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## An Insight on the Conceptual & Practical Paradigm of Lean Accounting

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### Abstract

Research indicates that although many organizations are rapidly implementing lean thinking, most organizations are still deploying traditional costing control systems despite arguments by lean accountants that traditional accounting standards impede lean implementation. Further research evidence suggests that while organizations are moving from traditional manufacturing practices, they still fall back on their historical approaches to accounting and resource planning. While a growing body of knowledge has investigated the topic of lean accounting, little research explores the relationship between lean accounting and field practices. There is a need to examine why lean manufacturing units may continue to utilize standard accounting and costing procedures. In this research, the author utilizes social systems approach using structuration theory to explain how lean accounting can be used as a social system to create changes in organizational practices. This research utilizes Anthony Giddens's structuration theory, will help to underpin the conceptual and theoretical framework for implementation of lean accounting. The paper anticipates that deploying theory of constraints and structuration will help to explore some of the insights of conceptual and practical frameworks of lean accounting and explore in-depth effectiveness of lean accounting to explain why mainstream lean organizations may continue to deploy or discard traditional costing systems.

**Keywords:** *Lean accounting; Lean manufacturing system; Lean management philosophy; Value stream costing; Structuration theory; Lean measurement.*

### 1. Introduction

In the past decades, the lean concept was applied primarily to the manufacturing and production sections, and was concerned with monitoring waste in the factory production processes. The concept of lean management at this time was majorly employed by Japanese automakers whose principles were emulated by the American firms to save their operations. Although the lean as adopted, researchers argued that it did not achieve its objective of saving the American firms, but rather helped them to catch up with impressive gains made by their counterparts from Asia. A growing body of knowledge suggests that while firms reported impressive manufacturing processes, companies continued to with their entrenched mass production (Rinehart, Huxley, and Robertson, 1997).

Studies have indicated that the past few decades have witnessed an increased interest for technical diffusion and features of lean management as applied in organizations. This growing concern from researchers across several fields may be understood for many reasons. Using a macro approach, the concept of lean manufacturing and changes in accounting processes influences many organizational concerns such as communication, productivity, competition between firms, internal and external relationships, and international competitiveness of a company's processes.

When approached from a micro-perspective, lean management and its effect on changes in accounting procedures and competitiveness of firms in terms of cost controls have caused many organizations to seek means of identifying, deploying, evaluating, and adopting lean approaches to gain competitive advantage over their immediate competitors. Similarly, different perspectives of lean accounting may be developed to understand the relationship between the principles of lean thinking and an organizations success in respect of cost minimization and profit optimization (Rinehart, Huxley, and Robertson, 1997). It is critical to examine the concept of lean manufacturing and accounting to help evaluate the extent to which organizations adopting lean concept gain or fail to reap the full potential of lean thinking.

Although many researchers have been undertaken to examine the application of lean accounting, most researchers have developed contradicting or inconclusive findings on the topic. Rinehart, Huxley, and Robertson (1997) noted that while an innovation of lean management in one study may be viewed as significant to organization, some studies may label them less important or not important at all (Haskin, 2010). In the light of the growing research on lean management theory, this paper seeks to explore several aspects of lean accounting with a view to meet various objectives.

Firstly, this paper presents a collaborative conceptual paradigm for understanding the role of lean accounting in organizational performance. This paradigm seeks to create a clear understanding of notable inconsistencies established in earlier studies on the topic, and provides a framework to help future research on lean thinking. Secondly, this paper, based on this framework, provides a practical approach to the development of a valid measure for effective implementation of lean concept. Finally, the paper explores the theoretical framework for understanding and measuring the quality of lean accounting while evaluating the applicability of the criterion measures.

The concept of lean manufacturing has been regarded as one of the leading strategies adopted by firms seeking to achieve excellent results. The concept of lean emphasizes better performance through routine improvement and elimination of production wastes (Haskin, 2010). Researchers argue that lean philosophy is a holistic approach that allows changes in organizations to both accounting and production as it gets entrenched into an organization's culture (Rinehart et al. 1997, pp. 2). Many researchers agree that lean production is a contemporary and standard model that befits the production and accounting challenges of the 21st century. In a survey conducted by Aberdeen Group (2006), 90% of the total manufacturing firms surveyed indicated that they were operating on a lean philosophy or were committed to implementing it in their processes. Many companies that have adopted lean concept have sought to increase productivity,

reduce wastes, costs, generate value for their customers, and enhance flexibility in their operations.

