THE NEED OF BUSINESS ANALYTICS AND ITS IMPACT ON MANAGERIAL ACCOUNTING

JAYAFAR MV, M.Com, CMA, CGBA
Ph.D. Research Scholar, Commerce
Bharathiar University, Coimbatore

Dr. V.P. Abdul Nasar, M.Com, PhD
Research Supervisor
Research and Development Centre
Bharathiar University, Coimbatore.

ABSTRACT

Management accountants are situated to expect a key part in the implementation and utilization of business investigation in their relationship as they move past customary, trade based bookkeeping to examination. This rising pattern will change how management bookkeepers break down and translate information for their organizations.The nature of management accountants' responsibility is evolving from merely reporting aggregated verifiable value to likewise including authoritative performance measurement and furnishing management with decision related information in the SMEs. The development in corporate information systems, for example, enterprise resource planning (ERP) systems has granted management accountants both expanded data storage power and enhanced computational power. However, research demonstrates that the nature and scope of managerial accounting has barely changed and that management accountants employ for the most part descriptive analytics, some predictive analytics, and a bare least of prescriptive analyticsin the SMEs.

1. INTRODUCTION

Associations are confronting ever more diverse challenges in dealing with their enterprise systems as emerging technologies bring both added complexities and additionally opportunities to the way they lead their business. Underpinning this ever-increasing volatility is the importance of having quality data to provide information to make those important enterprise-wide decisions. On the off chance that you have been a management accountant for any length of time, you realize that you generally have worn four particular caps in your association: cooperation in strategic cost management to achieve long haul objectives and objectives; planning and decision making for internal cost action; management and operational control for performance measurement; and, to help the initial three roles, preparation of financial statementsin the SMEs. All four roles have supported decision making by utilizing management accounting and finance data/information for examination. This is an exciting time to be a management accountant because recent developments in

technology and the field of business analytics will equip you with new instruments and processes that will enable you to assemble value in your association [1].

Throughout the years, the idea of progress in administration accounting research has been examined from a wide range of edges utilizing diverse theories, for instance functionalist, behavioral relations, institutional theories, performer organize theories, interpretive and basic viewpoints together with a wide range of approaches, for example, field thinks about, case strategies, documented investigations, and test contemplates. Still a wellspring of dissatisfaction is that exclusive couple of research comes about are utilized as a part of the reasonable world regardless of the way that administration accounting is a connected and useful field that always faces new difficulties from the business world. For research to only contribute new theories isn't sufficient; rather the specialists should endeavor to propel the assemblage of information, i.e. to create prescient theories that indicate both the conduct and the setting required for accomplishing the predetermined result. McAfee and Brynjolfsson (2012) likewise contend that 'all these should be possible in zones that so far have been commanded by instinct instead of by data and meticulousness'.

The idea of administration bookkeepers' duty is developing from only announcing accumulated recorded an incentive to likewise including hierarchical execution estimation and furnishing administration with choice related data. Corporate data frameworks, for example, endeavor asset arranging (ERP) frameworks have furnished administration bookkeepers with both extended data stockpiling power and upgraded computational power. With huge data removed from both inside and outside data sources, administration bookkeepers presently could use data analytics strategies to answer the inquiries including: what has happened (enlightening analytics), what will happen (prescient analytics), and what is the improved arrangement (prescriptive analytics). Nonetheless, investigate demonstrates that the nature and extent of managerial accounting has scarcely changed and that administration bookkeepers utilize for the most part spellbinding analytics, some prescient analytics, and an absolute minimum of prescriptive analytics [2].

Table 1: Current/Future Trends in Management Accounting

Current Trends	Future Trends
High Emphasis	High Emphasis
Budgeting for Planning and Control	Budgeting for Planning and Control
Variance Analysis	Variance Analysis
Capital Budgeting	Capital Budgeting
Return on Investment Techniques	Return on Investment Techniques
Absorption Costing	Moderate Emphasis
Variable costing	Balances scorecard
Moderate Emphasis	Customer Satisfaction Measurement

Balances scorecard	Activity based costing and management
Customer Satisfaction Measurement	Shareholder value analysis
Low Emphasis	Benchmarking
Activity based costing and management	Absorption Costing
Shareholder value analysis	Variable costing
Benchmarking	

