

According to Ali (2014), the change in the organizational structure occurred in order to develop the administrations, departments and offices whose mission is to provide better data and resolve certain deficiencies in the management of the Libyan manufacturing company called Trucks and Buses Company (TBC). For instance, strategic planning is one of the systems that have been implemented as a result of the change in the managerial policy in the TBC. According to jobs description at the TBC, strategic planning department is responsible for overseeing the works of strategic planning at all administrations, departments and offices as well as in order to be uniform down to the company's overall strategy.

Production Technology

Technology as a contingent factor can be related to production or information. Macy and Arunachalam (1995) defined 'production technology' as the process of transforming inputs to outputs. It is perhaps the simplest and longest established contingent variable utilized in management accounting and the distinction between different kinds of production techniques is a factor that has long been recognized as affecting the design of internal accounting systems. Fisher (1995) argues that technology as a contingent factor can be related to production or information. According to Scapens et al. (2003), the speed of technological change of production obviously had a significant impact on routine organizational life. Burns and Baldvinsdottir (2007) also assert that the increased speed of technological change has affected management accounting systems. Nanni et al. (1992) stated that

“Manufacturers must have the response capability to take advantage of technological changes through process and product innovation. The environment in which management accounting operates has changed significantly in the last twenty years and obviously this change has been in the technology and the complexity of manufacturing operation”.

Otley (1980) pointed out that production technology has a significant effect on the kind of accounting information system. For example, the nature of the production process determines the amount of cost allocation instead of cost apportionment. Put succinctly, complex technology needs simple and informal control mechanisms and uniform technology requires complex mechanisms (Wichramasingh & Alawattage, 2007; Lasyoud, 2015).

The adoption of new and advanced technological manufacturing techniques which transform production from normal into mechanized can have effects on management accounting. For example, the products produced in a high technological organization are fundamentally more complex and have a short life cycle (Brimson, 1986). Conventionally, the product life cycle comprise four stages: start - up; growth; maturity; and decline that spend most of their lives in the last two stages. A shorter product life - cycle and the desire to remain competitive require high technological organizations to invest in new manufacturing technologies such as: advanced manufacturing technology; flexible manufacturing systems; computer integrated manufacturing; and so on. Therefore, new capital investment analysis is needed. Shank (1996) proposes that the

traditional systems of capital investment analysis should be replaced by strategic cost management as this approach takes into account fundamental strategic matters.

Furthermore, Isa and Thye (2006) argue that management accounting techniques such as activity - based costing (ABC), value added accounting and target costing (TC) are influenced by technological factors such as complexity of production process, overhead expenses and product variety. However, other researchers argued that technological factors such as the level of overhead, product complexity and diversity and relative advantage are not related to management accounting practices such as ABC (Brown et al., 2004). In addition, the study by Innes and Mitchell (1990) indicated that production technology influences management accounting in the following three areas. First, the increased automation of the production process will lead to the development of machinery and equipment performance measures through the identification of 'cost drivers'. Secondly, the short production cycle and growth will commence delayed costing and replacing overhead rates with direct charging. Finally, the development of quality cost information will be influenced by the importance of maintaining quality standards.

Employees

Employees are another key factor that can contribute to management accounting change. Granlund (2001) proposed that the human factor should be carefully deemed in the development projects of accounting systems. People change accounting and, in this sense, employees cause all management accounting changes (Granlund, 2001). Nonetheless, they may also be an inciting force in change and not merely a vehicle by which it occurs. According to Klamer and Walker (1984), the majority of employees have been exposed to new techniques through their previous education, attending presentations, seminars and reading published articles. Thus, these contacts provide sources to new thoughts to apply in their current organization. In addition, change may occur from employing new experienced accounting staff (Armstrong, 1985) or exposing them to the international manufacturing operations and information systems (Edwards & Newell, 1991).

Furthermore, there may be a need for the company to change part of its management accounting system to fit the internal power struggle between the capital providers and the employees. Usually, this would include the company's reward system (see Amat et al., 1994; Ezzamel, 1994) which, in turn, is largely reliant on performance measurement information. Moreover, the impact of employees on management accounting practices has been investigated in the previous studies. For example, Al - Nimer (2010) carried out research which aimed to provide a view of the current role of management accounting practices in the Jordanian financial sector. The study revealed that the number of employees and other contingency factors had a significant impact upon the sophistication level of management accounting practices.

Problems of Existing Techniques

The insufficiency of existing management accounting systems is closely related to the introduction of new systems. The present techniques may not be sufficient or satisfactory for this current organization's processes (Armstrong, 1985). There might be inadequacy in the traditional systems as the role of the traditional industries declines (Lapsley & Mitchell, 1994) and shortcomings are also probably due to the lack of reliability of conventional costing (Askarany & Smith, 2000). For example, products are changing quickly with shorter product life cycles in a high technology environment.

