

- Strategy
- Decentralization
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Implementation
of Activity-based
Costing

Implementation of Activity-based costing in Bangladesh: An exploratory study

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Abstract

This study explores the current state of activity-based costing (ABC) implementation in the listed public limited companies (PLC) in Bangladesh, and what organization-specific factors influence their implementation. To this end, data have been collected from 83 PLC listed with the Dhaka Stock Exchange (DSE). Multiple regression analysis is employed in testing the hypotheses formulated, specifically to identify what contingencies affect the implementation decision of ABC system in the sample companies. The findings showed that around 50% of the sample companies implemented ABC in their organizations to some extent; of which 41% used this technique around moderate level. Moreover, of the contingencies studied, the regression results showed a significant positive impact of organizational structure (decentralization) and process complexities on the implementation of ABC in the sample companies. The results can have theoretical, practical, and policy implications as the study documented the level of adoption of this innovative cost management technique and significant impact of several contingencies on their implementation.

Keywords: Activity-based costing, Listed company, Management Accounting, Strategic Management Accounting, Bangladesh.

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1.0 Introduction

Activity-based costing (ABC) uses activity drivers (e.g., customer orders, set up number/hours) to allocate overhead costs to cost object (e.g., products) rather than using traditional volume drivers (e.g., units produced, machine hours, labor hours) (Narayanan and Sarkar, 1999). Put it differently, ABC emphasizes managing overheads by concentrating on activity-based cost drivers (Tayles, 2011).

However, there exists considerable debate as to whether ABC is a strategic oriented cost management tool or not. For example, several strategic management accounting (SMA) studies (e.g., Guilding et al., 2000; Cravens and Guilding, 2001; Cadez and Guilding, 2007, 2008) did not add ABC to the list of SMA techniques. Their arguments were that ABC largely focused on accuracy of cost measurement and overlooked external or environmental factors and long-term orientation. In contrast, other academics advocated ABC as a strategic oriented technique on the ground that ABC broadened to a number of functional areas in business in managing cost (Bjornenak and Mitchell, 2002), and that management of activities is critical in recognizing actions essential in the attainment of competitive advantages (Cooper and Kaplan, 1988; Shank and Govindarajan, 1993; Palmer, 1992). Furthermore, bad information on costs may lead to wrong competitive strategy (Cooper and Kaplan, 1988).

As suggested by Cooper and Kaplan (1988), all of a company's costs—from factory costs to corporate support costs need to be considered as product cost. The underlying reason is that the eventual purpose of all costs is to support the manufacturing and supply of a company's offerings (products). Product costs derived by employing ABC system is fundamentally different in comparison to the costs derived by employing traditional costing system. Whereas traditional costing directly allocates overhead costs to cost object like product, ABC uses a more rational approach by recognizing and allocating manufacturing and other overheads first to activities and then to cost objects such as products that cause the consumption of indirect resources (Cooper and Kaplan, 1988). This unique approach of allocating costs allows firms to assess product costs and profitability more critically than traditional costing system. Moreover, managers using ABC system can get more reliable cost information that might facilitate various strategic options. Cooper and Kaplan (1988) support this view by stating that ABC is not designed to trigger unconscious decisions. Rather, it is designed to supply more precise information of production and support activities and product costs to enable management to focus its attention on the products and processes having the most leverage to increase profits (Cooper and Kaplan 1988; Alsharari and Lasyoud, 2019). It helps managers make better decisions about product design, pricing, marketing, and mix, and encourages continual operating improvements" (Cooper and Kaplan, 1988; Alshamlan, 2021).

