

Changing Role of Management Accounting in 21st Century

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ABSTRACT

Accounting is a changing phenomenon. Applied sciences and concepts continuously evolve and redefine accounting. Management accounting is a subfield of accounting that plays a vital role in the enterprise environment. This study highlights the changing role of management accounting in 21st century focusing on purpose, function, and role of information technology on its transformation. The main source of information retrieval has been taken from web and search engines. The framework of the study has outlined into historical need for reforming management accounting system, future direction, new scope, trends, role of information technology in management accounting transformation, and the changing role of management accountants. It will be of remarkable significance to reap a proper understanding of how management accounting works locally and globally. The 21st century has viewed the emergence of information age and the resulting economy driven by knowledge as a source of competitive advantage. Therefore, this era calls for professionals with an appropriate balance between technical skills and breadth of knowledge to be compatible with the ongoing transformation.

Keywords: Management Accounting (MA); Transformation; Decision making; Information technology; Management accountant

INTRODUCTION

Accounting is a changing phenomenon, where both management accounting (MA) and financial accounting (FA) activities, applied sciences and concepts are continuously evolving and redefining themselves, and is turning into an increasing number of intertwined converging realities [1]. The properties of FA influence the quality of MA [2]. Hence, MA and FA are observed as separate realities. According to the Institute of Management Accountants (2008), 'MA is a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization's strategy'. It is associated with higher value and more predictive information.

Modern organizations are increasingly becoming more complex due to rapidly changing and highly competitive environment. Globalization, economic liberalization, technological advancements and interconnectivity have made the existence of organizations tougher than ever before [3]. Markets are becoming more international, dynamic and customer-driven. Customers are demanding more variety, better quality and service, including both reliability and faster delivery. Changes in commercial enterprise

ecology emphasize the need for complete, transparent, reliable and correct statistics that can be accessed quickly. In this situation, there is a need to simulate organizations to respond more innovatively in MA. It ought to be for value creation and developing and sustaining competitive advantages [4]. The expanding role of MA in 21st century is depicted at Figure 1.

Current MA practice has lost its relevancy with recent business environment [5]. The continuous changes in business environment influence MA practices and organizations' activities due to globalization [6], intense competition [7], information technology [8] and changes in regulations [9]. Moreover, advancement in

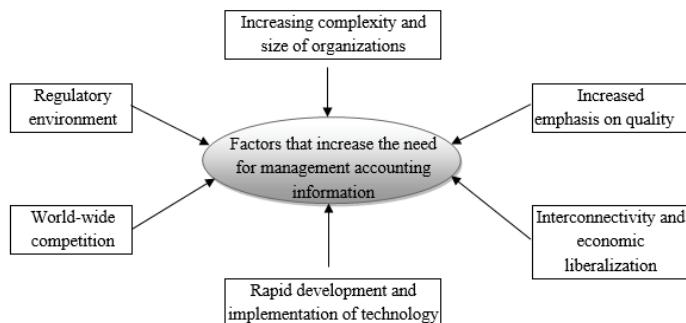


Figure 1: Expanding role of management accounting.

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production technologies, including advanced manufacturing technologies, computer-aided design and system also give significant impacts to the companies [10]. Recent years have witnessed changes in how products and services are supplied and delivered to customers [11] as well as advancement in information technology [12]. Preparation of information and dissemination become much easier, and processing capacities are much greater leading faster customers' response times [13].

The predominant supply of data has been taken from web and search engines such as Google, Yahoo, Bing, Ask, Wow etc. They have been used appreciably to hint and refer online data and news. There have been many books, articles, journals, analytical reports and various published materials gathered from the web sites such as knowledge storm, computer world, business today, Emerald Library, Amazon, ACCA business and accounting and e-week. Many books and journals were also used as reference. The framework of the study is developed in Figure 2.

Purpose of the study

The fundamental purpose of this study is to initiate discussion on the multifaceted nature of the MA to 'search the outright truth' through dismantling the 'black box' of accounting.

Objectives of the study

- To explore the new scope of MA based on the historical need for reforming and its direction;
- To explicate the role of information technology on its transformation; and
- To discuss the changing function of management accountant in 21st century.

