UNIVERSITY OF CAPE COAST

ACTIVITY-BASED COSTING PRACTICES IN SELECTED FOOD MANUFACTURING FIRMS IN SEKONDI-TAKORADI METROPOLIS

BY

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature: …….. Date: ……

Name: Joseph Quartey

Supervisors' Declaration

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Supervisor's Signature……. Date.....

Name: Mr Stephen Asante

ABSTRACT

The motive behind this study was to find out the activity-based costing practices of some selected manufacturing firms in Sekondi-Takoradi. The research design adopted was a descriptive survey. The study targeted one hundred and twenty (120) people, comprising chief financial officers, finance directors, and other accountants of the food production companies in Sekondi-Takoradi. Eighty respondents were purposively sampled for the study and the results were analyzed using descriptive statistics. It was revealed from the study that some food manufacturing firms in Sekondi-Takoradi use Activity-Based Cost as a cost analysis tool in the cause of producing goods and services. Secondly, it was found that Activity-Based Cost implementation aids firms in the classification of cost based on production activities which enable the firms to know what costs went into production at each stage. Thirdly, the study depicted that Activity-Based Cost has been beneficial since it demonstrated an appreciable cost-elevated cost designation system that aids firms to recognize the real costs of products or services. Finally, the study discovered that even though Activity-Based Cost is of great benefit, its implementation has some difficulties as well. It was concluded that Activity-Based Cost is being adopted by food manufacturing firms in Sekondi-Takoradi due to pressure from the globalized world, advances in technology, and the dominance of foreign managers and accountants. It was recommended that Selected firms should focus on promoting awareness and training on the benefits and implementation of ABC and setting performance metrics to capitalize on the financial returns and improved product/service quality resulting from ABC implementation.

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I also want to thank my friends and family for their contributions towards the successful completion of this project.

DEDICATION

To my family

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CHAPTER ONE

INTRODUCTION

In today's highly competitive business landscape, cost management and financial efficiency are paramount for the success and sustainability of any organisation. For firms operating in the food manufacturing industry, where the intricacies of production, distribution, and supply chain management are ever-evolving, the need for accurate cost allocation and analysis is particularly crucial. Activity-Based Costing (ABC) is an accounting methodology that has gained prominence as a powerful tool for enhancing cost transparency, improving decision-making, and optimizing resource allocation in various industries, including food manufacturing. The research topic, "Activity-Based Costing Practices in Selected Food Manufacturing Firms," explores the implementation, challenges, and impacts of ABC within the context of food manufacturing companies.

Background to the Study

Any organization determined to thrive in the present-day turbulent and dynamic business environment must plan strategically. Management must be proactive, set realistic objectives, and develop strategic plans of action in the reduction of cost in its manufacturing activities. The fundamental issue is taking decisions by examining various options or scenarios available to the firm and responding quickly to opportunities in the environment. From all strategies, consisting of objectives and goals, to the reduction of cost can be condensed to one sentence; what gets measured gets done (Kelly, 2000).

As the years have evolved with new ways and forms of conducting business activities, there has been a great evolution amongst firms. The quest to

complete task on time and also achieve efficient results have compel firms to adopt new ways of reporting and managing cost. This has made the traditional way of cost accounting to be outmoded due to misrepresentation of cost and irrelevances in the last 20 years (Johnson and Kaplan, 1987). In order to deal with the inefficiencies in the traditional accounting system in organizations, Activity-Based Cost (ABC) was developed (Miller, 1996).

The turbulent system as well as highly competitive environment businesses operate in has changed the dynamics of doing business. This has resulted in the adoption of technologies to aid efficient production in manufacturing companies globally. The increased application of technology among manufacturing companies has somehow rendered the traditional costing methods ineffective (Johnson & Kaplan, 1987). Consequently, most manufacturing firms have adopted the Activity-Based Costing (ABC) which is in line with the new methods of production among manufacturing firms. This technique is capable of building and giving concrete data and information on costs, and enhance the firm's efficiency (Shield, 1995).

The principle behind the innovation and ABC method is that it can achieve precise and concrete results on costing and is able to manage the distribution of cost activities to the outcome of production. Researchers who champion ABC confirmed that in other to make concrete and more precised policies and strategic decision concerning the evaluation of the overall efficiency of the business including; resource, products mix, price allocation, and process elevation of the business, it is necessary to ensure that the implementation and utilization of the ABC systems is in line with the scheme of work (Banker, et al. 2008).

Statement of the Problem

The importance of ABC has been phenomenal in management accounting, reflected by its presence in many academic journals. It has grown not only as a replacement for traditional costing methods, but as a management technique that enables decision making from "an informed and objective basis" (Moll, 2005). However, research in Ghana has not illustrated a clear picture of the nature and understanding of ABC in Sekondi-Takoradi, with few studies exploring little more than rates of adoption (Cotton, Jackman, Brown, 2003). The adoption, impact, and effectiveness of Activity-Based Costing (ABC) in manufacturing firms in Ghana remain an area of concern and interest. ABC is a costing methodology that allocates costs to specific activities based on their consumption of resources, offering a more accurate representation of costs compared to traditional costing methods (Kaplan & Anderson, 2007). While ABC has been widely adopted in developed countries, its implementation and utilization in developing countries such as Ghana, specifically in the manufacturing sector, require further investigation.

The first issue that arises is the identification of manufacturing firms in Ghana, particularly in the Sekondi-Takoradi region, that have implemented ABC. A comprehensive understanding of the firms that have embraced ABC is essential to evaluate its adoption rate and potential prevalence within the manufacturing sector. This informations can guide further research and provide insights into the extent of ABC implementation in the country.

Secondly, an examination of the factors that motivated the selected manufacturing firms in Ghana to implement ABC is crucial. These factors may include a desire for more accurate cost information, improved cost control,

enhanced decision-making processes, or increased competitiveness in the market. Understanding the drivers behind ABC implementation will shed light on the specific incentives and motivations that influenced its adoption among manufacturing firms in Ghana.

In addition to motivation, it is important to explore the challenges associated with ABC implementation in the selected production firms in Ghana. Challenges may arise from factors such as lack of awareness, limited resources, resistance to change, or difficulty in capturing and measuring activity costs accurately. Identifying and addressing these challenges will contribute to the effective implementation and utilization of ABC in the manufacturing sector, leading to more accurate cost information and improved decision-making processes.

Finally, determining the benefits associated with ABC in the selected production firms in Ghana is vital. These benefits may include better cost allocation, improved cost management, enhanced product pricing strategies, or increased profitability. Understanding the positive impacts of ABC will provide insights into its effectiveness and potential value addition for manufacturing firms in Ghana. Therefore, this research aims to address the gap in knowledge regarding the adoption, impact, and effectiveness of ABC in the manufacturing firms in Ghana, with a specific focus on the Sekondi-Takoradi region. By identifying the firms implementing ABC, examining the motivating factors, exploring the challenges faced, and determining the associated benefits, this study will contribute to the understanding and application of ABC in the context of the Ghanaian manufacturing sector.

Purpose of the Study

The main thrust of the study is to examine the activity-based costing in some selected food manufacturing firms in Sekondi-Takoradi.

Research Objectives

1. Identify the uses of ABC among food manufacturing firms in Sekondi-Takoradi.
2. Ascertain the factors that motivated the selected manufacturing firms to implement ABC system.
3. Determine the challenges associated with ABC in the selected production firms in Sekondi-Takoradi.
4. Determine the benefits associated with ABC in the selected production firms in Sekondi-Takoradi.

Research Questions

1. What are the uses ABC among food manufacturing firms in Sekondi-Takoradi?
2. What factors or reasons motivated the selected production firms to implement ABC systems?
3. What arc the challenges associated with ABC in production firms in Sekondi-Takoradi?
4. What are the benefits associated with ABC in production firms in Sekondi-Takoradi?

Significance of the Study

This study would help Ghana establish an increase in economic benefits such as a rise in the country's gross domestic product through firms that use ABC in production activities. This is because, in the implementation of ABC,

firms can reduce their cost of production thus causing a relative increase in sales. As a result, their tax liability increases giving a rise in government revenue thereby increasing the nation's GDP.

Again, manufacturing firms would know the value of the proper implementation of Activity- Based Costing and its benefits to firms, their business partners, and consumers at large. It will help the food manufacturing to know the difference between the traditional cost and the ABC, and enable them to know the clear cost savings derived from ABC, hence improving profit. It will also serve as a point of reference to students and other professionals who are yet to undertake research related to Activity- Based Costing or costing systems in Ghana or the world at large.

Delimitations

The focus of this study is on Activity-Based Costing in Food manufacturing firms in Sekondi-Takoradi. This is because of its rising impact on production with the capability of achieving more precised and concrete information of improving Food manufacturing firms' long and short-term performance. The research is based on food manufacturing firms since most firms undergo several processes or activities in ascertaining the cost of particular products. These may include assigning each activity of cost with resources to all products and services according to the actual consumption by each and also spreading indirect costs (overhead) into direct costs. Finally, the research is conducted in Sekondi-Takoradi relatively because most food manufacturing firms in the Western Region of Ghana are located in this area.

Limitations

A number of constraints served as limitations in this study. Uncooperative attitude on the part of the respondents when approached to respond to the items in the questionnaires was a problem though confidentiality was assured. The researcher only used quantitative instruments such as questionnaire for the study, if he had used qualitative tools such as interview guide and discussion, the resesarcher would have obtained wide range of information to enrich the study.

Organization of the Study

This research is grouped or categorized into five main Chapters. The first chapter contains the Background to the Study, Statement of the problem, Questions about the research, Objectives which contain both the general and specific, limitations, and finally the imperatives or significance of the Study. Chapter two contains a literature review providing related works on both theoretical and empirical overview of (ABC). Chapter three gives detailed information concerning the methodology adopted in data collection and the analytical instrument concerning the study. Chapter four contains results and findings which are demonstrated in the form of graphs. Finally, Chapter Five contains a summary, conclusions, and recommendations.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter presents a review of existing literature related to the research problem. The relevance of this was to gather a pool of knowledge on the topic under study, to create ample opportunity for analyzing the data. The review was grouped into theoretical, conceptual and empirical review.