Research suggests that as organizations seek to integrate lean production philosophies into their manufacturing, they recognize the corresponding need to adopt new accounting procedures and rules that have the capacities to support their lean processes (Frances, 2007). Although changes in production has captured the need for corresponding significance of changes in accounting, the accounting and educational body of knowledge have been weak and slow in recognizing the role of lean accounting in lean environments (Haskin, 2010). There is a growing lack of knowledge on the basics of lean accounting, which apparently obscures the role of lean accounting in an increasingly lean business environment.

This means that deliberate or unconscious moves not to recognize the inherent importance of lean accounting systems in accounting in eliminating waste continues to blur the effective study of lean accounting and mainstream lean philosophy in the contemporary business (Adler, Everett and Waldron, 2000). The concept of lean accounting may be understood by adopting two meanings. First, it relates to implementation of lean concepts into mainstream organizations' accounting procedures. Secondly, the concept may be construed as a complex phenomenon that involves value stream costing (VSC). This discussion utilizes the latter approach to explore the concept of lean accounting and how its effectiveness can be measured using value and costs as key measurement variables (Frances, 2007). Accounting processes that accommodates the lean philosophy can be timely, simple to prepare and read, more useful to users compared to accounting processes hat embrace traditional systems.

When an organization learns to adopt lean accounting practices, they derive processes that are extremely linked to pull as contrasted to push environment in lean production (Frances, 2007). In a traditional approach underscored by push effects, production is initiated without having received orders from potential customers (Lewis and Carnes, 2004). Little research evidence has shed insights on the importance of accounting in a lean manufacturing environment. In a case study concluded by Kennedy and Widener (2008), the study's model illustrates the role of lean accounting practices within lean environments. In their case study, Kennedy and Widener (2008) concluded that lean accounting practices serve as mediating factors between lean practices and managerial control systems.

This research contributes to the body of literature in a number of ways. It seeks to clarify the general understanding of lean accounting from a conceptual and practical perspective, and helps to examine the role that it plays in enhancing the lean managerial and manufacturing initiatives. According to Frances (2007) lean practices are executed in environments characterized by low tracking of stocks, low apportionment of conversion costs, improved use of visual performance measures, and dependence on value stream costing. However, it should be noted that lean accounting occurs in organizations whose managerial team exhibit commitment to empower low-end employees (Aberdeen Group, 2006). This is because for lean accounting practices to thrive, organizations must provide relevant and conducive environment that includes all people. This means that successful implementation of lean accounting is triggered by people, processes, and collaborative initiatives (Aberdeen Group, 2006).

## **2. Literature Review**

In the highly competitive and dynamic business environment, organizations have been pressured to fast track their operations to improve quality of production, reduce costs, and improve flexibility, and improve customer satisfaction levels. As such, many organizations have routinely responded to this call through initiating numerous actions, including statistical controls, quality cycles, theory of constraints, and Just-In-Time among other controls. Each of the mentioned strategic actions has made significant contributions to the growth of organizations, these aspects when taken cumulatively they are referred to as lean management philosophy (Aberdeen Group, 2006).

The basis of lean management philosophy is that all organizational functions must melt into a single and coherent system whose sole objective is to offer value for customers (Grasso, 2005). This means that lean processes cannot function in isolation to generate full advantage. Studies have noted a large performance gap between firms that adopted lean practices as contrasted to companies that operated traditional perspectives (Chenhall, 2003). The notion that lean practices must be integrated into the overall organizational system is supported by examining the congruence framework utilized by Nadler and Tushman (1997).

The framework posits that consistency in internal components of an organization, including people, work, formal and informal arrangement is essential for the success of organizations. In this respect, congruence refers to the extent to which the desires, needs, objectives, and structural components align to each other. Further, Nadler and Tushman (1997) assume that all components in an organization as a system must be aligned with each other, which means that one component influences the other in the process. Formal organization in an organization includes systems, processes, and structures. On the other hand, informal organization refers to beliefs, values, and culture of an organization (Chenhall, 2003). The framework in this discussion focuses on the relationship between organizational environment and accounting environment, and the control aspects involved.

In an organizational environment, lean manufacturing model functions under varying degree of support of organizational agents of change, especially top managerial teams. On the other hand, the accounting environment includes lean accounting practices, which are easy, flexible, and inclusive, and value stream costing (Chenhall, 2003). The final component involves control mechanisms such as performance measures, employee freedom and empowerment. Therefore, studying lean accounting takes a comprehensive ontology that incorporates people, work, and processes to achieve the intended objectives in a lean environment.

