

# Cybernetic Controls, and Rewards and Compensation Controls Influence on Organizational Performance. Mediating Role of Organizational Capabilities in Pakistan

Shafique-ur-Rehman<sup>1</sup>, Rapiah Mohamed<sup>2</sup>, Hazeline Ayoup<sup>3</sup>

<sup>1</sup>PhD Scholar, Tunku Puteri Intan Safinaz School of Accountancy, Universiti Utara Malaysia  
Shafiqueurrehman2018@gmail.com

<sup>2,3</sup>Tunku Puteri Intan Safinaz, School of Accountancy, College of Business, Universiti Utara Malaysia

**Abstract:** *The major intention behind of current study is to determine the influence of cybernetic controls, and rewards and compensation controls on organizational performance with the mediating role of organizational capabilities in Pakistan textile sector. In current study, theoretical framework developed with the help of RBV theory. To examine the influence of cybernetic controls and rewards and compensation controls on organizational performance with the mediating variable such as organizational capabilities this study collect data from top management of textile sector through questionnaires. Simple random sampling technique was use in this study to collect data from textile industry. One hundred sixty five questionnaires distributed in top management of textile sector. Two techniques such as confirmatory factor analysis and structural equation modeling were used for analysis purpose. Findings elucidated that cybernetic controls and organizational capabilities have significant and positive influence on organizational performance. Moreover, rewards and compensation controls significant but negative influence on organizational performance. Furthermore, cybernetic controls and rewards and compensation controls have significant and positive influence on organizational capabilities. Moreover, organizational capabilities positive and significantly mediate the association between cybernetic controls, and rewards and compensation controls and organizational performance.*

**Keywords:** Cybernetic controls, rewards and compensation controls, organizational capabilities, organizational performance

## 1. INTRODUCTION

Organizations did business in higher competitive atmosphere and it's difficult for organizations to survive in this condition because they face lots of issues that decrease organizational performance. For example, organizations face some issues regarding management control system (MCS) as a package (planning controls, cultural controls, cybernetic controls, rewards and compensation controls, and administrative controls), and issues regarding organizational capabilities that have strong impact on organizational performance. Organizational performance is significant factor for organization failure or their success in the market. According to Richard, Devinney [1], organizational performance having much importance in the attainment of organizational goals or objectives. Meanwhile, organizational performance refers to the organizations effectiveness in the attainment or achievement of their desired objectives or goals [2].

Furthermore, it is an indicator used by organizations to measure how well they achieve their objectives [3, 4]. In addition, organizational performance plays a significant role for the survival of both profit organizations and non-profit organizations [5]. Organization performance consists into two aspects such as financial performance and non-financial performance [6]. Therefore, different organizations use various tools to calculate performance depends on nature of their business. For instance, some organizations measure their performance only in financial term and ignore non-financial performance [7-9]. However, prior study recommends that organizations achieve long period profitability in that case when they give importance to non-financial performance also [10]. Similarly, some of the prior studies show that organization only focus on financial performance not sufficient [11, 12] and need to focus on non-financial performance also. In current study,

we are focusing on both financial and non-financial performance.

Textile industry is the largest manufacturing industry in Pakistan and having 8.5% contribution in gross domestic product and more than 60% of total exports of Pakistan from this industry [13]. Moreover, this industry plays a role of back bone for Pakistan and showing some positive figures but nowadays market share of this industry having less than 1 percent of world market share that is questionable [14] and author conclude that in future textile industry in Pakistan will grow. Economic survey of Pakistan (2008-09) shows that gross domestic product of textile industry Pakistan decrease 8.5 percent to 8 percent in 2015. Moreover, World Trade Organization report 2015-2016 shows that exports of this industry continuously decline such as in 2013 exports Rs. 2633.8 billion, 2014 exports Rs. 2590.3 billion, and in 2015 exports Rs. 2326.3 billion and this report tells that India textile industry overall share in exports 2.0, Malaysian industry 1.5, and Indonesian industry 1.1 and Pakistan textile industry share is 0.2 that is less than above mentioned countries that is critical situation for Pakistan textile industry.