Theoretical Review

Activity-based costing (ABC) theory

Activity-based costing (ABC) was developed and has been advocated as a means of overcoming the systematic distortions of traditional cost accounting and for bringing relevance back to managerial accounting. A traditional system reports what money is spent on and by whom, but fails to report the cost of activities and processes (Miller 1996). Many organizations in the manufacturing industry have adopted the new costing method. Aranoff et al (1998) said that there are two purposes of activity-based costing. The first purpose is to prevent cost distortion. Cost distortion occurs because traditional costing combines all indirect costs into a single cost pool. Cost distortion is prevented in ABC by adopting multiple cost pools (activities) and cost drivers. The second purpose is to minimize waste or non-value-adding activities by providing a process view.

Activity Based Costing is motivated by a belief that traditional (general ledger) accounting information is all but useless to managers who are interested in evaluating the effectiveness of resource allocation decisions

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The motive behind the adoption of the ABC method was to reduce or eliminate the weakness of the long-established techniques and their associated problems in the field of business and cost theory. Again, the reason behind the use of volume-based costing during the colonial period may be due to the lack of adequate technology and facilities. One of the major reasons that call for the adoption of the traditional method of cost allocation was due to its simplicity in nature in both procedure and principles (Cokins, 2015). ABC has been confirmed to be most reliable and convenient technique the current technologically advanced and competitive business environment due to its impact of managing more detailed data and information on businesses cost allocation (Woodruff, 1997).

ABC is an accounting technique that indicates every activity and it accompanying cost with regards to some of its activities. It then apportions the cost that is correlated with the direct activity to the output price of that activity, not necessarily the cost across all outputs (Hoang et al., 2020). It also gives room for the companies to identify the attested or actual cost related to each product. However, one of the imperative roles of the ABC is to create a more concrete and precised way of associating the cost of indirect and support resources to activities (Steiss, 2003).

One of the weaknesses of the long-established or the traditionally cost accountants has to do with the addition of percentage of determination into the unrelated cost allocation (Popesko, 2013). Thus, resulting in the elevation of inaccuracy due to the fact that unrelated costs were not treated equally by all products as the percentages of indirect or overhead costs rose, (Zogg et al., 2016). For instance, some product may take more time to be processed than another product and requiring more direct labor and materials; if the same generalized "cost" percentage is added to the additional cost of using the machine, then it will not confirm all products with the additional cost of using the machine. Therefore, when several products share the common cost, there is a risk that one product subsidizes another product (Popesko, 2013).

The theories of ABC were innovated in the manufacturing sector of the USA at the colonial period of the 1970s and 1980's. Within this time, different ideals came out on the decisive function for studies and the formalization of the principle that is known as Activity-Based Costing. They delineated that, ABC has come to counteract the problem and the weaknesses of the long-established traditional method of cost management systems (Roy & Tshehab, 2009). These

methods were confirmed not to always give accurate information on the actual costs, the costs of production and similar services (Esmalifalak, Albin, & Behzadpoor, 2015). However, wrong decision-making was delineated as one of the main causes of misrepresentation of information on product allocation and low productivity of the firms as some of the demerits of the volume-based costing as indicated by most managers of firms (Popesko, 2013).

ABC was delineated to possess several functions, especially in the manufacturing sector due to its ability to provide accurate and concrete data and information on cost allocation and distribution leading to the attainment of similar to actual cost and suitable categorization of cost incur by the business enterprise during the production process (Shander et al., 2010). ABC was accurately defined first as "A Field Study Perspective." They targeted on manufacturing sector where the elevation of modern technology and the enhancement of the production sector has resulted in the reduction of the corresponding rate of the direct costs of labour and materials, although it has elevated the corresponding rate of indirect costs (Hayward & Ncayiyana, 2011).

For instance, the adoption of automated machines may drastically result in the reduction of labour requirement geared towards a direct cost, but will result in an elevation of machines depreciation accounting for indirect cost. "Like manufacturing industries, financial institutions have diverse products and customers, which can cause cross-product and cross-customer subsidies (Innes & Booher, 2000). Since personnel expenses represent the largest single component of non- interest expense in financial institutions, these costs must also be attributed more accurately to products and customers. Activity-based costing, even though originally developed for manufacturing, may even be a

more useful tool for doing this (Cokins, 1998). In general terms, Activity- Based Costing records the cost that traditional cost accounting does not do".

Conceptual Review

ABC practices in manufacturing organizations

ABC as a method of cost allocation has been in operation for the past 20 years and a number of companies in varied fields have been using it in their operations. The capability of the ABC techniques to bring a drastic and imperative transformation in the cost management sector, most of the firms advocate the adoption of ABC in other to improve production and the representation of accurate information and data on cost allocation (Popesko, 2013). Due to globalization and modern technology, there is a competition amount the manufacturing sector to supply high-quality goods and services to meet the competitive prices and still maintain the integrity of the firm's reputation. This has called for the adaptation of ABC in the scheme of work to reduce the time wastage to reach out consumers in order to enhance the income of producers (Popesko & Novak, 2011).

Again, globalization has resulted in capital intensiveness in the production sector rather than the labour intensive concerning long-established manufacturing sector. It was therefore asserted that, the long-established model of costing concentrate mainly on labour-intensive productivity may not be in tandem with the recent revolution of most of the manufacturing institutions (Kim & Han, 2014). ABC was further seem as the technique of determining the activities of both cost and performance, products, and customers (Hayward & Ncayiyana, 2011). In the field of application of product cost, ABC gives space to associate cost to the product and to attested activities and resources consumed

in manufacturing, and other related activities involving cost in the market and identify the mutually dependent of cost drivers to activities (Kim & Han, 2014),

The main function of the ABC model concerning manufacturing firms is to associate costs to products with adoption of cost drivers (CD), a model that can store and record the attributes of the costs that are being assigned. The key factor responsible for the assigning of cost allocation activities is called cost drivers (Hergert & Morris, 1989). The paramount objective of ABC as a cost allocation model is to ensure accurate information and also to keep track of production costs involved in the manufacturing firm (Kim & Han, 2014). The motive behind the implementation of the ABC should go in line with the following steps as a manufacturing industry (Esmalifalak et al., 2015) determining the paramount activities and cost objects within the ABC model, associating costs to activities and computing the primary rates of individual activities.

Identifying the major activities and cost objects within the ABC model

According to Steiss (2003) the first stage in the implementation of the ABC model is the definition of activities. The structure of activities can be associated with the cost object structure due to diverse data that are processed and various outputs that are desired of the individual cost objects. However, it is imperative to separate this phase of ABC implementation into two coherent sections: i.e., defining activities and defining cost objects." Activity definition

The foundation of determining the significant information of the ABC model lies mainly in its activities which is important in the cost allocation system. Hence, there is a need to detail out the right definition at the activities level. To reduce mismanagement and misrepresentation of the ABC model,

there is a need to prevent information overload or opulent information and also too little information to prevent insufficiency of information available for analysis (Gunasekaran, 1999). The following procedure is use to define activities in the ABC model.

- Analyzing the institutional structure of an industry: that is analyzing the hierarchical framework in which the institution organized its scheme of authority and communication and then determine the manner to which principle, directives, and work schedule are delegated in the channel of managing the communication of information.
- Analysis of the workplace: that is analyzing the facilities or establishments of an organization concerning its location or work area.
- Analysis of personnel costs: analyzing the cost per the amount of work to be done by an employee or machine in carrying out their definite duties, especially in a specified timeframe.

Making good use of the few points listed above may go a long way to reduce the overload and insufficiency of information. (Popesko, 2009) also proposed the following important guidelines in the definition of activities in the ABC model.

1. There should be a relationship between the defined activities and the significant or the relevant cost pool. Thus the principle of the defined activity may not be to carry out process analysis, but its paramount reason is to determine the ABC model costing.
2. To prevent misrepresentation and misunderstanding of the activities, both the action and tasks should be accurately defined and explain early to reduce misinformation at the later stage of the application,

3. Also, at the earlier stage of processing, the identification of individual activities should be considered by either using numbers or codes to prevent misunderstanding of information.
4. To reduce overload and underload of information, the right range of activity should fall between 20 to 30 for a suitable and appropriate definition of such activity.

There are several ways of categorizing and defining activities within the ABC model but to more precise, the main forms of classification narrowed to either primary or secondary activities. The activities that are correlated to the institution or the organization responsibilities aimed at meeting the wants or the demands externally may be grouped as primary activities, while the activities that are correlated to the institution or the organizational responsibilities aimed at meeting the wants or the demands of the internal "customers" may be grouped as secondary (Hoang et al., 2020). Also, other models such as Porters' model may be useful as a back-up for activity in manufacturing industries as a means of cost allocation (Albright, 2016). Albright (2016) also came out with a similar classification using the ABC model value chain as the pivotal point of activities. He further explained that, activities that incorporate values to the product based on the consumer's perception are termed primary activities. Again, he went the extra mile to explain that, activities that ensure the systematic achievement of the primary activities are called secondary activities (Alabdullah, 2019; Farr, 2011). However, there is a lot of criticism concerning this model because, the model concentrated on operational activities and not taking into consideration innovation and service processes, notwithstanding, the fundamental principle of

this model was indicated to be essential for the implementation of the institution costing system (Novak & Popesko, 2008).