Researchers suggest that the fundamental principle underpinning the lean concept is elimination of less valuable activities (Fullerton and Wempe, 2009). However, it should be noted that accounting goes hand-in-hand with this determinants to achieve unanimous performance. Evidence from anecdotal research shows that accounting professionals experience difficulties in preparing month-month closings, and often see them as tedious and undesirable. This, according to accountants dilutes the essence of the accounting information generated. Cunningham and Fiume (2003) offer a critical position of how practices of lean accounting can be instrumental in

solving problems through elimination of irrelevant transactions, summarizing closing information, and ensuring ease of understanding of accounting information.

Nadler and Tushman (1997) indicated that these processes enhances efficiency, reduced costs, improved quality, and better alignment of lean strategies with organizational objectives and goals. Numerous researchers have argued that organizations implementing lean accounting practices have done so by investing large resources in initiating management costing systems that respond to their value streams (Coppage and Boer, 2000). Analysis has shown that firms that have successfully linked their lean accounting to their lean managerial and manufacturing practices have realized optimal benefits than firms with fragmented or loose relationships that govern their accounting and production processes (Fullerton and Wempe, 2009).

While it is critical to observe that attempts to implement lean accounting have often failed to deliver the anticipated results, studies suggest that these failures may be as a result of retaining some or all the traditional accounting and manufacturing regimes that harm lean manufacturing. Hansen et al. (2009, p. 571) suggested that for firms shifting from traditional manufacturing systems to new lean methods to realize full benefits, they must be willing to alter their accounting systems and operational control approaches to limit the effects of challenges and false signals during change-over periods (Grasso, 2005).

### **3. Theoretical and Practical Issues**

Anthony Giddens proposed a structuration theory to offer a theoretical framework for analyzing the nature and scope of social systems. Besides examining social systems and institutions, Structuration seeks to provide a platform to understand how these systems and social institutions undergo transformation. Accounting systems have been seen as social institutions undergoing strategic transformation over time. Accounting systems continue to witness inevitable changes in the manner in which rules, processes, and procedures are carried out to meet the organizational accounting objectives. Norman and Scaperns (1991) used the theory of structuration to investigate accounting systems. In their study, they found out mechanism of explaining how managerial accounting systems reflected characteristics of social systems.

Therefore, structuration provides a holistic perspective that enables one to examine concepts of managerial accounting and control systems, and explaining how these systems can cause transformation in organizations. Studies show that structuration succeeds as a framework for studying and understanding elements that may impact on the lean accounting systems in an organization (Haskin, 2010). In understanding the concept of lean manufacturing and accounting, we use constructs of structuration theory to derive relevant propositions regarding why there is a widespread misconception of the lean accounting and reasons why firms retain their traditional cost accounting systems under a lean environment.

Haskin (2010) describes structures as simple rules and principles organized as components of social system. According to Macintosh and Scaperns, structures are templates, blueprints, procedures, or guidelines that shape the overall behavior of systems and system components. In this paper, the discussion uses structuration theory to explore standard lean

accounting processes as structures of accounting systems (Shah and Goldstein, 2006). The theory provides that structuration may refer to agents of change of actors in social systems that serve to change or retain systems status to suit their interests of organizational purpose (Shah and Goldstein, 2006; Ahlstrom and Karlsson, 1995).

The understanding of this theoretical framework allows people to gain knowledge of how managers as agents of accounting systems struggle to change or maintain costing rules and formulas to support resource allocation and utilization (Hedin and Russell, 1992). In this analysis, managerial accountants and costing accountants are examined as social components or actors who engage in activities that support or impede lean accounting or management goals through actions that maintain or alter accounting standards and practices (Pierce and O'Dea, 2003).

Management accountants as social actors are involved in structuration through three main dimensions of interactions in social systems. First, they reengineer their power over system resources such as inventories. Second, they attempt to communicate and transfer meaning to other agents of social systems (Shah and Goldstein, 2006). Third, they carry out social activities within standards that are generally accepted such as accounting and managerial controls. Many researchers have studied the lean accounting versus traditional costing (Hedin and Russell, 1992). These studies analyzed some of potent reasons that have warranted the use of some costing systems at the expense of other accounting procedures.

