practices.

2.6. Actor-Network Theory

In the 1980s, actor-network theory (ANT) came into the works of Callon (1986) and Latour (1987). It is a material-semiotic approach used to investigate how materials and concepts are related. According to the ANT, the concept of an actor covers inanimate actors; in which include machines, as well as computer's software and hardware (Chua, 1995; Lowe, 2000). Accordingly, people and machines are considered as actants whose nature is determined by networks; without which actants cannot be determined. In this sense, networks mean the actants' processual activities. Ritzer (2006) indicated that ANT is concerned with how networks are strengthened, stabilized, become coherent, gain durability, and become functionally essential.

In the research of management accounting's stability and change, ANT is widely employed. For instance, Dechow and Mouritsen (2005) utilized ANT in investigating management control systems among organizations implementing the SAP enterprise resource planning system. In accordance to the concept of boundary objects or the communication means among actors, they examined the integration in the SAP technology and its effect on the social reality of management control systems. By using ANT, Alcouffe et al. (2008) investigated the ways by which two management accounting approaches were incorporated in actor-networks for an extended duration. They indicated that management accounting practices across actor-networks are homogenized and heterogenized because while the translation is taking place, drift and adaptation are detected (Alcouffe et al., 2008).

2.7. Critical Theory and Post-Critical Methodology

The critical theory originates from studies done in Frankfurt by the Institute of Social Research. Max Horkheimer, Jurgen Habermas, Herbert Marcuse, and Theodor Adorno are the most prominent names associated with critical thinking (Laughlin, 1987). The main concept as explained by Laughlin (1987, p. 482) for the critical theory is that, if the current situation is unsatisfactory and there could be a better one, the critical theory's methodological dimension could lead to the transformation where critical thinking is brought about. According to critical theory, the main aim of social science is to liberate society from dispensable restrictive traditions, assumptions, ideologies and power relations that hinder independence, thus achieving optimum satisfaction (Callaghan, 2016). Critical management studies (CMS) therefore focus on the ways critical theory being applied to the field of management (Callaghan, 2016).

Critical accounting research has witnessed a radical change since the mid-1990s. Among the most prominent theorists associated with this change, which is called post-critical thinking are Foucault, Latour, and Bourdieu (Roslender, 2016). The term governmentality was introduced by Foucault in the 1970s within his attempt to examine political power. Accordingly, government could be defined as activity ensuring the conduct of persons through the placement of authority that guides them on things to do and the happenings (Foucault, 1997, p. 68). Foucault's main aim was to investigate the birth of liberalism. His work has been essential in creating "new histories" of management accounting. For example, foucault's works on "discipline and "docility" are the bases for management accounting control (Baxter & Chua, 2003). In fact, Foucault's theory considers concepts like conflict, struggle and self-affirmation that are an integral part of power operation. This has triggered new empirical studies to focus towards the influence of subjectivity on labor process within the accounting, finance and insurance research (Raffnsøe et al., 2017).

III. RESEARCH METHODOLOGY

3.1. Theoretical Frameworks Incorporating Theories in Management Accounting

Many researchers attempt to present frameworks by utilizing the previously mentioned theories in their research methodology. Among the most prominent frameworks are those presented by Burrell and Morgan (1979), Hopper and Powell (1985), and Laughlin (1995).

3.1.1. Burrell and Morgan's framework (1979)

Based on the framework by Burrell and Morgan's (1979), there are two aspects guiding philosophical assumptions: social sciences nature and society nature.

1). The nature of social science: assumptions

Based on Burrell and Morgan (1979), there are four hypotheses associated with social sciences: human nature, epistemology, methodology and ontology. Each of them includes two distinct philosophical positions concerning social sciences (objectivism or subjectivism). The choice between objective and subjective philosophies is based on the position adopted by the researcher.

Ontological assumptions are about the nature of reality. These assumptions are used to determine if the phenomena studied related to a concrete and external reality autonomous from human cognition. The ontological assumptions are also concerned with the question if the external social world is merely an outcome of individual subjectivism (nominalism) (Hopper & Powell, 1985; Guba & Lincoln, 1994).

Epistemology assumptions consider the nature and basis of evidence upon which knowledge is formed (Hopper & Powell, 1985). The definition of epistemology by Crotty (1998) is that, it is a knowledge theory upon which methodology is determined. Epistemology reflects two perspectives of knowledge: the first is the objective perspective (positivism), according to which knowledge is present autonomously from awareness and the attainment is only through empirical observation of actual social setting. The second is the subjective perspective (Anti-positivism). According to this position, the social world is dependent and knowledge depends on individual investigation, experience and the perception of the concerned individuals (Burrell & Morgan, 1979; Hopper & Powell, 1985).