However, while there exists numerous studies focusing on the implementation status of ABC in the developed economy contexts (Johnson, 1992; Shields, 1995; Innes and Mitchell, 1995; Gosselin, 1997; Innes et al., 2000; Bjornenak and Mitchell, 2002; Pavlatos and Paggios, 2009; Armitage et al., 2016; Elshaer, 2022) and contingencies influencing the implementation (Innes and Mitchell, 1995; Bjornenak, 1997; Gosselin, 1997; Chenhall and Langfield-Smith, 1998; Innes et al., 2000; Ittner et al., 2002; Baines and Langfield-Smith, 2003; Pierce and Brown, 2004; Bhimani et al., 2005; Kallunki and Silvola, 2008), empirical studies presenting the status of implementation of ABC and contingencies influencing their adoption/implementation is not

voluminous in the context of developing and emerging economies with few exceptions (Isa and Foong, 2005; Shil et al., 2010; Joshi et al., 2011; Hasan and Akter, 2010).

This study contributes to the existing literature of management accounting in several ways. First, this study presents evidence on the current status of ABC implementation rate in the listed PLC in Bangladesh, which has rarely been addressed in the context of developing country like Bangladesh. Second, using the grounds of contingency theory this study examines the impact of a number of organization-specific contingent factors that can have impact on the implementation decision of ABC. Moreover, many of these factors (e.g., market orientation, process complexity) have not been explored in the context of developing countries.

The rest of the study is organized as follows. Section 2 offers a discussion of the existing literature and hypothesis development. Section 3 presents methodology followed by section 4 that presents the results of the study. Section 5 offers the discussion on findings followed by section 6 that shows the conclusion including the limitations and avenues for further research.

2. Literature review and hypotheses development

2.1 Activity-based Costing

Cooper and Kaplan (1988) coined the term 'activity-based costing' for the first time based on the work of Staubus (1971), and publicized in the academics and corporate arenas by writing a series of articles in Harvard Business Review. This costing system was first introduced in the John Deere Component Works in USA (March and Kaplan, 1987), where Kaplan devoted his effort to overcome the problem of traditional costing system of allocating overhead costs to products accurately (Narayanan and Sarkar, 1999, 2002; Lorenz, 2015).

This initiative has received greater interest from both academics and practitioners (e.g., Johnson, 1992; Shields, 1995; Innes and Mitchell, 1995; Innes et al., 2000; Foster and Swenson, 1997, Bjornenak and Mitchell, 2002), which made it popular primarily in the manufacturing sector in the USA during 1970s and 1980s. Later, this technique was reported useful

to enhance costing accuracy in allocating personnel expense to cost objects (e.g., product and customers) in service sectors, particularly in the banking (Kaplan, 1994; Norries, 2002) and hospital services (Shander et al., 2010).

However, the rate of implementation was highly diverse across different countries of the globe. For instance, Bright et al. (1992) surveyed 677 UK manufacturing firms and reported that the use of ABC is much higher than their expectations. In contrast, Drury et al. (1993) surveyed UK manufacturing firms and reported that only 10% of the surveyed firms adopted ABC. Chenhall and Langfield-Smith (1998) conducted a survey among 78 largest Australian manufacturing companies and documented that ABC is implemented in about 56% of the sample companies.

Pavlatos and Paggios (2009) reported that a 23.5% of the Swedish companies use ABC, Chow et al. (2006) surveyed 225 Chinese listed (manufacturing and service) companies and reported an above average usage of ABC (mean value 3.01 in the scale of 5).

Armitage et al. (2016) compared the findings of MAPs of 22 small and medium enterprises (SMEs) from Australia and Canada (11 from each country) through an in-depth interview and documented that ABC is used by 9% enterprises in Australia while absent in Canada.

Unfortunately, many of these studies documented that the number of firms adopting ABC is declining over time (Bjornenak and Mitchell, 2002; Gosselin, 2006), and that many firms stop the implementation process (Nanni et al., 1992; Madison and Power, 1993; Innes and Mitchell, 1995; Gosselin, 1997, 2006; Innes et al., 2000) because of several difficulties (Innes et al., 2000) specifically due to the rising costs and employee irritation (Kaplan and Anderson, 2004). Moreover, the volume of articles on ABC has declined substantially during the past three decades (Bjornenak and Mitchell, 2002; Gosselin, 2006). The low diffusion of ABC despite its emergence in a favorable context has been termed as 'ABC paradox' (Gosselin, 1997). However, Kaplan (1998) suggested researchers to wait before evaluating the success of ABC and claimed that ABC was not successful in a particular organization due to the poor management of ABC project.