Cost object definition

As one of the weaknesses of the long-established traditional costing technique which involve the utilization of a single cost for a product or service which resulted in the mismanagement and misrepresentation of cost information has led to the development of a more advanced and accurate system that can handle multiple and complex task and achieving accurate information of cost objective of an organization (Popesko, 2010a). One of the demerits of adopting the multiple cost principles is; it results in more complicity and technicality of the costing model, but notwithstanding this principle gives concrete and accurate output as an imperative requirement of the manufacturing industry (Popesko, 2010a). It has been confirmed that there is a close link between the activities and cost objectives and therefore to ensure efficient implementation, both the define activities and the costing objects should be in a similar phase of implementation (Novak & Popesko, 2008). The close association between an activity and a cost object's structure is also held by long-established categorization of activities, where every grouping of activity is correlated to the different cost object (Hoang et al., 2020). Also, each time a group or a multiple of goods and services are produced at a particular point, they should be classified as batch level activities. The activities which are undertaken to make sure that all goods and services are produced successfully are termed as product sustaining activities whiles the activities which are undertaken to ensure that the customers are served well form part of the cost object and finally, the activities

which are undertaken with the aim of promoting the facility's productivity and other manufacturing processes are also grouped as facility sustaining activities.

Allocation costs to activities

Associating activities with the respective costs constitute the initial phase to consider in the cost designation process within the ABC model. The initial principle to take note as far as the ABC model is concerned is that; the allocation of the defined activities should and must not follow the company's overall cost but should be grouped according to their nature (Hoang et al., 2020). Direct traceable costs are a cost that is associated similarly to a cost object by the adoption of similar principles as the long-established costing methods while the cost that assigned to a particular or a specific activity were classified as activity- traceable costs.

Again, the demerit of these cost associations to the right or designated activities is confirmed to be a complicated and time-consuming task that may eventually require more time for implementation. A similar argument was reported by (Steiss, 2003; Alabdullah, 2019; Hoang, 2020). They further assert that, the cause of the problem may be as a result of the structure of both the activities and the institutional scheme of schedules which are poorly organized. (Popesko, 2013). In other to have an effective allocation of cost, there is a need to carefully ascertain concrete and a defined resource cost driver (Popesko, 2013). A similar argument was being raised by (Hoang et al., 2020; Alabdulla, 2019). According to Popesko (2010b), the main importance of the resource cost drivers is to facilitate the assigning of costs to a specific activity at the point of book entries by the application of the following resource cost drivers; the allocation of the cost of person to the activities were classified as personnel

workload. Square meters; for the allocation of other cost such as accommodation cost, depreciation cost, heating cost and electricity cost to activities, the total number of equipment and tools, and other estimation.

Calculating the primary rates of individual activities

According to Popesko, (2010b), there are five steps involving in the computation of primary rates of individual activities. The steps are scheduling relevant activity cost drivers for individual activities, measuring the productivity of every single activity, computing the basic rate of single activities, associating the cost of SA to PA, and computing the costs of defined cost objects.

Setting appropriate activity cost drivers for individual activities

According to Popesko (2010a), activity cost drivers (ACD) are the significant determinants of costs in the business transaction in an organization. ACD should be able to generate data that is responsible for individual types of overhead costs accumulated within an organization. According to (Drury, 2001) ACD's can be divided into; transaction drivers, duration drivers and Intensity drivers.

One of the imperative parameters of attaining a defined ACD is the capacity of the manufacturing company to determine the driver and the quantum of its efficiency or productivity in the field of production. It was also confirmed by (Hoang et al., 2020) that cost driver may not be considered for cost allocation, if and only if the cost driver cannot determine the quantum cost consumed by the industry or the manufacturing company and the individual cost object to come out with accurate and concrete information. A similar argument was reported by (Novak & Popesko, 2008; Alabdullah, 2019; Popesko, 2010b).

It was confirmed that in some cases, the cost driver behavior is similar structure as the determiner of cost variability. However, it was further confirmed that, a total transformation of cost of the activity will occur if the number of unit activities performed by the company is low during the production phase of manufacturing. Notwithstanding, there is always a similarity in regular case that the activity costs are largely consistent in character resulting in the ACD being simply a gauge of cost allocation (Popesko, 2010).

Determination of output measurement of individual activities

Another key stage in the implementation of the ABC in the manufacturing industry is to determine the output measurement of individual activities (Gunasekaran, 1999). This has to do with specific number of activities performed at a given time period. The determination of the output measurement is very relevant because it enable the manufacturing firm to determine unit cost of each activity (Esmalifalak et al., 2015). The most important principle governing the measurement of the cost activity capacity is to achieve accurate and concrete activity capacity, which is accumulated by the level of its denominator (Popesko, 2009). The denominator levels are regularly applied in the manufacturing process where capacity can be technically and very precisely measured (Dwommor, 2012). In the situation where there is uncountable activity measurement, the scheduling of accurate or concrete denominator levels could result in more complexity due to uncountable activities which might easily be measured (Lopez-Santander, 2017). To counteract the situation of overhead activities, there is a need to determine the productivity or the efficiency of individual cost allocation within a cost period (Lopez-Santander, 2017).

To recover the rate of each cost pool, there is a need to determine the output of the cost allocation which is incorporated in the ABC model ander, 2017. According to (Lopez-Santander, 2017) the actual output makes it easier to specify output measure, and maximize capacity, and also sets regular capacity level for each activity. Notwithstanding, computing activity recovery rates using the principle's actual output may be a less complex and easier exercise to implement since no maximum capacity measurement is necessary (Lopez-Santander, 2017). One of the merits of adopting maximum capacity during the computation of cost activities is that it leads to the achievement of precised and accurate information (Lopez-Santander, 2017).

Computing the primary rates of individual activities

According to Lopez-Santander (2017) the activity capacity output measures are used for quantifying activity unit costs, the rate for which is calculated as follows;

$$\text{Activity Cost per unit} = \frac{Activity\ Cost}{Output\ Measure\ Capacity}$$

Activity cost per unit, also called primary rates could be then used in the ensuing stages of ABC implementation as important measurements, which could be analyzed.

Assigning the costs of support activities to primary activities

The next activity after the computation of the primary rates has to do with the allocation of secondary activities to primary ones. The quantification of the secondary cost driver may be imperative in solving complex technicalities relating to the secondary cost activity (SCA) (Santtnaer, 2017). The major function of the measurement of the SA was confirmed to aid in the allocation of

SAC to primary activity cost (PAC) during the manufacturing stage (Ekmanruranstrom, Omerov, Jacob, & Landen, 2013), thus, resulting in the computation of the secondary activity costs of primary activities (Ekman et al., 2013). The total PAC are then computed by the combination of both the PAC (cost pool) and SAC (costs of SA allotted to a PA) (Popesko, 2009). At the point where the addition of both the primary unit cost activity or the primary rate (PR) and the unit costs of SA utilized by a secondary rate (SR). Computation on the unit costs of an activity (combined rate) can be obtained using equation adopted by (Popesko, 2013);

Total Activity Costs = PCA +SCA of primary activity

Combined rate = PCA + SC consumed by primary activity

The complexity lies at the point where the SA and their outcome determined are not specifically articulated by PA but other SA, as well as by these activities themselves. A similar argument was made by (Alabdullah, 2019; Ekman etal., 2013).

Computing the costs of defined cost objects

The last stage as far as the ABC model is concern includes the computation on finding the expense on a particular cost objects (Farr, 2011). The principle governing this phase is to obtain concrete and accurate quantification of the number of unit activities articulated by individual cost objects (Sanuilicter, 2017). It was later, therefore, confined that, the imperative of obtaining accurate multiple drivers of cost is to achieve an authentic statement of costing for different types of users (Santander, 2017; Novak & Popeszko, 2008; Popesko, 2010a).

Motivation for the use of ABC system in manufacturing firms

Activity-Based Costing (ABC) is a cost allocation method that has gained significant attention in manufacturing firms. This essay aims to review the literature and identify the factors that motivate manufacturing firms to adopt ABC systems. ABC systems allocate costs based on activities performed, providing a more accurate understanding of resource consumption and cost drivers. By examining the existing body of literature, this review sheds light on the primary factors motivating manufacturing firms to implement ABC systems.

Enhanced cost accuracy and decision-making

One key factor driving the adoption of ABC systems in manufacturing firms is the need for enhanced cost accuracy and decision-making. Traditional cost allocation methods, such as direct labor or machine hours, often fail to accurately reflect the diverse set of activities involved in modern manufacturing processes. ABC systems enable firms to identify and allocate costs to specific activities, providing a more accurate picture of resource consumption. By understanding the true cost drivers, firms can make informed decisions regarding pricing, product mix, process improvement, and resource allocation (Gupta & Galloway, 2021). The enhanced cost accuracy offered by ABC systems empowers managers to identify areas of inefficiency, reduce costs, and improve overall operational performance.

Complex and diverse product portfolios

Manufacturing firms with complex and diverse product portfolios are more likely to adopt ABC systems. As the number of products and processes increases, traditional costing methods become less effective in capturing the heterogeneity of activities and costs associated with each product. ABC systems

provide a framework to allocate costs based on the intensity of activities required by each product. This approach allows firms to accurately determine the profitability of individual products, identify cost-saving opportunities, and allocate resources efficiently (Banker et al., 2017). By understanding the true cost of production for each product, manufacturing firms can make data-driven decisions regarding product pricing, promotion, and investment.

Intensified competitive pressures and globalization

Intensified competitive pressures and globalization have also emerged as motivating factors for the adoption of ABC systems in manufacturing firms. In today's globalized business environment, manufacturers face increasing competition, both locally and internationally. To remain competitive, firms need to optimize their cost structures and operational efficiencies. ABC systems provide a comprehensive view of cost drivers, enabling firms to identify and eliminate non-value-added activities, optimize processes, and reduce costs (Li et al., 2019). By adopting ABC systems, manufacturing firms can achieve cost leadership, improve their competitive position, and respond more effectively to market dynamics.