Research questions

This study notices several factors that may influence the changes in MA practices. Environmental and organizational factors are believed to be an underpinning theory for changes. Therefore, the study has framed the changing role of MA in 21st century on the following questions-

- What are the decisive initiatives of MA information?
- How have the role and direction of accounting recently evolved? and
- How are information technology and systems concerned in the change of MA?

This paper focuses on the new strategy of MA in retaining up with the latest information technologies and manufacturing technologies. It additionally highlights the emergence of new and greater 'proactive' MA that is changing despite the emergence of rapidly developing information age.

LITERATURE REVIEW

The historical need for reforming MA systems

MA has constantly had a rich history, carefully linked to the changes in organizational strategy. The evolution observed in MA is not random, it is environmentally driven [14]. The MA reforming

manner is determined by the pressures of an increasingly more aggressive competition, new technologies, and the dictatorship of financial accounting and the expanding role of MA [15] further adds that current resource planning, computer-assisted design and manufacturing have decided the look of mistrust in in MA conventional techniques. Therefore, evolution of MA is continuous transformation as presented in Figure 3.

MA, in its evolutionary process, represents a response to organizational changes [15]. In 1998, the International Federation of Accountants [16] issued an assertion describing the development of MA through four sequential stages: '(i) cost determination and financial control (pre 1950); (ii) information for management planning and control (by 1965); (iii) reduction of waste resources in business processes (by 1985); and (iv) value creation through effective use of resources (by 1995)' to be achieved through the use of applied sciences which examine the drivers of customer value, shareholder value, and organizational innovation.

Transformation of MA systems is influenced by way of a sequence of factors, such as the economic, financial, political, legal, social and cultural environment [15] further adds that the systems should revolve around the precept that a product, through its attributes, delivers customer value, instead than the value for its manufacturer. MA practices in 21st century are possibly to advance wide spectrum of cross-functional disciplines and translate into a broader reform, including the management system. In the last decades, MA has passed through more metamorphosis than in any other duration in its history [15].

Future direction of MA

The reason of MA in the corporation is to assist competitive decision-making by collecting, processing, and communicating facts that helps management in planning, controlling, and evaluating

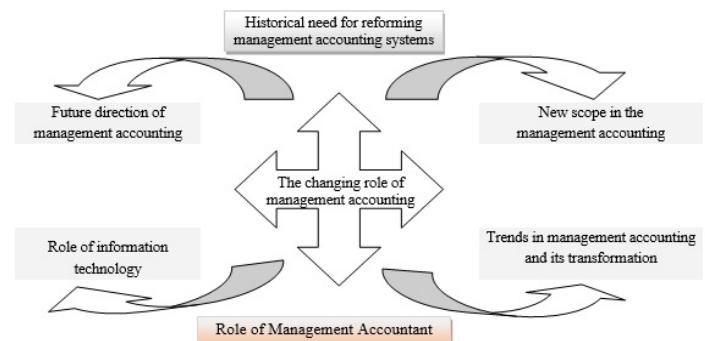


Figure 2: The study framework.

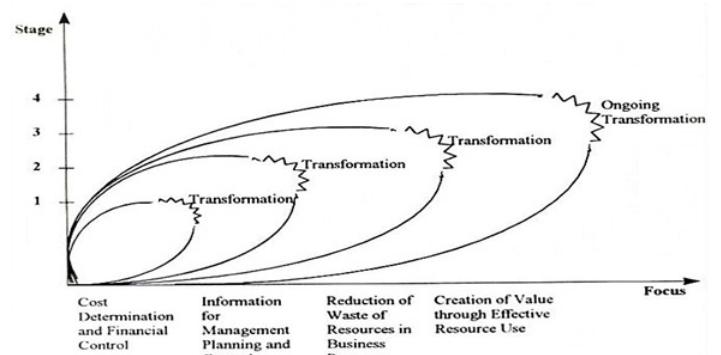


Figure 3: The evolution of MA (IFAC, 1998).

business processes and enterprise strategies. Information needs for costing and decision making as inputs-processes-outputs is presented at Figure 4.

The final reason of MA can be classified into two categories: control and decision making [1,17]. Control encompasses planning, cybernetics, administrative and cultural controls as well as compensation systems, whilst decision making involves strategic and operational decisions [1,18,19].