Assumptions regarding human nature are about how individuals and their environment are related (Burrell & Morgan, 1979). Determinism and voluntarism are the two main positions upon which this notion is based. The determinism position indicates that the environment will dictate the humans and their activities, whereby this environment has a full control over them (Burrell & Morgan, 1979). However, the voluntarism position indicates that there is no relationship between humans and their environment. It means that individuals are totally independent and the environment could freely be formed by them (Burrell & Morgan, 1979; Hopper & Powell, 1985).

Methodological assumptions are about the way researchers gain the knowledge concerning the world. Essentially, researchers use the methodology based on their epistemological and ontological hypotheses (Burrell & Morgan, 1979; Guba & Lincoln, 1994). Additionally, these assumptions justify how methods are selected in investigating and acquiring knowledge (Burrell & Morgan, 1979). Crotty (1998) defined methodology as the plan of action used as the basis for the selection of a certain method to be applied to reach the desired outcomes. Accordingly, a methodology is a research design used by researchers as a guide in choosing the techniques to gather and examine study data (Burrell & Morgan, 1979).

The ontological and epistemological perspectives regarding human nature directly affect the selection of study approaches (Burrell & Morgan, 1979; Hopper & Powell, 1985). Should the social realm is considered to be the same as the natural world where data are gathered according to rules of the natural science (Burrell & Morgan, 1979), then hypotheses testing and data analysis are conducted via statistical techniques and quantitative methods. On the other hand, should the social realm is considered as an outcome of communication among individuals, then qualitative methods are used for data collection and analysis (Burrell & Morgan, 1979).

2). The nature of society: assumptions

Burrell and Morgan (1979), mentioned that society's nature could be investigated through the using of any of these two research approaches: the sociology of radical change and the sociology of regulation. The finding of an answer to the question of what is the reason that makes society maintained as an entity falls under the regulation sociology approach. This approach investigates the reasons that make society not falling apart and tend to stay as one (Burrell & Morgan, 1979). Nevertheless, radical change sociology approach is about injustice and imbalanced power distribution, whereby these cause the need for major transformation (Burrell & Moran, 1979; Hopper & Powell, 1985; and Ryan et al., 2002). This approach reflects the orientation of the associated schools with respect to change.

Burrell and Morgan (1979) presented a helpful model in the investigation of how ontological views towards the world would result in epistemological ideas on knowledge, whereby this will influence study's questions and results' implications. Burrell and Morgan's (1979) analysis depends on a two-by-two matrix, as shown in Figure 1.

Figure 1
Social Theory Analysis Dimensions (Burrell & Morgan, 1979, p. 22)

	The Sociology of Radical Change		
Subjective	**Radical Humanist**	**Radical Structuralist**	**Objective**
	Interpretive	**Functionalist**	
	The Sociology of Regulation		

Burrell and Morgan's (1979) framework includes two dimensions: represented by the horizontal and vertical axis. By combining both, Burrell and Morgan (1979) proposed four dimensions for investigating a social phenomenon: radical humanist, functionalist, radical structuralist and interpretive. Each dimension presents different views concerning the natures of society and social sciences. Additionally, Burrell and Morgan (1979) stated that only one dimension could be used at a time because each dimension refuses the assumptions of all the other dimensions.

The interpretive dimension adopts a subjective method in investigating social sciences. This subjective approach is based on nominalist ontology with an anti-positivism epistemology. In general, the aim of this paradigm is to investigate behavior stability based on the viewpoint of the individual (Burrell & Morgan, 1979). Its main concern is on comprehending the social realm. This is to obtain more a thorough understanding on human behavior. The understanding of human behavior is gained through long-term observation.

Functionalist dimension is in accordance to ontological realism's assumption together with positivist epistemology, whereby it is the deterministic view towards human nature, as well as a nomothetic approach. This method aims to offer a sensible and generalizable justification for human nature. This approach also suggests that researchers can explain organizational behavior by testing hypotheses. Significantly, in accounting and finance research, the functionalist paradigm has been dominant since the 1970s (Burrell & Morgan, 1979). Moreover, the functionalist paradigm is based on the assumptions that society's nature is located under regulation sociology.

