

Towards Increasing the Management Accountant's Contribution to the Changing Organizational Needs: Analyzing Cost Structures in Business Process Reengineering (BPR)

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ABSTRACT

An opportunity to study the contribution of the management accountant has emerged with companies' adoption of change management techniques. This paper provides a structured way of studying the management accountant's contribution in Business Process Reengineering (BPR), a widely adopted change management technique. Efficient use of limited resources is critical for the success of any BPR effort and when many BPR interventions and activities have overlapping outcomes, choosing between objectives and alternative means to achieve those objectives is extremely important. The management accountant can provide a methodology of cost accounting that would enable cost comparison among alternatives. The methodology is Activity-Based Costing (ABC) and it assumes that activities consume resources to produce an output. The current study has resulted in the creation of a framework that can be used in studying the underlying cost structures of reengineering.

INTRODUCTION

In recent years many organizations have exhibited a variety of changed structures and processes as a result of changes in their business environments. In response, management accounting is also changing and the management accountant is expected to provide more and more non-traditional services to the corporate world. An opportunity to study the contribution of the management accountant has emerged with companies' adoption of change management techniques. This paper discusses how the management accountant can contribute significantly to Business Process Reengineering (BPR), one of the widely adopted change management techniques. It has been suggested that management accountants can play a vital role in different phases of the reengineering project as an internal information provider. This paper also

recognizes the process orientation nature of BPR and Activity-Based Costing (ABC), an advance cost management technique. Then the paper illustrates a conceptual framework that explains how that management accountant can contribute to BPR. Finally, the paper develops a cost framework that can be used in studying the cost structures of BPR.

MANAGEMENT ACCOUNTING CHANGE

Knowledge about change in management accounting techniques has expanded rapidly over the last few decades (Quattrone & Hopper, 2001; Hopper et al, 1987; Bhimani, 1996; Burns & Scapens, 2000; Burns & Vaivio, 2001; Hansen & Mowen, 1997; Innes & Mitchell, 1990). As Burns & Scapens (2000, p.3) explain management accounting change has become a topic of much debate in recent years. This development in management accounting is clearly in response to the recognition that it is vital for an organization to take strategic initiatives in order to face the shifting winds of change in today's business environment (O'Brien, 1996). These changes include globalization, agile competition, and advances in information technology. As a response to these changing business environments, academics, accountants in business and consultants have sought to develop new management accounting techniques and new management accounting systems – a management accounting that meets the information requirements of business managers in today's global, technology-driven world (Burns & Vaivio, 2001). Some of these new techniques include Activity-Based Costing/ Management, Economic Value Added, Total Quality Control, Business Process Reengineering, and Just-In-Time Production Systems as change management techniques (Cooper & Kaplan, 1988; Johnson & Kaplan; 1987).

THE CHANGING ROLE OF THE MANAGEMENT ACCOUNTANT

In recent years, many organizations have exhibited a variety of changed structures and processes as a result of changes in their business environments. These include flat and horizontal organizational forms, multidimensional matrix structures, networks of 'virtual' organizations and self-directed work teams (Burns & Vaivio, 2001). Especially, changes in information technology have driven changes in the collection, measurement and analysis and communication of information and they imply a need for the management accountant to change his/her role. As a consequence, accounting needs to be seen not only as a center of calculation but also as a center of discretion, as a set of practices that intrinsically constrain but also enable change (Quattrone & Hopper, 2001). The management accounting function often adopted a supportive and monitoring role, not a more active one (Cooper, 1996). These roles were both advisory (tendering opinions, assisting in making evaluations, forming expectations, or developing norms or objectives) and informational providing "neutral" information on past or present occurrences, on variations from norms, on opportunities under consideration, or alternatives being evaluated. With the changes in socio-economic factors, the management accountant is expected to provide more and more non-traditional services to the corporate culture and the society as a whole. Internal operations and processes were refocusing strategically on customers and competitors. Attempts were made to integrate internal tasks and operations as part of broader business processes that incorporated suppliers and customers as components of an extended value chain. Organizational processes were reconfigured to emphasize and facilitate change by flattening management structures, using cross-functional teams, making information available immediately by capturing it on operations, and empowering the workforce. With the recognition that processes are very important in

