

# An Analytical Study of the Impact of Cost Accounting on Profitability

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## **ABSTRACT**

The term 'Cost Management' has not been defined as such. However it can be said that cost management identifies, collects, measures, classifies and reports information that is useful to managers and other internal users in cost ascertainment, planning, controlling and decision making. Cost management aims to produce and provide information to internal users and personnel working in the organization. Effective management of cost makes an organization more strong, more stable and helps in improving the potentials of a business. The organization calls for a system that would monitor the full economic impact of the business, on resource acquisition and consumption. This provides supplying of information to the top management for exploring various alternatives by which cost effectiveness can be improved. Cost management also helps in optimizing resources which will improve overall efficiency of the organization and help the firm to achieve its objectives.

**KEYWORDS:** Cost Accounting, Management Decision Making, Information System, Investors Cost Management, Profitability,

## **Introduction**

Cost management produces information for internal users. Specifically, cost management identifies, collects, measures, classifies, and reports information that is useful to managers for determining the cost of products, customers, and suppliers, and other relevant objects and for planning, controlling, making continuous improvements, and decision making. The accounting information system within an organization has two major subsystems: a financial accounting system and a cost management accounting system. One of the major differences between the two systems is the targeted user. Financial accounting is devoted to providing information for external users, including investors, creditors (e.g., banks and suppliers), and government agencies.

These external users find the information helpful in making decisions to buy or sell shares of stock, buy bonds, issue loans and regulatory acts, and in making other financial decisions. Because the information needs of this group of external users are so diverse and the information must be so highly reliable, the financial accounting system is designed in accordance with clearly defined accounting rules and formats, or generally accepted accounting principles (GAAP).

Cost management has a much broader focus than that found in traditional costing systems. It is not only concerned with how much something costs but also with the factors that drive costs, such as cycle time, quality, and process productivity. Thus, cost management requires a deep understanding of a firm's cost structure. Managers must be able to determine the long- and short-run costs of activities and processes as well as the costs of goods, services, customers, suppliers, and other objects of interest. Causes of these

costs are also carefully studied. The costs of activities and processes do not appear on the financial statements. Yet, knowing these costs and their underlying causes is critical for companies engaging in such tasks as continuous improvement, total quality management, environmental cost management, productivity enhancement, and strategic cost management.

Cost management encompasses both the cost accounting and the management accounting information systems. Cost accounting attempts to satisfy costing objectives for both financial and management accounting. When cost accounting is used to comply with a financial accounting objective, it measures and assigns costs in accordance with GAAP. When used for internal purposes, cost accounting provides cost information about products, customers, services, projects, activities, processes, and other details that may be of interest to management. The cost information provided plays an important support role for planning, controlling, and decision making. This information need not, and often should not, follow GAAP.

### **Factors Affecting Cost Management An Overview**

Over the last 25 years, worldwide competitive pressures, deregulation, growth in the service industry, and advances in information and manufacturing technology have changed the nature of our economy and caused many manufacturing and service industries to dramatically change the way in which they operate. These changes, in turn, have prompted the development of innovative and relevant cost management practices. For example, activity-based accounting systems have been developed and implemented in many organizations. Additionally, the focus of cost management accounting systems has been broadened to enable managers to better serve the needs of customers and manage the firm's business processes that are used to create customer value. A firm can establish a competitive advantage by providing more customer value for less cost than its competitors. To secure and maintain a competitive advantage, managers seek to improve time-based performance, quality, and efficiency. Accounting information must be produced to support these three fundamental organizational goals.