MA has developed from backward-looking manage functions towards forward-looking information systems for strategic planning and control, and for decision making [1]. Traditionally, MA has focused on annual controls in secure and confirmed competitive operating environments due to the managers' need for historical data in order to apprehend overall performance and to manipulate accountability in their organization [1,20]. They further add that recent trends of modern businesses, such as globalized competition, commercial enterprise networks, and the increased importance of securities markets as allocation mechanisms for financial resources, have characterized the running surroundings of businesses. As a consequence, new MA information desires have emerged, and future-oriented, forward-looking information to aid strategic planning and decision making is required (Figure 5) [1,21].

The working surroundings and the nature of commercial enterprise operations have turned out to be future and business-oriented. They have led to the use of forward-looking accounting information, such as non-financial measures [1]. Thus, the function of MA has changed and its attention has directed closer to the long-term perspective, where non-financial facts give leading indicators of future business financial performance and information on the external operating environment, i.e., markets and competitors (Figure 6) [1,22] summarizes the change towards a broader orientation of MA.

Most research providing evidence for development in MA has been related to the change in the function of MA and the accountants towards the help of planning and more strategic decision making in business operations [1,23-25].

New scope in the MA

MA technique represents a genuine initiative for implementing change, this involving the need for change, a vision of change and strategy, innovation stimulation [15,26]. They further add that the transformation of production technologies and of MA techniques has predominant implications at the information flow in today's business organizations. Modern MA techniques must overcome the 'gap' between the accounting and technical information released by the operational system of the organization [15].

The acceptance of contemporary MA techniques has a widespread

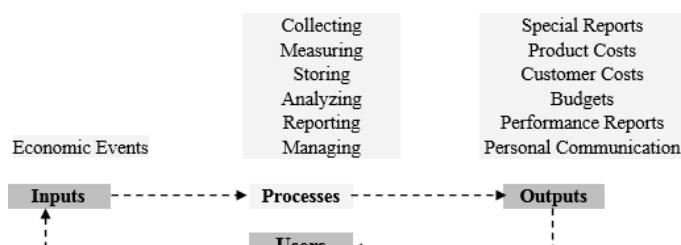


Figure 4: Information needs: costing and decision making.

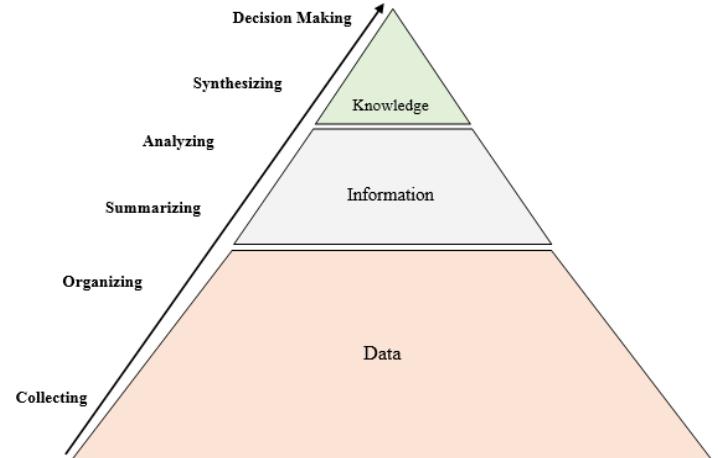


Figure 5: Need for MA information.



Figure 6: A broader orientation of MA [1].

effect in all organizational structures. The performance of a MA technique should not be perceived independently from organizational and managerial context [15]. New techniques ought to be converged with the interdependence of all organizational processes and informational circuits between MA and managers at all levels. MA is apparent that organizational changes/adjustments are more important than accounting ones, characterized by an unnatural inertia [15].

Although the role of MA facts is vital for supporting decisions and solving problems, information is never neutral [27]. The mere act of measuring and informing affects the individuals involved. Therefore, MA systems/structures are not limited to numerical information [15]. They have two domains: technical and behavioral. Technical domain concerns financial information and relates to accounting standards; discretionary reporting; performance measurement; activity-based costing; target costing; life-cycle costing; transfer pricing; environmental costing; competitor, customer and contractor analysis etc. The behavioral domain concerns with non-financial information and relates to customers; organizational processes; employees and their role; incentive and control systems; cultural and social environment; innovation and organizational capabilities etc. Figure 7 presents the responses of businesses in 21st century's business environment with today's MA tools.