increasing customer value in order to satisfy customers and achieve business goals, business organizations started to pay much attention to improve business processes and manage process costs. Increasing customer value means increasing customer realization, decreasing customer sacrifice, or both (Hanson & Mowen, 2003). With the changing emphasis on business processes, the role of the management accountant is also changing. To survive, they must develop skills in system design and implementation, change management, and strategy, and they must be knowledgeable about cost management and management accounting (Cooper 1996). Thus, with these expanding responsibilities and knowledge, management accountant will be an integral part of the decision making process and his/her office will be the strategic intelligence center of the organization. In the future, the scope of the controllership will be widened, and you will be more than just a staff provider of information. Controllers already have the unique viewpoint and perspective for handling this new role. Some studies have found that management accountants face both opportunities and threats in these changed environments (Granlund & Lukka, 1998; Burns & Vaivio, 2001; Burns and Yazdifar, 2001). In today's business organizations the management accountant's service has been expended to new areas previously not served by the management accountant. Specifically, in the area of process-oriented business management, the service provided by the management accountant has been of profound importance. Thus, it is not uncommon for management accountants to be proactively involved in such areas as strategy, information systems implementation and change management – activities that, ten years, were unheard of for the vast majority of management accountants (Burns & Vaivio, 2001). The management accountant's role in many organizations has transformed from 'controller' or 'scorekeeper' to 'business support' or 'internal business consultant (Burns & Vaivio, 2001). In the same way, management accounting is becoming more and more generalized and pushing out to general management areas. Thus, for instance, business managers are devising and managing their own budgets rather than being 'given' the numbers, and 'hit' once a month with the variances. Therefore, it is important for the management accountant to be skillful of core business areas to maintain his/her position in the organization. The management accountant should be able to assist and take a leading role in the change management initiatives either by assisting in design of new systems or by changing management accounting output to the needs of the changing environments. With a sound knowledge of cost management tools, the management accountant can contribute significantly to business process reengineering, one of the widely applied management techniques in the process of radically improving business processes to achieve improvements in cost, quality, service and speed.

BACKGROUND OF BUSINESS PROCESS REENGINEERING (BPR)

The general idea of radically changing the way managers do their activities is known as Business Process Reengineering (BPR). Michael Hammer and James Champy (1993) proposed that existing business processes should be reengineered to achieve dramatic improvements in business performance. It is argued that reengineering is the solution for achieving and sustaining major improvements in performance by aligning and integrating an enterprise's human resources, business processes and technology with its strategic imperatives in modern organization under the conditions driven by competitive market forces. BPR means redesigning existing processes and implementing new ones (Earl et al, 1995). Over the years BPR has evolved as an important change management tool. One important aspect of this technique is that it is customer oriented. Customers, Competitors, and Change, are the controlling forces of today's business world. These

three Cs demand flexibility and responsiveness and proponents of BPR suggest reengineering fosters an environment that supports flexibility and responsiveness and produces dramatic improvements in performance.

GOALS OF BUSINESS PROCESS REENGINEERING

The concept of process orientation in reengineering has created new values for customers. This forces them to qualify the business's efforts by the four new "value metrics" – improved product quality and/or service, reduced cycle time, and reduced cost to the customer, while at the same time increasing the speed of innovation and new product development (Johansson et al., 1993). Formulating specific goals or objectives of BPR is vital to the existence and continuity of the project. Objectives such as cost reduction, technological improvement, innovation, increased competitive advantage, process development, and empowering are among many objectives of reengineering. It should be noted, however, that the distinctive objective of reengineering is customer satisfaction. In order to satisfy customers while achieving organizational objectives, an organization should clearly understand and define the specific objectives of its reengineering effort. These goals, as shown in Figure 1, can be divided into three major types: cost improvement, achieve parity or best in class and to affect a breakpoint. A firm can have one or more of these goals in relation to its BPR project. Cost improvement and reduction and revenue improvement have been high-level outcomes of the majority of BPR attempts. The terms "reengineering" or "restructuring" have been equated with "cost reduction" or "layoffs". The reason is that during restructuring management's focus is typically on developing severance and incentive packages to reduce employee headcount (Marshall & Yorks, 1994). Because restructuring companies usually focus first and foremost on overhead cost reduction by trimming headcount (Marshall & Yorks, 1994). However, BPR is more than just reducing headcount or reducing cost and as new technologies change building codes for corporate structures, firms scramble for radical new work designs (Greengard, 1993). The core concept of BPR is to radically redesign existing business processes that are outdated and no longer economical or efficient. It is used to redesign inefficient, uneconomical, and outdated business processes to achieve dramatic improvements in critical, contemporary measures of performance (Hammer & Champy, 1993). The management accountant is expected to provide meaningful information about business processes and improve efficiency and effectiveness.