Pakistan textile industry faces lots of issues regarding MCS as a package such as planning controls, cultural controls, cybernetic control systems, rewards and compensation controls, and administrative controls that reduce organizational performance of this industry. For example, issues regarding cybernetic controls such as financial problems, poor physical infrastructure, lack of new investment, unavailability of standardized material, lack of training programs, and lack of quality in R & D [14, 15], and issues regarding rewards and compensation controls such as lack of managerial capabilities, employees turnover, and employees move to other countries that reduce organizational performance [14-16]. In Pakistan, less attention has been paid in the field of MCS [17]. In current study, we are cybernetic controls, and rewards and compensation controls that are elements of MCS as a package that having less attention in Pakistani Textile Sector.

MCS plays an important role for organizations in enhancing organizational performance [9]. In these days, MCS considers a vital element for organizations [18] that have strong influence on organizational performance [19]. For instance, some previous studies examined MCS influence on organizational performance and findings revealed that MCS have influence on the performance of an

organization [7, 9, 20]. Maximum studies in past examined the influence of MCS on the performance of an organization conducted in developed countries and this relationship ignoring in developing countries [7, 21-28]. Therefore, one of the most recent studies suggest that there is need to focus on MCS with organizational performance in developing region [29]. Moreover, some more studies recommend that in future studies need to examine the relationship between MCS and organizational performance [30, 31]. Hence, in this research we are examining the relationship between MCS as a package element such as (cybernetic controls, and rewards and compensation controls) with organizational performance in developing countries that is Pakistan.

Prior studies examined the relationship between MCS and organizational performance and findings elucidated that MCS have an significant but weak influence on the performance of an organization [19, 32]. Moreover, some prior studies examined this relationship and findings revealed that there are some mixed results between these variables [7, 20]. Therefore, above mentioned studies show that the relationship between MCS and organizational performance inconclusive and need to further examined in future. In this research, we are using organizational capabilities as a mediating variable between cybernetic controls, rewards and compensation controls, and organizational performance. One of the recent studies examined the relationship between organizational capabilities and organizational performance and findings revealed that organizational capabilities have significant and positive influence on organizational performance [33]. The reason to use only organizational capabilities as mediating variable and not other variable because Pakistan textile industry faces various issues related to organizational capabilities like lack of modernized machinery, lack of managerial capabilities, lack of specialized workers, and lack of skilled employees that reduced the performance of this industry [14, 15].

## **2. LITERATURE REVIEW**

### **2.1 Organizational performance**

Organizational performance refers to an indicator that uses organizations in the achievement of their desired objectives. According to Richard, Devinney [1], organizational performance is an important factor in obtaining organizational goals or objectives. Meanwhile, it is an indicator that determines how well organizations attain their particular goals [3]. Previous studies often paid scant attention on those indicators that must be part of organizational

performance and how well this organizational performance measured [34]. Organizations focus goes to increase organizational performance by enhancing profit [35]. While, this indicator having much importance for organizations as well as in past studies but this indicator not properly defined in those studies [36] because organizations measure organizational performance in your own way to see their desired goals. In current study, we are focusing financial performance as well as non-financial performance to measure this indicator because non-financial performance also compulsory to enhance profit in long run.

## **2.2 Cybernetic controls**

Cybernetic control systems refers to a system in which employees actual performance compared with standard performance by proper feedback as well as measure system performance and if there is need some modification in current system due to unnecessary differences. According to Fisher [37], cybernetic control system refers “a system in which standards of performance are determined, measuring systems gauge performance, comparisons are made between the standards and actual performance, and feedback provides information on variances”. In current study, Malmi and Brown [38], cybernetic control system used that consists of four parts such as budgets, financial measurement systems, non-financial measurement systems, and hybrid measurement systems. First part is budget that plays important role for organization and management use budget for communicating as well as coordinating strategic priorities and this budget used in facilitating commitment of lower level management to these priorities [39]. Second part is financial measurement system used in setting the target of organization such as it includes economic value added, and return on investment [38]. Third part is non-financial measurement systems that play a significant role for organizations because non-financial measurement systems overcome several limitations of financial measurement systems such as market share, customer relationship, supplier relationship, new product development, and quality of product [38]. Final part of cybernetic control is hybrid control systems that refers to a mixture of both financial measurement system and non-financial measurement systems [11, 12, 40, 41].