Perhaps, it may be important to note that the dimension of structuration allows one to explain why some particular costing system may prevail in one organization and not in another (Shah and Goldstein, 2006). In his study, Kaplan noted that single-sourced cost accounting rules cannot be used to achieve all organizational objectives of managerial accounting any given firm (Coppage and Richard French, 2002). Therefore, lean accounting proposes that adoption of accounting procedures must be guided by structures that fulfill three main system objectives in an organizational costing regime. These objectives include inventory valuation, inventory control, and product costing (Hu and Bentler, 1995). This discussion utilizes these objective functions of integrative costing to assess the value of lean accounting concept in manufacturing firms.

The theory of constraints refers to an organizational approach to change focusing on the optimization of profits. According to the proponents of the theory of constraints, each organization inevitably faces at least one constraint in its quest for improving its profitability. For purposes of this paper, a constraint may refer to a factor that impedes an organization from achieving its intended purpose, which is usually profit maximization. Therefore, as employees seek to improve the overall profitability of a firm through lean production and accounting, they should remain aware of the potential challenges that may limit their success (Howell and Soucy, 1987). These constraints may include internal factors as well as externally generated constraints, including non-production constraints such as market demand, and the ability of the internal team to translate market information into an organizational return (Foster and Young, 1997).

When examined from this perspective, organizations are viewed as agents of lean strategies that help to generate synergies for improved profitability (Kaynak, 2003). As organizations seek to adopt lean concepts in their manufacturing and accounting processes, the

theory of constraints provides critical definitions of a set of techniques and managerial tools, which organizational change agents may deploy in managing constraints to improve the profitability of an organization. To examine the relationship between organizational performance and lean management, one should examine organizations as sets of processes, which are inextricably linked to change firm inputs into saleable outcomes.

Using the theory of organizational constraints, organizations can be conceptualized as a chain of systems aimed at accomplishing a common goal. Many organizations that are seeking to adopt and execute lean concepts are finding it complex because they lack genuine knowledge and initiative to understand the relationship between the effectiveness of lean management and the potential factors that may hamper this process (Kaynak, 2003; Maskell, 2000). Therefore, integrating the concept of lean thinking with the theoretical model of constraints can have far reaching impact on the performance of accounting departments in respect of reduced costs and optimal profits (Kaynak, 2003).

One of the major misconceptions facing the utilization of lean accounting is the tendency of agents of change to evaluate lean accounting as an independent mechanism that can create maximum organizational value. A departure from this philosophical thinking to adopt an integrative and collaborative approach that creates a linkage between success factors and constraining factors can have significant positive impact on the effective application of lean concepts in organizational processes (Kennedy and Maskell, 2006).

Issues of identifying and assessing the lean organizations remain complex. However, it is increasingly important to generate understanding by considering the concept of lean management from a broader perspective, rather than adopting a unidirectional approach to the concept of lean accounting. By doing this, researchers can gain significant insights into the theory and practice of lean accounting. Kennedy and Maskell (2006a) suggested that cost constructs are essential when evaluating the effectiveness of lean practices within mainstream accounting and manufacturing. Lean management is viewed as an idea, innovation, concept that derived from change of organizational culture and changes from traditional to modern management (Kennedy and Widener, 2008b).

Although this paper concentrates on lean accounting, other managerial lean perspectives may be used to understand and qualify lean accounting as a managerial concept (Kennedy and Widener, 2008b). The social system as a niche for lean accounting includes private and public organizations, institutions, firms, groups, states or individuals together with other organizations with which they relate. These set of parties refer to the integrative group of adopters of lean accounting concept.

#### **4. Measurement of Lean**

Accounting changes that are continue to occupy the field may be observed as being the result of the failure of previous accounting measures to support mainstream lean management. Traditional and current accounting concepts are replete with changes that have been brought in to adapt to changes in managerial and production to allow firms profit from their operations (Klein

and Rai, 2009). This revelation indicates that accounting is an obstacle to the successful implementation of lean management, and warrants discussions on reduction of waste resulting from accounting procedures and processes (Kennedy and Widener, 2008b).

