

Decentralized Structures and Organizational Performance: The Mediating Role of Activity-Based Costing Implementation

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Abstract: The aim of this paper is to empirically examine the mediating effect of activity based costing (ABC) implementation on the relationship between decentralized structures and organizational performance from a contingency theory perspective. The decentralized structures are investigated using two dimensions: the vertical and horizontal structures. Since there is little evidence on the effect of decentralized structures on ABC implementation from Arab countries, this paper uses Iraqi manufacturing companies as the sample of the study. The data is analyzed using a PLS3 and the results indicate that vertical decentralized structure is positively and significantly associated with ABC implementation and organizational performance. ABC implementation is also positively and significantly associated with organizational performance. In contrast, the results show that horizontal decentralized structure has a strong negative effect on both ABC implementation and organizational performance. This study also demonstrates that ABC implementation has no mediating effect on the relationships of both the decentralized structures and organizational performance.

Key Words: ABC Implementation, Vertical Decentralized, Horizontal Decentralized, Organizational Performance, Iraq.

Introduction

There have been significant levels of achievements from different researchers in establishing and articulating the contributions of ABC implementation on different levels of organizational performance. ABC is a system that helps in making an apt strategic decisions with regards to product mix, outsourcing, pricing and assessment of production processes and performance (Banker, Bardhan, & Chen, 2008). However, few studies have been conducted on the relationships between decentralized structures, ABC implementation, and organizational performance in developing countries. In particular, no relevant evidence exists in Iraq.

Contingency theory hypothesizes that under decentralized structure, more sensitive and sophisticated accounting information system is needed. In addition, it assumes that effective organizational performance is achieved by matching decentralized structure to management accounting system (MAS) (Gordon & Miller, 1976). However, Iraqi industrial companies suffer from poor performance, and this may be attributed to the incompatibility of the organizational structure with the functions of performance evaluation (Ibrahim, 2014). In this paper, the authors argue that a good match between the decentralized organizational structures

and ABC system will lead to higher organizational performance.

Furthermore, previous studies (Chia, 1995; Soobaroyen and Poorundersing, 2008) have only considered the indirect effect of MAS (in general) on the relationship between decentralized structure and organizational performance. As such, the paper aims to contribute to a better understanding on which kinds of decentralized structure proposed in Mintzberg's, (1979) model are motivated to implement ABC system. It also aims to investigate the impact of ABC implementation on organizational performance in the context of Iraqi industries.

The remainder of the current research is structured as follows: It first briefly reviews the relevant literatures and develops hypotheses. Then, describes the research method applied, followed by the findings. Finally, it presents a discussion of the results, conclusions and directions for future study.

Literature Review

Decentralized Organizational Structures and ABC Implementation

Chia (1995) explained that decentralized structure is a type of organizational structure which articulates the division and participation of decision making among managers in the

organization. In essence, decentralized structure implies the impossibility of an individual to make the entire decision in the organization (Subramaniam & Mia, 2001). For instance, a decentralized structure permits the division of authority of making decision over the implementation of ABC across the organizational hierarchy which as a result, have the tendency of affecting the functionalities and performance of ABC as a costing system (Zhang, Hoque, and Isa, 2015). Mintzberg (1979) categorized decentralized structures into vertical decentralized structure and horizontal decentralized structure. Vertical decentralized structure is defined as the dispersion of decision-making responsibilities from the top management to medium and unit managers (Lunenburg, 2012). This structure allows both the top and down of the organizational hierarchy to get involved in decision making process (Mintzberg, 1980). Meanwhile, horizontal decentralized structure involves the division of decision-making control with individuals outside the organizational hierarchy (Hudson & Bielefeld, 1997). Elhamma and Moalla (2015) elaborated that vertical decentralized structure entails formal division and dispersion of authority while horizontal is the informal dispersion of decision-making authority.