2.2 Contingency theory

Contingency theory suggests that something is true only under definite circumstances (Chenhall, 2003). Similarly, the suitability of a system such as costing system depends upon the particular conditions in which an organization finds itself (Otley, 1980). Studies focusing on the impact of contingencies on certain structures such as costing system can be stated as a “congruency paradigm” (Chenhall, 2003; Cadez and Guilding, 2008; Rashid et al., 2023). As the present study focused on the contingencies having influence on the adoption of ABC system, this study can be described as employing the ‘congruency paradigm’ of contingency theory.

In management accounting research, the impact of business strategy (Guilding, 1999; Abdel-Kader and Luther, 2008), organizational structure (Chenhall and Morris, 1986; Abdel-Kader and Luther, 2008), market orientation (Cadez and Guilding, 2008), use of advanced technology in operation (Chenhall, 1997; Mia, 2000; Abdel-Kader and Luther, 2008), characteristics of process (Khandwalla, 1977; Chenhall and Morris, 1986; Abdel-Kader and Luther, 2008), and size (Cadez and Guilding, 2008; Hadid and Al-Sayed, 2021) on MAPs is well evident.

2.3 Hypothesis development

Business strategy and ABC

In management accounting research, the impact of various organization-specific contingencies has been studied. Of these contingencies, the types of business level strategy pursued have received greater attention from the management accounting researchers (e.g., Gosselin, 1997; Bhimani et al. 2005; Cadez and Guilding, 2008; Cinquini and Tenucci, 2010; Elhamma and Zhang, 2013; Cescon et al., 2019) based on the expectation of a solid link between the types of strategy pursued and management accounting techniques adopted and implemented (Langfield-Smith, 1997; Chenhall, 2003).

Miles and Snow (1978) identified three preferred organizational strategies based on the pattern of strategy pursued: prospectors-analyzers-defenders. Additionally, they identified a fourth one (reactor) that they perceived as unsustainable. Prospectors are perceived to be eager to exploit new opportunities to be pioneer in the respective market (Miles and Snow, 1978; Cinquini and Tenucci, 2010). In contrast,

defenders focus on achieving competitive advantages through efficiency (Miles and Snow, 1978; Cadez and Guilding, 2008). As ABC requires detailed cost records for each activity performed in the value chain separately, a substantial investment will be required to hire and maintain required system and workforce. Accordingly, prospectors type companies intending to exploit contingencies are expected to invest adequate funds to initiate and maintain sophisticated management accounting technique like ABC. Gosselin (1997) supported this view and showed that firms pursuing vertical differentiation strategy make greater implementation of ABC than their counterparts. Bhimani et al. (2005) reported that outcome-based ABC and strategy is significantly and positively associated. In contrast, Elhamma and Zhang (2013) found that business strategy does not have a significant influence on the use of ABC system in Moroccan enterprises. However, their study showed that prospectors and defenders demonstrated an interest to adopt the ABC method.

Based on the rationales and results presented above, this study expects a significant relationship between the type of strategy pursued and ABC. Therefore, this study hypothesizes that:

H1: ABC implementation rate is positively associated with prospector strategy.

Organizational structure and ABC

Organizational structure denotes formal specification of its members’ roles and the way an organization adopts to differentiate (by decentralizing authority) and integrated (centralizing rules and procedures to be followed by subunits) (Chenhall, 2003). More specifically, companies operating in an environment characterized by diversity and uncertainty need highly differentiated and divisional structures (Chandler, 1962; Chenhall, 2003). In this regard, decentralized organizations usually delegate more autonomy to managers at different hierarchy of organization (Chenhall and Morris, 1986), and demand detailed information regarding their responsibility centers that may not be available centrally (Abdel-Kader and Luther, 2008). This leads to the need for sophisticated and innovative management accounting tools such as ABC to allow managers to better plan and control their responsibility centers (Abdel-Kader and Luther, 2008). This is supported by Elhamma and Moalla

(2015), which documented that companies having vertical decentralization make greater usage of ABC system. Based on the arguments and findings of studies presented above, the following hypothesis is developed.