Today commercial enterprise sectors have furnished a fertile environment for the renewed interest and center of attention on the position of MA in commercial enterprise management [8]. They further adds that the key topographies of a commercial enterprise firm in trying to toughen their customer orientation and the fulfillment of the firm rely on the new MA systems. The success

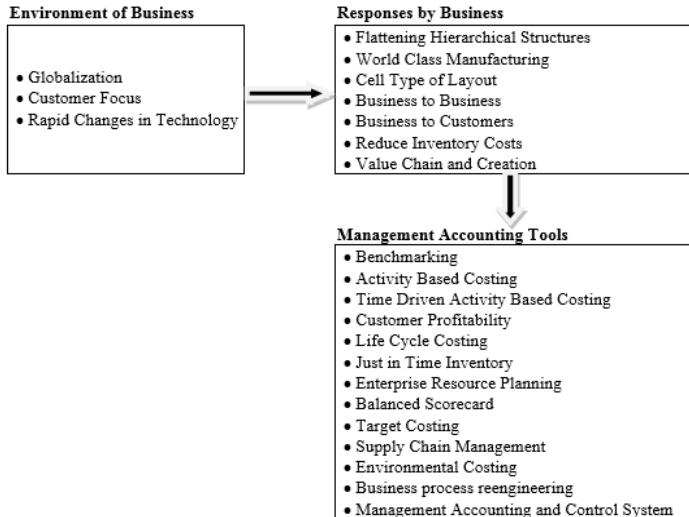


Figure 7: A new look at MA.

of functioning of MA techniques depends, as in the case of all the decisions dealing with enterprise management, no longer only on the reliability of the decision itself, but also on the way of its implementation [15].

The changing role of MA remains intently in touch with the adjustments in the working surroundings and performs a positive function in the path giving these changes [8]. As a result, it shows that the MA characteristic has the conceivable to play an enormous route in the era of quality strategy, irregular reporting for management manipulate and in identifying, evaluating and prioritizing the various quality improvement initiatives which demonstrates accelerated earning overall performance [8]. In these consequences, the success of MA is being evaluated in term of decision-making and management evaluation.

Trends of MA and its transformation

In the early 1980s, the focus of MA was mechanical aspects of accounting such as preparing budgets and expense reports [28] also described the role of the MA as emphasizing costs and production, summarizing results, and allocating the pool of shared resources to various products. However, in a fast-paced business world, MA has become information providers [28]. The key transformation in MA practices is illustrated in Table 1.

In the late 20th century, organizations anxiously reacted, through their management accountants, to the waves of changes delivered about by the way of three principal drivers of change, namely globalization, information technology, and knowledge economy. To ensure MA relevance in the 21st century, it has to go beyond simple assumptions and usual boundaries. The MA technique should enable managers to better serve the needs of customers, support decision-making and manage the corporate value chain. According to Cokins [29], the major trends in MA are:

- Expansion from product to channel and customer profitability analysis explores that MA must help the sales and marketing functions [29]. A company needs to know the best types of customers to retain, grow, win back, and acquire - and those who aren't.
- Expanding role of MA with organization overall performance management discusses the various components of enterprise performance management are like gears in a machine - they are interconnected [30,31].

- The shift to predictive accounting exhibits a fundamental transition from MA for reporting costs and profits to managerial economics for decision support and analysis that have an effect on the future [30,31].
- Business analytics embedded in enterprise performance management (EPM) methods recognizes that progressive accounting functions now realize that competency and capabilities with analytics provides a competitive edge [30,31].
- Coexisting and improved MA methods demonstrates that the more progressive chief financial officers and their MA staffs are considering the range of needs of different types of managers in their organization [30,31].
- Managing information technology and shared services as a business enlightens for MA to assist inside records, technological knowhow and shared services to be managed as a business [30,31].
- The need for better capabilities and competency with behavioral cost management requires change agent - management accountants to motivate mid-level managers and other 'champions' to reveal to their co-workers that progressive MA and enterprise performance management (EPM) methodologies make sense to implement [29].