Chia (1995) revealed from a contingency study conducted in Singapore that there is a positive relationship between decentralized organizational structure and MAS information. The implication of Chia's result is that the organization implements a sophisticated MAS when the level of decentralization is high, it enhances the accessibility of relevant information and by extension, the quality of decisions. More recently, a study conducted by Elhamma and Moalla (2015), based on a contingency theory, reported that there is a significant high usage of ABC among organizations with vertical decentralized structure. Meanwhile, Liu and Pan (2007) demonstrated that hierarchical command and communication structure (vertical decentralized structure) and active participation of high numbers of committed professionals (horizontal decentralized structure) have significant impact in enhancing the success and diffusion of ABC implementation. However, the actual link between decentralized organizational structures and ABC implementation has not been investigated in Iraq. Therefore, this study formulates the following hypotheses:

H1: *Vertical decentralized structure has a positive and significant effect on ABC implementation.*

H2: *Horizontal decentralized structure has a positive and significant effect on ABC implementation.*

ABC Implementation and Organizational Performance

ABC is a cost management system which calculates costs based on the individual activities that are executed in the course of manufacturing a product or delivering a service (Raz and Elnathan, 1999). ABC system has been argued to be one of the efficient methods of measuring the financial and non-financial performances, through providing

information about cost objects and all activities (Chong & Cable, 2002; James, 2013). Baxendale (2001) added that, the strength of ABC as a sophisticated accounting system lies on the application of accounting information generated to prepare product profitability, eradicate unnecessary cost information for strategic decision making process and managerial planning, and reevaluate product pricing.

Majority of previous studies have indicated significant and positive relationship between ABC implementation and profitability (Plowman, 1997), higher quality levels (Ittner, Lanen, and Larcker, 2002), financial performance (Cagwin and Bouwman, 2002), competitiveness (Elhamma, 2015) and financial and non-financial performance improvement (Chea, 2011; Zaman, 2009). However, studies in the Iraqi context are scarce. Therefore, it is worth investigating the relationship between ABC implementation and organizational performance in the Iraqi manufacturing sector, particularly because improving the overall performance of these companies is a current challenge. Therefore, this paper hypothesizes that:

H3: *ABC implementation has a positive and significant effect on organizational performance.*

Decentralized Structures and Organizational Performance

Researchers have discussed the reasons why large organizations need to choose a decentralized structure to enhance their performance. Chia (1995) concludes that through decentralized structures the organizations are able to provide its decision makers with greater responsibility and control over its activities and also greater access to the required type of information. Evidently, Chen and Huang (2007) used regression analysis in 146 large companies in Taiwan, and their findings concluded that decentralized structure leads to higher performance compared to other dimensions of organizational structure.

Meanwhile, Farhanghi, Abbaspour, and Ghassemi (2013) in a study involving 242 engineers of consultant firms in Iran found that there is a significant relationship between the performance of organizations and the structure in which an organization implements. In a very recent study, Uyar and Kuzey (2016) employed a covariance-based SEM techniques to analyze the survey conducted among Turkish companies. Their findings demonstrated that decentralized structure as a contingency factor has a significant influence on organizational performance. However, Tavitiyaman, Zhang, and Qu (2012) reviewed that the relationship between organizational structure and organizational performance is yet to be exhaustively studied.

Although numerous studies have been undertaken on the relationship between organizational structure and organizational performance (Csaszar, 2012; Qunhui & Yang, 2011; Tran & Tian, 2013), none of these studies have specifically examined the impact of vertical and horizontal decentralized structures on organizational performance. Therefore, the current study proposes that both types of

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decentralized structures would enhance organizational performance. H4 and H5 are hypothesized as follows:

H4: *Vertical decentralized structure has a positive and significant effect on organizational performance.*

H5: *Horizontal decentralized structure has a positive and significant effect on organizational performance.*

Decentralized Structures, ABC Implementation and Organizational Performance

An ABC system has a critical role in accessing timely and accurate information as well as enhancing productive decisions and managerial plans (Abdel-Kader and Luther, 2008). Empirical studies (e.g. Elhamma and Moalla, 2015; Liu and Pan, 2007) confirm that there are relationships between decentralized structure and ABC implementation. Decentralized structure also has an indirect relationship to organizational performance. Soobaroyen and Poorundersing (2008) employed a regression-path analysis to analyze the survey conducted in an African developing country context. Their findings empirically demonstrated that the relationship between decentralized structure and performance is mediated by MAS information. Similarly, the findings presented by Chia (1995) confirmed that there are significant influence of decentralized structure on sophisticated MAS and enhancement of organizational performance.

Arguments on the relationship between organizational structure and the implementation of ABC are still on-going in the literature. Meanwhile, previous studies on the implementation of ABC, decentralized structures and organizational performance of both developed and developing countries are limited. More so, there is only one study (Elhamma and Moalla, 2015) that investigates the relation between vertical and horizontal decentralized structures with ABC implementation. Therefore, this study predicted the following hypotheses:

H6: *ABC implementation mediates the relationship between vertical decentralized structure and organizational performance.*

H7: *ABC implementation mediates the relationship between horizontal decentralized structure and organizational performance.*

Accordingly, the theoretical framework for this research is illustrated in Figure 1. The framework relies on the contingency theory and depicts the relationship between decentralized structures namely; vertical decentralized structure and horizontal decentralized structure, ABC implementation and organizational performance.