The prevalent misconceptions of lean accounting have been found to be caused by lack of adequate knowledge and resistance to cultural changes. Scholars of lean management have argued that for individuals within and outside accounting to support the tenets of lean accounting transformation, they must be able to understand the lean systems and how they function. Many researchers suggest that the understanding the concept of lean enables one to overcome the barriers of fear, and limited education. However, for organizations seeking to adopt lean accounting, Ansari, Bell, Klammer and Lawrence (1997) suggest that firms should be ready and willing to transform their current state of managerial approaches while shading off the shackles of fear for the unknown. Klein and Rai (2009) noted that the best approaches to understanding lean is through appreciating the holistic sense of lean enterprise is opposed to tackling the concept as a fragmented concept that operates independently (Ansari, Bell, Klammer and Lawrence, 1997). Research indicates that while lean begun from production, the concept does not remain within the separate confines of production, but rather traverses to meet the accountancy needs of an organization. Lean accounting frameworks must be consulted to enable an objective understanding and spread of the concept of lean accounting within upstream and downstream enterprises (Langfield-Smith, 1997).

There are contradicting conceptualizations on whether the utilization of lean accounting should precede the adoption of lean production practices on the floor of a firm's plant then proceed to a new manufacturing frame. However, there is no agreed upon structural formula with which an organization can follow while seeking to adopt the lean accounting and manufacturing practices (Lind, 2001). While these two practices may work independently, they can be used congruently with each other to support future excellence. Research shows that lean accounting cannot stand alone in a process aimed at establishing the success of a system. Therefore, retaining old factory production practices and adopting new initiatives of lean accounting may render a system less productive (Maskell and Kennedy, 2007). The theory of constraints suggest that lean managerial practices of accounting can eliminate controlled costs and activities, which do not create value for firms, owners and customers.

The time line between the ordering and cash describes the value stream of an organization. Therefore, organizations can optimize their value stream through initiating procedures that create efficient transaction recording, easy interpretation and quick processing (Lind, 2001). As organizations deploy lean accounting concept and change their manufacturing approaches from traditional to modern approaches, they must evaluate their accounting systems against their operations to recognize wasteful transaction activities, which can be eliminated to realize full benefits of lean approaches (Langfield-Smith, 1997).

As organizations continue to face increased pressure to integrate new techniques that support the improvement of value for shareholders and customers, it is critical for managers and employees as actors of change to restructure their formal and informal systems around value

streams, but not traditional structures, hierarchical lines, which have fail to reap maximum gains (Langfield-Smith, 1997). This will need lean accounting to identify and eliminate potential waste.

The study of lean accounting under the philosophy of lean manufacturing reveals two critical concerns that have been neglected by companies that attempt to incorporate lean thinking. First is the need for top managers to remain committal in leading the lean journey. The other concern has been the use of lean tools rather than focusing on people as agents to underpin the implementation of lean accounting (Maskell and Baggaley, 2004). Research has shown that successful organizations that have reported positive results of lean manufacturing have been seen to involve people into processes of change. This implies that people are exemplified as agents of change rather than mere recipients of the change being sought. Therefore, change of culture through people-oriented actions hails the potential for successful implementation of lean accounting (Maskell and Baggaley, 2004).

Lean accounting as a philosophy provides a formidable ground to measure the outcome of lean processes (Maskell and Kennedy, 2007). Although measuring employee empowerment and involvement, such factors such as the degree of suggestions and continuous involvement coupled with high-valued training important in creating value streams for all agents of organizational change. Lean organizations employ simple accounting procedures that seek to enable people to understand the organizational processes.

However, there is a growing misconception that lean accounting does away with the traditional accounting rule (McLachlin, 1997). The reality is that while lean accounting introduces changes in the accounting regimes of organizations, it does not offer stand-alone mechanisms of producing overnight changes. Lean manufacturing, the brain child of lean accounting has a standing history of proven benefit to user organizations, and provides a fertile ground for continuous improvement (McLachlin, 1997). Lean accounting includes all efforts to generate management information of accounting based on lean thinking (Shah and Ward, 2003).

The management accountant is supposed to develop understanding the principles of lean philosophy and manufacturing practices that integrate the tenets of lean practices. A critical review of the literature on lean accounting reveals several assertions of lean accounting whose implications have far-reaching effect on the performance of firms (Parks, 2003).

The process of evaluating the effectiveness of lean accounting leads to the assertion that organizations must be able to integrate people with processes to achieve maximum benefits. It is critical to understand the critical implications of assertions of lean accounting, question the operation-centric view advanced by proponents of lean accounting (Shah and Ward, 2003).

While examining the progressive views of lean accounting, lean accountants and scholars of lean thinking must not shy away from examining the credibility of contrary assertions of lean accounting. Many contrasting assertions have been posted in many articles as declarative statements underscoring the concept of lean accounting. Some studies have asserted that accounting is a problem, and that lean practices do not have a place in the modern business (Shah and Ward, 2007). Lean practices have the potential for transforming organizational perspectives

on accounting. However some declarative statements have provided no empirical evidence from technical analysis perspective to discredit lean practices in accounting and manufacturing processes (Shah and Ward, 2003).