H2: ABC implementation rate is positively related to decentralized organizational structure.

Market orientation and ABC

A company usually pays extra focus either on market or product in the endeavor to achieve competitive advantage. Recognizing the importance of customer preference and loyalty in such achievement, many companies switched to market orientation from product (Jain and Singh, 2002). Customer (market) preferences are highly regarded in companies employing marketing orientation (Jaworski and Kohli, 1993; Walker et al., 1998). Narver and Slater (1990) noted that the culture of market orientation can create superior value for customers with efficiency (Cadez and Guilding, 2008). Guilding and McManus (2002) and Cadez and Guilding (2008) have investigated the impact of market orientation philosophy on the use of sophisticated management accounting practices in the context of Australia and Slovenia and reported a significant impact. Goebel et al. (1998) also showed the effectiveness of ABC to companies adopting market orientation. Mahmood Albalaki et al. (2019) documented a significant positive impact of market orientation on ABC usage. Chen et al. (2010) also supports this result and showed a significant positive association between market orientation and ABC usage.

The arguments and findings presented above suggested a positive influence of market orientation philosophy on the usage rate of ABC. Accordingly, the following hypothesis is formulated.

H3: ABC usage rates are higher in market-oriented companies.

Advanced Operating technology and ABC

The impact of level of operating technology adopted on the usage of management accounting practices also received substantial attention of management accounting scholars (e.g., Ittner and Larcker, 1997; Mia, 2000; Abdel-Kader and Luther, 2008). Companies adopting contemporary operating technology are expected to employ management accounting

technique characterized by broad scope information and facilitate linking between strategy and operation (Chenhall, 2003). This view is supported by studies such as Ittner and Larcker (1995, 1997), Sim and Killough (1998) and Abdel-Kader and Luther (2008) which documented a greater usage of broad scope-oriented management accounting tools in advanced manufacturing technology environment such as TQM. Liggett et al. (1992) documented the usefulness of ABC in advanced manufacturing environment. In contrast, Brown et al. (2004) showed no association between technology and ABC in the Australian firms. However, in a later study Schoute (2011) showed a positive impact of advanced operating technology on ABC usage rate in the medium-sized Dutch manufacturing firms. Consequently, based on the arguments and findings of prior studies presented above the following hypothesis is formulated.

H4: ABC implementation rate is higher in companies with advanced operating technology.

Process characteristics and ABC

The complexity of a process depends on several factors such as the nature of products and services (whether standardized or customized), the magnitude of production runs (large or small-batch), and the automation level of operation (Woodward, 1965; Chenhall, 2003). Companies with automated process usually manufactures standardized and similar products at large volume (Chenhall, 2003). Traditional management accounting tools are more compatible to this type of organization (Khandwalla, 1977; Chenhall, 2003).

In contrast, companies manufacturing customized products depends on flexible and informal controls. Krumwiede (1998) documented empirical evidence to support this view and note a significant positive influence of process complexity on the decision to adopt ABC. Mazbayeva et al. (2022) also showed a significant positive impact of complex processing system represented by product diversity on ABC usage rate specifically with the involvement of accountants in the costing system development process. Accordingly, based on the arguments and findings presented above, the present study formulates the following hypothesis.

H5: ABC implementation rate is higher in companies with complex processing system.

3.0 Research design

3.1 Sample and data

The present study collects data from the listed public limited companies in Bangladesh. There were 311 companies listed with DSE in 2019 (excluding 241 G-SEC (T.Bond), 37 mutual funds, 15 corporate bond, 8 debenture). Initially, all the 311 companies listed with DSE were contacted to learn about the current state of the adoption rate of ABC in their companies (Dhaka Stock Exchange, 2019). However, a nine-month physical visits resulted in a total of 83 usable responses. Five knowledgeable respondents were selected for pilot study, based on which the questionnaire was finalized [see Appendix 1].