**Global Competition:** Vastly improved transportation and communication systems have led to a global market for many manufacturing and service firms. Several decades ago, firms neither knew nor cared what similar firms in Japan, France, Germany, and Singapore were producing. These foreign firms were not competitors since their markets were separated by geographical distance. Now, both small and large firms are affected by the opportunities offered by global competition. Stillwater Designs, a small firm that designs and markets Kicker speakers, has significant markets in Europe. The manufacture of the Kicker speakers is mostly outsourced to Asian producers. At the other end of the size scale, Procter & Gamble, The Coca-Cola Company, and Mars, Inc., are developing sizable markets in China. Automobiles, currently being made in Japan, can be in the United States in two weeks. Investment bankers and management consultants can communicate with foreign offices instantly. Improved transportation and communication in conjunction with higher quality products that carry lower prices have upped the ante for all firms. This new competitive environment has increased the demand not only for more cost information but also for more accurate cost information. Cost information plays a vital role in reducing costs, improving productivity, and assessing product- line profitability.

**Growth of the Service Industry:** As traditional industries have declined in importance, the service sector of the economy has increased in importance. The service sector now comprises approximately three quarters of the U.S. economy and employment. Many services—among them accounting services, transportation, and medical services—are exported. Experts predict that this sector will continue to expand in size and importance as service productivity grows. Deregulation of many services (e.g., airlines and

telecommunications in the past and utilities in the present) has increased competition in the service industry. Many service organizations are scrambling to survive. The increased competition has made managers in this industry more conscious of the need to have accurate cost information for planning, controlling, continuous improvement, and decision making. Thus, the changes in the service sector add to the demand for innovative and relevant cost management information.

**Advances in Information Technology:** Three significant advances relate to information technology. One is intimately connected with computer-integrated applications. With automated manufacturing, computers are used to monitor and control operations. Because a computer is being used, a considerable amount of useful information can be collected, and managers can be informed about what is happening within an organization almost as it happens. It is now possible to track products continuously as they move through the factory and to report (on a real-time basis) such information as units produced, material used, scrap generated, and product cost. The outcome is an operational information Enterprise resource planning (ERP) software has the objective of providing an integrated system capability—a system that can run all the operations of a company and provide access to real-time data from the various functional areas of a company. Using this real-time data enables managers to continuously improve the efficiency of organizational units and processes. To support continuous improvement, information that is timely, accurate, and detailed is needed. Automation and integration increase both the quantity (detail) and the timeliness of information. For managers to fully exploit the value of the more complex information system, they must have access to the data of the system—they must be able to extract and analyze the data from the information system quickly and efficiently. This, in turn, implies that the tools for analysis must be powerful. The second major advance supplies the required tools: the availability of personal computers (PCs), online analytic programs (OLAP), and decision-support systems (DSS). The PC serves as a communications link to the company's information system, and OLAP and DSS supply managers with the capability to use that information. PCs and software aids are available to managers in all types of organizations. Often, a PC acts as a networking terminal and is connected to an organization's database, allowing managers to access information more quickly, do their own analyses, and prepare many of their own reports. The ability to enhance the accuracy of product costing is now available. Because of advances in information technology, cost accountants have the flexibility to respond to the managerial need for more complex product costing methods such as activity-based costing (ABC).

- ABC software is classified as online analytic software. Online analytic applications function independently of an organization's core transactions but at the same time are dependent on the data resident in an ERP system.
- ABC software typically interfaces with DSS software and other online analytic software to facilitate applications such as cost estimating, product pricing, and planning and budgeting. This vast computing capability now makes it possible for accountants to generate individualized reports on an as-needed basis. Many firms have found that the increased responsiveness of a contemporary cost management system has allowed them to realize significant cost savings by eliminating the huge volume of internally generated monthly financial reports.
- The third major advance is the emergence of electronic commerce. Electronic commerce (e-commerce) is any form of business that is executed using information and communications technology. Internet trading, electronic data interchange, and bar coding are examples of e-commerce. Internet trading allows buyers and sellers to come together and execute transactions from diverse locations and circumstances. Internet trading allows a company to act as a virtual organization, thus reducing overhead.

Electronic data interchange (EDI) involves the exchange of documents between computers using telephone lines and is widely used for purchasing and distribution. The sharing of information among trading partners reduces costs and improves customer relations, thus leading to a stronger competitive position. EDI is an integral part of supply chain management (value-chain management). Supply chain management is the management of products and services from the acquisition of raw materials through manufacturing, warehousing, distribution, wholesaling, and retailing. The emergence of EDI and supply chain management has increased the importance of costing out activities in the value chain and determining the cost to the company of different suppliers and customers.