Therefore, MA, as a function participant in the business environment and a subfield of accounting, has by no means been unaffected by way of the waves of change. MA has to endure perpetual change to remain relevant. The change in the world of management accountant as: the characterization of management accountants in leading-edge companies has long gone from 'bean counter' to 'corporate cop' on the periphery of business decision making, to 'business partner' and 'valued team member' at the very center of strategic activity [32].

Role of information technology

Information technology (IT) has performed and will play a fundamental function in the improvement of accounting information systems (AIS) by providing 'the push that drives

Key Transitions	Late 20 th Century MA	Early 21 st Century MA
Dominant focus	Internal	Internal as well as external
Key disciplines	Finance/ accounting	Marketing/economics/ psychology
Primary concern	Cost impact	Cost-value relationships
Primary role	Scorekeeper	Analyst and consultant
Management responsibility	Follower/reactive	Leader/proactive
Dominant personal traits	Technical proficiency, control orientation and skilled in detailed work	Comfortable with ambiguity, strong analytical skills, life-long learner, strong management skills
Role of cost estimates	Measure of operational efficiency	Measure of strategic effectiveness

Table 1: Key transitions in MA practices.

accounting activities' [1,33]. The pace of change in technology is turning into much faster, and accounting and finance human beings are very heavy users of technology, greater so than a lot of other functions. The roles performed with the aid of IT in MA and control techniques cover the entire continuum of roles from efficiency enhancement to a more summary mediating role [1,34,35]. IT creates an information surroundings that allows integrated and flexible operations [36,37] and has become an essential, inescapable carrier of accounting facts [35,38,39]. This has enabled and facilitated the materialization of the purposes of accounting through the use of applied sciences such as the internet and digital communications, software and database solutions [1,40].

IT can additionally play a role in the layout of accounting functions [1,41]. Previous studies have verified that changes in corporate management are driven with an integrated information platform facilitated through information science innovations, such as tightly built-in enterprise resources planning (ERP) systems with shared database and internet solutions [1,42-44]. Recent lookup shows that IT innovations, such as ERP systems, help and integrate both internal and external commercial enterprise approaches [34,38,44]. Thus, it opens a broader groundwork for management control.

The demand for management and accounting information promotes the application of IT in business world. Table 1 illustrates how the financial accounting information is refined into management information systems on the main level of accounting processes. The figure is also informed by the control framework of Hartmann and Vaassen study [34], which extends the control frameworks 'from a knowledge management viewpoint to the information system and the communication process, supporting knowledge creation and integration'. This framework consists of three domains central to the control of organizations: the information, communication, and business domains [1].

At another perspective, as presented in Table 1, technical and technological (T&T) domain converge data i.e., information and knowledge into the behavioral and organizational (B&O) domains. Similarly Innes and Mitchell [45] identified facilitators, motivators, catalysts, and enablers' role of IT for accounting change. The technological advancements undoubtedly facilitate the potential change of MA, without technology-related facilitation, it remains less significant. When IT assumes the catalyst role, the influence of information technology is immediately related with the timing of change. The motivating role of IT refers to its customary influence. It establishes the ground for change and justifies/necessitates, or even forces it in a familiar manner [1]. In its strongest needle, when IT initiates the change, it takes the structure of an enabler.

The 21st century has viewed the emergence of the information age and the ensuing economy pushed by understanding as a source of competitive advantage. The drivers of this fundamental shift in economic activities are leading to a new wave of innovation in MA and a new stage of demand for the capabilities and competencies of today's professional management accountant [46].

Role of management accountant

Management accountants are experiencing evolutionary change in almost all dimensions of their professional work environment. The pressures from market competition have created challenges for

them in adapting contemporary MA practice in order to react the changing need [47]. The position of contemporary management accountant is to additionally bear the manner of enhancing and extending the organizational vision and they are being requested to emerge as commercial enterprise partners and change agents [15]. To be competent and reliable in an organization, they should proactively involve in leadership, strategic management, operational alignment and long-life learning and improvement [48].

