

## AN EVALUATION OF COSTING SYSTEMS TO PROMOTE SUSTAINABLE FINANCIAL GROWTH WITHIN SMALL-MEDIUM ENTERPRISES

Küçük-Orta Ölçekli İşletmelerde Sürdürülebilir Finansal Büyümeji Teşvik Etmek için Maliyetleme Sistemlerinin Değerlendirilmesi

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# An Evaluation of Costing Systems to Promote Sustainable Financial Growth within Small-Medium Enterprises

## Abstract

This research evaluates the effectiveness of the traditional and activity-based (ABC) Costing systems in promoting sustainable financial growth in UK-based small-medium enterprises (SMEs). Specifically, it aims to understand the differences between traditional costing and ABC systems and their impact on organizational competency and financial growth. A mixed-method approach, including qualitative and quantitative data analysis, was employed. The study concludes that ABC is the most effective costing system for promoting sustainable financial growth in SMEs. Traditional costing leads to inaccurate data and hindered management competency. ABC eliminates cost distortion, aids decision-making, and encourages long-term development. Additionally, the availability of a wider range of products/services positively impacts financial growth. While the initial implementation of ABC may be costly, it offers long-term benefits, including improved organizational competency and profitability.

**Keywords:** Traditional Costing, Activity-Based Costing, Management Accounting, Sustainable Financial Growth, SMEs

## Özet

Bu araştırma, Birleşik Krallık merkezli küçük-orta ölçekli işletmelerde (KOBİ) sürdürülebilir finansal büyümeyi teşvik etmede geleneksel ve faaliyete dayalı (ABC) Maliyetlendirme sistemlerinin etkinliğini değerlendirmektedir. Özellikle, geleneksel maliyetlendirme ve ABC sistemleri arasındaki farkları ve bunların organizasyonel yetkinlik ve finansal büyüme üzerindeki etkilerini anlamayı amaçlamaktadır. Nitel ve nicel veri analizini içeren karma yöntemli bir yaklaşım kullanılmıştır. Çalışma, ABC'nin KOBİ'lerde sürdürülebilir finansal büyümeyi teşvik etmek için en etkili maliyetleme sistemi olduğu sonucuna varmıştır. Geleneksel maliyetlendirme, yanlış verilere yol açar ve yönetim yetkinliğinin engellenmesine neden olur. ABC, maliyet bozulmasını ortadan kaldırır, karar vermeye yardımcı olur ve uzun vadeli gelişimi teşvik eder. Ek olarak, daha geniş bir ürün/hizmet yelpazesinin mevcudiyeti finansal büyümeyi olumlu yönde etkiler. ABC'nin ilk uygulaması maliyetli olsa da, gelişmiş organizasyonel yetkinlik ve karlılık dahil olmak üzere uzun vadeli faydalar sunar.

**Anahtar Kelimeler:** Geleneksel Maliyetleme, Faaliyet Tabanlı Maliyetleme, Yönetim Muhasebesi, Sürdürülebilir Finansal Büyüme, KOBİ'ler

**JEL Codes:** M40, M41, M49

## **Introduction**

The most often used costing systems in organisations are traditional costing and activity-based costing (ABC) systems. Traditional costing involves including direct materials, direct labor costs, and fixed and variable factory overhead costs as part of product costs (Huang, 2018, 55-66). This approach utilizes fewer cost pools compared to the activity-based costing (ABC) system, which identifies and collects costs based on the nature of various activities within an organization (Shil and Pramanik, 2013, 170-182). ABC provides a more detailed analysis of the costs incurred by an organization. Generally, the main aim of these two costing systems is to allocate the indirect cost to cost objectives (Chiang, 2013, 85-96). The traditional costing and ABC systems differ in their approach to allocating manufacturing and non-manufacturing overhead costs, as well as assigning direct costs to products (Huang, 2018, 55-66).

Every firm needs to examine its costing methods in order to adapt to the changing business environment, which includes technological improvements, escalating competition, and the availability of information in the market (Nassar et al., 2009, 229-263). It is supported by Almeida and Cunha (2017, 932-939) indicating that organizations must also be clearly productive and cut production costs to maintain a competitive edge due to saturated markets and the accompanying high levels of competition. In light of this, they might benefit from selecting the best costing system. This is particularly beneficial because it promotes sustainable growth by assuring the achievement of an aligned organizational purpose through supporting decision-making, determining total costs, hence showing profitability, and assisting with budgeting (Shanmugam, 2022, 43-54).

Typically, larger firms tend to favour the adoption of the ABC system compared to smaller firms due to their greater resource availability, higher level of overhead expenses, and a wider range of cost categories (Ahmadzadeh et. al., 2011, 61-70). Similarly, SMEs often face limitations in their capacity to adapt to sophisticated costing systems and make changes due to their insufficient availability of resources (Raucci and Lepore, 2020, 198-214). On the other hand, Lohr (2012, 35-55) indicates that the ABC system might be equally beneficial for both SMEs and larger firms. SMEs play a dominant role in the gross domestic product of numerous countries, with 99.2% of businesses falling into this

category and an estimated turnover of £2.1 trillion in the UK (Federation of Small Business, 2022).

Choosing the most suitable costing system is therefore crucial for enhancing business operations and decision-making processes especially in highly competitive markets where gaining a competitive edge is essential (Ahmad, 2017, 342-353). Implementing an effective costing system can significantly contribute to managerial and organizational competency, offering numerous advantages to firms. However, Rios-Manriques et. al. (2014, 220-232) indicates that the adoption rate of activity-based costing in SMEs is relatively low. This highlights the limited success of more complex accounting systems in smaller organizations, attributed to various reasons such as doubts about the system's impact, concerns related to fiscal or auditing issues, and challenges associated with cost management.

The objective of this study is to fill the knowledge gap regarding the impact of different costing systems on SMEs, identifying the most suitable costing system at an organizational level. While costing systems are discussed in various literature, there is limited understanding of their effects on SMEs due to a lack of available data on the topic (Al-Omiri and Drury, 2007; Van Triest and El shahat, 2007; Cohen and Kaimenaki, 2011; Pike et. al., 2011). Hence, further study is necessary to gain insights into the influence of costing systems on organizational competency, facilitating changes that promote growth, particularly in terms of profitability.

This research identifies the advantages and disadvantages of two costing systems, assesses why adoption rates of each system vary among SMEs, examines factors affecting profitability within an SME, and assesses how costing systems can influence well-informed managerial choices in SMEs. Based on these, the following research questions (RQ) were developed.

**RQ 1:** What are the benefits and limitations of ABC accounting and traditional costing?

**RQ 2:** What factors contribute to the varying adoption rates of ABC and traditional costing systems within SMEs?

**RQ 3:** What are the factors that significantly impact the profitability of SMEs?

**RQ 4:** How do different costing systems impact inform managerial decisions in small

and medium-sized enterprises (SMEs)?