**Advances in the Manufacturing Environment:** Manufacturing management approaches such as the theory of constraints and just-in-time has allowed firms to increase quality, reduce inventories, eliminate waste, and reduce costs. Automated manufacturing has produced similar outcomes. The impact of improved manufacturing technology and practices on cost management is significant. Product costing systems, control systems, allocation, inventory management, cost structure, capital budgeting, variable costing, and many other accounting practices are being affected.

**Theory of Constraints:** The theory of constraints is a method used to continuously improve manufacturing and nonmanufacturing activities. It is characterized as a “thinking process” that begins by recognizing that all resources are finite. Some resources, however, are more critical than others. The most critical limiting factor, called a constraint, becomes the focus of attention. By managing this constraint, performance can be improved. To manage the constraint, it must be identified and exploited (i.e., performance must be maximized subject to the constraint). All other actions are subordinate to the exploitation decision. Finally, to improve performance, the constraint must be elevated. The process is repeated until the constraint is eliminated (i.e., it is no longer the critical performance limiting factor). The process then begins anew with the resource that has now become the critical limiting factor. Using this method, lead times and, thus, inventories can be reduced.

**Just-in-Time Manufacturing:** A demand-pull system, just-in-time (JIT) manufacturing strives to produce a product only when it is needed and only in the quantities demanded by customers. Demand, measured by customer orders, pulls products through the manufacturing process. Each operation produces only what is necessary to satisfy the demand of the succeeding operation. No production takes place until a signal from a succeeding process indicates the need to produce. Parts and materials arrive just in time to be used in production. JIT manufacturing typically reduces inventories to much lower levels (theoretically to insignificant levels) than those found in conventional systems, increases the emphasis on quality control, and produces fundamental changes in the way production is organized and carried out. Basically, JIT manufacturing focuses on continual improvement by reducing inventory costs and dealing with other economic problems. Reducing inventories frees up capital that can be used for more productive investments. Increasing quality enhances the competitive ability of the firm. Finally, changing from a traditional manufacturing setup to JIT manufacturing allows the firm to focus more on quality and productivity and, at the same time, allows a more accurate assessment of what it costs to produce products.

**Total Quality Management:** Continuous improvement and elimination of waste are the two foundation principles that govern a state of manufacturing excellence. Manufacturing excellence is the key to survival in today’s world-class competitive environment. Producing products and services that actually perform according to specifications and with little waste are the twin objectives of world-class firms. A philosophy of total quality management, in which managers strive to create an environment that will enable organizations to produce defect-free products and services, has replaced the acceptable quality attitudes

of the past. The emphasis on quality applies to services as well as products. Boeing Aerospace Support (AS) provides maintenance and training support for Boeing aircraft.

**Time as a Competitive Element:** Time is a crucial element in all phases of the value chain. Firms can reduce time to market by redesigning products and processes, by eliminating waste, and by eliminating non-value-added activities. Firms can reduce the time spent on delivery of products or services, reworking a product, and unnecessary movements of materials and subassemblies. Decreasing non-value-added time appears to go hand-in-hand with increasing quality. With quality improvements, the need for rework decreases, and the time to produce a good product decreases. The overall objective is to increase customer responsiveness. Time and product life cycles are related. The rate of technological innovation has increased for many industries, and the life of a particular product can be quite short. Managers must be able to respond quickly and decisively to changing market conditions.