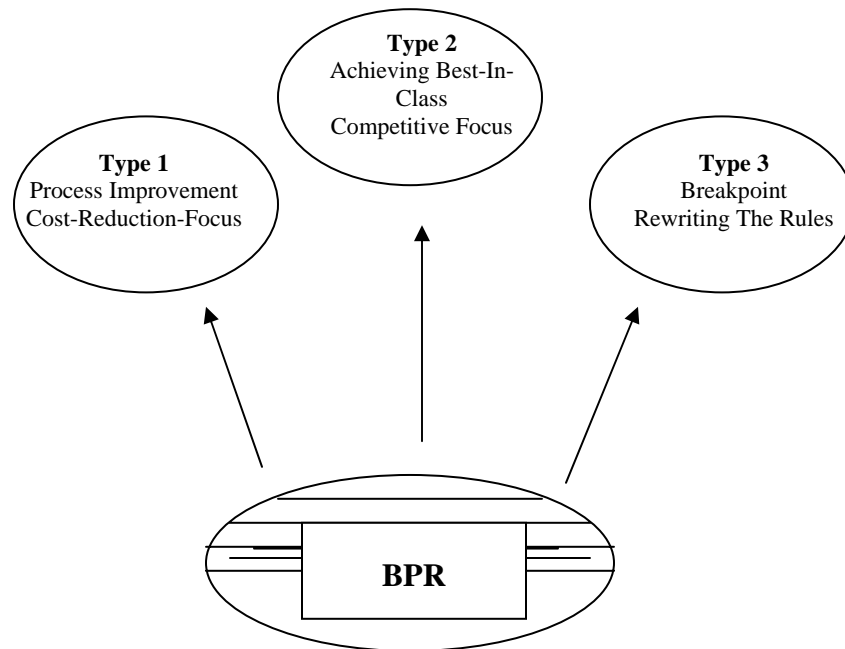


Figure 1: Goals Driving Business Process Reengineering
Source: Johansson et al., 1993, p.61.

THE MANAGEMENT ACCOUNTANT AND BPR

It has been suggested that the management accountant can play a vital role as the internal information provider in reengineering (Herath, 1997; Angus et al, 1996). In a BPR effort, the management accountant's function is to provide relevant and important information to eliminate waste and non-value adding activities. The role of the management accountant as the leader of business process re-engineering (BPR) ... can contribute significantly in building trust and breaking down functional barriers, acting as a catalyst, researching and providing analysis, assessing improvement proposals, facilitating workshops, improving communication by bringing together service providers and service receivers (internal customers and suppliers) in order to effect improvements (May, 1995). Resource allocation is another important area to which the management accountant should essentially contribute by providing relevant information. By radically redesigning the resource allocation process, an organization can minimize the use of limited resources. Organizations are emphasizing the relationships among resource allocation, change management and strategy formation in their attempts to achieve competitive advantage.

MANAGEMENT ACCOUNTANT'S ROLE IN DIFFERENT PHASES OF BPR

The management accountant can take an important role in different phases of the reengineering project by providing valuable information about the cost, quality and cycle time, and value of business processes and activities to the customer. The Johansson et al., (1993) Break Point Framework recognizes three phases of business process reengineering designed to achieve dramatic break-through improvements in quality, service cost and cycle time. Based on the

Johansson et al., (1993) framework, Herath (1997) developed a model consisting of three phases, Discovery, Design and Implementation. These phases are discussed in the following.