The nature of social sciences underpins the radical humanist dimension, whereby it is comparable to interpretive dimension. Accordingly, radical humanist paradigm adopts a non-positivist perspective towards the world. Concerning the assumptions on the nature of society, radical change sociology covers the paradigms of radical humanist and radical structuralist. Significantly, the paradigm of radical structuralist assumes that the nature of social sciences is similar to that of the functionalist (Burrell & Morgan, 1979). Researchers focusing on the paradigm of radical structuralist had detected that society has essential conflicts. This leads to regular reformations through political and economic crises. Researchers have made a conclusion that major reformations are natural in a society's structure and nature. However, researchers focusing on the dimension of radical humanist confirmed on the necessity of easing restrictions related to social aspect that hinder humans' progress. The researchers consider the current influential views prevent humans from achieving greater heights (Burrell & Morgan, 1979).

3.1.2. Criticisms to the framework of Burrell and Morgan (1979)

The model by Burrell and Morgan offers a useful way of categorizing social research as well as developing more socially and politically progressive accounting theories. However, it suffers from certain limitations. Gallhofer et al. (2013) stated that Burrell and Morgan are not the only contributors to this field. Although Bernstein (1976) is less known compared to Burrell and Morgan, his works influenced both Chua (1984) and Laughlin (1995). Also, even though Bernstein (1976) and Burrell and Morgan (1979) laid the groundwork for critical accounting, they still did not provide the alternative methodology needed to achieve the intellectual liberation from the dominant ideologies of accounting theory and practice (Roslender, 2016).

In addition, Deetz (1996) argued that the model of Burrell and Morgan has been used for the easy categorization of research types, but it lacks definite ways in differentiating research paradigms. In the same vein, Gallhofer and Haslam (1997) stated that the categories suggested by Burrell and Morgan are treated exclusively by researchers in which prevents the followers of these independent paradigms from engaging in constructive dialogues.

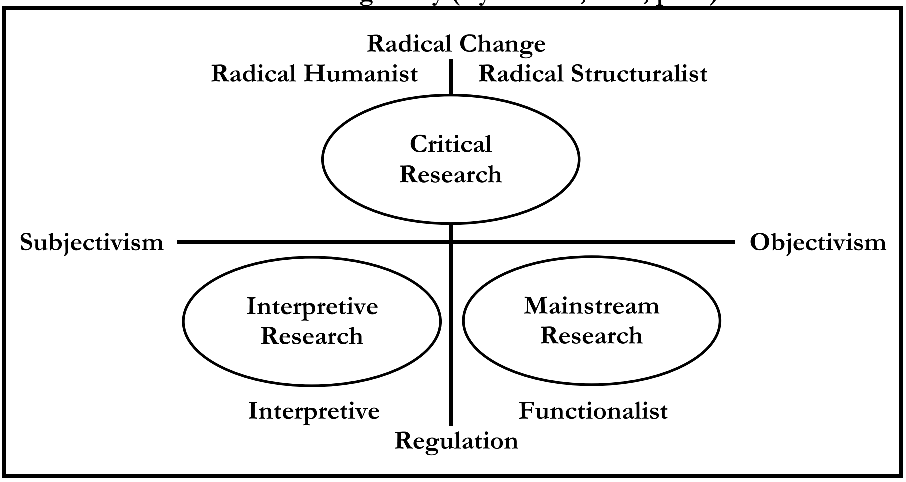
Ryan et al. (2002) stated that Burrell and Morgan's framework is helpful in categorizing accounting research, but it does not cover all the dimensions in accounting analysis. The study pointed out that the subjective and objective research paradigms are not distinct. This is because the human agency is subjective by nature, yet it still able to form objective external social structures. Similarly, Chua (1984) and Laughlin (1995) argued that the suggested independence of each paradigm of Burrell and Morgan's framework makes researchers unable to follow more than one paradigm at a time, which limits research results. In addition, Chua (1984) refused the notion that strict dichotomies govern all the assumptions concerning social sciences and society. This means that there are only two possibilities: the first is that individuals are controlled by their social environment. The second is individuals are completely free and autonomous.

Hopper and Powell (1985) used Burrell and Morgan's (1979) paradigm as the basis of categorizing accounting analysis after making some extensions. They suggested three main types of accounting research: interpretive, critical and mainstream. Hopper and Powell (1985) considered the subjective-objective paradigm to be a continuum, which gives room for subdividing the schools of thought. In accordance to Ryan et al. (2002), the beliefs by Hopper and Powell (1985) are as illustrated by Figure 2.