Of the respondents, 91% were professional accountants (either CMA, CA or both). Moreover, 61% of the respondents were from the manufacturing sectors whereas the rest were from the service sectors. The overall response rate was 27% [83 of 311] which is typical as claimed by several management accounting research (Bains and Langfield-Smith, 2003).

3.2 Regression model

To test the hypotheses formulated, the study develops the following ordinary least squares (OLS) regression model:

$$ABC_{i,t} = \alpha + \beta_1 STRATEGY_{i,t} + \beta_2 DECENTRA_{i,t} + \beta_3 MARKET_{i,t} + \beta_4 ADVTECH_{i,t} + \beta_5 PROCESS_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 INDUSTRY_{i,t} + \varepsilon_{i,t}$$

Where ABC represents the mean usage rate of activity-based costing and is measured by a seven-point Likert scale ranging from 'not at all' (1) to 'to a great extent' (7) (Vetchagool et al., 2020); STRATEGY represents the type of strategy adopted and is measured by assigning a value of 4 for 'prospector', 3 for 'analyst', 2 for 'defender', and 1 for 'reactor' (Miles and Snow, 1978); DECENTRA stands for the degree of decentralization and is measured by a seven-point Likert scale ranging from very low (1) to very high (7) (Rashid et al., 2023); MARKET represents the degree of market orientation of a company and is measured by seven-point Likert scale ranging from very low (1) to very high (7) (Cadez and Guilding, 2008); ADVTECH represents the extent of the use of advanced operating technology and is measured by seven-point Likert scale ranging from very low (1) to very high (7) (Abdel-Kader and Luther, 2008); PROCESS stands for the degree of process complexity and is measured by seven-point Likert scale ranging from very low (1) to very high (7) (Abdel-Kader and Luther, 2008); SIZE represents the company size which is measured by the natural logarithm of the number of employees (Chenhall, 2003; Rashid et al., 2023); and INDUSTRY is a dummy variable which is measured by assigning a value of '1' for manufacturing company and '0' for service company (Rashid et al., 2023).

4.0 Results

4.1 Descriptive statistics and correlations

Table 1 presents the frequency of ABC usage rate in the sample companies. As displayed, 41 (49.40%) of 83 companies do not use ABC at all; 8 (10%) companies use to a little extent; 15 (18%) use to slightly below moderate level; 7 (8%) companies use at moderate level, and 12 (14.5%) companies use this technique to slightly above moderate level. This result indicates that ABC has not been extensively adopted by the sample companies in Bangladesh.

Table 1. ABC usage rate

	Frequency	Cumulative frequency	Percent	Cumulative percent
Not at all	41	41	49.4	49.4
To a little extent	8	49	9.6	59.0
Slightly below moderate level	15	64	18.1	77.1
Moderately usage	7	71	8.4	85.5
Slightly above moderate level	12	83	14.5	100
Above moderate level	0	83	0	100
To a great extent	0	83	0	100
Total	83		100	

[Source: Author's own creation]

Table 2 presents a comparative picture of ABC usage rate across different countries of the globe. The results showed substantial variation in the usage rate of ABC across several countries, even within a country. For example, Armitage and Nicholson (1993) documented 11% usage rate in the USA while Kiani and Sangeladji (2003) noted 52% usage rate. The rate is also fluctuating between studies conducted in the UK. However, Chenhall and Langfield-Smith (1998) reported 56% usage rate of ABC in Australia. Pierce and Brown (2004) reported 27.9% usage rate in Ireland whereas Schoute, 2011 documented 17.3% in Netherlands.