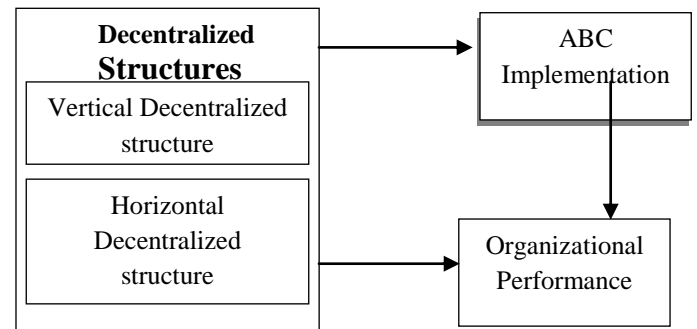


Figure 1: Theoretical Framework

Methodology

The methodology used in this research is a quantitative, and it is based on mailed survey questionnaire to collect information about large manufacturing companies in Iraq. This target sample was selected because they are more likely to adopt and implement ABC system according to Innes and Mitchell (1995). The questionnaires were sent to the chief financial officers of all 305 companies because they are usually responsible for performance measurement. The researchers obtained 239 (78%) filled questionnaires within 4 months and one week, starting from 1st of March 2017. Four questions (Yes/No answers) were used to distinguish between ABC implementer groups and non-implementer: (1) non-implementation of ABC at all, (2) planning to implement, (3) ABC implementation for activity cost analysis, and (4) ABC implementation for measuring product cost and decision-making process. Of the 239 companies, 112 of them were not adopted or implemented ABC system and therefore were not useable. 13 respondents did not fully complete the questionnaires and therefore were also excluded. Thus, it left with the useable responses of 114 organizations that have either implemented ABC; either at the adoption level or at the implementation level.

Table 1 displays the dimensions and items for the variables examined. McGowan's (1998) instrument is used to measure ABC implementation through four dimensions: (1) impact on organizational process (measured with 6 items), (2) perceived usefulness of ABC (measured with 5 items), (3) technical characteristics of ABC (measured with 4 items), and (4) employee attitude (measured with 4 items). Organizational performance is measured using the instrument developed by Govindarajan (1984) with eight (8) items for measuring both financial and non-financial performance. Finally, nine (9) items were adopted from Elhamma and Moalla (2015) for measuring both vertical decentralized structure (measured with 5 items) and horizontal decentralized structure (measured with 4 items). All items are measured by a seven-point Likert-type scale ranging from 1 to 7.

In order to assess the direct and indirect relationships between the variables, path coefficients are computed using structural equation modeling (SEM)-partial least squares (PLS3) path model (Chin, 1998; Cohen, 1988). PLS3 is useful when the theory sets out to explain the effect of

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variables that intervene in relationships between independent variables and dependent variables (Hair, Sarstedt, Hopkins, and Kuppelwieser, 2014). In the current study, decentralized structures and the implementation of ABC are input variables while the outcome of the investigation is the effect on organizational performance. However, the path model also includes relationship between decentralized structures and ABC implementation leading to a mediation effect.

The seven hypotheses drawn from the research model are tested by the SEM-PLS3. For this test to occur, it is necessary to make a preliminary assessment of measurement and structural models (Hair et al., 2014). According to the nature of measures used (Bisbe, Batista-Foguet, and Chenhall, 2007) in the current study, the measurement model is considered as a reflective-reflective type. The variables understudied in this research are operationalized as a reflective type of Hierarchical Component Model (HCM) consisting of six Lower Order Components (LOCs) which are the dimensions of ABC implementation (4) and

organizational performance (2). The results of both the measurement and structural models are reported in the following subsections.

Findings

Measurement Model

The reliability and validity of the LOCs were assessed by the measurement model of PLS3-SEM path model. As shown in Table 1, the reliability analysis (internal consistency reliability) has been achieved for all reflective constructs as represented by Cronbach’s Alpha and Composite Reliability (Hulland, 1999), which is above the threshold of 0.60 and 0.70 for all variables respectively. Meanwhile, items reliability is assessed by checking the loadings which should be 0.50 and above (Hair et al., 2014). As shown in Table 1, The loadings of all items are above 0.60. The Average Variance Extracted (AVE) of the reflective dimensions are higher than 0.50 (Henseler, 2007) indicating that the convergent validity is established and also achieved.