## **2.3 Rewards and compensation controls**

Rewards and compensation controls refers to a system in which organization gives incentives to individual and groups on the basis of their performance that enhance the overall performance of an organization. According to Flamholtz, Das [42],

rewards and compensation control is known as incentive system and due to this system organization increase the performance of individuals. Similarly, rewards and compensation control purpose mainly on motivate individuals and groups within the organization to pay incentives and achieve organizational objectives [43]. In MCS as a package rewards and compensation controls uses as in separate head because it is significant for the enhancement of organization performance [38].

## **2.4 Organizational capabilities**

Organizational capabilities mean the ability of organizations to manage their both resources such as intangible resources as well as intangible resources to enhance organizational performance. According to Grant [44], organizational capabilities refers to organizational ability to organize or deploy their own resources like tangible resources and intangible resources to perform their activities in increasing business performance. In this research, we measure organizational capabilities by using three elements like operational capabilities, strategic management capabilities, and external stakeholder relation capabilities [9] because textile industry in Pakistan faces lots of issues regarding these capabilities. For instance, issues regarding operational capabilities, strategic management capabilities [15], and issues regarding external stakeholder relation capabilities that reduce organizational performance of this industry.

## **3. HYPOTHESES DEVELOPMENT**

Cybernetic control consists of four parts such as budgets, financial measurement system, non-financial measurement system, and hybrid measurement system [38]. Some of the prior studies show that there is significant and positive relationship between budgets and organizational performance [45, 46]. Moreover, one of the studies show that there is significant positive impact of balanced scored card on organizational performance [47]. In addition, some of the studies suggests that organizational performance can be increased by using cybernetic control [48, 49]. The relationship between cybernetic control such as (budgets, balanced scorecard) and organizational capabilities show that there is significant and positive influence on organizational capabilities such as strategic management capabilities, operational capabilities, and external stakeholder relations capabilities [9, 50]. Therefore, the following hypotheses are proposed for empirical examination:

H<sub>1</sub>: Cybernetic control positively influence organizational performance

H<sub>2</sub>: Cybernetic control positively influence organizational capabilities

Rewards and compensation controls have some mixed findings with organizational performance. Some of the previous researchers examined the association between rewards and compensation controls and organizational performance. Findings revealed that rewards and compensation controls have significant influence on organizational performance [51, 52]. Furthermore, one of the prior studies examined the relationship between rewards and compensation controls and shows that both rewards as well as compensation controls center of attention in motivating and increasing individuals as well as groups within the organization in obtaining desired objectives [43]. Despite of this, one of the studies investigated the relationship between rewards and compensations controls and performance of employees and findings revealed that rewards and compensation control have no influence on performance of employees in the organizations. [53]. According to Simons [54], diagnostic controls use to correct the deviations and rewards in the achievement of specific objectives. Previous studies examined the relationship between diagnostic control system with organizational capabilities and findings revealed that diagnostic control system has significant influence on organizational capabilities [9, 20]. Despite this, diagnostic control system has negative influence on organizational capabilities [7].

H<sub>3</sub>: Rewards and compensation control positively influence organizational performance

H<sub>4</sub>: Rewards and compensation control positively influence organizational capabilities

MCS deemed an important resource for an organization that helps top management in easy decision making, controls as well as in evaluation process and MCS have significant impact on the performance of an organization [55, 56]. According to Barney [57], organizational capabilities plays a vital role to strengthen or improve the association between resources of organizations and their performance. Moreover, organizational internal strengths such as organizational capabilities determines how an organization achieve competitive advantage and competitive advantage ultimately increase performance of an organization [57, 58]. In this research, resource-based view (RBV) theory enlightens the framework that consists on cybernetic control, and rewards and compensation control, organizational capabilities, and organizational performance. Previous researchers examined the