Technological advancements and data availability

Technological advancements and the increasing availability of data have facilitated the adoption of ABC systems in manufacturing firms. With the rise of enterprise resource planning (ERP) systems and advanced data analytics tools, firms have access to vast amounts of operational and financial data. ABC systems leverage this data to allocate costs accurately and efficiently. Advanced software tools and modeling techniques enable firms to implement ABC systems with relative ease, making it more feasible for manufacturing firms to

adopt this costing method (Fleischman et al., 2018). The integration of technology and data availability has significantly contributed to the motivation behind the adoption of ABC systems in manufacturing firms.

Simply put, several factors motivate manufacturing firms to adopt Activity-Based Costing (ABC) systems. These factors include the need for enhanced cost accuracy and decision-making, the presence of complex and diverse product portfolios, intensified competitive pressures, and globalization, as well as technological advancements and the availability of data. By leveraging ABC systems, manufacturing firms can gain a deeper understanding of their cost structures, identify inefficiencies, optimize processes, and improve their competitive position. Future research could explore the impact of ABC systems on financial performance, employee motivation, and other organizational outcomes in manufacturing firms.

Empirical Review

ABC and organizational performance

One of the problems facing most manufacturing facilities or institutions is how to achieve a strategic planning procedure due to the transformation or changing of the operational environment leading to the decline of the progress of the organization (Hayward & Ncayiyana, 2011). According to Ekman et al. (2013) the Institute of Management Accountants in 2000 suggested that to counteract this problem, there is a need to incorporate cost control systems and support the overall strategic goals of a company. This was confirmed to have a positive impact on the performance of a company. It was confirmed that the ABC model produces a significant result for most organizations. Notwithstanding, meeting the demand of the increasing population has resulted

in the low productivity of the organizations (Ekman et al., 2013). Another researcher has confirmed that the correlation between the ABC model and organizational performance is inversely proportional (Ittner, Lanen, & Larcker, 2002; Dwommor, 2012).

The main purpose of the ABC model is to produce concrete and accurate data or results which may aid in decision and policy-making and promote the scheduling process of the company resulting in the reduction of the cost involved in the allocation of activities (Ittner et al., 2002) with the main principle that, the model may lead to the improvement of the daily efficiency of the organization (Ekman et al., 2013). Brierley, Cowton, and Dairy (2001) assert that, a linear correlation exists among the organization's performance and the implementation of the ABC model. Thus, an organization with full adoption of the model has superior performance as compared to the firms with low adoption in the first three years.

Woodruff (1997) adds that to gain recognition globally and competitive merit, there is a need for the organization to make good use of both the internal and external strategic initiatives in the planning stage. Ekman et al. (2013) further state that, the ABC is capable of aligning the strategy and structure to provide a space for competitive advantage by providing management with the analytical tools to guide decisions about products, processes, customers, and transactions. Hoang et al. (2020) is of the view that, to achieve the objective strategy, companies, institutions, and organizations should adopt scheme of work in other to reduce and eliminate costs such as; cost leadership, differentiation, and focus. Steiss (2003) also attest that to sustain the reputation

and the competitive advantage, there is a need for the company or institution to acquire either cost leadership or a differentiation strategy.

Notwithstanding, according to (Dirisu, Iyiola, & Ibidunni, 2013) several factors result in low competitive advantages in most manufacturing firms such as; high-quality costs, lower product quality, and long customer leading time, as well as manufacturing cycle time. To counteract the problem with low competitiveness at the global level, there is a need to adopt the ABC model to promote more competencies. Popesko (2013) state that, the production of low or poor-quality products can be tracked with the help of the ABC model. Inferior product is an indication that the costs of a certain characteristic of processes must be eliminated, by adopting the ABC model. According to (Hayward & Ncayiyana, 2011) the opportunities with the greatest potential for improving quality, reducing cost, and also efficiency and effectiveness of major activities or processes, could be used as the standard for continuous improvement in an organization.

Ittner et al. (2002) confirmed that, ABC implementation would result in the improvement of quality products and a reduction in manufacturing cycle time. Similar results were found by (Woodruff, 1997; Popesko 2009; Steiss, 2003). However, there was no significant difference between the cost of reduction and ABC implementation.

Importance of ABC in manufacturing organizations

Cokins (1998) explained that ABC is imperative, as most of the manufacturing firms are not aware of which activities comprise their output or how each activity's cost is consumed. However, due to the technological transformation in production environments, long-established cost accounting is

frequently disappearing. Gursest (1999) found that in today's world, manufacturing companies are changing and becoming more information-intensive, highly flexible, and immediately responsive to customer expectations. Gosselin (2002) confirmed that in the 1990s, organizations have been challenged to change their costing practices more specifically to adopt new cost management innovations, such as ABC and the impact of these pressures seems to vary from one organization to another. According to (Gunasekaran, 1999) the adoption of ABC model will not only help to bridge the gaps in every unit of the institution but will also serves as an important tool in decision making, and the attainment of concrete and accurate information for the improvement of the organization. Cokins (1998) further explained that ABC system is a design which aimed at counteracting the problems associated with long-established cost management. Due to globalization, there is an increased in the demand for quality products.

This has heightened the competitiveness and complexity for market for goods and service. The adoption of the ABC model has been a useful tool to firms to produce high quality goods and services to meet the ever changing and complex consumer needs. Some of the advantage of the ABC model as a tool for supporting decision include:

- It also serves as a tool for manager to track the occurrence of cost and the factors that result in those cost.
- The implementation of the ABC model also serves as a tool for effective policy making on price improvement, product development, md marketing, and the provision of concrete and precised information.

- One of the imperatives of the ABC model is its ability to track the information of the weak product lines.
- The model also helps in the identification and correction of errors which might not be included in the budget but may have resulted in the expense.
- The ABC model also play a chiefly role in the company's markers in several ways; it leads to the estimation of cost which is important in pricing, it serves as a guide towards industrial marketers in attaining a specific and coincided adjustments of reduced cost and identify the sector of cost activities which need transformation in operation in other to ensure the satisfaction of the customers with better and quality goods and service.

According to Dirisu, Iyiola, and Ibidunni (2013) the ability of the ABC model to correctly attribute cost serves as a motivation and convincing tool of businesses to be globally competitive. This in turn, can promote the activity of organizing process, improving quality, and reducing costs, and also help the managing directors to conduct competitive bidding in a profitable way. ABC model also give a sense of directive which helps manager to make concrete and accurate decision toward the attainment of term goals which may be based on the consistency of the computation of the cost of products that have become very important in today's competitive world. According to Hoang et al. (2020) ABC system allows for the elimination of non-value-added activities or less efficient goods and services.

Difficulties associated with the implementation of ABC activities

The ABC systems are paramount as compared to the long-established or the traditional costing systems due to the fact that the traditional model produces inaccurate information (Ness & Cucuzza, 1995). The major shortcoming of the traditional cost allocation model has to do with its inability to identify the cost drivers and activities. Notwithstanding, the merits of the ABC model, it also come with its problem which has to do with its complexity and may be difficult to implement and wrong application may lead to the misrepresentation of information. In every cost allocation activities, there is always some portion of the expense in the traditional undifferentiated overhead model which may be difficult to be identified by both the ABC and the traditional cost allocation and therefore, the identification of the appropriate cost allocation method, as it was confirmed that ABC model is a long term plan to reduce cost (Geri & Ronen, 2005). However, it has been established that the ABC model has the ability to track the resource involved in the manufacturing of products (Dirisn el al., 2013). For the ABC model to work well and give accurate results, it should operate with the basis that all of the costs are variable which changes according to the output level. Notwithstanding, as a company, there are other costs that are incurs whether there is production or not which is classified as fixed cost. Labour cost, rent, and equipment, and maintenance of equipment cost and other depreciation are some examples of fixed cost to the company (Herger & Morris, 1989).

Roztoclci and Lascola (1999) asserted that notwithstanding the merits and the importance of ABC's model to the companies that implemented it, its implementation lacks the capacity to track both capital cost and investment risk,

and other factors such as cash flow activities due to the non-consideration of balance sheets and not taking the sum cost of product into consideration. Finally, Haywarc and Ncayiyana (2011) ABC is the perfect cure for the problem of overhead allocation within organizations and the assigning of the cost associated with the activity directly to the pricing of the output of that activity, rather than averaging the cost across all outputs; there are some cases where firms that produce only one product might not see ABC as simply necessary. With that being the case, traditional costing is a more appropriate and simpler approach to overhead allocation."

Chapter Summary

The section reviewed the ABC practices in manufacturing organizations. The researcher focued on identifying the major acticities and cost objects within the ABC model. The empirical review was done in relation to ABC and organization performance, importance of ABC in manufacturing organizations and difficulties associated with the implementation of ABC activities.

CHAPTER THREE

RESEARCH METHODS

Introduction

The study sought to find out the activity-based costing practices of some some selected food manufacturing firms in Sekondi-Takoradi. The research method describes the methods used for the study. It describes the research design, population, sample and sampling procedure. It dealt with the instruments for data collection and subsequent administration of instruments. It also describes how the data will be gathered and analysed.

Research Design

According to Gomm (2008) the procedure or a plan that guides the researcher in answering questions with regards to the research is termed as research design. The researcher adopted a descriptive approach and also made use of primary data for the study which could bring to light the issues of activity-based costing in the area concerning the selected food manufacturing firms. The study used the descriptive survey to give a snapshot and describe the ABC practices in selected food manufacturing firms in the area. This approach was chosen to ascertain the ABC practices as it pertained to the firms in the metropolises being studied. Because of the expected diverse intellectual and professional background of the respondents, the researcher assisted respondents to appropriately respond to questions raised in the questionnaires as well as follow-up questions to obtain a concrete understanding of the situation. With the descriptive design, the respondents can be examined in a completely natural and unchanged environment where the tendencies for the researcher to influence the outcome of the study are substantially minimized (Klassen et al., 2016).