Table 1: Outer Loadings, Cronbach’s Alpha, Composite Reliability, AVE and R Square for the First Stage Hierarchical Construct Model

Constructs and items	Code	Loadings	Cronbach’s Alpha	Composite Reliability	AVE
ABC Implementation	ABC				
Impact on Organization Process	IOP		0.821	0.870	0.527
Quality of decision	ABC1	0.747			
Efficiency and waste reduction	ABC2	0.689			
Innovation	ABC3	0.762			
Relationship across functions	ABC4	0.715			
Communication across functions in the organization	ABC5	0.725			
Overall goal	ABC6	0.716			
Perceived Usefulness of ABC	PUA		0.755	0.837	0.509
Operations control	ABC7	0.673			
Accomplishment of task more quickly	ABC8	0.760			
Enhancement of effectiveness	ABC9	0.744			
Making job more easier	ABC10	0.777			
Usefulness on my job entirely	ABC11	0.600			
Technical Characteristic	TC		0.833	0.888	0.666
Accurate information	ABC12	0.809			
Accessible information	ABC13	0.790			
Reliable information	ABC14	0.836			
Timeliness information	ABC15	0.827			
Employee Attitude	EA		0.896	0.928	0.762
Favorable attitude	ABC16	0.893			
Embrace ABC	ABC17	0.863			
Willingness to use ABC	ABC18	0.877			
Easy to incorporate ABC system	ABC 19	0.858			
Organizational Performance	OP				
Financial	FP		0.858	0.904	0.702
Level of firm profitability	OP1	0.850			
Sales and revenues	OP2	0.889			
Return on investment	OP3	0.822			
Operational and cost efficiency	OP4	0.788			
Non-financial	NFP		0.832	0.888	0.665
Market share	OP5	0.846			
Customer loyalty	OP6	0.852			
Employee satisfaction	OP7	0.758			

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R&D activities	OP8	0.804			
Vertical Decentralized	VD		0.846	0.891	0.621
Recruitment/Dismissal	OS1	0.771			
Launching of a new product	OS2	0.812			
Choice of suppliers/customers	OS3	0.831			
Pricing sale	OS4	0.815			
Operational reorganization	OS5	0.704			
Horizontal Decentralized	HD		0.777	0.836	0.564
Involved in all types of decisions	OS6	0.637			
Consulting coworkers	OS7	0.683			
Consulted by coworkers	OS8	0.830			
Involved employees in decisions	OS9	0.833			

Additionally, to ascertain the discriminant validity of the reflective constructs for LOCs, the square root of AVE of each dimensions should be higher than its correlations with any other construct (Fornell and Larcker, 1981). As shown

in Table 2, the diagonal bolded values represent the square root of AVE, which are above the correlation of any reflective variable with one another. This clearly indicates the discriminant validity is established at LOCs.

Table 2: Discriminant Validity (Fornell-Larcker Criterion) for First Stage Hierarchical Construct Model

	EA	FP	HD	IOP	NFP	PUA	TC	VD
EA	0.873							
FP	0.526	0.838						
HD	-0.292	-0.397	0.751					
IOP	0.521	0.529	-0.332	0.726				
NFP	0.531	0.661	-0.473	0.575	0.815			
PUA	0.476	0.319	-0.169	0.643	0.426	0.714		
TC	0.514	0.438	-0.291	0.687	0.516	0.572	0.816	
VD	0.377	0.420	-0.218	0.578	0.560	0.478	0.568	0.788

To assess the second stage hierarchical construct model, the latent variable scores in the first order model were recomputed under the variables in the second stage hierarchical construct model. As a result, the dimensions of the constructs in the first stage model served as items for the constructs in the second stage model (Henseler, 2007). The

result of the second stage which is the hierarchical measurement model revealed the second order model (Table 3) is fit as the Cronbach’s alpha, Composite Reliability and AVE values were all above the expected threshold of 0.60, 0.70 (Hair et al., 2014) and 0.50 respectively (Chin, 1998).