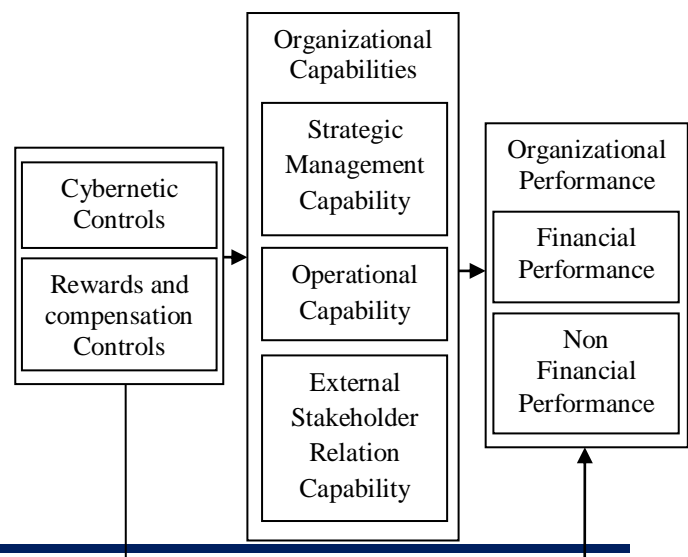
relationship between organizational capabilities and performance of organization. Findings revealed that organizational capabilities enhance the performance of organizations [33, 59, 60]. Followings are the proposed hypotheses:

H<sub>5</sub>: Organizational capabilities positively influence organizational performance

MCS playing a vital role for business organizations [18] and have impact of organizational performance [19]. In this research, two elements of MCS as a package uses like cybernetic controls and rewards and compensation controls [38]. Prior studies examined the association between MCS and organizational performance. Results elucidated that MCS have positive and significant impact on performance of an organization [61-63]. While, some of the prior studies investigated the influence of MCS on organizational performance and findings revealed that MCS have significant but weaker influence on organizational performance [19, 32] and there is need to study this relationship further with the addition of another variable that explains this relationship more. Moreover, some of the prior researchers examined this relationship and show mixed findings [7, 20]. Therefore, there is unconvincing association between MCS and performance of an organization. In this research, add another variable such as organizational capabilities that mediates the relationship between MCS and organizational performance. Following are the proposed hypotheses:

H<sub>6</sub>: Organizational capabilities mediate the relationship between cybernetic controls and organizational performance.

H<sub>7</sub>: Organizational capabilities mediate the relationship between rewards and compensation control and organizational performance.





## Theoretical framework

### 4. METHODOLOGY

In this research, four variables use that makes conceptual framework. Every variable was measured through some items that adapted from various studies. Cybernetic controls consists eight (8) items and adapted from [64], rewards and compensation controls consists six (6) items and adapted from [64], organizational capabilities fifteen (15) items that adapted from [9], and organizational performance eleven items that adapted from [65, 66]. Every item of questionnaire was measured by using five-Likert scale that have range from 1 to 5. 5 represents strongly agree and 1 represents strongly disagree.

#### 4.1 Data collection

In this study data was collected by using structured questionnaire from top management in textile industry Pakistan. 165 organizations selected to collect data that were under All Pakistan Textile Mills Association (APTMA). For this purpose data collected were from top management who know very well regarding cybernetic control, reward and compensation controls, organizational capabilities, and organizational performance because they well educated and know everything in the organization. Data were collected from top management through questionnaire technique and one questionnaire filled from one organization. 165 questionnaires distributed among top management of textile organizations under APTMA and 124 questionnaires used for analysis. Remaining 41 questionnaires exclude due to too much missing values.

#### 4.2 Demographics

In this section, questions related demographics discussed. In Pakistan textile industry male have dominant positions rather than female. In current study, our 100% sample represents to males due to male in top management. In our sample majority of the respondents did master degree. In our sample, experience of the respondents is within the range of 5 years to 15 years. In our sample, most of the organizations have employees within the range of 351 to 1100. In our sample 165 organizations selected from those organizations that were under APTMA and average annual revenue were in the range of Rs. 125 million to Rs. 650 million.

### 5. FINDINGS

#### 5.1 Reliability Test

Reliability test used to determine that our data that we are using in this study is reliable or not and

for this purpose Cronbach's alpha technique used. The value of cronbach's alpha should be atleast 0.70 of all the variables that we are using in research then our data will be reliable [67]. Below Table 1 show value of Cronbach's alpha.

Table 1: Reliability Results

Variable	Items	Cronbach's Alpha
Cybernetic Controls	08	0.830
Rewards and compensation Controls	06	0.889
Organizational Capabilities	15	0.838
Organizational Performance	11	0.717

Above table shows that Cronbach's values of all constructs are higher than 0.70 that is the standard value suggested by [67]. Therefore, our data fulfill the reliability requirement and available for further analysis.