According to (Klassen et al., 2016) descriptive research designs help to gather information about the present and existing condition of a research parameter.

Study Area

According to Adjei (2012) Sekondi-Takoradi Metropolitan are located in the south-eastern part of the western region of Ghana, with Sekondi-Takoradi as the administrative capital of the metropolises. The metropolis is located on the coast of Ghana with a distance of about 200km from Ghana's capital, Accra. Although one of the smallest, it is the most highly developed among the districts in the western region. With a total land area of 49.78km2, the metropolises are considered the third-largest in Ghana after Accra and Kumasi (Danso & Addo, 2017). According to 2010 Ghana statistical service, the population of the metropolises was 559,548 which represented 23.5% of the region's population. According to the census report, 63.9% of the population aged 15years and older are economically active engaged in mainly agriculture, forestry, and fishery work. A minority of about 8% are engaged in sales and services whiles 5% as managers, professionals, and technicians.

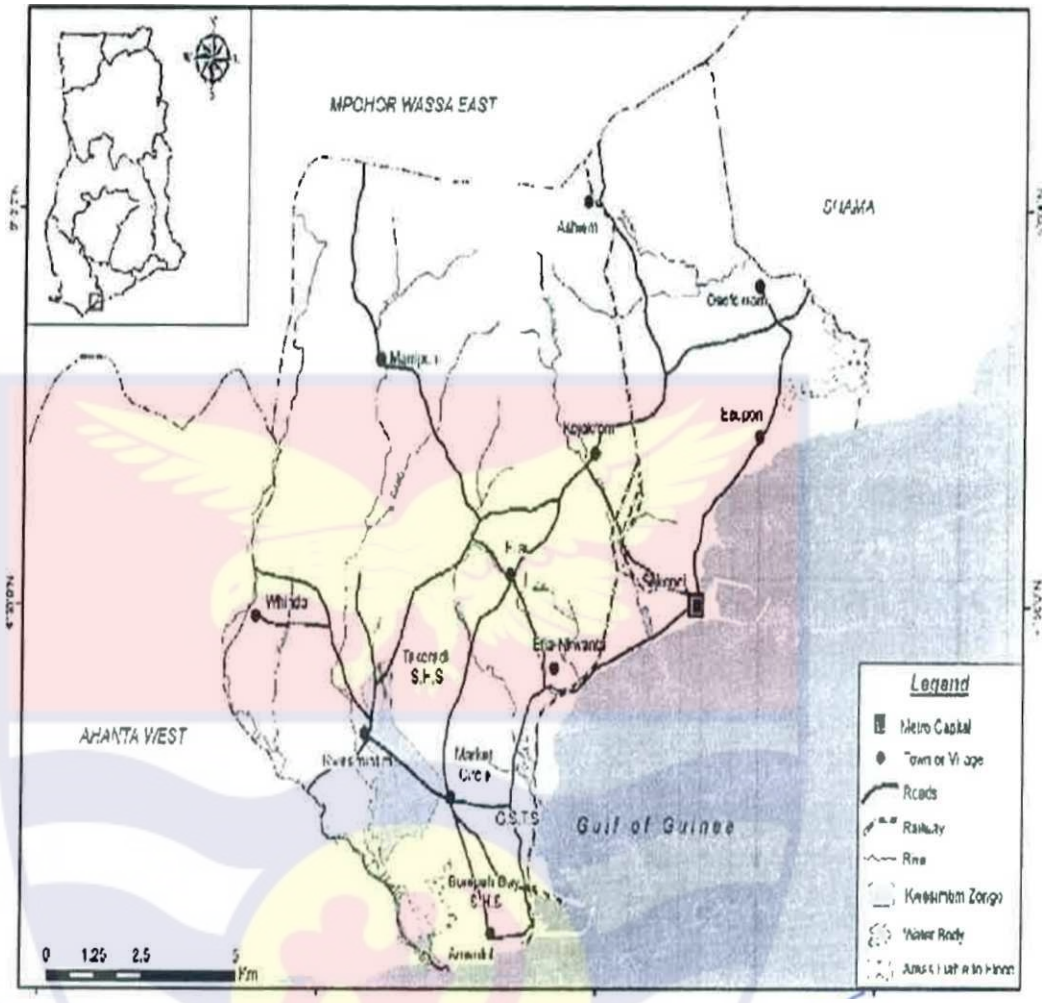

Figure 1: The Sekondi-Takoradi Metropolitan Area
Source: GIS and Catography Unit of University of Cape Coast (2017)

Population

The targeted population of the study was one hundred and twenty (120) workers as captured in the National Board for Small Scale Industries (2017), comprising of finance directors, chief financial officers, and cost and management accountants of all food manufacturing firms registered in Sekondi-Takoradi between the periods 2010-2017. Inquiries made by the researcher at the metropolitan assembly's section for monitoring small businesses revealed that there were about a total of 20 such food manufacturing companies in the Secondi-Takoradi metropolises.

Sampling and sampling procedure

The sample for the population was determined using the Sample Size Determination Formula below.

Z2 * (p) * u-p)

C2

“Where:

Z = Z value (1.96 for 95% confidence level) p = percentage picking a choice, expressed as decimal

(.5 used for sample size needed)

c = confidence interval,"

With a population of 120, and a confidence level of 95% and the appropriate sample to be used for the research was 96.

Sampling techniques

Purposive sampling techniques were adopted for the study. The purposive sampling approach was adopted for the selection of the organizations and convenience sampling was for the selection of respondents. Purposive sampling was used to reach respondents with the appropriate knowledge of the costing processes of the organization so that appropriate insight could be obtained in assessing the use of the costing processes in the organizations being studied.

The purposive sampling method is explained as the sampling method where the researcher selects the sample as a result of the qualities that the sample possesses. (Tongco (2007) explains that, when carrying out research involving human beings, there is always the need to use informants in the processes. According to the researcher, purposive sampling represents a practical and

efficient toll which when used properly, can be as effective and efficient as random sampling.

Source of data

The major source of data employed for the research was the primary source of data which was made up of the questionnaires administered to the target group of the selected firms in Secondi-Takoradi. The other sources included books, internet searches, articles, data from Registrar General Department, and journals among others.

Data Collection Instrument

The study made extensive use of primary data in the process. Data for the research was collected through the use of questionnaires. The researcher designed and distributed questionnaires among respondents across all the organization's understudy. This was done to solicit information from the appropriate respondents on the subject matter under consideration. Both closed-ended and opened ended questionnaires were used with the expectation that with the intellectual background of the targeted respondents, they will be in a good position to analyze and provide the most appropriate responses to the various questions raised. The questionnaires were designed based on the objectives of the research to tap deep into the actual processes and use of activity-based costing processes in the manufacturing companies considered.

The research instrument, per the researcher's analysis, was the most appropriate to collect the right data required to obtain first-hand data about the situation of the adoption and use of activity-based costing in manufacturing organizations established or operating in the Sekondi-Takoradi metropolises. The instrument was carefully designed to be able to collect data relating to

demography, the use of activity-based costing in the organization, motivation for the adoption and use of activity-based costing, benefits derived from the use of this method of costing, as well as challenges associated to the use of this approach to the organization.

Data Collection Procedure

An introductory letter was obtained from the researchers' department. The letter spelled out the purpose of the instrument, the need for individual participation, anonymity as well as the confidentiality of respondents' responses. After establishing the necessary contact with the management of the selected firms in Sekondi-Takoradi, permission was granted for the administration of the instrument. The presence of the researcher was necessary as it enabled the establishment of rapport between the researcher and the respondents, which facilitated a complete understanding of the questionnaire by explaining areas respondents did not understand. The questionnaires were completed and given back to the researcher on the same day. The questionnaire was administered from 12:30 pm to 2:30 pm for two weeks. This time was favorable since it was the break time for workers for most of the workers (finance directors, chief financial officers, and Cost and Management Accountants) which permitted the researcher to administer the instrument to the workers without interference with their busy schedule."

Validity of instrument

In ensuring the validity of the instrument, the instrument was designed to address the objectives of the research using the research questions of the study. To ensure the effectiveness and the usefulness of the questions, the questionnaires were given to the researcher's supervisor, who made a lot of input

with regards to ambiguity and the relevance of the questions to meet the research objectives.

Data Processing and Analysis

According to Hatch (2002) data analysis is about interpreting the results obtained from the field and the means of presenting your findings for communication to the general public and to see patterns, identify themes, discover relationships, develop explanations, make interpretations, mount critiques, or generate theories that involve synthesis, evaluation, interpretation, categorization, hypothesizing comparison, and pattern finding. Since the research was mainly descriptive, SPSS version 21.0 was used to analyze using descriptive statistics including; frequency, and percentages. The data was coded in line with the designed questionnaires, edited, and then inputted into the software for analysis of commonalities and viewpoints.

The researcher assigned numerical codes to the responses or variables in your questionnaire. This step ensures that the data can be easily analyzed using statistical software. Also, the researcher reviewed the collected data for any errors or inconsistencies and made necessary corrections. Data cleaning and editing helped to ensure the accuracy and reliability of the analysis. After the editing process, the researcher entered the cleaned data into the SPSS software. The researcher used this software to compute descriptive statistics, such as frequencies and percentages. These statistics provided a summary of the data and described the distribution of values for each variable.

In terms of frequency and percentages, this analysis counts the number of occurrences of each response or category within a variable. It helps identify the most common responses or categories. In addition to frequencies, the

researcher computed percentages to express the distribution of responses or categories relative to the total sample size. The percentages provided a clearer understanding of the relative importance of different categories. Results of the analysis have been presented in tables and charts and figures.

Chapter Summary

The chapter looked at the approaches adopted by the researcher to gather data from the field for the study. It gave a brief profile of the Sekondi-Takoradi metropolises. The population for the study was 120 managerial staff of twenty (20) food manufacturing organizations in Sekondi-Takoradi. The sample size of 96 from the population was determined using the sample size determination formulae. Data for the study was collected using open and closed-ended questionnaires and analyzed with the aid of the SPSS software package (version 21).