Table 3: Loadings, Cronbach’s Alpha, Composite Reliability and AVE for Second Stage Model

Construct	Loadings	Cronbach’s Alpha	Composite Reliability	AVE
ABC Implementation		0.841	0.893	0.678
Impact on Organizational Process	0.881			
Perceived Usefulness of ABC	0.800			
Technical Characteristics	0.848			
Employee Attitude	0.759			
Organizational Performance		0.796	0.907	0.830
Financial	0.899			
Non-Financial	0.923			
Vertical Decentralized	1.000	Nil	Nil	Nil
Horizontal Decentralized	1.000	Nil	Nil	Nil

Additionally, Table 4 presents the discriminant validity of the second-order model which is assessed with the square root of the AVE values and it was expected to be greater than the correlations among latent constructs. The result of the discriminant validity shows the square root of the AVE

values of each construct are all greater than the correlations among the constructs. Hence, this result indicates that there is a valid relationship between the first order dimensions and the second stage variables.

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Table 4: Discriminant Validity (Fornell-Larcker Criterion) for Second Stage Hierarchical Constructs Model

	1	2	3	4
ABC Implementation	0.823			
Horizontal Decentralized	-0.335	1.000		
Organizational Performance	0.652	-0.480	0.911	
Vertical Decentralized	0.612	-0.218	0.542	1.000

Structural Model

In order to discuss the proposed hypotheses in this study, the structural equation model was employed using bootstrap technique (Hair et al., 2014) to examine the relationships between decentralized organizational structures (vertical and horizontal), ABC implementation and organizational performance. As presented in Table 5, the results reveal that vertical decentralized structure has a significant and positive effect on ABC implementation ($\beta = 0.164$, $p < 0.10$) and therefore H1 is supported. Also, the results demonstrate that ABC implementation has a positive and significant effect on

organizational performance ($\beta = 0.347$, $p < 0.01$). This provides the basis to support H3. The results also show that vertical decentralized structure has a positive and significant effect on organizational performance ($\beta = 0.178$, $p < 0.10$). Therefore, H4 is supported. Conversely, there is a negative but significant effect between horizontal decentralized structure and ABC implementation ($\beta = -0.097$, $p < 0.10$). This suggests that H4 is not supported. Also, there is a significant and negative effect of horizontal decentralized structure on organizational performance ($\beta = -0.281$, $p < 0.01$). This shows that H5 is not supported too.

Table 5: Structural Model Assessment

H	Relationships	Beta	SE	t-Values	p-Values	Decisions
H1	VD -> ABC	0.164	0.125	1.310	0.095*	Supported
H2	HD -> ABC	-0.097	0.067	1.446	0.074*	Not Supported
H3	ABC -> OP	0.347	0.113	3.067	0.001***	Supported
H4	VD -> OP	0.178	0.120	1.481	0.070*	Supported
H5	HD -> OP	-0.281	0.067	4.209	0.000***	Not Supported

Note: *: $P < 0.10$; ***: $P < 0.01$

In addition, Table 6 presents the results of the indirect effect of ABC implementation. The result of H6 demonstrated that, ABC implementation does not mediate the relationship between vertical decentralized structure and organizational performance ($\beta = 0.057$, $t = 1.071$, $p > 0.10$). Hence, H6 is

rejected. Also, the result presented in Table 6 shows that, ABC implementation has no mediation effect on the relationship between horizontal decentralized structure and organizational performance ($\beta = -0.034$, $t = 1.178$, $p > 0.10$). On this basis, the H7 is not supported.

Table 6: Testing the Mediation Effect of ABC Implementation

H	Mediation Path	Beta	SE	t-Value	p-Value	Confidence Intervals		Decision
						Lower Limit (5%)	Upper Limit (95%)	
H6	VD > ABC > OP	0.057	0.053	1.071	0.142	-0.018	0.162	Not Supported
H7	HD > ABC > OP	-0.034	0.029	1.178	0.120	-0.089	0.000	Not Supported

Discussion

The results presented in Table 5 reveal that the relationship between vertical decentralized structure and ABC implementation is significant and positive. However, the relationship between horizontal decentralized structure and ABC implementation is significant but negative. These results imply that vertical decentralized structure is more enabling and effective in influencing the implementation of ABC system as compared to horizontal decentralized structure. This result does not suggest that manufacturing

organizations in Iraq do not engage in horizontal decentralized structure, however the findings of this research could not justify a supportive role of horizontal decentralized structure for a successful implementation of ABC system. This study provides evidence on the fundamental of the contingency theory by revealing the effect of vertical decentralization structure on the implementation of ABC. In line with findings presented by Abdel-Kader and Luther (2008), the significance of vertical decentralized structure suggests the need for implementing

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ABC system for coordinating a complex process among the vertical structure of organizational managers. In other words, by implementing ABC system, managers can make individual decisions based on the information provided through ABC system. In essence, vertical decentralized structure is practically more favorable for the implementation of ABC as compared to horizontal decentralized structure. Previous studies such as Lee and Yang (2011) and Elhamma and Moalla (2015) have also demonstrated that vertical decentralized organizational structure is significantly related to ABC implementation.