When observed from external reporting perspective, lean accounting has an implication for organizational transformation in terms of costing and reporting of external financial information (Sim and Carey, 2003). Further, this externality implies that lean accounting has the capacity to disclose relevant financial information based on established generally accepted accounting principles while seeking to change the organizational culture. Although inventory costing and valuation has been advanced as the core of lean practices, the concept works collaboratively with other accounting entities to help organizations achieve their long-term objectives (Shah and Ward, 2003; Merwe and Thomson, 2007).

As organizations attempt to adopt practices of lean accounting, they incorporate new performance measurements. The application of these new performance measurement tools enables organizations and their management accountants to provide control and offer continuous improvement to processes with an aim of creating value streams for their customers (Sim and Carey, 2003). Fundamentally, lean accounting (Merwe and Thomson, 2007) does not constrain its resources on mainstream practices for profiting organizations, but rather have a comprehensive implication on the quality of value generated for owners as well as customers through controlled inventory costing (Statements on Management Accounting SMA, 2006). Contrary to traditional accounting practices, lean accounting moves from complicated traditional reporting and costing procedures to accommodate new, easy, and flexible practices that enable firms to develop clear understanding of organizational performance. Usually, performance results from lean practices are presented on visual displays and are maintained by people using its key principles in the manufacturing process.

## **5. Directions for Future Research on Lean Accounting**

Lean practices possess a large history of potential benefits to adopters of lean thinking. The primary principles of waste reduction, departure from duplication to replacement, employee involvement, and customer pull versus company push practices are critical to the development of actions capable of warranting realizable profits for organizations and their competitiveness (Solomon and Fullerton, 2007). In a business environment where strong and independent lean accounting practices are prevalent to support continuous improvement has the potential of using value stream approaches to enhancing customer value, and can create dramatic changes in organizational performance (Sim and Carey, 2003).

Studies have been fronted on whether lean accounting practices have the potential of replace, compliment, or supplement the prevailing or emerging cost accounting practices and change initiatives. Answering this concern should, however, be guided by looking at the nature of organizational culture and systems approach to change. At its best, and based on the simple organizational environment, research suggests that lean accounting, when fully deployed may offer itself to initiate change or adopt changes on traditional approaches of accounting. However, no clear formula can be derived to evaluate the effectiveness of lean accounting to bring about

these changes until comprehensive analysis of how lean accounting supports operational-centric view of lean decision-making, strategic planning, and progressive costing for creating sustainable value streams (Statements on Management Accounting SMA, 2006).

The other central question in the study of lean accounting could be “does lean accounting decision-making practices optimize organizational improvement?”, therefore the central concern of lean accountants and proponents of lean thinking to traverse the ordinary assertions and adopt new and challenging notions that spur progressive debates rather than dismiss some of the declarative assertions as traditional accounting practices that offer no input in the contemporary lean business environment.

This discussion has explored the relational aspect of organizational systems in a bid to help firms reap maximum benefits of implementing lean processes. This research paper confirms previous literature that firms initiating lean manufacturing have also resorted to altering their cost accounting systems to align their production and accounting procedures that support each other. However, separate studies examined in this discussion suggest that where top managerial teams fail to exhibit support for lean accounting, and fail to apportion freedom and room for employees to participate, organizations record less or no impact of lean accounting. Therefore, the successful implementation of lean accounting should be seen as a holistic approach to organizational performance, rather than as independent steps to achieve their objectives (Maskell and Baggaley, 2006). While initializing lean philosophies can be seen as having far-reaching positive impact on the status of an organization, considerable evidence indicates that in-depth case studies must be used to assess the potential of lean accounting (Maskell and Baggaley, 2004).

The next research initiative would be to include other aspects such as informal organization, which include shared organizational values, and beliefs to understand the relationship between organizational environment and accounting environment of firms adopting lean approaches (Womack and Jones, 1996). Other significant research aspects that would give insights into the topic may include assessing the relative significance of emerging accounting systems that have the capacity to support lean concepts. Such accounting aspects include time-driven Activity Based Accounting, direct costing, and throughout accounting. It is highly important that future research dimensions considers way of improving lean accounting systems to provide far-reaching information capable of influencing better decision-making for improved organizational manufacturing practices (Womack and Jones, 1996).

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