Today's business environment is emphasizing higher quality products, lower prices and costs, global competition, and meeting and anticipating customer needs. It requires dynamic management accountant to adapt the changes in market environment that have greater impact to an organization. The future of management accountants depends on how they acclimate and respond to the changing and emerging technologies. The competence in the MA function is underpinned by management accountant's roles that are in turn associated with individual attributes [16] classifies the individual competencies and expertise that are integral to the success of a MA profession into cognitive and behavioral skills as presented in Figure 8.

Individual competencies/skills are essential for management accountants to participate in the strategic, planning and decision making processes. Management accountants are expected to have more strategic focus and value creator besides increased in the use of non-financial measures to assess business performance [49-55]. Application of IT in MA has modified the roles, duties and responsibilities of management accountants. The changing role of the management accountant in response to the IT evolution is illustrated in Figure 9.

IT embraces the automation of MA functions and offers the ability to influence information to obtain differential sources of competitive advantage in the marketplace. It is forcing management accountants to redefine their role by offering them new challenges [55]. Figure 10 shows the changing role of management accountants from industrial age to digital age.

Figure 11 show the application of IT in MA is becoming essential part of accounting to cater to the current needs of immediate business analysis and performance measures. The digital age calls for professionals with an appropriate balance between technical skills and breadth of knowledge.

FINDINGS OF THE STUDY

The study focused on new strategies and systems connected in the area of accounting. Keeping in view of the study, major findings are outlined as follows:

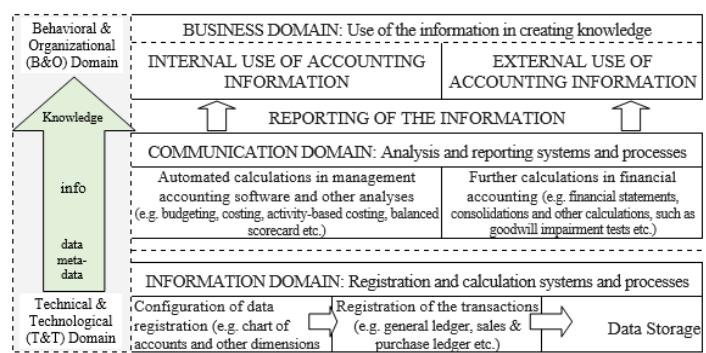


Figure 8: Role of IT in creating knowledge (adapted from Taipaleenmaki & Ikaheimo, 2013).

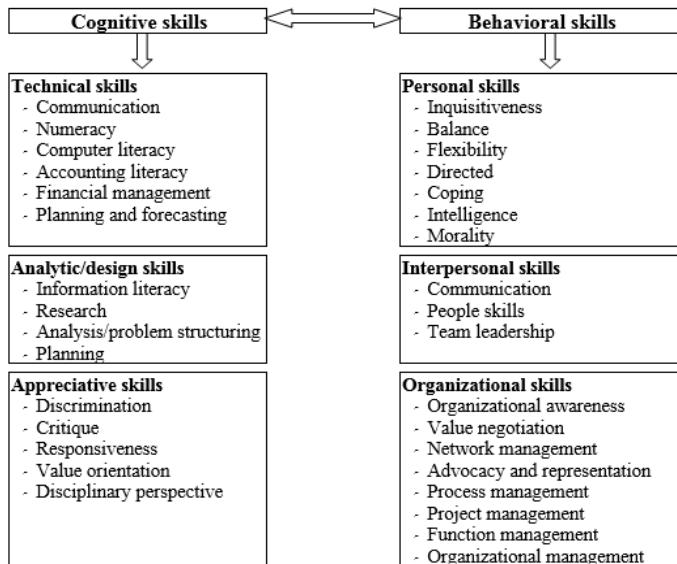


Figure 9: Individual attributes of management accountant (IFAC, 2002).

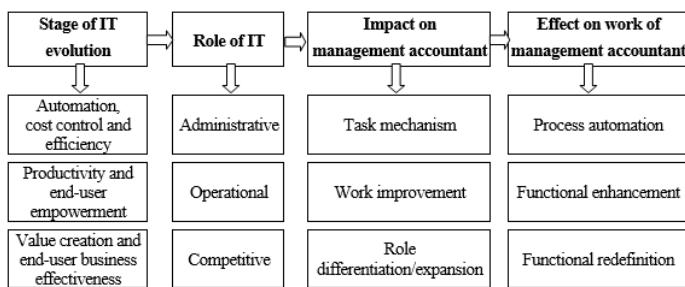


Figure 10: Management accountant's role by focusing on the IT evolution (Gartner Group, 1999).