Furthermore, this present result can be explained in relation to the theoretical perspectives of contingency theory on the relationship between ABC implementation and organizational performance. The results reveal that there is a fit between ABC implementation and organizational performance. According to contingency theorists (Haldma and Laats, 2002), the fit between ABC implementation and organizational performance reflects the feasibility of improving organizational performance through the implementation of ABC system. Similarly with previous contingency-based studies (such as studies by: Elhamma and Moalla, 2015; Banker et al., 2008; Cagwin and Bouwman, 2002; Ittner et al., 2002), the current study shows that the implementation of ABC system among Iraqi organizations have important implications on organizational performance.

Additionally, the results of this study reveal that both vertical and horizontal decentralized structures have significant effects on organizational performance. Even though, only vertical decentralized structure has a positive significant effect on organizational performance while horizontal decentralized structure has a negative significant effect, the implication of these findings is that vertical decentralized structure which is practiced by manufacturing organizations has the influence to enhance organizational performance. Meanwhile, horizontal decentralized structure does not have a supportive effect on organizational performance. In essence, this study demonstrates that vertical dispersion of responsibilities among employees and managers in the manufacturing companies in Iraq is found to be positively influential to the performance of manufacturing organizations. Hence, the top and down distribution of organizational responsibilities allow smooth and flawless decision-making process which therefore enhances organizational performance. This result is in line with contingency-based studies which have similarly demonstrated that vertical decentralized structure positively affect organizational performance (Chia, 1995; Chen and Huang, 2007; Hoque, 2011; Uyar and Kuzey, 2016; Elhamma and Moalla, 2015).

The results presented in Table 6 reveal that there is no significant mediating effect of both vertical and horizontal decentralized structure and organizational performance through ABC implementation. This result implies that

among the manufacturing companies in Iraq, the effect of vertical decentralized structure does not go through the ABC implementation. The weak of the vertical decentralized structure / ABC-implementation coefficient might be responsible for the insignificance of the indirect relationships. Surprisingly, this result does closely support Hoque's (2011) findings. Hoque (2011) found that decentralized structure (increased delegation) has no indirect effect on organizational performance through changes in MAS. On the other hand, although H2, H3 and H5 are significant, the indirect effect of ABC implementation on the relationship between horizontal decentralized and organizational performance is not supported. This can be explained by the very strong negative relationship between horizontal decentralized structure and organizational performance which undermines the indirect effect of ABC implementation. The results of both H6 and H7 are in contrast with previous research (Soobaroyen and Poorundersing, 2008; Abdel-Kader and Luther; 2008) which suggest that MAS and its practices mediate the relationship between decentralized structure and organizational performance.

Conclusion

This study concludes that horizontal decentralized structure has negative but significant effects on both ABC implementation and organizational performance. Meanwhile, vertical decentralized structure has significant and positive effect on both ABC implementation and organizational performance. ABC implementation is found to have positive significant effect on organizational performance. Although ABC implementation has no mediating effect on the relationships between both horizontal and vertical decentralized organizational structure and organizational performance, the findings reported in this study have significant theoretical and practical implications. Theoretically, the results of this study provide the empirical evidence on the contingency theory perspective that under decentralized structure, more sophisticated accounting information system is needed (Gordon & Miller, 1976). The findings of this study posits another important theoretical contribution of contingency theory that MA systems are adopted in order to assist managers in achieving some desired company outcomes or goals (Haldma and Laats, 2002). Practically, the findings of this research implies that to ascertain a successful implementation of ABC and to achieve a high level of performance among manufacturing companies especially in Iraq they must focus on vertical decentralized organizational structure.

Even though the highlighted objective of this study is achieved, there are some limitations which are observed. The foremost limitation of this study is the nature of its design. Due to the use of the cross-sectional survey approach, there is no room for causal inferences to be made

from the population of this study. Thus, the cross-sectional nature of data collection provides a static perspective on the effect of decentralized organizational strategies on ABC implementation and organizational performance. Based on this limitation, it is recommended that a longitudinal design which could allow the measurement of ABC implementation on organizational performance over a longer period of time needs to be carried out. This will enable to measure the study variables at a different stages of ABC implementation.

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