Table 2. ABC implementation rate globally

Studies	Developed countries							Developing countries		
	USA	UK	France	Australia	Ireland	Netherlands	Morocco	South Africa	Thailand	Bangladesh
Armitage and Nicholson, 1993	11%									
Kiani and Sangeladji, 2003	52%									
Innes and Mitchell, 1991		6%								
Drury and Tayles, 1994		13%								
Innes et al., 2000		17.5%								
Tayles and Drury, 2001		23%								
Bescos et al. 2001			23%							
Alcouffe, 2002			15.9%							
Chenhall and Langfield-Smith, 1998				56%						
Pierce and Brown, 2004					27.9%					
Schoute, 2011						17.3%				
Elhamma and Zhang, 2013							12.9%			
Sartorius et al., 2007								12%		
Chongruksut, 2002									11.88%	
Hasan and Akter, 2010										10%

[Source: Motivated by Sartorius et al., 2007 and Elhamma and Zhang, 2013]

However, in the context of developing countries the rates are not as high they are in the developed countries. For example, Elhamma and Zhang (2013) reported 12.9% usage in Morocco, Sartorius et al. (2007) reported 12% in South Africa, Chongruksut (2002) noted 11.88% in Thailand, and Hasan and Akter (2010) documented 10% in Bangladesh.

Table 3 shows the descriptive statistics for the variables included in the regression model and the correlation matrix between the variables. The mean ABC usage rate is 2.289 with standard deviation (SD) 1.502, which

indicates a low usage rate of ABC. The mean value strategy is 2.855, decentralization is 3.00, market orientation is 4.084, the use of advanced technology is 4.397, process complexity is 3.397, size is 3.115, and industry is 0.614. These results indicate that the level of decentralization is around average level, market orientation indicates the supremacy of market orientation over product orientation, the use of advanced operating technology, and supremacy of manufacturing companies over service companies in the sample.

Table 3. Descriptive Statistics and Pearson Correlation matrix

Variables	Mean	SD	1	2	3	4	5	6	7	8
1.ABC	2.289	1.502	1							
2.STRATEGY	2.855	.964	.273*	1						
3.DECENTRA	3.000	1.199	.406**	.538**	1					
4.MARKET	4.084	1.280	.152	.395**	.262*	1				
5.ADVTECH	4.397	.961	.249*	.326**	.486**	.329**	1			
6.PROCESS	3.397	1.103	.231*	-.003	.138	.192	.217*	1		
7.SIZE	3.115	.563	.254*	.010	.180	-.086	.010	-.127	1	
8. INDUSTRY	.614	.489	.104	-.042	.042	-.200	-.085	.332**	-.086	1**

**Correlation is significant at the 0.01 level (two-tailed); *Correlation is significant at the 0.05 level (two-tailed)

[Source: Author's own creation]

4.2 Regression results

Table 4 presents the regression results of organizational characteristics and ABC usage. The coefficient of strategy is ($\beta=0.189$, $p>0.10$), indicating that the first hypothesis is not confirmed. Accordingly, the notion that companies pursuing prospector strategy makes greater usage of ABC is not supported. However, the coefficient of decentralization is significant and positive ($\beta =0.300$, $p<0.10$), suggesting that decentralized companies make greater usage of ABC. Consequently, the second hypothesis is confirmed. Regarding the third hypothesis (H3) which assumes a significant association between market orientation and ABC usage, the regression result does not display a significant relationship. Therefore, the third hypothesis is not confirmed.

Table 4: Regression analysis of organizational characteristics and ABC usage

Variable	Expected sign	Model I			VIF
Dep. Variable= ABC usage					
		Coefficient	t-stat	Sig.	
STRATEGY	+	.189	.960	.340	1.614
DECENTRA	+	.300*	1.801	.076	1.789
MARKET	+	.026	.191	.849	1.401
ADVTECH	+	.072	.385	.701	1.450
PROCESS	+	.264*	1.699	.093	1.313
SIZE	?	.643**	2.321	.023	1.092
INDUSTRY	?	.195	.568	.572	1.267
Constant	?	-2.595**	-2.032	.046	
Observations			83		
R^2			0.258		
Adjusted R^2			0.189		
F			3.727***		
Durbin-Watson			2.092		

*** Correlation is significant at the 1% level

** Correlation is significant at the 5% level

* Correlation is significant at the 10% level

[Source: Author's own creation]

An identical result is also displayed for the fourth hypothesis which implies that companies adopting advanced operating technology makes greater usage of ABC is not true. Nevertheless, the coefficient of process complexity is significant and positive ($\beta = 0.264$, $p < 0.10$), which suggests a greater ABC usage in companies with complex process. Therefore, the fifth hypothesis is confirmed.