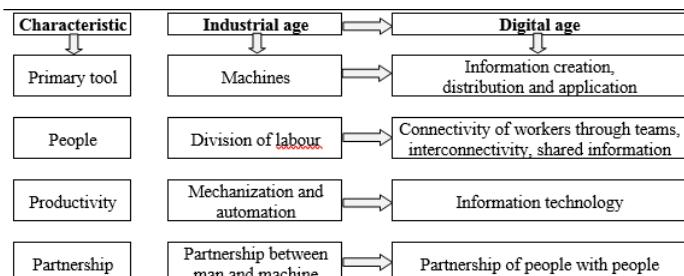


Figure 11: The changing role of management accountant (Gartner Group 1999)

- MA practices in 21st century are likely to develop broad spectrum of cross-functional disciplines and translate into a broader reform, including the management system.
- In the last decades, MA has undergone more metamorphosis than in any other period in its history.
- MA systems are not limited to numerical information, they concern with customers; organizational processes; employees and their role; incentive and control systems; cultural and social environment; innovation and organizational capabilities etc.
- The application of IT in MA is becoming essential part of accounting to cater the current needs of immediate business analysis and performance measures.
- The role of management accountants in leading-edge companies has changed from 'bean counter' to 'corporate

cop' on the periphery of business decision making, to 'business partner' and 'valued team member' at the very center of strategic activity.

- For successful implementation of the changing role of MA, it requires dynamic and competent management accountant to lead over changes in market environment with cognitive and behavioral skills.
- The management accounting has turned into a spotlight in the field of accounting. Therefore, years from now, it is expected that the successful organization ought to be well along with all of the techniques and trends.

DISCUSSION AND KEY LEARNINGS

This study noticed several factors that influence the changes in MA practices and lead to challenges in MA profession. The evolution of MA is environmentally driven and closely linked to the modifications in organizational strategy. Transformation of MA systems is influenced by a series of factors mainly divided into two aspects: the technical and technological (T&T) and organizational and behavioral (O&B) aspects. MA practices in 21st century are likely to develop broad spectrum of cross-functional disciplines and translate into a broader reform, including the management system.

MA has evolved from backward-looking control functions in the direction of forward-looking information systems for strategic planning and control, and for decision making incorporating non-financial considerations [1]. The role of this accounting has modified and its attention has directed towards the long-term perspectives. Non-financial issues are regarded as leading indicators of future

business economic performance. Therefore, modern management accountants need to give more emphasis on strategy and decision-making roles, rather than the traditional areas of costing and financial analysis.

The adoption of contemporary MA system has a widespread effect in all organizational structures, characterized by an unnatural inertia [15]. The current world is living on technology and no doubt, MA needs technology to improve and enhance its functionality [50-55]. The utility of IT in MA is getting to be fundamental part of accounting to provide the current needs of instantaneous commercial enterprise analysis and overall performance measures. Therefore, this discussion has made to 'search the absolute truth' through dismantling the 'black box' of accounting.

CONCLUSION

The recent fashion of MA has shifted from history-based temporary planning and control to future-oriented strategic planning and control. The MA changing procedure is controlled by the pressures of an increasingly forceful challenges, new technologies and advancements, the dictatorship of financial accounting and the expanding role of MA. Information technology that could facilitate, catalyse, motivate, or perhaps modify the convergence of MA with financial accounting within the technical and technological domain and in the behavioral and organizational domain. MA system represents to a real activity for actualizing change. The MA system might empower managers to better serve the needs of customers, support decision-making and manage the corporate

value chain. Constantly changing ecology of commercial enterprise surroundings demands future oriented and forward-looking MA information incorporating non-financial aspects that can help strategic planning and decision making process. Along with the globalization and technological evolution, external environment has changed rapidly. Enterprises are facing more challenges than the past. There is no doubt, more attention need to be paid to MA because the scope is enlarged, and methods and techniques have significantly improved. Therefore, MA has already become a spotlight in the field of accounting.

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