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents the data collected and the detailed analysis of information gathered during the study as well as in-depth interpretation of presented data. The discussion in this section focuses on the use of ABC, factors that motivated the selected manufacturing firms to implement the ABC system, benefits associated with ABC in the selected manufacturing firms in Sekondi-Takoradi as well as challenges associated with ABC in the selected manufacturing firms in Sekondi-Takoradi.

The Use of ABC in the Organisation

Objective one sought to examine some basic uses of ABC activities in the various manufacturing companies. Data were gathered on how they identify, define, and classify activities; trace overhead to activities, assign a cost to some activities among others and presented in Tables 2 to 8 respectively

Table 1: Identification of cost items, the definition of cost items, and classify activities

Response	Frequency	Percentage
Yes	68	85
No	12	15
Total	80	100

Source: Fieldwork (2021)

From Table 1, 68 out of 80 respondents representing 85 percent responded to the affirmative that they follow the costing processes that are required for ABC. That is, they identify cost items, define costing items, and

classify cost elements based on various activities. Another 12 out of the 80 respondents representing 15 percent responded No. From the data, it can be inferred that most food manufacturing firms identify, define, and classy activities as part of their food manufacturing processes respondents in their cause of their operations. This corroborates with findings of (Steiss, 2003) who stated that the first stage in the implementation of the ABC model is the definition of activities.

Table 2: Assign the cost of resources to activities

Response	Frequency	Percentage
Yes	64	80
No	16	20
Total	80	100

Source: Fieldwork (2021)

Table 2 indicates that 64 out of 80 respondents representing 80 percent of the respondents agreed through their response of 'YES' showing that, firms assign the cost of resources to manufacturing activities, whiles 16 respondents representing 20 percent said 'NO'. This indicates that the majority of food manufacturing firms assigned the cost of resources to manufacturing activities in the metropolises. This supports the finding of Popesko (2010b) who indicated the main importance of the resource cost drivers is to facilitate the assigning of costs to a specific activity at the point of book entries by the application of the following resource cost drivers; the allocation of the cost of person to the activities were classified as personnel workload.

Table 3: Trace overhead costs to activities

Response	Frequency	Percentage
Yes	68	70
No	12	30
Total	80	100

Source: Fieldwork (2021)

Considering Table 3, food manufacturing firms mostly trace overhead costs to their activities. This is evident from Table 3 that 68 out of 80 respondents representing 85 percent responded yes to the question posed. On the contrary, however, 12 respondents representing 15% of the total respondents were negative about this. Hence, it can be inferred that most food manufacturing firms in Sekondi-Takoradi traced their overhead costs to their manufacturing activities. This finding is consistent with Popesko's study in 2010 which indicated that manufacturing firms have adopted concepts such as ABC which will result in wastage in the distribution of products that elevate the income and for highly competitive purposes.

Table 4: Trace overhead costs to cost objects

Response	Frequency	Percentage
Yes	56	70
No	24	30
Total	80	100

Source: Fieldwork (2021)

Table 4 above, 56 (70%) of the respondents agreed by responding 'Yes', attesting to the tracing of overhead costs to cost objects as \h part of their manufacturing activities, whiles 24 out of 80 respondents were with the opposite

view 'No' to this notion. Based on this, it can be concluded that food manufacturing firms traced overhead costs to cost objects.

Table 5: Calculate primary activity rates of individual activities

Response	Frequency	Percentage
Yes	60	75
No	20	25
Total	80	100

Source: Fieldwork (2021)

Table 5 is on how firms calculate the activity rates of their activities. From the Table, 60 respondents of the food manufacturing firms representing 75 percent responded that 'Yes', they calculate primary activity rate of the individual activities, whiles 20 (25%) of the respondents had a divergent view; they responded 'No'. From the analysis, it was evident that food manufacturing firms as part of their processes calculate the primary activity rates of individual activities.

Table 6: Assign the cost of secondary activities to primary activities

Response	Frequency	Percentage
Yes	24	30
No	56	70
Total	80	100

Source: Fieldwork (2021)

Table 6 aimed at ascertaining if the firms assign the cost of SA activities to PA. The table shows that 24 (30%) of the respondents responded that 'Yes' they assign the cost of SA to PA, whiles 56 respondents representing 70 percent indicated that, they do not assign such costs to primary activities. Based on the

responses, it is indicative that food manufacturing firms do not assign the costs of SA to PA when determining cost.

Table 7: Assign activity costs to cost objects

Response	Frequency	Percentage
Yes	56	70
No	24	30
Total	80	100

Source: Fieldwork (2021)

Tables 7 was to find out if the manufacturing firms assign costs to cost objects as part of the organization's costing processes. From the Table, 56 (70%) of the respondents which is the greater majority of the respondents, responded 'Yes' to this process. 24 respondents representing 30% of the respondents answered 'No' to this process. The responses depict that the food manufacturing firms assign activity costs to cost objects as part of their costing processes.

Concerning the first objective of whether food manufacturing firms in Sekondi-Takoradi use ABC as a cost analysis tool (table 1 to 7), it was realized that most food manufacturing firms in Sekondi-Takoradi use ABC as a cost analysis tool in the cause of producing their goods and services. This was determined by the response given by respondents which showed that the firms trace overhead costs to cost objects, assign a cost to activities performed in the production process, and also calculate the primary activity rates of individual activities. These being part of processes in ABC implementation, it showed that firms used ABC as a cost analysis tool. This is evident in Tables 2 to 6 where for example, over 55 percent of the respondents assigned the cost of resources to activities. Therefore, firms are now adopting the ABC practices to provide

accurate information on product cost among others. Also, manufacturing firms have adopted concepts such as ABC which will result in wastage in the distribution of products that elevate the income and for highly competitive purposes (Popesko, 2010).

Factors that motivate the Implementation of ABC

The researcher helps the opinion that, without any incentives or motivational factors, it may not be easy to implement ABC on a silver platter, therefore, this objective sought to examine some of the factors that motivate employees and management to implement these practices. Data were gathered and the results are presented in Table 9 to 15 subsequently.

Table 8: ABC implementation increases the organization's profitability, significantly

Response	Frequency	Percentage
Yes	72	90
No	8	10
Total	80	100

Source: Fieldwork (2021)

Table 8 sought to find out if the implementation of ABC processes could affect the profitability of the firms. From Table 9, the food manufacturing firms have it that their ABC implementation increases the organization's profitability significantly with 72 out of 80 respondents representing 90 percent responding 'Yes' to this assertion. On the other hand, 8 respondents representing 10% of the total respondents disagreed by responding 'No' to this assertion. Therefore, ABC tends to increase the firm's profitability significantly; they were motivated to implement it.

Table 9: ABC is a valuable overhead cost allocation system to identify the real cost of product or service

Response	Frequency	Percentage
Yes	66	85
No	14	15
Total	80	100

Source: Fieldwork (2021)

From Table 9 that, 66 (85%) the respondents agree that ABC is a valuable overhead cost allocation system to identify the real cost of a product, whiles 12 respondents representing 15% of the total respondents disagreed. This is evident in the response pattern where 85% of the respondents responded 'Yes', whiles 15% responded 'No' This shows that firms are likely the implement ABC since it is a valuable overhead cost allocation system that can be used to identify the real cost of a product or service.

Table 10: ABC helps in the classification of cost based on production Activities

Response	Frequency	Percentage
Yes	68	85
No	12	15
Total	80	100

Source: Fieldwork (2021)

From the survey, Table 10, it was made evident that most respondents felt that ABC helps in the classification of cost based on production activities. This was evident by 68 (85%) of the respondents who responded 'Yes' whiles 12 (15%) of the respondents responded 'No'. In conclusion, firms are motivated

to implement ABC because it helps them in the classification of costs based on production activities.

Table 11: ABC leads to proper cost identification

Response	Frequency	Percentage
Yes	64	80
No	16	20
Total	80	100

Source: Fieldwork (2021)

Table 11 above sought to verify if ABC assisted the manufacturing firms to do proper cost identification. From Table, a significant majority of the respondents (64, 80%) responded Yes' to the viewpoint to confirm that ABC leads to proper cost identification. The other, 16 (20%) of the respondents however had a contrary view.

From the data, it can be inferred that firms are motivated to implement ABC since it leads to proper cost identification in a food manufacturing firm's costing activity hence it motivates firms to implement it.

Table 12: Competitive strength in the and performance industry in terms of price, quality, and performance

Response	Frequency	Percentage
Yes	48	60
No	32	40
Total	80	100

Source: Fieldwork (2021)

The table above is a fallout in ascertaining the motivating factor to firms for the implementation of ABC. The table, therefore, was to identify if the implementation of ABC offered competitiveness in the company's strength

concerning performance, pricing, and quality. From Table 12 above, a total of 48 (60%) of the respondents responded 'Yes' to confirm that ABC creates a competitiveness in the company's strength concerning pricing, quality, and performance, whiles 32 (40%) responded 'No'. From the data, it can be inferred that ABC being able to create a competitive strength in the industry in terms of price, quality and performance motivates firms to implement it as per the majority responses, however, the minority 40% view is also too significant to be ignored.

From Table 8 to 12, it can be determined that some of the main factors that motivate manufacturing firms in Sekondi-Takoradi to implement ABC include the fact that over 55 percent stated that its implementation increases a firm's profitability marginally over some time. Also based on responses from Table 9, ABC implementation aids firms in the classification of cost based on production activities enabling firms to know what costs went into production at each stage and this was agreed by 70 percent of the respondents.