Discovery

In this phase, the firm recognizes the need for change. The reengineering organization must create a strategic plan for dominance or renewed competitiveness in the market (Herath, 1997). Executives identify customer requirements, develop expected outcomes and create specific goals and assess their feasibility that will help the organization recognize the gap between what it is and what it should be. The key is to focus what customers want and define the company's competitive advantage (Angus, et al, 1996, p.29). Customer satisfaction is of paramount importance to any reengineering project and so is effective and efficient performance of the firm's employees and managers. The outcomes and specific goals can be developed using techniques such as benchmarking, activity based costing/management, and value chain analysis. As an internal information provider of the firm, the management accountant can help everyone understand what resources have been consumed, what outputs were produced and what revenues were generated by each activity and process of the firm enabling better decision making towards discovering the existing conditions of business performance and problems that are vulnerable to reengineering. In BPR, all activities are directed at value generation through making fundamental changes in business processes. The management accountant can participate "in resource-related direction setting for an organization, for example, strategy formation, project appraisal, business planning, budgeting, and operational decision making" (Birkett, 1995, p.45).

Design

This phase of the reengineering project consists of establishing a reengineering team, identifying processes and resources, and analyzing tools and techniques, which can be used in the reengineering attempts and developing unique strategies (Herath, 1997, p.137). Identifying processes for immediate reengineering can be done using techniques such as Value-Added Analysis, Zero Based Budgeting, Activity-Based Costing, Marginal Costing, Total Quality Management, and Profitability Analysis. As an information provider within the organization, the management accountant can facilitate this process by providing information in relation to alternative uses of resources. Birkett (1995) identifies that the management accountant in the Design phase participates in organizational change and design processes, for example, implementing process reengineering and continuous improvement initiatives, benchmarking and monitoring change processes and outcomes, establishing gain sharing/reward systems, restructuring, and the like. In this phase the management accountant should gain a clear understanding of what drives the competitive advantage in the firm's industry, industry's value chain and the basis of competition.

Implementation

This phase consists of developing and communicating plans, implementing and measuring the reengineering effort, and continuous improvement of the system. Using various techniques such as Activity-Based Costing (ABC), Priority-Bases Budgeting (PBB), Activity-Based Budgeting (ABB), Executive Information Systems (EIS), and Benchmarking, the management accountant

can improve decision making by providing information about what resources are consumed and what outputs are produced by each process within the organization. As an information producer, the management accountant facilitates the reengineering process, helping not only in assessment of ideas for improvement but also “sensing and monitoring of activity budgets, performance measures and best practice targets, non-financial as well as financial, qualitative as well as quantitative, short-term as well as long-term in line with overall organizational objectives (May, 1995).

PROCESS ORIENTATION OF BPR AND ABC

Business Process Reengineering (BPR) and Activity-Based Costing (ABC) are among those widely adopted changed management techniques. A common feature of these two techniques is that they both focus on business processes. A business process is any set of activities designed to produce a specified output for a customer or market (O’Brien, 1996). Processes are chosen as the focus because they are the sources of value for customers and shareholders and because they are the key to achieving an organization’s financial objectives. Processes are the means by which things are done and this procedure is discussed under three methods: process improvement; process innovation; and process creation. ABC assumes that activities cause costs and products and customers create a demand for activities. Therefore, costs should first be traced to activities and then attributed to products (Cooper & Kaplan, 1988; Cooper, 1996; Innes & Mitchell, 1991; Hansen & Mowen, 2003). An activity-based responsibility accounting system allocates responsibility to processes and uses both financial and non-financial measures to measure performance. Such a system takes a process viewpoint. Literature suggests that the changed manufacturing environment requires organizations to use costing systems suitable for its specific needs (Hoque, 2000; Cooper, 1996; Johnson, 1988) and it is argued that the effect of activity-based model on management accounting has been dramatic (Hansen & Mowen). The management accountant can use ABC in understanding the underlying cost structure, as ABC is a powerful tool for establishing linkage between costs and benefits BPR.