**Computer-Integrated Manufacturing:** Automation of the manufacturing environment allows firms to reduce inventory, increase productive capacity, improve quality and service, decrease processing time, and increase output. Automation can produce a competitive advantage for a firm. The implementation of an automated manufacturing facility typically follows JIT and is a response to the increased needs for quality and shorter response times. As more firms automate, competitive pressures will force other firms to do likewise. For many manufacturing firms, automation may be equivalent to survival. The three possible levels of automation are (1) the stand-alone piece of equipment, (2) the cell, and (3) the completely integrated factory. Before a firm attempts any level of automation, it should first do all it can to produce a more focused, simplified manufacturing process. For example, most of the benefits of going to a completely integrated factory can often be achieved simply by implementing JIT manufacturing. If automation is justified, it may mean installation of a computer-integrated manufacturing (CIM) system. CIM implies the following capabilities: (1) the products are designed through the use of a computer-assisted design (CAD) system; (2) a computer-assisted engineering (CAE) system is used to test the design; (3) the product is manufactured using a computer-assisted manufacturing (CAM) system (CAMs use computer-controlled machines and robots); and (4) an information system connects the various automated components. A particular type of CAM is the flexible manufacturing system. Flexible manufacturing systems are capable of producing a family of products from start to finish using robots and other automated equipment under the control of a mainframe computer. This ability to produce a variety of products with the same set of equipment is clearly advantageous.

**Customer Orientation:** Firms are concentrating on the delivery of value to the customer with the objective of establishing a competitive advantage. Accountants and managers refer to a firm's value chain as the set of activities required to design, develop, produce, market, and deliver products and services to customers. As a result, a key question to be asked about any process or activity is whether it is important to the customer. The cost management system must track information relating to a wide variety of activities important to customers (e.g., product quality, environmental performance, new product development, and delivery performance). Customers now count the delivery of the product or service as part of the product. Companies must compete not only in technological and manufacturing terms but also in terms of the speed of delivery and response. Firms like Federal Express have exploited this desire by identifying and developing a market the U.S. Post Office could not serve. Companies have internal customers as well. The staff functions of a company exist to serve the line functions. The accounting department creates cost reports for production managers. Accounting departments that are "customer driven" assess the value of the reports to be sure that they communicate significant information in a timely and readable fashion.



Reports that do not measure up are dropped.

**New Product Development:** A high proportion of production costs are committed during the development and design stage of new products. The effects of product development decisions on other parts of the firm's value chain are now widely acknowledged. This recognition has produced a demand for more sophisticated cost management procedures relating to new product development—procedures such as target costing and activity-based management. Target costing encourages managers to assess the overall cost impact of product designs over the product's life cycle and simultaneously provides incentives to make design changes to reduce costs. Activity-based management identifies the activities produced at each stage of the development process and assesses their costs. Activity-based management is complimentary to target costing because it enables managers to identify the activities that do not add value and then eliminate them so that overall life cycle costs can be reduced.

### Conclusion

The company's internal accountants have moved beyond the traditional manufacturing cost approach to a more inclusive approach. This newer approach to product costing may take into account the costs of the value-chain activities defined by initial design and engineering, manufacturing, distribution, sales, and service. An individual who is well schooled in the various definitions of cost and who understands the shifting definitions of cost from the short run to the long run can be invaluable in determining what information is relevant in decision making. Individuals with the ability to think cross-functionally can shift perspectives, expanding their understanding of problems and their solutions. Japanese automakers got their idea for JIT manufacturing from Taiichi Ohno's (the creator of Toyota's JIT production system) 1956 trip to the United States. He toured American automobile factories and American supermarkets. The impressive array of goods in the supermarkets and their constant turnover led to Ohno's comprehension of the way that grocery customers "pulled" products through the stores. That understanding led to Toyota's attempt to "pull" parts through production precisely when and where needed.

Today's cost accountant must understand many functions of a business's value chain, from manufacturing to marketing to distribution to customer service. This need is particularly important when the company is involved in international trade. Definitions of product cost vary.

Today's accountant must be an expert at valuing things. This includes methods of costing and achieving quality:

- Of differentiating between value-added and non value-added activities, and
- Of measuring and accounting for productivity.

Thus, it is crucial that owners, managers, and accountants be aware of the signals that are being sent out by the accounting information system and ensure that correct signals are being sent.

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