Therefore, this research will fill the gap in the literature by focusing on the evaluation of the Traditional costing system and Activity-Based Costing (ABC) system to reveal their impact on organizational competency and sustainable financial growth.

## **1. Literature Review**

The determination of a product's total cost can be achieved using costing systems like traditional costing systems or ABC. The important point is that each method has a different calculation methodology so they generate different costing figures (Mishra and Vaysman, 2001, 619-641). These differences in cost calculations can significantly influence managerial decisions (Geiszler et. al., 2017, 45-52). Therefore, the selection of the appropriate costing method plays a vital role in firms' pricing strategy and managerial decisions.

On the other hand, there are some similarities between the two predominant costing methods besides differences in the cost calculation. The objective of ABC and traditional costing systems is to allocate production costs based on the rate of the cost driver (Shanmugam, 2022, 43-54). Consequently, traditional costing and ABC can be used for the evaluation of the expenses and understanding of the total costs associated with various business operations, including product evolution.

Overhead costs are described as the continuous expenses incurred by a business that contributes to the overall process rather than being directly attributed to a specific cost object (Chiang, 2013, 85-96). The traditional cost system has got a basic structure for allocating costs to services or products. Direct product costs, such as material and labor costs, are directly assigned to products. Indirect overhead costs are allocated using a firm-wide overhead rate or multiple departmental overhead rates. Selling, general, and administrative costs are considered period expenses. While the traditional cost system is easy to implement, the resulting cost allocation is doubtful. Certain period costs, like shipping and sales commission, are excluded from product costs even though they are consumed by products. Additionally, all manufacturing overhead costs, including expenses for facility cleaning and security, are allocated to products despite not being directly attributable to them. Conversely, non-manufacturing costs incurred outside of the manufacturing facilities are not included in product costs, even though some may be

caused by products (Garrison et. al., 2015, 75).

This supports the argument that traditional costing relies on a simplistic volume-based cost allocation method (Major and Hoque, 2005; Rasiah, 2011; Paul, 2020), which hampers managerial competence by inadequately reflecting the working environment (Duh et al., 2009; Ratnatunga et. al., 2012). As a result, decision-making suffers due to the omission of factors like volume production and unaccounted costs such as depreciation, impacting investment decisions (Zimmerman, 2009, 107). Consequently, the use of traditional accounting can lead to organizational shortcomings, affecting competitiveness as product costs may be undervalued, thereby influencing profitability. Additionally, traditional costing relies on allocating overheads based on volume, which is suitable only for inventory evaluation, not for supporting complex decision-making (Mishra and Vaysman, 2001, 619-641). Also traditional costing systems become less relevant when a significant portion of a company's overhead costs is not directly linked to its production volume (Chan and Lee, 2003, 81-89). This reinforces the notion that traditional accounting is primarily used for estimating costs, lacking the necessary details to foster organizational growth.

Compared to ABC method, traditional costing methods are characterized by a small number of cost pools and cost drivers. Only unit-level drivers are allocated to products or services in the traditional method (Anderson, 2006, 481-506). This means that cost allocation is based solely on factors such as labor or machine hours (Chiang, 2013, 85-96), resulting in inadequate data and informed decision-making. In contrast, ABC accounting recognizes the need for cost adjustments over time, allowing for a more accurate inventory representation. By incorporating a greater number of cost pools and considering a wider range of expenses, ABC accounting provides a more precise estimation of the total cost of a product or service, enabling users to assess profitability on an item-by-item basis. Therefore, the introduction of ABC was a direct response to the limitations of traditional costing methods. It offers an alternative approach to cost that is based on a cause-and-effect relationship, making it more suitable for operational practices (Rios-Manriquez et. al., 2014, 220-232). ABC accounting represented a significant advancement in knowledge and has demonstrated its advantages in cost analysis (Stapleton et al., 2004; Baykasoglu and Kaplanoglu, 2008).

The effectiveness of this system in cost management has been widely acknowledged, leading to its widespread adoption in diverse organizations. This is primarily attributed to its ability to generate dependable and practical cost outcomes (Shanmugam, 2022, 43-54) as well as its capacity to provide precise cost management, enabling informed decision-making by managers (Messaoud and Mourad, 2021, 73-96). Consequently, ABC accounting is considered a reliable alternative that prioritizes providing insightful information, ultimately enhancing organizational and managerial competency, which is critical for future planning in organizations.

Moreover, the primary objective of the ABC system is to improve the reliability of outcomes (Quesado and Silva, 2021, 41) and enable more comprehensive evaluations, even for large quantities of products, thus facilitating more intricate analyses (Paksoy and Yilmaz, 2021, 2090-2113). In contrast to traditional costing method that rely on cost estimation (Mishra and Vaysman, 2001, 619-641), ABC system considers the actual utilization of products and services, thereby assisting organizations in managing overhead costs (Kumar and Mahto, 2013, 8-17). Within ABC system, direct costs are allocated as contributions to other cost elements within the process, allowing organizations to assess the costs associated with product manufacturing and identify areas where expenses can be minimized. Additionally, the ABC system aims to prevent cost distortions that can lead to misconceptions in pricing by employing multiple expense pools, ensuring accuracy in cost allocation. The elimination of cost distortions can contribute to long-term development (Shanmugam, 2022, 43-54), fostering sustainable progress and growth for organizations. Hence, it can be argued that the ABC system can effectively support organizational growth by facilitating informed decision-making and providing managers with the necessary information to thrive in any market.

However, despite the widespread encouragement from managers, consultants, and researchers to adopt ABC system for its increased accuracy there is evidence suggesting that the implementation of ABC often fails to deliver tangible benefits. Only a small number of organizations that have explored the adoption of ABC accounting have actually experienced significant advantages (Mishra and Vaysman, 2001, 619-641). Although the implementation of ABC systems in small and medium-sized enterprises (SMEs) is currently limited, there is an increasing belief that adopting an advanced managerial accounting system can bring about similar advantages for SMEs as it does for

larger organizations (Rios-Manriques et al., 2014, 220-232). Despite the challenges, implementing a new system could offer a viable solution to various existing problems. SMEs face similar managerial complexities to their corporate counterparts, and therefore, adopting a more advanced system may provide advantages in any market. Although the implementation of ABC system may be complex and costly (Ahmadzadeh et al., 2011, 61-70), it can provide valuable information to support organizational growth and enhance managerial competency.

However, SMEs typically lack the resources and capabilities of larger firms, including multinational organizations. This resource constraint makes the adoption of new methods and systems require a significant organizational effort (Machado, 2012, 167-186). Implementing a new method and changing current business operations can potentially disrupt the performance of an SME, particularly in the short term, as it would necessitate extensive training and adjustments. Furthermore, ABC accounting is commonly perceived as more time-consuming and costly to implement (Ahmadzadeh et al., 2011, 61-70), which aligns with the understanding that SMEs tend to allocate their limited resources to other priorities. Moreover, the expenses associated with training and acquiring suitable software add to the overall costs of implementing such a system (Ozyurek and Yilmaz, 2016, 389-397). Given the substantial time and financial commitments involved, organizations would require significant revenue generation to justify transitioning to the ABC costing method. This further elucidates the low adoption rate of the ABC system in SMEs and highlights why traditional costing approaches are often favoured despite their limitations.