High technology production has changed cost structure with more emphasis on indirect instead of direct cost. This has resulted in organizations adopting more suitable systems for controlling overheads. The motivation for activity - based costing (ABC) derives from a need to modify inequities in conventional volume - based allocation systems for these indirect manufacturing costs. The design of activity - based costing (ABC) is that diverse production support activities that are similar should be categorized together. Then the cost of these activities is gathered to shape an activity cost pool and a single activity driver is utilized for each of them in costing products (see Anderson, 1995; Cobb et al., 1995).

In addition, organizations are faced with frequent capital investment decisions, due to shorter product life cycles in high technology environments. Nevertheless, conventional capital investment appraisal techniques are not without shortcomings. Shank (1996) argued that the traditional systems of capital investment analysis do not comprise the full influence of the technology change decision. For instance, the net present value places such a premium on short - term financial outcomes and little attention on the difficulty to quantify issues such as quality enhancement or manufacturing flexibility. The study suggested that high technology organizations adopt strategic cost management. In addition, this approach evaluates strategic issues in capital investment appraisal.

Deterioration of Financial Performance

A poor financial performance itself generates pressures for action to be taken which will improve performance measures. Therefore, as a reaction to the deterioration of financial performance in an organization, there is a need to adopt new management accounting systems as a result of a dip in performance. Changes in the management accounting system may provide the solution to an increased demand for information. Thus, better performance and useful information will be provided for an organization through adopting new techniques. Innes and Mitchell (1990) found out that deterioration in financial performance is a catalyst which stimulated new developments in the unstable world of high technology organizations. Their result was affirmed by Haldma and Laats (2002) who observed in a more general study that: *"....dissatisfaction with the performance measurement system, which was unable to provide appropriate information for decision - making served as a significant catalyst in improving the cost accounting and MAS"*.

The following table (3) shows the six sub - groups of micro - organizational factors (Internal Factors) listed above and the related factors that fall under each respective heading.

Table 3: Micro - Organizational Aspects

| Micro - Organizational Aspects (Internal Factors) | | | | | |
|--|-------------------------------|---|---------------------------------------|--|---|
| Organizational Structure | Managerial Policies | Production Technology | Employees | Problems of Existing Techniques | Deterioration of Financial Performance |
| Level of decentralization | Corporate expansion | Technological innovation | Widespread of knowledge | Insufficient the existing systems | New assessment and adopted |
| | Change in strategies | High-technology process | Reduction of skilled to simple labour | Declining role of traditional industries | Need to justify actions |
| | Restructuring of organization | Shorter product life-cycle | Internal power struggle | Lack of efficiency | Information quality performance evaluation |
| | Constant improvement | Change in production process Quality improvement | | Capability of the traditional cost | |

CONCLUSIONS

This paper has discussed the concept and dimensions of change in management accounting. In addition, this paper has principally presented previous studies that have attempted to investigate management accounting change and many factors, both external and internal. These factors may influence management accounting practices or systems in organizations. The paper concludes that most of previous studies that have concentrated on management accounting change within large organizations. However, most of them studied it as an outcome. Researchers have been given a little attention to the nature of in other words the different types of change in management accounting and the processes that have taken place to affect it. The paper also concludes that there is no generally agreed upon definition of change in management accounting. Since change in management accounting is not a uniform phenomenon and happens in a dynamic world, thus, many factors, both external and internal, is expected to cause changes in organizations. Little attention has been given by most researchers to the exact specification of the full range of causal factors. Consequently, many different terms have been utilized for similar causal factors that cause change in management accounting and the previous studies have focused on a limited number of causal factors. In addition, little consideration has been given to the interrelations between causal factors.

Several recommendations for future research have been provided by this study. Firstly, future research could adopt survey approaches whereby a wider sample of organizations can be studied. By using different methods for collecting data, future research can also study change in management accounting in other public sectors (such as service, financial, oil and so on). Secondly, future research can be conducted in developing countries (a single country or comparing two or more countries) to provide further insight on the influence of country - specific factors (country's characteristics) on management accounting and control practices. Finally, future research could focus on alternative theoretical perspectives for the investigation of the process of change in management accounting such as critical theory and actor - network theory. The paper also gives implications for future management accounting research combining institutional and critical theories. The paper contributes to the extant literature by presenting the dimensions of management accounting change. It also discusses intra and extra organizational factors, which might form management accounting practices within organizations, since the paper concludes that most prior studies are on large companies. Therefore, this paper will be useful for scholars in this area through giving in-depth understanding of management accounting practices within organizations, especially Small and Medium-sized Enterprises (SME's).

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