Table 13: ABC provides the right incentives for managers to make decisions that are consistent with top management goals

Response	Frequency	Percentage
Yes	56	70
No	24	30
Total	80	100

Source: Fieldwork (2021)

It is considered that, before a lower-level manager will implement a strategy, it must be consistent with the decision of the top-level management goals. Table 13, therefore, sought to ascertain if ABC provide a lot of incentive for management in decisions making that are consistent with top management

goals. From the Table, 56 (70%) of the respondents 'Yes' to the question to say that ABC provides a lot of incentives for management decisions making that are consistent with top management goals, whiles 24 of the respondents said 'No'. The responses show that the food manufacturing firms implement ABC because it can provide the right incentives for managers to make decisions that are consistent with top management goals.

Benefits associated with ABC

Benefits that accrue to manufacturing firms practicing ABC were also examined and the results are presented subsequently. Benefits focused on identifying major cost drivers, overhead cost allocation system, value for customers, financial return as well as customer quality service delivery.

Table 14: ABC has helped to identify major cost drivers for each of the Products

Response	Frequency	Percentage
Yes	64	80
No	16	20
Total	80	100

Source: Fieldwork (2021)

Considering Table 14, ABC as a costing tool has helped in the identification of major cost drivers for manufacturing firms. It is evident from Table 16 as 64 (80%) of the respondents responded 'Yes' to confirm the assertion, whiles 16 (20%) responded 'No' to communicate their divergent opinion. Hence, it can be inferred based on the responses that, it is beneficial to manufacturing firms by helping in the identification of major cost drivers.

Table 15: ABC has proven to be a valuable overhead cost system to identify the real cost of product or service

Response	Frequency	Percentage
Yes	64	80
No	16	20
Total	80	100

Source: Fieldwork (2021)

According to Table 15, only 72 respondents attested to the fact that ABC is beneficial when implemented. 8 of the respondents however responded 'No'. Based on this, it is evident that ABC has proven to be a valuable overhead cost allocation system to identify the real cost of product or service to the manufacturing firms in the metropolises.

Table 16: ABC has helped to create more value for customers through identifying major input, output, and process elements

Response	Frequency	Percentage
Yes	64	80
No	16	20
Total	80	100

Source: Fieldwork (2021)

Table 16 shows that there is a split in the decision as to whether ABC has helped to create more value for customers through identifying major input, output, and process elements. From the table, 50% of the respondents responded 'Yes' to this position whiles another 50% responded 'No'. Inferring from the responses in the table, it is evident that one way or the other ABC helps to create more value for customers through identifying major input, output, and process elements but may not be directly so.

Table 17: ABC implementation gives an organization better financial return in terms of long-term customer acceptability

Response	Frequency	Percentage
Yes	44	55
No	36	45
Total	80	100

Source: Fieldwork (2021)

Table 17 above just like Table 16, sought to verify if the ABC implementation gives the organization better financial returns in terms of long-term customer acceptability. From Table 18, 44 (55%) of the respondents indicated agreement to this assertion by responding 'Yes' whiles 36 (45%) disagreed and therefore responded 'No'. From the analysis, it can be observed that ABC implementation gives firms better financial returns in terms of long-term customer acceptability but just as was realized with the responses in Table 17, this may not be directly based on the significant 45% who answered 'No'

Table 18: ABC has helped us to deliver better quality products or services than before

Response	Frequency	Percentage
Yes	32	40
No	48	60
Total	80	100

Source: Fieldwork (2021)

Table 18 shows that 12 (15%) of the respondents strongly agree that ABC implementation has helped them deliver better quality products than before. Also, 20 (25%) of the respondents agree, 36 (45%) of the respondents were neutral and the other 12 respondents disagreed. This shows that ABC does

not affect the delivery of better-quality products than before. This is in lin with the outcome of Popesko (2013) who discovered that, the production of low or poor-quality products can be tracked with the help of the ABC model. This finding contradicts the results of (Ittner et al., 2002) who observed that, ABC implementation result in the improvement of quality products and a reduction in manufacturing cycle time. Similar results were found by (Woodruff, 1997; Steiss, 2003).

It can be deducted from the analysis of the third objective that ABC comes along with various benefits to its implementers in various ways. This is made evident in Table 13, by 64 out of 80 respondents representing 80 percent who responded that 'Yes' ABC helps them to identify major cost drivers in their process of production, enabling them to easily identify the causes of cost at each stage of production. Also, findings in Table 14, 48 out of 80 respondents representing 60 percent agreed by attesting to the fact that ABC has been beneficial since it has proven to be a valuable cost overhead cost allocation system which aids them to identify real costs of product or service.

Also, Table 15, spells out another benefit of ABC, which is that it helps firms to create more value for customers through identifying major input, output, and process elements. This is apparent with 56 out of 80 respondents representing 70 percent who responded 'Yes' to show that through the use of ABC, firms can monitor and minimize the cost of their products to create more value for their customers. Lastly from the findings in Table 18, despite the many benefits of ABC, it does not affect the delivery of better-quality products as compared to previous productions before its implementation. This is evident by

a split in the number of respondents who responded to the question. The response showed a 50% split between the 'Yes' views and the 'No' views.

Challenges associated with the implementation of ABC

Inquest to implement effective ABC practices, firms were deemed to be likely faced with some barriers or challenges. The study, therefore, gathered data on these challenges, and the results are presented in Tables 20, 21,22, 22, 24, and 25.

Table 19: ABC implementation is costly

Response	Frequency	Percentage
Yes	72	90
No	8	10
Total	80	100

Source: Fieldwork (2021)

From Table 19, it is evident that ABC implementation is costly. This can be seen with 72 out of 80 respondents representing 90 percent who agreed and therefore answered Yes' to confirm the assertion. Only 8 (10%) of the respondents disagreed and therefore answered 'No'. Therefore, it can be concluded based on the 'Yes' response rate that ABC implementation is costly.

Table 20: Poor implementation processes reduce

Response	Frequency	Percentage
Yes	72	90
No	8	10
Total	80	100

Source: Fieldwork (2021)

Table 20 sought to find out if the effectiveness of ABC could be hampered due to poor implementation processes. From the survey, it was made evident that poor implementation of ABC reduces its effectiveness. Seventy-two (72, 90%) of the respondents answered 'Yes' to this while Eight (8,10%) of the respondents answered 'No' to this. Poor implementation process reduces the effectiveness of Activity-Based Costing to the organization.

Table 21: Difficulty in designing the system

Response	Frequency	Percentage
Yes	60	75
No	20	25
Total	80	100

Source: Fieldwork (2021)

The table above aimed to obtain if firms faced difficulty in designing systems for ABC. From Table 21, it was observed that 60 (75%) of the respondents confirmed that it was difficult in designing systems for the implementation of ABC, but 20(25%) indicated 'No'. It can be concluded from the responses that as a challenge, Activity-Based Costing systems are difficult when designing it.

Table 22: Difficulty in identifying activities

Response	Frequency	Percentage
Yes	68	85
No	12	15
Total	80	100

Source: Fieldwork (2021)

As part of the challenges, the researcher sought to ascertain if there were challenges in identifying activities in ABC. From Table 22, 68 (85%) of the respondents agreed by responding Yes' that with the use of ABC, it is difficult in identifying activities. 12 (15%) of the respondents answered 'No', from the data, it can be inferred therefore that, with the implementation of ABC, it is difficult to identify activities.

Table 23: Difficulty in gathering data on cost-drivers

Response	Frequency	Percentage
Yes	68	85
No	12	15
Total	80	100

Source: Fieldwork (2021)

Considering Table 23, it is evident that ABC users find it difficult when gathering data on cost drivers. This is seen by 68 (85%) of the respondents who answered Yes' to confirm the assertion whiles 12(15%) of the respondents answered 'No'. Hence, it can be inferred that firms find it difficult in gathering data on cost-drivers with the implementation of ABC.

Table 24: Lack of commitment and cooperation among departments

Response	Frequency	Percentage
Yes	28	35
No	52	65
Total	80	100

Source: Fieldwork (2021)

It can be deduced from Table 24 that, 28 out of 80 respondents representing 35 percent communicated Yes' to show that there was a dull

commitment towards the implementation of ABC whiles the majority 52(65%) responded 'No' to communicate that such challenges did not find itself in the organization. From the analysis, it was evident that the lack of commitment and cooperation among departments was not a challenge the firm faced in implementing ABC.

The last objective is the challenges associated with the implementation. As realized from the survey, ABC does not just come along with benefits, but there are some challenges associated with it as well. Some of these are the costly nature of its implementation which was represented by over 60 percent of respondents in Table 21, and also 90 percent of respondents stating that poor implementation processes reduce the effectiveness of the tool thus making it difficult also in identifying activities, and also gathering data on cost- drivers.

These findings are similar to the views of (Roztocki, 2000) who found that despite ABC's advantages in its implementation. "It still fails to account for capital costs, investment risk, and cash flow factors due to the non-consideration of balance sheets. (Roztocki, 2000) made it known that although it outperforms traditional methods in terms of reliability and efficiency, it still disregards capital costs. Moreover, ABC could fail due to a poor implementation process. The most common problem reported was the difficulty in identifying the cost drivers. ABC is highly complex and may be difficult for firms to implement with accuracy; for some costs, such as upper management compensation" (Geri & Ronen, 2005).

Table 25: Will you recommend it to any organization?

Response	Frequency	Percentage
Yes	76	95
No	4	5
Total	80	100

Source: Fieldwork (2021)

Table 25 sought to obtain the opinion of respondents on whether they will seek to recommend the use of this costing method to any other person or organization. Based on the response patterns, 76 out of the 80 respondents representing 95% responded Yes' to communicate their readiness to recommend the use of this method to other firms or persons, while 4 representing 5% said 'No'. From the responses, it was observed that the adoption of ABC is more likely to recommend its use to other firms and users.

Table 26: Will you recommend to management continue using ABC?