ACTIVITY BASED COSTING (ABC)

Efficient use of limited resources is critical for the success of any BPR effort and when many BPR interventions and activities have overlapping outcomes, choosing between objectives and alternative means to achieve those objectives is extremely important. The management accountant can provide a methodology of cost accounting that would enable cost comparison among alternatives using ABC. ABC is one of the highest profile developments of management accounting and the management accountant can use ABC to understand the underlying cost structures of a BPR project and develop a cost accounting system for BPR. The core concept under this approach is that products consume all resources in proportion to their volume of products. It has been suggested that traditional volume-based costing may produce distorted products because many of the organizational resources are not volume related (Kaplan, 1992; Cooper, 1996). Activity-based costing was proposed as an alternative costing method to volume-based costing. This method assumes that activities cause costs and products create the demand for activities (Cooper and Kaplan, 1988; Innes and Mitchell, 1990; Johnson, 1988, Brinker, 1995). An ABC system first traces costs to activities and then to products. The underlying assumption is that activities consume resources and that products in turn, consume activities.

ABC information has many uses such as process improvement, inventory valuation, and new product development. This paper focuses on using ABC information for studying cost structures of reengineering projects.

WHAT SHOULD MANAGEMENT ACCOUNTANT KNOW ABOUT BPR?

Knowledgeable accountants can play a major role in business process reengineering. The management accountant can provide support for each of the following steps in the three phases of reengineering.

Discovery Phase: Identifying customer requirements, defining expected outcomes and create specific goals, and assessing feasibility of expected outcomes.

Design Phase: Identifying processes for reengineering, analyzing tools and techniques of reengineering, and developing specific strategies to achieve reengineering outcomes.

Implementation Phase: Developing and communicating plans, implementing and measuring, and continuous improvement.

Figure 2 illustrates a useful conceptual framework that outlines what management accountants need to know about reengineering projects and activity-based costing in order to contribute to the changing needs of the business world. It emphasizes that the management accountant should concentrate his/her efforts in five areas of knowledge: foundation concepts of BPR, technology of BPR, application of BPR, development of BPR, management of BPR.

Foundation Concepts of BPR

In order to play a key role, the management accountant should understand what the basic concepts and key elements of BPR are. The key elements include customer focus, establishing quality and goals, cost and benefits involved and studying the feasibility of the project.

Technology of BPR

The management accountant should gain an understanding of the suitable change management techniques available. Among others ABC, Activity-Based Management, Benchmarking, Balanced Scorecard, Total Quality Management, Flexible Manufacturing, Target Costing, Enterprise Resource Planning, and Statistical Process Control are very promising change management techniques, the management accountant can choose for the BPR project. It is important for the management accountant to focus on the most suitable techniques for the BPR project and the impact of them on people, processes and technology of the organization.

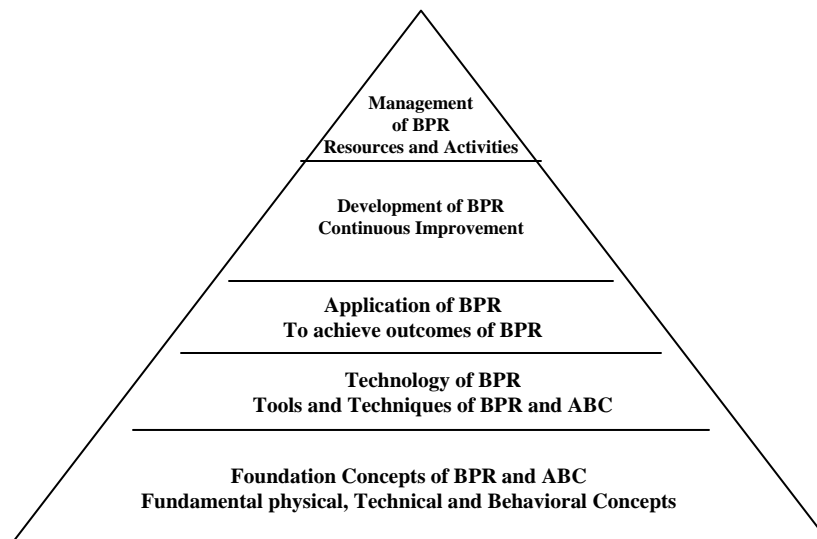


Figure 2: A Framework of Reengineering Focusing on Using ABC

Application of BPR

The management accountant should have an understanding of the major applications of reengineering. Potential application of reengineering includes human resources, new product, business processes, and corporate-wide reengineering. The term Business Process Reengineering (BPR) normally indicates all of these types of reengineering. The management accountant should gain a basic understanding of reengineering concepts and major applications. The management accountant can help eliminate inefficient non-value -adding activities from the firm's operations by estimating the cost of inefficient operations using ABC technique.