## **2. Methodology**

### **2.1. Data Collection**

Organizations were contacted through multiple channels, including email, social media platforms like LinkedIn, and phone calls in order to collect data. This multi-channel approach aimed to maximize the response rate and gather conclusive results for the study. The survey targeted management and accounting departments of the selected SMEs, as senior staff members were more likely to have access to the required financial data, thereby increasing the reliability of the results.

### **2.2. Sampling Approach**

To enhance the reliability and generalizability of the study findings, a random sampling approach was employed. This approach ensured that each member of the population had an equal probability of being selected for participation in the survey. The organizations included in the sample were selected from various locations and characterized by different attributes, aiming to identify patterns and facilitate the determination of relevant conclusions.

### **2.3. Research Method**

The survey method was used to gather the data. A questionnaire consisting of seventeen questions was created to collect primary data for the study. The questions covered various aspects related to the financial information of SMEs, including budgets, costing methods, decision-making processes, and financial performance. The survey questionnaire included information about the number of employees within the organization, location of the businesses, sector information, number of departments, range of products and services, awareness of costing systems, reasons for adopting existing costing systems, advantages and disadvantages of the implemented costing system, effects of costing systems on the decision-making process, and financial performance indicators such as direct cost, indirect cost, and net profit.

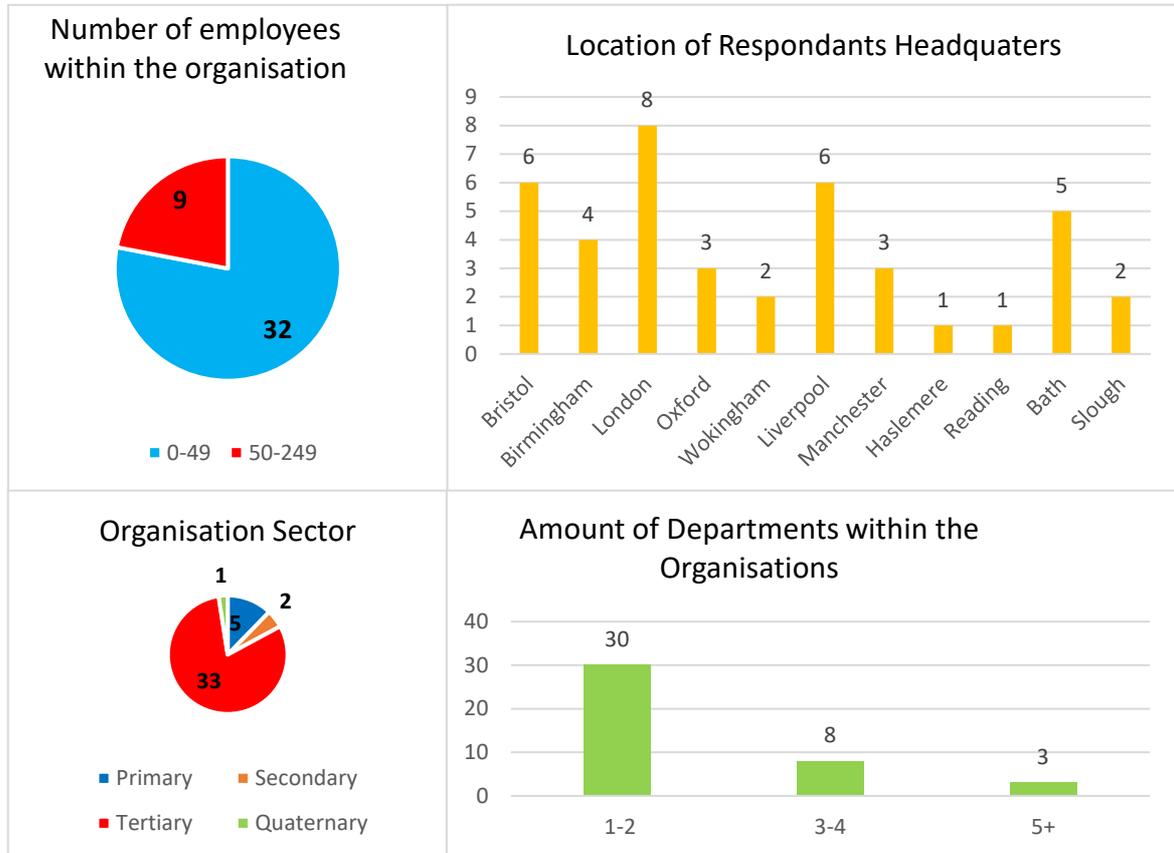
### **2.4. Data Analysis**

The collected survey data were converted into numerical data to facilitate statistical analysis. This conversion process involved assigning numerical values to categorical responses and transforming qualitative information into quantitative measures. The converted data were then subjected to statistical analysis to identify patterns, relationships, and trends.

Quantile regression analysis was employed to analyze the relationship between the variables identified in the survey. Quantile regression is considered one of the best methods for evaluating performance and identifying the decision-making process under uncertainty (Damette and Delacote, 2012, 2427-2434). This analysis technique allows for the examination of the conditional distribution of a response variable given a set of predictor variables at different quantiles.