Insert Figure 2 here.

According to Chua (1984), accounting research is objective and deals with accounting as a method, not a goal. Moreover, mainstream research is based on quantitative data (Ryan et al, 2002). Although critical research considers reality to be objective, it assumes that reality is also subjective to alteration based on what the social actors interpret (Ryan et al., 2002). Lastly, interpretive study attempts explaining accounting's social nature from a subjective perspective (Chua, 1984).

Figure 2
The Classification of Accounting Study (Ryan et al., 2002, p. 40)



3.2. Use of Middle Range Thinking as a Methodological Framework

Laughlin (1995; 2004) presented a framework titled middle range thinking approach. This framework is useful for categorizing accounting research and selecting a proper methodology in conducting accounting research. Laughlin developed Burrell and Moran's framework and ignored the subjective-objective dimension.

Insert Figure 3 here.

Laughlin offers a three-dimension classification for schools of thought: theory, methodology, and change. Here, change is similar to the notion of Burrell and Morgan; except that it is considered a continuum, not a separate choice. The theories underpinning accounting research classified by Laughlin (1995) are shown in Figure 3.

In Figure 3, the top left part reflects positive research. Meanwhile, the bottom left section portrays interpretive research. The study by Laughlin (1995) considered positivism viable to the definition and hypothesis testing. However, Laughlin (1995) mentioned that interpretivism is not viable to be defined. According to Laughlin (1995), the positive research is quantitative and structured; while the interpretive research is considered disorderly, qualitative and vaguely defined.

Laughlin (1995) also considered data needed in positive research to be selective in generating non-generalizable conclusions. In addition, interpretive research is seen by Laughlin (1995) as descriptive and dependent on empirical rich data that are ill-defined.

Insert Figure 3 here.

Nevertheless, since 1995, some contemporary schools of thoughts for instance, practice theory, institutional theory, and actor-network theory have adopted interdisciplinary accounting research (Roslender, 2013). However, Laughlin's (1995) framework does not cover these schools of thought. Hence, in the current paper the researchers argue that institutional theory of accounting study has not been popularized by the framework of Laughlin (1995). Institutional theory needs to be shown in the bottom left box in a 3x3 matrix of the original Laughlin model alongside the structuration theory.

In the research on accounting, the interpretive methodology makes it possible for the researcher to concentrate on the problems faced by practitioners and to offer richer insights into the daily implications of accounting (Tomkins & Groves, 1983). Thus, the researcher can analyze a theory's suitability to study approach (Ryan et al., 2002).

Significantly, positive research is dominant in the accounting field. However, the research on management accounting is experiencing an augmentation following the interpretive approach recently (Ryan et al., 2002).

Figure 3
Alternative Schools of Thought in Accounting Research: Features (Laughlin, 1995, p. 70)

		Theory Choice: Levels of Prior Theorization		
		High	**Medium**	**Low**
Methodological Choice: Level Theoretical Nature of Methods	**High**	**Positivism (L) Realism (L) Instrumentalism (L) Conventionalism (L)**		
	Medium		**German critical theory (M)**	**Symbolic interactionism (Kuhn) (L)**
	Low	**Marxism (H)**	**Structuration (L) French critical theory (L)**	**Pragmatism (L) Symbolic interactionism (Blumber) (L) Ethnomethodology (L)**

Change Choice: Level of Emphasis Given to Critique of Status Quo and Need for Change (High/Medium/Low)

The Middle-Range thinking suggested by Laughlin (1995) enables researchers to make a decision based on three choices before conducting an empirical investigation in the accounting field. The decision should be made concerning methodology, theory, and change. Theory means the pre-theorization to the investigation. A decision should be made of whether ontological or epistemological assumptions are to be adopted. As for methodology, the decision should be made about the function and nature of the researcher during the process of investigating. The decisions about the theory and methodology are related to the nature of social sciences. However, the decision about change is related to the nature of society in the sense that a decision should be made whether the research's basic objective is to accomplish transformation in the phenomenon under investigation. According to Laughlin (1995), the decisions made about theory, methodology, and change can be considered based on three categories, i.e. high to low.