Development of BPR

In order to achieve the benefits of reengineering in the best possible way, the management accountant should be aware of the concepts of problem-solving and development. Continuous improvement of the reengineering project is of vital importance to achieve the outcomes of it. Continuous improvement is the achievement of breakthrough improvements in the quality and reliability of products and processes. It addresses the creation of positive change to the reengineering achievements. The management accountant should understand how to push for more and more effectiveness through reengineering. For this purpose it is important for the management accountant to gain an understanding of the issues relating to marketing and manufacturing.

Management of BPR

The management accountant should gain an understanding of the various methods that can be employed in managing resources, activities tools and technologies of reengineering.

Management of the reengineering project is very important because the development and use of a reengineering project is costly and time consuming. By understanding the relevant ways of managing the reengineering project can provide tremendous benefits to the organization.

ANALYZING COST STRUCTURES IN BPR

In an ABC environment all the activities and processes in the organization are analyzed to evaluate the extent to which they add value to the customer. ABC recognizes that instead of having one overhead cost allocation basis, the cost driver or drivers cause costs to occur. Cost drivers are any events that cause a change in the total cost of an activity (Noreen, 1991). Cost drivers (activities) explain why the amount of cost incurred in a particular cost center is there and if the activities are not adding value to the output then they can be eliminated, reduced or take any other relevant actions. As an internal information provider to the BPR project, the management accountant should have a thorough knowledge of the underlying cost drivers (causes) and the related cost structures. This understanding is essential in every phase of BPR project – discovering processes needing improvement, designing the reengineered processes, and implementing the reengineered processes. Gaining a thorough understanding of the underlying cost structures of the processes being reengineered is inevitable and failure to do so will be a major reason for BPR failure. Cost management is crucial for the success of any BPR project and that requires the knowledge of the underlying cost structures of business processes. The role of the management accountant being the information gatekeeper is no longer valid (Corrigan, 1996). Management accountants must design and implement a cost management system for the entire life cycle of the reengineering project. To fulfill this task, the management accountant must set cost goals, and control them. Often, however, in reengineering organizations the cost goals are not achieved due to lack of proper planning and control of management tasks at different stages of the lifecycle (Ahmed, 1995). The management accountant can develop a framework based on ABC for studying cost behavior of BPR because of its promising features in managing cost in business processes. Figure 3 provides a framework a management accountant can use in studying the cost structure of the BPR project.

Discovery Phase of the Cost Framework

In this phase the management accountant should understand the existing environment for implementing a reengineering project in order to develop a plan for costs. This phase of the cost framework consists of defining reengineering outcomes and establishing cost goals, estimating cost targets, and identifying critical success factors. It is very important to define what the reengineering project is for and what outcomes are expected to achieve.