## **3. Findings**

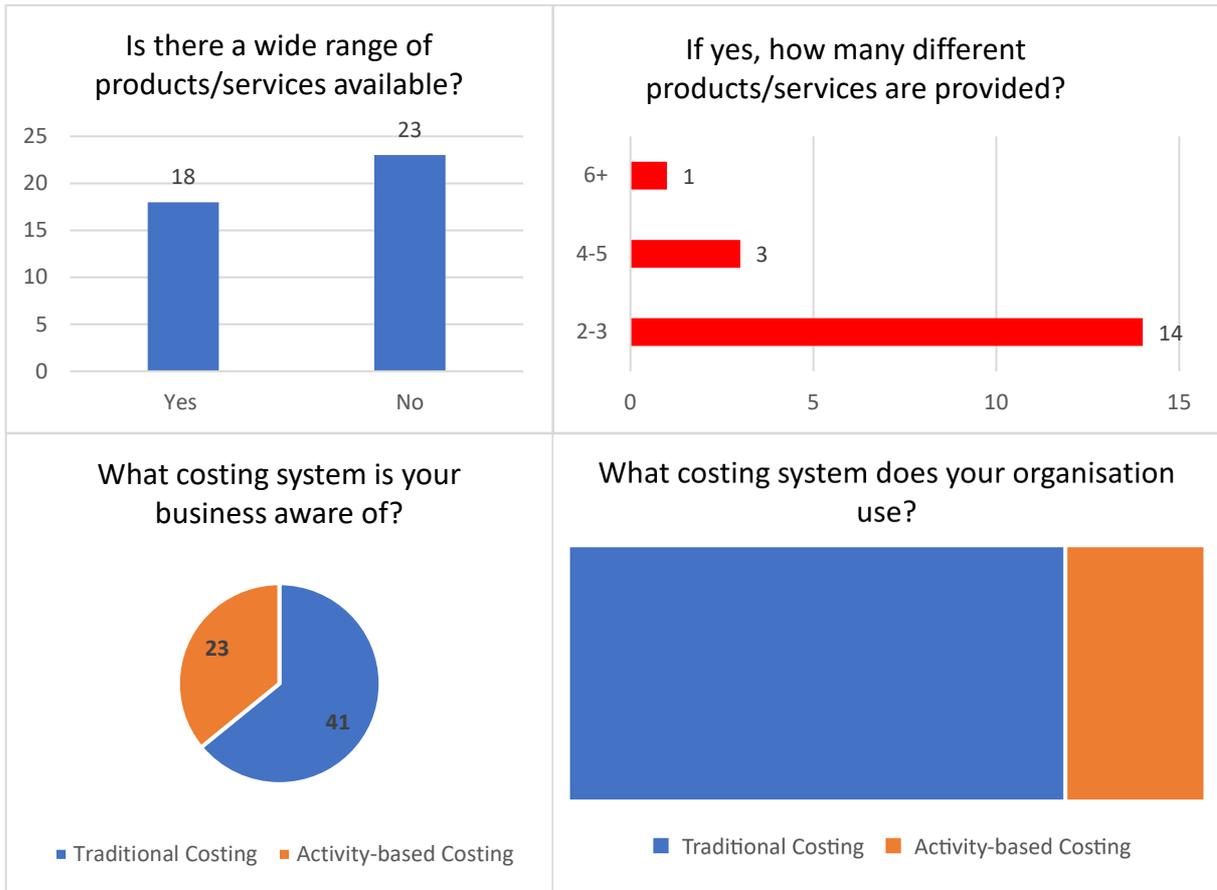
This section presents the survey findings and the result of the quantile regression analysis.



Source: Authors, 2023

**Figure 1: Background information about SMEs in the UK**

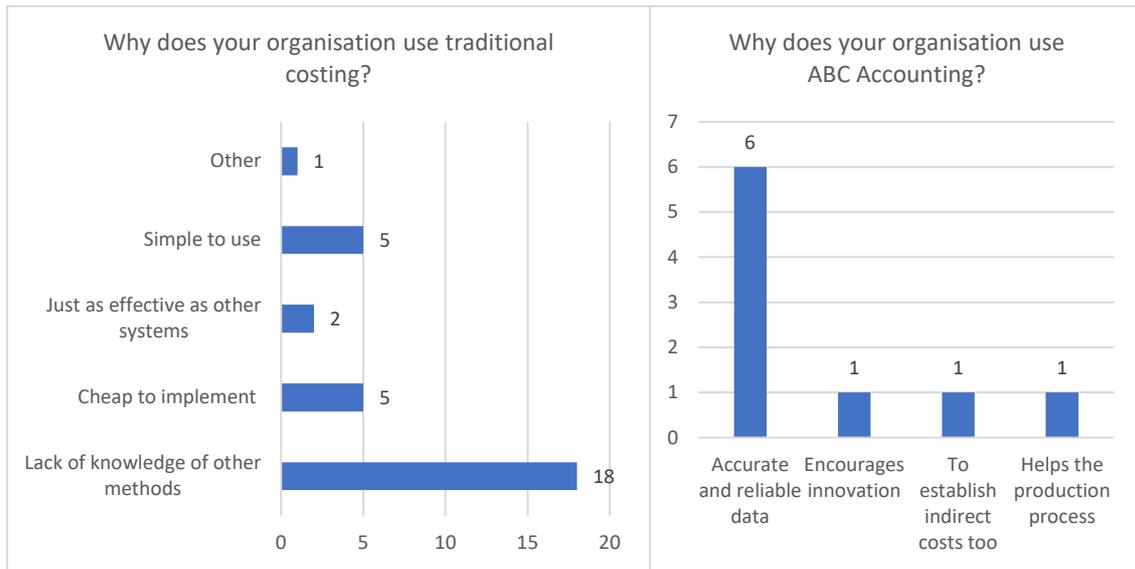
It is evident that all participating organizations, had fewer than 250 employees, meeting the official definition of an SME as stated by the European Commission (2015). Additionally, respondents were from various locations across England, aligning with the intended target participants. However, there were no participating organizations from Wales and Scotland despite attempts to involve them. Moreover, the study successfully focused on businesses operating in the tertiary sector, with 80% of respondents operating within this industry. A significant majority of participants, accounting for 73%, indicated that their SMEs consisted of 1-2 departments. An additional 20% of the SMEs had 3-4 departments, while the remaining 7% reported having more than 5 departments.



Source: Authors, 2023

**Figure 2: Background Information About the Products/Services and Costing Systems**

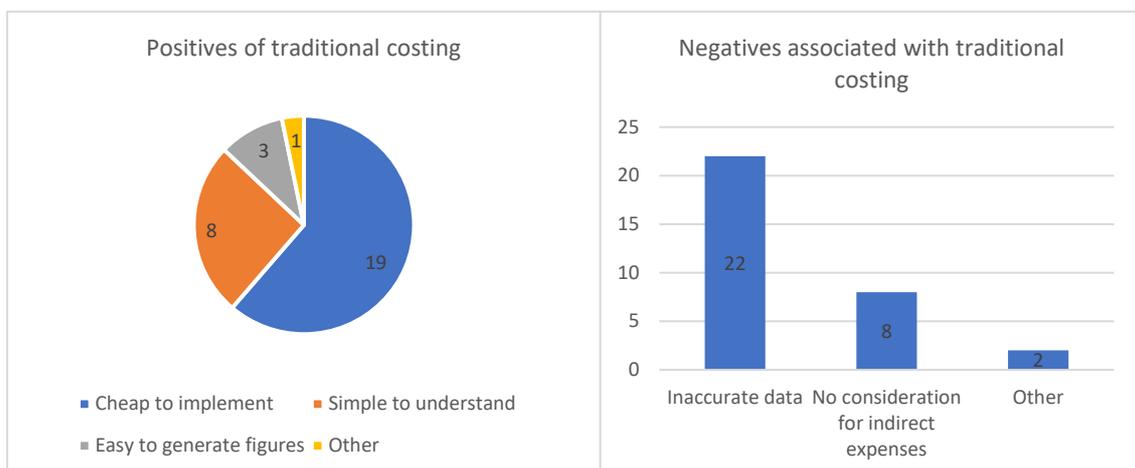
Figure 2 presents the distribution of products or services among the participating SMEs and information about the costing systems. Out of the respondents, 56% indicated that their SME had a limited range of products, while the remaining participants reported having two or more products. More specifically, the data indicates that 34% of SMEs offered 2-3 products, 7% had 4-5 products, and a minimal 2% had more than 6 distinct product categories available to consumers. All participants (41 – 100%) had knowledge of traditional costing, indicating its widespread familiarity among the respondents. Only 23 (56%) respondents were aware of the ABC system. This finding helps to explain the extensive utilization of traditional costing methods. Furthermore, Figure 2 reveals that only 56% of participants were aware of ABC costing, suggesting a lack of knowledge about ABC methods. In addition to this, 78% of participants continued to utilize traditional costing, indicating its continued popularity among SMEs.