2. THE SEVEN MAJOR TRENDS IN MANAGEMENT ACCOUNTING

The seven major trends in management accounting are:

1. Extension from product to channel and customer profitability analysis,

2. Administration accounting's extending role with enterprise performance administration (EPM),

3. The move to predictive accounting,

4. Business analytics embedded in EPM methods,

5. Existing together and improved administration accounting methods,

6. Overseeing information innovation and shared services as a business, and

7. The requirement for better abilities and competency with behavioral cost administration.

3. Changing role of managerial accounting

3.1 Management accountant's role

Developing from its traditional accentuation on financially-oriented choice analysis and budgetary control, modern managerial accounting incorporates a morestrategic approach that stresses the distinguishing proof, measurement, and management of the key money related and operational drivers of shareholder esteem. The objective of management accounting is to provide managers with operational and money related accounting information. Management accountants serve the role of participating in strategic cost management for accomplishing long haul objectives; actualizing management and operational control for corporate performance measurement; getting ready for internal cost movement; and preparing money related statements. To support this proposed role, the primary commitments of management accountants can be ordered into (1) preparing monetary statements; (2) measuring the organization's performance; and (3) providing choice related information [3].

With ERP systems and powerful business logical tools that provide enterprises the capacity to interpret and dissect various sorts of data, (for example, internal/external, structured/unstructured and money related/nonfinancial), it is crucial for management accountants to modify their responsibility to enable organizations to increase upper hand. In the preparation of budgetary statements, management accountants utilize amassed historical qualities to report the money related circumstance of the organization. It is proposed that management accountants ought to transgress the boundaries of management accounting and interact with non-accountants to take care of practical problems. Cokins (2013) feature seven trends that are occurring in management accounting:

1. development from product to channel and customer profitability analysis;

2. management accounting's growing role with enterprise performance management (EPM);

3. the move to predictive accounting;

4. business analytics embedded in EPM methods;

5. coinciding and improved management accounting methods;

6. overseeing information technology and shared services as a business; and

7. The requirement for better aptitudes and competency with behavioral cost management.

In particular, management accounting has stretched out its traditional concentration to incorporate recognizing the drivers of monetary performance, both internal and external to the business. New and revolutionary non-money related metrics and approaches have been added to management accounting capacities, with an effect that is as yet being examined by scholastics and practitioners [4].

Enterprise Resource Arranging (ERP) systems are extensive and integrated information systems that are fit for overseeing and coordinating every one of the resources, information, and elements of a business from shared data stores. Since ERP systems can integrate transaction-based corporate information into one central database and enable that information to be retrieved from different organizational divisions, they can improve the capacity of management accountants to satisfy the aforementioned roles by providing management with access to relevant and real-time operational data in the support of basic leadership and management control. Early research recommends that ERP systems have restricted effect on management accounting. One reason is that the execution of ERP systems centers around improving the productivity of the money related reporting process and not changing the nature of that process, despite the fact that change could be acquired through the outline and

usage of a framework that integrates the operations of the entire organizations. That is, management accountants consider the ERP framework as a powerful apparatus for report generation and disregard its potential in process control and corporate performance analysis [5].

4. Big data and business analytics

Big data and business analytics now impact relatively every part of major organizations' basic leadership, strategic analysis, and forecasting (Griffin and Wright, 2015). On any given day, a business may create, purchase, extract, gather, process, and dissect a large number of data components from external as well as internal sources to keep up upper hand. Big data and business analytics are not any more the area of a couple of introductory innovators and adopters; they are omnipresent for any business that needs to remain focused. Since management accountants traditionally use information generated from accounting records to help business managers, it is expected that the accessibility and utilization of big data and analytics by businesses will affect the managerial accounting profession. However, first it is necessary to understand big data and business analytics in the internal business environment and its unique circumstance.