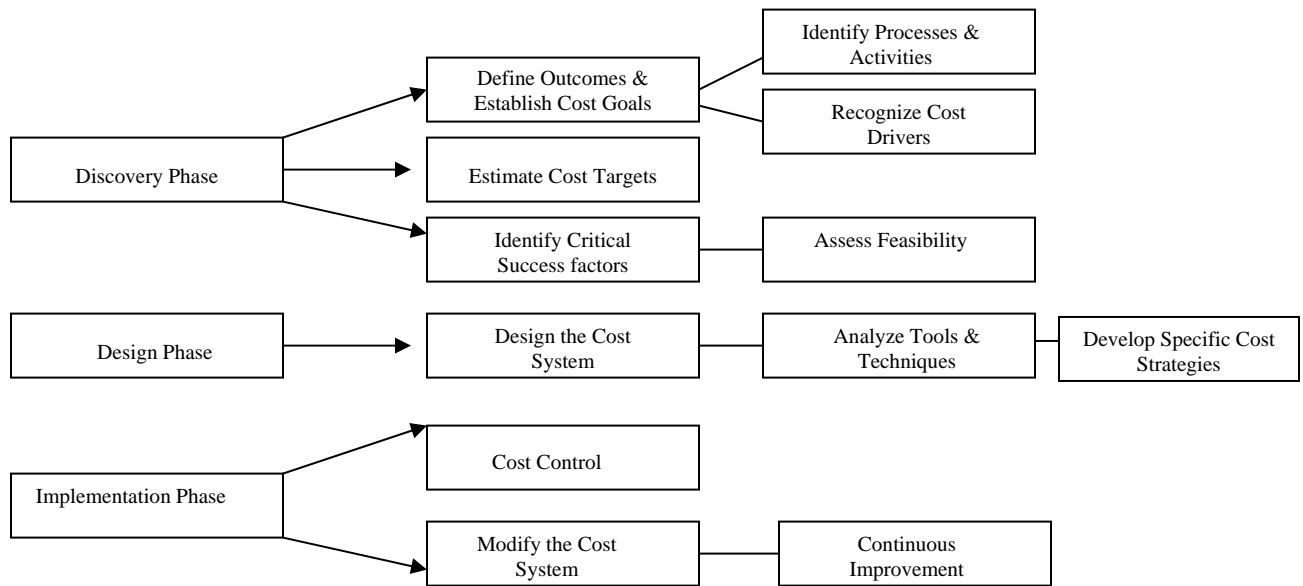


Figure 3: A Cost Planning Framework for Reengineering

Source: Adapted from Ahmed (195, p.262).

As explained in Figure 1, outcomes of BPR can be process improvement, achieving best-in-class performance, or breakpoint achievement. It is very important to define outcomes and the time frame of their achievement. Similarly, cost goals are determined in this phase and all the relevant processes and activities should be clearly recognized. Once a process or an activity is chosen, the potential opportunities and weaknesses should be studied and priorities for reengineering should be established. The management accountant then should focus on identifying value-adding and non-value-adding activities. Using ABC, the management accountant can recognize cost drivers and take measures to eliminate non-value-adding activities and processes and reduce them to their essential composite levels. Providing cost performance metrics to facilitate for dramatic improvements is one of the major contributions expected from the management accountant. Likewise for each and every process cost targets (budgets) should also be developed. For the established outcomes a set of relevant critical success factors (such as strategic focus, resource usage and change management) should be recognized. Assessing the feasibility of achieving cost targets is another important area the management accountant should pay attention.

Design Phase of the Cost Framework

The major task in this phase is the designing of the cost system. It involves designing of the budgeted cost system according to the guidelines specified under the discovery phase. Design phase of the cost framework is very important because it consists of data collection, analysis and developing the actual plan of the budgeted cost for the reengineering project. The knowledge of the relevant business processes and activities will provide the foundation in designing the cost system. Costs of the available resources should be determined using the relevant cost

management tools and techniques. In this phase specific cost strategies should be developed in order to eliminate or minimize errors and waste.

Implementation Phase of the Cost Framework

The major tasks of the management accountant in this phase are cost control and modification of the cost system. Most of the cost of the reengineering occur actual implantation phase. It is very important to compare actual cost with planned cost and take necessary measures to achieve the planned results. The management accountant can establish proper monitoring and control procedures such as timely report generation, checking of critical success factors and developing incentive systems. Based on the results of the cost control phase the cost system may need to be modified if necessary. This may include the modification of the cost goals and targets, critical success factors and the design of the cost system. Once the necessary modifications are done it is important to maintain the cost system. In this stage, measures to continuously improve the existing cost structure should be taken.

CONCLUSION

This paper has sought to provide some insights into the role of the management accountant in the changing business environment. In particular, the paper discussed the importance of reengineering in today's business world and how the management accountant can contribute significantly to reengineering. The paper developed a framework of the management accountant's role in reengineering. The study also highlighted the importance of the cost management in reengineering and finally developed a cost framework for managing cost in reengineering using activity-based costing concepts. This framework can be used substantiated using an empirical study in order to validate their real world use. It is the next step of the researchers.

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