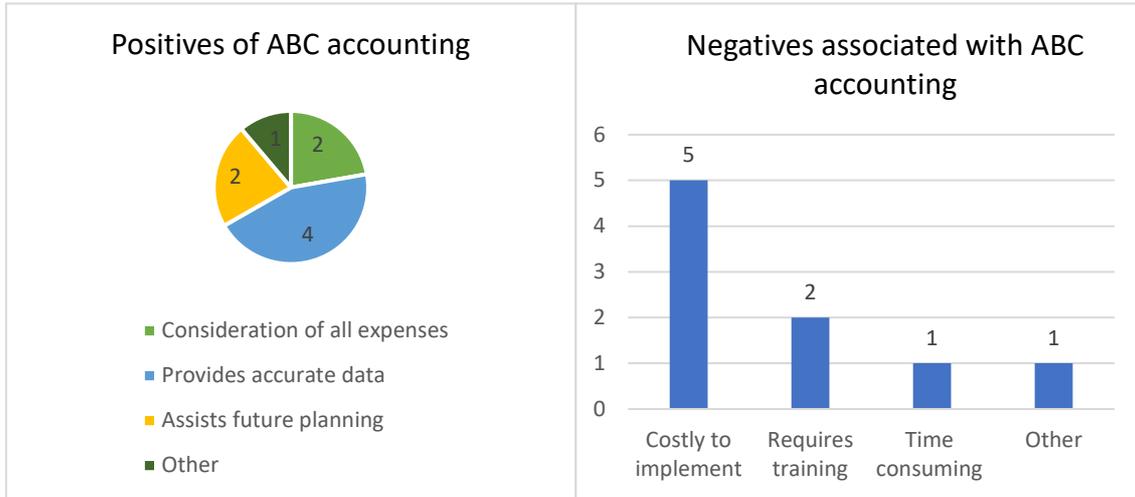


Source: Authors, 2023

**Figure 3: Reasons to Adopt the Costing Systems**

Figure 3 demonstrates that a significant proportion of participating organizations (56%) chose traditional accounting as their preferred method due to the lack of alternative options. Furthermore, 19% of respondents opted for traditional costing due to its simplicity, while 6% perceived it as being equally effective as other systems, primarily because of high production levels. Moreover, 16% of participants regarded traditional costing as a more cost-effective alternative. In contrast, it provides insights into why other SMEs prefer ABC accounting, with 67% of respondents highlighting the reliability of data offered by this method. Other reasons included its ability to foster innovation (11%), its comprehensive consideration of costs (11%), and its contribution to assessing the profitability of products and services by assisting in production processes (11%).



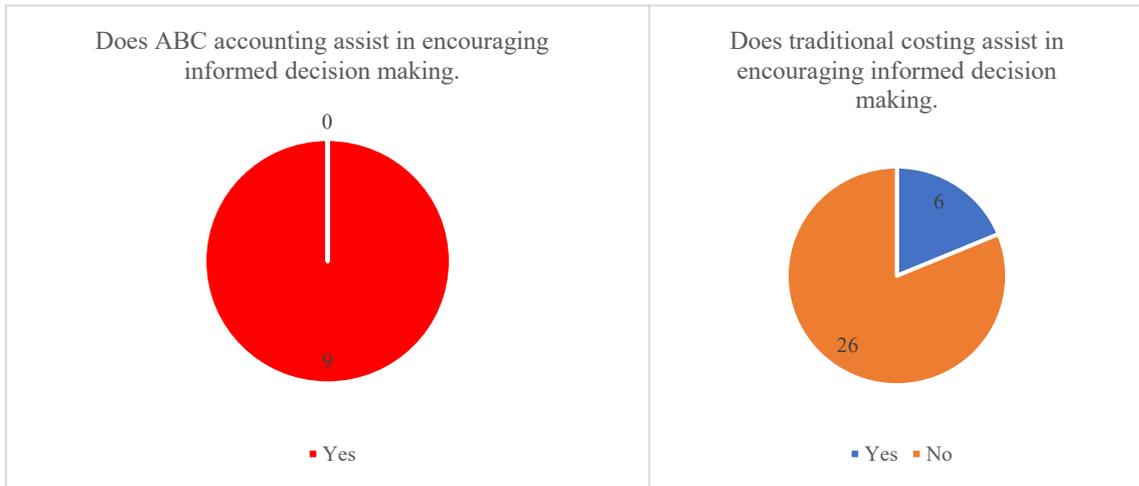


**Source:** Authors, 2023

#### **Figure 4: Positives and Negatives of The Traditional Costing and ABC Systems**

Figures 4 provide valuable insights into the advantages and disadvantages associated with traditional costing, shedding light on both its strengths and limitations. Participants identified cost-effectiveness as the primary benefit of traditional costing, with 61% acknowledging this advantage. Additionally, 26% of respondents emphasized the simplicity of the method, reaffirming its ease of use. However, users also recognized certain drawbacks of traditional accounting. The most significant negative aspect, as indicated by 69% of participants, is the potential for inaccurate data. Another 25% expressed concerns about the method's failure to consider indirect expenses, further highlighting the issue of unreliable data associated with traditional costing. It presents the advantages and disadvantages of ABC accounting, shedding light on the factors that limit its adoption within SMEs. While the results show a more balanced distribution, the most significant benefit identified by participants is the provision of accurate data, with 44% citing this benefit. Furthermore, 22% of participants highlighted the importance of considering full costs and the assistance provided in future planning as significant reasons for their choice. On the other hand, the high cost of implementation emerged as a prominent negative aspect, as indicated by 56% of respondents. Additionally, the requirement for training (22%) and the time-consuming nature of implementing the

system (11%) were also significant drawbacks, highlighting the complexity associated with ABC system.



Source: Authors, 2023

**Figure 5: The Effects of The Costing Systems on The Decision-Making Process**

Figures 5 demonstrate the extent to which each costing method facilitates informed decision-making. The findings demonstrate that all participants utilizing ABC system responded positively, indicating that the method fosters informed decision-making and supports managerial competence. In contrast, only 19% of traditional costing users reported that the method contributes to informed decision-making. This stark difference suggests that traditional costing, with its simplified approach, may not effectively support decision-making compared to the more complex ABC system.