Table 1 shows the nature of Middle-range thinking in comparison to other points of view. The high theory, high methodology and low change approach suggests a material world independent from the notions of the users and includes generalizations that should be uncovered, which needs defined methods and observation (Laughlin, 1995). This approach assumes that legitimate inquiry does not involve critique and change (Laughlin, 1995). However, the low theory, low methodology and low change approach assumes that reality depends on humans' perceptions and projections, and generalization is not possible (Laughlin, 1995).

The medium theory, medium methodology, and medium change approach is the one called "the middle-range approach". It assumes a material reality independent from human perception, but the unavoidable bias in understanding frameworks is not being rejected (Laughlin, 1995). The medium approach assumes that reality can be generalized.

However, it also suggests that it is not guaranteed that generalizable realities exist. This middle approach also indicates that there would always be skeletal realities that need empirical details for them to make sense. According to this approach, the methodology should establish skeletal rules for discovery systems, but at the same time should promote variability and differences in practices (Laughlin, 1995). In addition, this approach is considered as a better-balanced method for transformation. The approach indicates that although using possible situations of criticism and change is necessary, sometimes change is not needed (Laughlin, 1995). The medium position allows change to be conditional. This means there is always a room for improving the status quo and for implementing radical change (Ryan et al., 2002).

Table 1
Main Features of Main Schools of Thought (Laughlin, 1995, p.80)

	High/High Low	**Medium/Medium Medium**	**Low/Low Low**
Theory Features:			
Ontological belief	Generalization waits for the reveal	There is possibility of "skeletal" generalization	Generalizations might not be available for discovery
Role of theory	Theory can be defined and hypotheses can be tested	Skeletal' theory together with several general comprehension about connections	Theory is not well defined- there are no prehypotheses
Methodology Characteristics:			
Human nature notion and observer function	Observer has independence and not relevant	Observer is vital and is a component of discovery process method is explainable.	Observer is vital and is a component of discovery process
Approach nature	Organized quantitative approach	However is based on the refining of real environment, always qualitative	Structurally no strong, bad definition, qualitative method
Data are pursued	Cross-sectional data are mainly utilized at a period of time and are carefully collected for hypotheses relevance	Research is longitudinal. Highly descriptive, but analytic	In accordance to longitudinal research, very detail
Conclusions are drawn	Rigidly conclude the results	There are reasonable conclusions based on the 'skeletal' theory. Empirically rich	Bad definition with conclusion cannot be reached. However, highly detailed
Validity criteria	Conclusion is statistical	Meanings: through analysis and researcher	Meanings: through analysis
Change Attributes	Low	Medium	Low
	Change is emphasized	Flexible towards major transformation and preservation of current situation	Stress on the change of current situation

Understanding the theories and approaches utilized by previous researchers in management accounting is paramount for informing current research endeavors. Consequently, researchers can design their studies more effectively, use appropriate methodologies, and interpret the results accurately. This ultimately leads to more reliable and valid research findings, which can contribute significantly to the field of management accounting (Otley, 2016). Lack of understanding of the underlying theories and approaches can result in incorrect or misleading information, which can negatively affect decision-making and performance evaluation (Atkinson et al., 2012). In addition, Van der Stede (2015) emphasizes that "a critical assessment of past research endeavors is essential for identifying opportunities for innovation and addressing emerging challenges in management accounting practice and education." A good understanding of the theories and approaches used by previous researchers in management accounting is essential for informing current research practices, identifying research gaps, and addressing contemporary challenges facing organizations.

IV. CONCLUSION

This paper has demonstrated some of the most prominent theoretical perspectives in the study of management accounting. Theories including structuration theory, contingency theory, actor-network theory, and institutional theory have been highlighted. In addition, the paper illustrated that many previous studies in accounting research have investigated the reasons for the reformation in the practices and system of management accounting. The function of management accounting information is also discussed. This paper aims to determine the theories and methodological concerns underpinning study in management accounting.

The literature review leads to the conclusion that some of the modern theories including actor-network theory, institutional theory, and practice theory are not covered by the model of Laughlin. However, interdisciplinary accounting research has depended heavily on these contemporary schools of thought (Roslender, 2013). As a result, there is a need for locating these theories in Laughlin's original framework. According to the researchers' view, the middle- range thinking approach provides an efficient framework capable of categorizing accounting research and selecting research methodology.

By synthesizing the theoretical insights and methodological considerations of this study, researchers should be able to understand the complex issues in management accounting, identify and suggest a more complex and adaptable approach to choosing theories and methodologies, address criticisms associated with the individual frameworks considered, and drive research innovations in management accounting.

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