#### 5.2 Normality Test

The second test is normality conducted to see that data is normal or not and for this purpose see two things such as skewness and kurtosis [68]. The standardized range for skewness is  $\pm 3.0$  and for kurtosis is  $\pm 1.0$  [68]. In current study, findings elucidated that our data skewness and kurtosis value within the range as mentioned above. Hence, data is normal and available for further analysis.

#### 5.3 Confirmatory factor analysis (CFA)

To perform CFA this research evaluates the convergent validity to estimate our measurement model. Three things considers to calculate or find out the convergent validity of constructs that are as follows; factor loadings, average variance of extract (AVE), and the last one is composite reliability (CR) [69]. The value of factor loadings of items should be equal to or greater than 0.50. Factor loading of cybernetic control system are within the range of 0.610 to 0.861. Moreover, rewards and compensation controls minimum item loading is 0.784 and maximum factor loading is 0.898. Furthermore, factor loading the range of organizational capabilities are within 0.559 to 0.901. Additionally, organizational performance factor loading least value is 0.585 and maximum value is 0.840. Hence, the criteria of factor loading fulfill because all the values are greater than 0.50. AVE of cybernetic controls, rewards and compensation controls, organizational capabilities, and the organizational performance are 0.538, 0.718, 0.514, and 0.554 respectively. Hence, the values of cybernetic controls, rewards and

compensation controls, organizational capabilities, and the organizational performance are meet the criteria that value of AVE must be equal or greater than 0.50. CR values of cybernetic controls, rewards and compensation controls, organizational capabilities, and the organizational performance are

0.902, 0.938, 0.967, and 0.945 respectively. Hence, CR values of cybernetic controls, rewards and compensation controls, organizational capabilities, and the organizational performance are higher than 0.80.

**Table 2**

Items	Factor Loading	AVE	CR	Items	Factor Loading	AVE	CR
<b>Rewards and compensation controls</b>		0.718	0.938	<b>Cybernetic controls</b>		0.538	0.902
RCC1	.784			CBC1	.714		
RCC2	.854			CBC2	.710		
RCC3	.875			CBC3	.861		
RCC4	.846			CBC4	.676		
RCC5	.898			CBC5	.610		
RCC6	.822			CBC6	.641		
				CBC7	.825		
				CBC8	.795		
<b>Organizational capabilities</b>		0.514	0.967	<b>Organizational Performance</b>		0.554	0.945
OC1	.802			OP1	.762		
OC2	.901			OP2	.769		
OC3	.778			OP3	.585		
OC4	.753			OP4	.707		
OC5	.877			OP5	.778		
OC6	.870			OP6	.699		
OC7	.621			OP7	.737		
OC8	.793			OP8	.722		
OC9	.569			OP9	.838		
OC10	.655			OP10	.840		
OC11	.653			OP11	.649		
OC12	.559						
OC13	.575						
OC14	.822						
OC15	.626						

capabilities, and organizational performance. Findings elucidated that cybernetic controls significantly correlated with organizational performance ( $r=0.839$ ,  $p<.05$ ).

#### 5.4 Correlations analysis

Table 3 shows both descriptive as well as correlation analysis of cybernetic controls, rewards and compensation controls, organizational

**Table 3 Descriptive & correlations analysis**

Variables	Mean	S.D	CBC	RCC	OC	OP
CBC	4.429	0.42	1			
RCC	4.105	0.45	.129	1		
OC	4.428	0.40	.425**	.569**	1	
OP	4.369	0.35	.839**	.0051	.265**	1

Note: \*\* $p<.01$ ; S.D=standard deviation; CBC=cybernetic controls; RCC=rewards and compensation controls; OC=organizational capabilities; OP=organizational performance