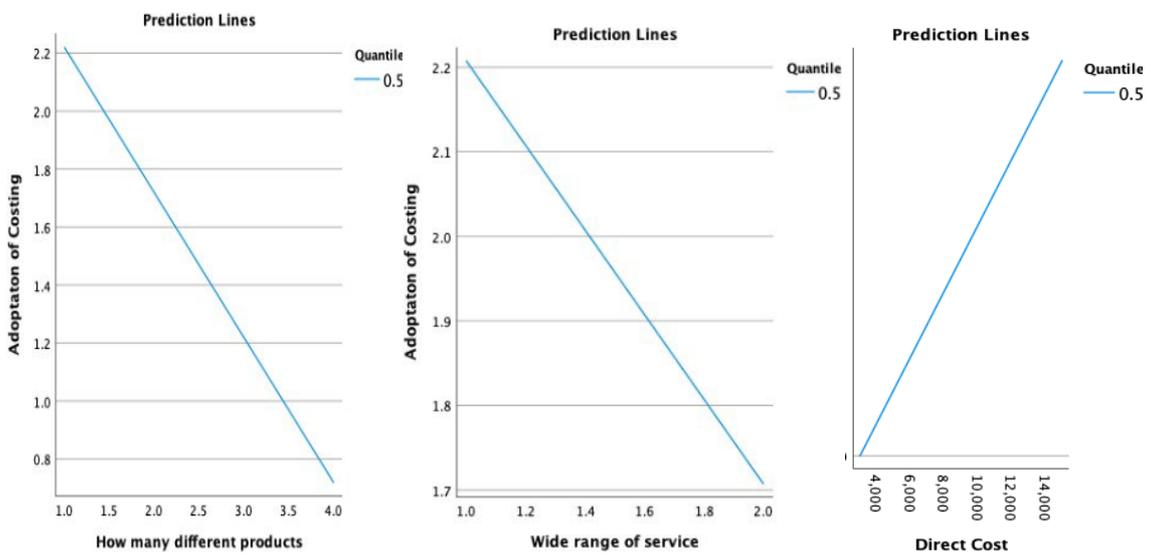
**Table 1: The Factors That Have an Impact on The Adoption of The Costing System**

Model Quality (q=0.5) <sup>a,b,c</sup>					
Pseudo R squared			0.222		
Mean Absolute Error (MAE)			0.1707		
a. Dependent Variable: Adaptation of Costing b. Model: (Intercept), Amount of Departments, Wide range of services, Number of different products, Direct Cost c. Method: Simple Algorithm					
Parameter Estimates (q=0.5) <sup>a,b</sup>					
Parameter	Coefficient	Std. Error	t	df	Sig.

(Intercept)	3.500	1.425E-16	2.456E+16	36	0.000
Amount of departments	1.967E-17	3.7380E-17	0.526	36	0.602
Wide range of products	-0.500	5.2536E-17	-9.517E+15	36	0.000
Number of different products	-0.500	3.6757E-17	-1.360E+16	36	0.000
Direct cost	2.178E-20	5.9872E-21	3.637	36	<0.001
a. Dependent Variable: Adaptation of Costing b. Model: (Intercept), Amount of Departments, Wide range of services, Number of different products, Direct Cost					

Source: Authors, 2023

The dependent variable chosen for analysis was the adoption of costing choice, aiming to examine its relationship with other variables. The data presented in Table 1 does not show any apparent correlation with the "number of different departments." However, other variables exhibited a significant relationship, as indicated by a correlation significance level of less than 0.01. As a result, these factors were further examined and are illustrated graphically below.



Note: Bigger number on the Y axis shows traditional costing while smaller ones indicate the ABC system. (1:ABC, 2:Traditional Costing)

Source: Authors, 2023

**Graph 1: Prediction Lines – Adaptation of Costing and Factors**

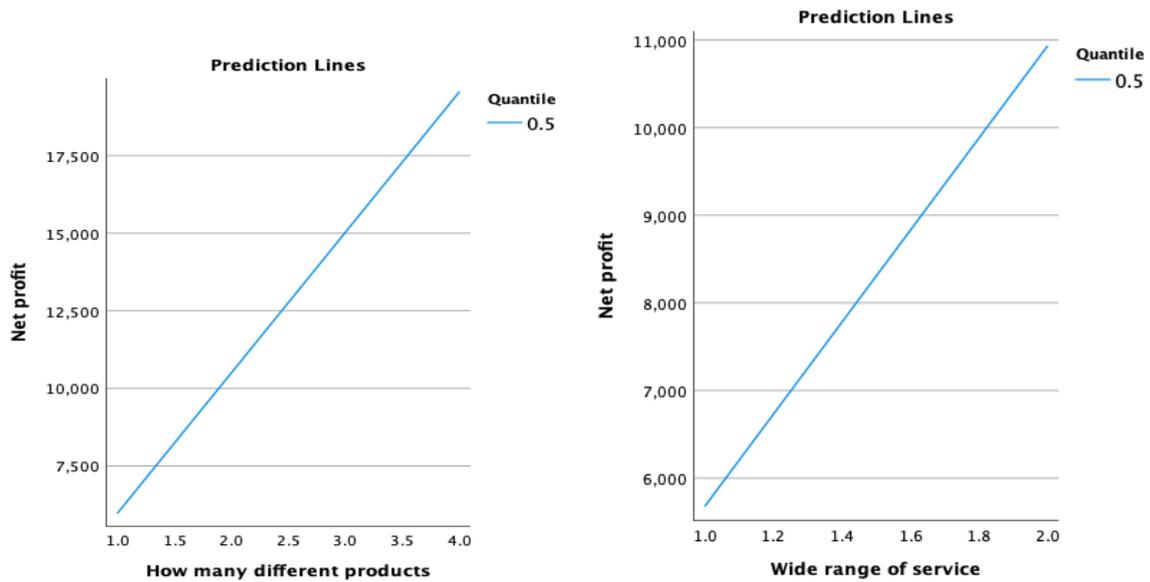
Graph 1 illustrates that as the number of products or services offered by an organization decreases, the likelihood of adopting ABC accounting as the costing method decreases as well. The data collected indicates that organizations with a smaller range of offerings are more inclined to use traditional costing methods. It shows that as the range of products or services offered by an organization decreases, the likelihood of using ABC system as the costing method decreases as well. Hence, organizations that offer a limited range of services are more inclined to choose traditional costing, potentially attributed to their smaller size and correspondingly lower product sales volume. Also, it can be said that there is a correlation between a higher direct costing total and the preference for traditional costing as the accounting method, based on the data collected through the questionnaire.