Response	Frequency	Percentage
Yes	76	95
No	4	5
Total	80	100

Source: Fieldwork (2021)

Finally, Table 26 sought to obtain the opinion of respondents on whether they will seek to recommend the management of their organizations to continue to use this costing method in their organizations. Based on the response patterns, 76 out of the 80 respondents representing 95% responded

'Yes' to communicate their readiness to recommend the continuous use of the method in their firms, whiles 4 representing 5% said 'No'. From the responses,

it was observed that the adoption of ABC was more likely to recommend the continuous use of this method of costing to their top management.

Chapter Summary

The study showed that some manufacturing firms in Sekondi-Takoradi are ABC as a cost analysis tool in the cause of producing goods and services. The study also revealed that some factors that motivate these firms to implement ABC include ABC implementation increases the organization's profitability and leads to proper cost identification. Again, it was confirmed that the adoption of ABC is not restricted to developed nations.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This is the final chapter of the study. It presents a summary of the research process and the findings on the ABC practices in selected food production firms in Sekondi-Takoradi. Based on the main findings, conclusions are drawn to enable appropriate recommendations to be made as well as suggestions for further research. The summary is divided into two sections. The first segment summarises the research process and the second section summarises the key findings of the study.

Summary of the Study

The main purpose of the study was to find out the ABC practices in selected food production firms in Sekondi-Takoradi. Specifically, the study sought to; identify the manufacturing firms in Sekondi-Takoradi that use the ABC model; ascertain the factors that motivated the selected manufacturing firms to implement the ABC model; determine the benefits associated with ABC in the selected manufacturing firms in Sekondi-Takoradi; determine the challenges associated with ABC in the selected manufacturing firms in Sekondi-Takoradi.

The study used a descriptive survey design of the quantitative approach. A stratified sampling technique was used to select 80 respondents from manufacturing companies in Sekondi-Takoradi. Questionnaires were the main data collection instrument administered and analyzed using Statistical Product for Service Solution (SPSS version 21.0) which was presented in tables as

percentages and frequencies. The following research questions and hypothesis guided the study:

1. What are the uses ABC among food manufacturing firms in Sekondi-Takoradi?
2. What factors or reasons motivated the selected production firms to implement ABC systems?
3. What arc the challenges associated with ABC in production firms in Sekondi-Takoradi?
4. What are the benefits associated with ABC in production firms in Sekondi-Takoradi?

The study employed the descriptive cross-sectional survey design using a questionnaire as the only instrument to collect the relevant data in addressing the research questions formulated. Purposive sampling techniques were adopted for the study.

Summary of Key Findings

From objective one, it was comprehended that some manufacturing firms in Sekondi-Takoradi use ABC as a cost analysis tool in the cause of producing goods and services. This was determined by the responses given by respondents indicating that they use to:

- identification of cost items, the definition of cost items, and classification activities
- assign the cost of resources to activities
- Trace overhead costs to activities
- assign activity costs to cost objects
- Trace overhead costs to cost objects

The second objective also revealed some of the factors that motivate these firms to implement ABC as follows:

- ABC implementation increases the organization's profitability, significantly
- ABC is a valuable overhead cost allocation system to identify the real cost of a product or service.
- ABC helps in the classification of costs based on production activities
- ABC leads to proper cost identification

From the third objective, the findings indicated that the following are challenges associated with the implementation of ABC:

- It is costly
- Poor implementation processes reduce the effectiveness of ABC
- Difficulty in designing system
- Difficulty in identifying activities
- Difficulty in gathering data on cost-drivers

The last objective indicated that the following benefits are obtained from the use of ABC by food manufacturing firms at Sekond-Takoradi:

- ABC has helped to identify major cost drivers for each of the products
- ABC has proven to be a valuable overhead cost system to identify the real cost of a product or service
- ABC has helped to create more value for customers by identifying major input, output, and process elements

- ABC implementation gives an organization better financial return in terms of long-term customer acceptability
- ABC has helped us to deliver better quality products or services than before

Conclusions

It is confirmed that the adoption of ABC is not restricted to developed nations. In Sekondi-Takoradi, a small percentage of food manufacturing firms have started implementing ABC which is not surprising for several reasons. First, to compete with the highly quality demanded world, firms in the globalized world are pressured or persuaded to adopt the latest managerial philosophies and ABC models which may not be an exception. Second, the advancement in information technology made it easier for new accounting methods and techniques to be transferred from developed to developing nations.

Also, the dominance of foreign managers and accountants in some firms based in Sekondi-Takoradi. The importance of ABC as well as its benefits is that it provides insight into cost causation which helps in cost reduction and control. The provision of more accurate information for pricing decisions, product profitability analysis, and inventory valuation and income determination were also suggested as important. The study found the identification of activities by the ABC model was challenging.

Recommendations

i. Promote ABC awareness and training: Selected firms should focus on promoting awareness and providing training on the benefits and implementation of ABC. This recommendation includes educating key stakeholders, such as management, finance teams, and employees, about the

potential profitability improvements, accurate cost allocation, and proper cost identification that can be achieved through ABC.

ii. Conduct regular ABC reviews and updates: Selected firms need to conduct regular reviews and updates of their ABC system to keep it aligned with changing business dynamics. This involves reassessing cost drivers, activities, and resource consumption patterns to ensure accurate cost allocation and classification. By regularly reviewing and updating the ABC system, organizations can adapt to evolving business needs, identify new cost drivers, and refine the cost identification process, leading to more reliable and insightful cost information.

iii. Conduct a thorough cost-benefit analysis: Before embarking on the implementation of ABC, the firms must conduct a comprehensive cost-benefit analysis. This analysis should evaluate the potential costs involved in implementing ABC, such as software, training, and data collection, against the expected benefits, such as improved cost accuracy and decision-making. By quantifying the costs and benefits, organizations can make informed decisions regarding the feasibility and financial viability of ABC implementation.

iv. Building on the benefits of ABC in identifying major cost drivers and creating value for customers, selected food manufacturing firms should focus on optimizing these cost drivers and value-added activities. By understanding the significant cost drivers for each product, organizations can prioritize efforts to reduce costs in those areas through process improvements, supplier negotiations, or resource optimization.

v. To capitalize on the financial returns and improved product/service quality resulting from ABC implementation, selected food manufacturing firms should establish performance metrics and regularly monitor and measure them. This includes metrics related to cost reduction, customer acceptability, and product/service quality.

Suggestions for Further Research

This current study examined the activity-based costing practices in selected food manufacturing firms in Sekondi-Takoradi Matropolis.

1. The study could be replicated in other regions in the country to find out what persists there.
2. Finally, quantitative instruments were the only instruments used for the study. Also, the questionnaire gave very little room for respondents to share their independent opinions. Future studies can adopt the interview guide in order for respondents to get more room to express their opinions

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APPENDICES

APPENDIX A

QUESTIONNAIRE FOR ABC IN SELECTED FOOD MANUFACTURING FIRMS IN KOFORIDUA

This questionnaire is designed to elicit information on the study Activity-Based Costing Practices in Selected Food Manufacturing Firms in Sekondi-Takoradi. This academic project work is a requirement for awarding a Master in Business Administration (MBA Accounting Option). Any information about this research given would be treated with all confidentiality. Where multiple-choice or alternatives are given, please tick [V] as appropriate: **SECTION A: Demography**

Direction: Please tick [V] responses as appropriate.

SECTION A: Personal Data

1. Position Held in Organization:

Financial Director [ ] Accountant [ ] Cost & Management Accountant [ ] If other specify

2. For several years you have worked in this organization.

1 - 3 years [ ] 3-6 years [ ] 6- 9 years [ ] 9-11 years [ ] 11 years and above [ ]

SECTION B: The use of ABC in the organization

In your opinion, the company uses ABC as a cost allocation tool on the following grounds

3. Which of the following activities do you consider as the reason why your company uses ABC? Please tick as many as apply.

a. Identify, define, and classify activities [ ]

b. Assign the cost of resources to activities [ ]

c. Trace overhead costs to activities [ ]

d. Trace overhead costs to cost objects [ ]

e. Calculate primary activity rates of individual activities [ ]

f. Assign the costs of secondary activities to primary activities [ ]

g. Assign activity costs to cost objects [ ]

h. Other, Specify:

4. Which of the following factors will you consider as the motivation for your firm's implementation of ABC? Please tick as many as apply.

a. ABC implementation increases the organization's profitability [ ]

b. ABC helps identify the real cost of a product or service [ ]

c. ABC helps in the classification of cost based on production activities []

d. ABC leads to proper cost identification [ ]

e. ABC gives competitive strength in the industry in terms of price, quality and performance [ ]

f. ABC provides the right incentives for managers to make decisions that are consistent with top management goals [ ]

g. Other, Specify:

5. What will consider as the benefit that your organization has enjoyed from the implementation of ABC? Please tick as many as apply.

a. ABC has helped to identify major cost drivers for each of the products [ ]

a. ABC has proven to be a valuable overhead cost allocation system to identify the real cost of a product or service [ ]

b. ABC has helped to create more value for customers through identifying major input, output, and process elements [ ]

c. ABC implementation gives an organization better financial return in terms of long-term customer acceptability [ ]

d. ABC has helped us to deliver a better quality product or service than before [ ]

e. Other, Specify:

6. Which of the following will consider as challenges your firm has faced in the implementation of ABC? Please tick as many as apply.

a. Activity-Based Costing implementation is costly [ ]

b. Poor implementation processes reduce the effectiveness of ABC[ ]

c. Difficulty in the designing system]

d. Difficulty in identifying activities [ ]

e. Difficulty in gathering data on cost- drivers [ ]

f. Lack of commitment and cooperation among departments [ ]

g. Other, Specify:

7. Based on your experience with using ABC, will you recommend it to any organization?

a. Yes [ ]

b. No [ ]

8. Based on your experience will you recommend to management to continue using ABC in your organization?

a. Yes [ ]

b. No [ ]