5. Classification of business analytics

Business analytics is 'the utilization of data, information technology, statistical analysis, quantitative methods, and mathematical or computer-based models to enable managers to increase improved understanding about their operations, and improve, truth based choices'. The recently proposed three measurements of space, orientation, and techniques are valuable for understanding the extent of business analytics. Area refers to the specific situation or environment in which the analytics are being connected. Orientation describes the viewpoint of the analytics – descriptive, predictive, or prescriptive. Lastly, techniques refer to the analytical processes of the space and orientation. The practicality of the use of any one system is chosen by its orientation, as well as by the accessible data. For this dialog, the space measurement is business management. Management accountants in this space are relied upon to create systems that line up with management obligations and objectives. The three measurements of orientation (descriptive, predictive, and prescriptive) should now be clarified to pick up an understanding of their potential in the managerial accounting area. The differing orientations of these measurements are partly because of the accessibility of different kinds of data in conjunction with various techniques and the abilities of enterprise systems to deal with big data [6].

5.1 Descriptive analytics

Descriptive analytics answers the inquiry in the matter of what happened. It is the most well-known sort of analytics utilized by businesses and is regularly characterized by descriptive insights, Key Performance Indicators (KPIs), dashboards, or other kinds of perceptions.

Descriptive analytics summarize what has happened and which additionally forms the premise of numerous ceaseless monitoring alert systems, where transactions are compared to benchmarks and thresholds are built up from ratio and trend analysis of historical data [7].

5.2 Predictive analytics

Predictive analytics is the subsequent stage taken with the information obtaining from descriptive analytics and answers the topic of what could happen. It is characterized by predictive and probability models, forecasts, statistical analysis and scoring models. Predictive models utilize historical data collected over time to make figurings of probable future occasions. Most businesses utilize predominantly descriptive analytics and are simply starting to utilize predictive analytics.

5.3 Prescriptive analytics

Prescriptive analytics answers the topic of what ought to be done given the descriptive and predictive analytics results. Prescriptive analytics might be described as an improvement approach. Prescriptive analytics go past descriptive and predictive by recommending one or more arrangements and demonstrating the reasonable result of each [8].

6. Enterprise systems with big data and business analytics

As talked about earlier, enterprise systems applications are software bundles that are generally in light of relational databases, which affect and encourage business occasions, for example, order capturing, to accounting, and to warehouse management [9]. All levels and sources of information are entered in the framework once, at the season of occurrence, and the expansive extent of the framework enables this new data to be in a split second accessible anywhere internally. Enterprise systems resulted from the need by business management to design, oversee, and represent resources and exercises in a real-time, relevant, and savvy manner. Previously disengaged inheritance systems have been replaced by, or more generally associated with, integrated enterprise systems in numerous businesses to provide improved support for more impactful bits of knowledge and ensuing choices and activities. Furthermore, traditional analytical and machine learning methodology may posture problems in a big data enterprise framework setting. For instance, commonplace data analysis starts by extracting a representative example or "training set" of the data to a separate "sandbox" environment where tools, for example, SAS, R, Python, or SPSS might be connected. A descriptive, predictive, or prescriptive model or arrangement is then created or constructed and which is determined to be pertinent and useful [10]. However, this model and all its related data preparation and transformation steps should be by one means or another transposed into SQL (most enterprise systems) and recreated for "mass analysis" internal to the framework. This conversion can be a tedious and error prone process. Enterprise framework providers are starting to offer this usefulness with the goal that businesses may take full preferred standpoint of the significant advantages that big data analytics can provide.

These systems additionally prepare the data for analysis. Data is cleaned, normalized, and formatted prior to extraction. These enterprise systems enable management accountants to get to more information exogenous and endogenous to the firm and provide informed predictions, all while working with big data internally. R and other open source applications, for example, Python are available directly inside the enterprise framework. Accountants can fabricate mechanized analytical applications inside the framework once the assignments have been characterized. With these new capacities of modern enterprise systems, and the conceivable outcomes presented by big data and business analytics, management accountants can accomplish more than basically monitoring and tracking key indicators of historical monetary reports.

7. Conclusion

The importance of managerial accounting is advancing from the traditional accentuation on financially oriented choice analysis and budgetary control to a more strategic approach that underscores the recognizable proof, measurement, and management of the key money related and operational drivers of shareholder esteem. With the improvements in enterprise systems that provide management accountants access to more data and data types, larger data storage, and better computational power, enterprise systems that incorporate this extra data currently can use data analytics techniques to answer the inquiries including: what has happened (descriptive analytics), what will happen (predictive analytics), and what is an advanced arrangement (prescriptive analytics).

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