**Table 2: The Factors That Have an Impact on Net Profit**

Model Quality (q=0.5) <sup>a,b,c</sup>					
Pseudo R squared			0.220		
Mean Absolute Error (MAE)			1567.1879		
a. Dependent Variable: Net Profit b. Model: (Intercept), Amount of Departments, Wide range of services, Number of different products, Direct Cost, Adaptation of costing c. Method: Simple Algorithm					
Parameter Estimates (q=0.5) <sup>a,b</sup>					
Parameter	Coefficient	Std. Error	t	Df	Sig.
(Intercept)	-2648.649	4196.2616	-0.631	35	0.532
Amount of departments	-370.270	810.6756	-0.457	35	0.651
Wide range of products	5251.351	1131.1330	4.643	35	<0.001
Number of different products	4527.027	843.9825	5.364	35	<0.001
Direct cost	-0.135	0.1275	-1.060	35	0.296
Adaptation of costing	-1464.865	1011.7179	-1.448	35	0.157
a. Dependent Variable: Net Profit b. Model: (Intercept), Amount of Departments, Wide range of services, Number of different products, Direct Cost, Adaptation of costing					

Source: Authors, 2023

Table 2 did not show a clear relationship between NET profit and the adoption of cost as the dependent variable. However, other variables exhibited significant correlations with NET profit, as indicated by a correlation significance level of less than 0.01. Consequently, these factors were further investigated and presented in the following graphs.



Source: Authors, 2023

**Graph 2: Prediction Lines – Net Profit and Factors**

The relationship between NET profit and the volume of goods or services sold by a SME is clearly demonstrated in Graph 2. As demonstrated in the figure, an increase in the number of different offerings corresponds to an increase in NET profit. This implies that diversifying the range of products or services can potentially lead to higher profitability and a more successful business strategy. The data collected underscores the significance of offering a broader range of services or the ability to provide a variety of offerings in driving NET profit. It indicates that SMEs with a diverse array of services available to consumers tend to achieve higher NET profits.

#### **4. Discussion**

The research questions were discussed in this section based on the findings.

**RQ 1:** What are the benefits and limitations of ABC accounting and traditional costing?

**Research Objective One:** “To identify and compare the benefits and limitations of the

*different costing systems.”*

The findings reveal the clear benefits and drawbacks associated with ABC system, and one of its key advantages is its capacity to deliver dependable and practical cost outcomes (Shanmugam, 2022, 43-54) and its high level of accuracy in cost management (Messaoud and Mourad, 2021, 73-96). This supports the argument that ABC costing is widely adopted due to its advantageous data. This alignment between theory and practice is evident in the results shown in Figure 3, where 67% of respondents using ABC accounting cited reliable data as the reason for selecting the method, affirming its reliability in the cost calculation.

Conversely, the presence of inaccurate data is a notable disadvantage of traditional costing, as indicated by both existing literature and primary research findings. Traditional costing heavily relies on cost estimation (Mishra and Vaysman, 2001, 619-641), which has resulted in instances where industrial projects and overseas sourcing suppliers have faced financial insolvency due to distorted cost calculations, highlighting the issue of inaccurate data associated with this method. Figure 4 reinforces this perspective, with 69% of respondents identifying inaccurate data as the most crucial reason for rejecting traditional costing.

However, traditional costing does offer several benefits to users, such as simple volume-based cost allocation (Zimmerman, 2009; Ratnatunga et. al., 2012), which facilitates its easy understanding of outcomes. This aligns with Figure 3, where 16% of respondents mentioned simple cost allocation as a reason for using traditional costing. Additionally, as depicted in Figure 4, 25% of participants recognized simplicity as the most notable benefit, further emphasizing the appeal of its straightforward approach. The 9% of participants valuing easy figure generation also supports the clear understanding associated with traditional costing, potentially contributing to its higher adoption rate among SMEs. Furthermore, the cost-effectiveness of traditional costing, mentioned by 59% of participants, aligns with practical considerations of organizations seeking cost savings.

Another disadvantage of traditional costing is its failure to allocate overheads based on direct labor costs (Anderson, 2006; Chiang, 2013), resulting in the exclusion of indirect costs. This contributes to the problem of inaccurate data, reinforcing the results displayed

in Figure 4, with 25% of respondents noting the "no consideration for indirect expenses" as a disadvantage. This further reinforces the idea that the presence of unreliable data can discourage SMEs from adopting traditional costing and instead motivate them to embrace ABC system.

In contrast, ABC accounting utilizes a more intricate costing methodology, which enhances accuracy but can result in increased labor consumption and overall costs (Ahmadzadeh et al., 2011, 61-70). This observation aligns with the findings in Figure 4, where 56% of participants identified the expensive implementation as a significant disadvantage. This indicates the substantial cost associated with establishing the ABC accounting system, which may help explain the low adoption rate of ABC accounting in SMEs.

Moreover, the expenses related to training and software add to the overall costs of implementing such a system (Ozyurek and Yilmaz, 2016, 389-397), further supporting the perspective of the 56% of respondents who viewed high costs as a disadvantage. This viewpoint is reinforced by Figure 4, where 22% of participants identified the requirement for training as a drawback, highlighting the significant impact employee training can have on the effectiveness of the method, given the time required to attain a desired level of understanding. These correlations between ABC accounting in literature and real-world perspectives highlight the alignment between researchers' findings and SMEs' decision-making processes when selecting an appropriate costing system for their organization.

**RQ 2:** What factors contribute to the varying adoption rates of ABC and traditional costing systems within SMEs?

**Research Objective Two:** *"To evaluate why adoption rates of each costing system differ within SMEs."*

Findings from both secondary literature and primary sources indicate a noticeable connection between the adoption rate of costing systems in SMEs. Secondary research reveals a low adoption rate of ABC system, with a study conducted in Mexico indicating that only 7.22% of SMEs had implemented this advanced method (Rios-Manriquez et al., 2014, 220-232). This is further supported by Figure 2, which demonstrates that only 22% of organizations in the UK utilize ABC accounting as their chosen method, indicating a preference for traditional costing.

Various reasons have been identified in research to explain the slow adoption of ABC accounting in SMEs, with a prominent factor being a lack of knowledge about the system. Although organizations assert having prior knowledge of accounting and costs, a significant proportion of SMEs using traditional costing, specifically 66%, were found to have no knowledge of ABC accounting (Rios-Manriquez et al., 2014, 220-232). This lack of awareness contributes to the prevalent utilization of traditional costing. This finding aligns with Figure 2, where only 56% of participants exhibited awareness of ABC accounting, in contrast to 100% who were aware of traditional costing. As a result, organizations may opt for traditional accounting simply because they perceive it as the sole available method, thus rendering the benefits of ABC accounting inaccessible to them.