With respect to the impact of control variables, the results suggest a greater ABC usage in larger companies. However, the impact of the type of industry is not significant.

The regression model explains 19% of the explanatory variations in ABC usage and the F value is positive and significant at the 1% level ($F = 3.727$). The value of the Durbin-Watson statistic also remains between 1.5 and 2.5, indicating the residuals are independent (Saunders et al., 2003). As the values of VIF are below 5, the regression model is expected to be free from the multicollinearity problem (Myers, 1990).

5.0 Discussion

The usage rate of ABC is still far below than majority of the developed countries and some developing countries as presented in Table 2. Moreover, the impact of strategy is found to be insignificant which goes against the findings of Gosselin (1997) and Bhimani et al. (2005). However, this result is consistent with Elhamma and Zhang (2013) which shows a weak contingent role of type of strategy pursued on ABC usage.

Regarding the impact of decentralization, the result supports the findings of Abdel-Kader and Luther (2008) and Elhamma and Moalla (2015) studies and the notion that decentralized organizational structure is a precondition for greater usage of advanced management accounting practices like ABC. Surprisingly, the impacts of market orientation and use of advanced operating technology are not robust, which substantiate their weak contingent role on the usage of ABC. These results go against the findings of Liggett et al. (1992) and Schoute (2011). In contrast, Brown et al. (2004) supported this result and showed no association between technology and ABC in the Australian firms. Finally, the impact of process complexity on ABC usage supports the notion that companies employing complex processing system sophisticated management accounting techniques like ABC. This is also supportive to the findings of Krumwiede (1998) and Mazbayeva et al. (2022) studies.

6.0 Conclusion

The study aims to explore the usage status of ABC in the listed public limited companies in Bangladesh and the impact of organization-specific contingencies on the usage of ABC. The results showed a lower usage rate of ABC in the sample companies as compared to other parts of the world. Of the five contingencies studied (business strategy, decentralization, market orientation, use of advanced operating technology, and process complexity), the impact of organizational structure (decentralization) and process complexity is found as significant and positive on the usage of ABC. While the result is supported by the findings of several prior studies, the insignificant impact of the rest of the variables goes against several other studies conducted in other countries.

The theoretical implication of the present study is that it confirms the significant impact of two organization-specific contingencies on ABC usage in the context of Bangladesh. For the practitioners, the results may signal what sort of organizational structure and process is suitable for the use of ABC in this context. Policymakers may allow the use of ABC in deriving product and service prices which are currently not allowed for majority of the sectors.

The underlying limitations of the present study is that it focuses only on listed companies. Non-listed companies are also contributing a lot to the economic development of Bangladesh which has not been included in the sample. Second, this study merely focused on the usage rate and contingencies influencing the usage decision. Case study research may be conducted to present the difficulties faced while implementing ABC and the impact of usage on strategic decision and performance.

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Appendix I.

Survey Questionnaire

“Implementation of Activity-based Costing: An Exploratory Study”

Dimension of strategy	Strategy followed (Please tick beside the strategy followed in your company)							
Strategic pattern (level of aggressiveness in pursuing market share)	Prospector	Defender	Analyzer	Reactor				
		Very high	Above moderate level	Slightly above moderate level	Moderate level	Slightly below moderate level	Below moderate level	Very low
Degree of decentralization								
(Market/product) Orientation of company								
Contemporary/Advanced technology in operation (computer aided design, inspection and process planning, robotics, automated material handling, integration of manufacturing process using computers)								
Process/ Operation characteristics (Technology):								
		To a great extent	Above moderate level	Slightly above moderate level	Moderate level	Slightly below moderate level	Below moderate level	Not at all
Activity based costing								
Number of employees								
Industry								