Graph 1 illustrates that SMEs with a smaller number of products and a restricted range of services tend to adopt traditional costing. The presence of a limited range of products, as indicated by 56% of respondents in Figure 2, implies a preference for a simplified costing approach. This aligns with research that highlights the resource limitations of SMEs compared to larger firms, which prompts organizations to stick with their current approach (Machado, 2012, 167-186). Therefore, due to the smaller size of SMEs and their limited resources, the adoption rate of complex costing systems tends to be low since there may be less need for such systems due to smaller inventories or fewer complex decisions to be made.

**RQ 3:** What are the factors that significantly impact the profitability of SMEs?

**Research Objective Three:** *“To analyze factors affecting profitability within an SME.”*

Researchers have gathered evidence indicating that the utilization of more sophisticated costing systems, such as ABC accounting, has a favorable influence on profitability within a firm. This finding underscores the potential of ABC accounting to foster success. ABC accounting allows for strategic decision-making by identifying and measuring improvements in pricing and outsourcing, enabling executives to make informed choices that can lead to better revenue generation (Zimmerman, 2009; Geiszler et. al., 2017). This observation is consistent with the findings presented in Figures 3 and 4, where 11% of respondents indicated that the implementation of ABC accounting aids in the production

process, leading to improved profitability. Consequently, these findings offer additional support for the correlation between existing literature and the primary data collected.

On the other hand, secondary research suggests that traditional costing can hinder profitability, as it relies on estimating the profitability of products or services (Mishra and Vaysman, 2001, 619-641), which undermines the reliability of the results. However, the adverse effects of estimation on businesses and its impact on SMEs' profitability cannot be definitively measured. In contrast, the primary research findings present a more conclusive understanding of the relationship between NET profit and various organizational factors. Graph 2 demonstrates that the number of different products and the range of services offered have a notable impact, suggesting that while the choice of costing system may influence profitability, other factors also play a crucial role in determining the success of an organization. Ultimately, SMEs that offer a wider range of products and services tend to have higher NET profits. However, as mentioned earlier, SMEs with a wider range of products are more likely to use a more complex costing system like ABC system, suggesting a relationship between ABC accounting and profitability. Nonetheless, it is evident that costing systems are not the sole determinant of NET profit within an organization, and other factors should also be considered.

**RQ 4:** How do different costing systems impact inform managerial decisions in small and medium-sized enterprises (SMEs)?

**Research Objective Four:** “To evaluate how costing systems can affect informed managerial decisions in SMEs.”

The primary research findings strongly align with the existing literature, particularly concerning the impact of costing systems on managerial decisions and organizational competence. Machado (2012, 167-186) argues that ABC accounting has gained popularity due to its ability to provide informative insights for managers. This assertion is corroborated by Figure 5, where 100% of ABC accounting users indicated that the system supports informed decision-making, highlighting it as a significant advantage. Additionally, ABC system is renowned for its high accuracy in cost management (Messaoud and Mourad, 2021, 73-96), which contributes to positive managerial decision-making (Garrison, 2015, 78). This is further supported by Figure 4, where 22% of participants identified the assistance of future planning as a key benefit of the method.

Future planning relies on well-informed managerial decisions, and this finding underscores the value organizations place on the information provided by the costing system.

In contrast, traditional costing is criticized for its inability to accurately reflect working environments (Anderson et al., 2006, 481-506), which hampers management competency by providing insufficient information to aid decision-making. This is evident in Figure 5, where a mere 19% of respondents indicated that traditional costing assists in facilitating informed decision-making. This starkly highlights the significant disparity between the two systems in terms of their ability to provide detailed information to managers, ultimately suggesting that ABC accounting is more likely to offer superior information that promotes growth.

## **Conclusion**

The study concludes by evaluating the effectiveness of different costing systems in promoting sustainable financial growth in SMEs. It presents a strong argument highlighting the disparities between activity-based costing and traditional costing, as well as the attitudes towards each system. Activity-based costing is praised for its complex approach that provides detailed information to managers, thereby enhancing their competency. In contrast, traditional costing is criticized for generating inaccurate data and distorting prices, resulting in inadequate information for managers and hindering SMEs' capabilities.

The study emphasizes the undeniable relationship between managerial competency and organizational success, underscoring the importance of informed decision-making. Considering that SMEs face similar managerial challenges as larger enterprises and that innovative managerial accounting systems benefit SMEs as much as larger organizations, it is evident that the more complex approach of activity-based costing is most advantageous for promoting sustainable growth. This is further supported by the ability of activity-based costing to eliminate cost distortion, contributing to long-term development. Accurate cost valuation reinforces better decision-making, ultimately fostering sustainable growth.

In contrast, traditional costing, with its simplistic volume-based cost allocation, inadequately reflects working environments, hindering management competency. This misinformation can lead to poor decision-making, particularly in pricing strategies, resulting in undetermined profits. As a result, traditional costing has a detrimental effect on sustainable financial growth due to its unreliable data and inability to accurately forecast future organizational growth or losses.

Nevertheless, although activity-based costing is recognized as the preferred costing method for SMEs to attain sustainable financial growth, primary data reveals that several other factors play a critical role in enhancing net profit within an organization. A clear relationship emerges, indicating that a greater range of products and services leads to higher overall net profit. Therefore, expanding the range of offerings and providing a wide variety to consumers becomes an additional factor in supporting financial growth. Research also reveals that organizations with a wider range of services tend to prefer activity-based costing, further substantiating the link between financial growth and the choice of costing system. Moreover, activity-based costing encourages long-term thinking, aligning with the sustainable aspect of continuous business growth beyond short-term considerations.

The implementation of costing systems, especially for ABC, can pose several challenges for SMEs. Implementing a new costing system requires financial investment and allocation of resources, which can be a challenge for SMEs with limited budgets and manpower. The initial costs associated with training, software, and system setup can be significant, making it difficult for SMEs to justify the adoption of ABC. In addition to this, many SMEs may lack the necessary knowledge and expertise to implement and maintain a complex costing system like ABC. This can result in resistance to change and a reluctance to invest in training and development. SMEs may also struggle to find employees with the required skills and experience to effectively implement and manage the system. Furthermore, implementing a new costing system requires changes to existing processes and workflows. This can lead to resistance from employees who may be comfortable with the traditional costing system and resistant to change. Overcoming this resistance and ensuring buy-in from employees can be a significant challenge.

ABC relies on accurate and detailed data to allocate costs to various activities and products/services. SMEs may struggle with data collection and accuracy, especially if they have limited accounting and information systems in place. Without reliable data, the implementation of ABC can be challenging and may result in inaccurate cost allocations. Also, implementing ABC can be a time-consuming process, requiring extensive data collection, analysis, and system setup. SMEs may find it difficult to allocate the necessary time and resources to complete the implementation process while also managing day-to-day operations.

Despite these challenges, it is important for SMEs to consider the long-term benefits of implementing a more advanced costing system like ABC. While the initial implementation may be costly and time-consuming, ABC can provide valuable insights and support informed decision-making, ultimately contributing to sustainable financial growth.

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