#### 5.5 The structural model and hypotheses testing

After establishing reliability and validity of the instruments the next move is the testing of hypothesis that we proposed upper. Two things are used in SmartPLS 3.0 to test the hypotheses like Algorithm and Bootstrapping. In current study, five direct and two indirect hypotheses as mentioned in Table 4. In

current study, total seven hypotheses developed and out of these hypotheses one direct hypotheses insignificant and remaining six hypotheses significant. Cybernetic controls has significant and positive influence on organizational performance ( $\beta=0.190$ ,  $t=2.02$ ,  $p<0.05$ ) and supported  $H_1$ . Rewards and compensation controls have significant but

negative influence on organizational performance ( $\beta=-0.209$ ,  $t=-2.38$ ,  $p>0.05$ ) and  $H_3$  not supported. Cybernetic controls have significant and positive influence on organizational capabilities ( $\beta=0.142$ ,  $t=2.89$ ,  $p<0.05$ ) and our hypotheses  $H_2$  accepted. Rewards and compensation controls have significant and positive influence on organizational capabilities ( $\beta=0.403$ ,  $t=4.94$ ,  $p<0.05$ ) and our  $H_4$  hypotheses accepted. Organizational capabilities have significant and positive influence on organizational performance ( $\beta=0.243$ ,  $t=3.21$ ,  $p<0.05$ ) and our hypotheses  $H_5$  supported. Based on the results related to mediating associations, the results revealed that organizational capabilities positively mediates the association

between independent variable (cybernetic control) and dependent variable (organizational performance) ( $\beta=0.134$ ,  $t=3.12$ ,  $p<0.05$ ) and our hypotheses  $H_6$  accepted. Moreover, organizational capabilities mediates the relationship between rewards and compensation and organizational performance ( $\beta=0.119$ ,  $t=3.04$ ,  $p<0.05$ ) and our hypotheses  $H_7$  supported. To determine the mediation to use this approach like using bootstrapped and confidence interval some previous researchers give argument that this technique is superior than Baron and Kenny [70] traditional approach [71, 72].

**Table 4 Structure equation modeling**

Indication of relationship of constructs	Standardized estimate	S.E	C.R	P-value	results
CBC --> OP	0.190	0.094	2.02	0.046	Sig
CBC --> OC	0.142	0.078	2.89	0.002	Sig
RCC --> OP	-0.209	0.088	-2.38	0.019	Not Sig
RCC --> OC	0.403	0.082	4.94	0.000	Sig
OC --> OP	0.243	0.076	3.21	0.001	Sig
CBC -->OC-->OP	0.134	0.072	3.12	0.000	Sig
RCC -->OC-->OP	0.119	0.078	3.04	0.000	Sig

## 6. DISCUSSION AND CONCLUSION

The objective of this research was to examine the influence of cybernetic control, and rewards and compensation control on organizational performance with the mediating variable organizational capabilities. Results elucidated that cybernetic control have positive and significant impact on organizational performance and our hypotheses  $H_1$ . The results is same with the results of [73]. Moreover, findings elucidated that rewards and compensation control have significant but negative influence on organizational performance and our hypotheses  $H_3$  not accepted. The findings are same with the work of [53]. While, findings are not consistent with the findings of [73]. Furthermore, rewards and compensation controls have significant and positive impact on organizational performance and our hypotheses  $H_4$  accepted. The results are same with the work of [9, 20]. Meanwhile, there is positive and significant impact of organizational capabilities on organizational performance and our hypotheses  $H_5$  accepted. The results and same with the results of [33, 60]. Organizational capabilities positively mediate the association between cybernetic controls and organizational performance and our hypotheses  $H_6$  accepted. Furthermore, organizational capabilities positively mediate the association between rewards

and compensation controls and organizational performance and our hypotheses  $H_7$  supported. In this study, we are using RBV theory to explain the relationship between cybernetic controls, rewards and compensation controls, organizational capabilities, and organizational performance. Current study contributes in the literature of cybernetic controls, rewards and compensation controls, organizational capabilities, and organizational performance. Current study conducted in Pakistani textile industry because this area has less attention in both manufacturing and service sector.

## 7. LIMITATIONS AND RECOMMENDATIONS

In this study like other prior studies some limitations that should be focused in the future studies with respect of same variables as used in current study. First, this study conducted in developing country like Pakistan and in manufacturing sector. Future research can be conducted in other developing and developed countries in manufacturing as well as service sector because we cannot ignore service sector. Second, in current research we use small sample and in future this study can be conducted with increasing sample size. Third, in this research we use only cybernetic controls, rewards and compensation control in determining the performance of an organization and

in future there is need to add other variables including these variables such as planning controls, cultural control, and administrative controls in examining organizational performance. Fourth, in developed as well as developing countries there is need to study MCS as a package as well as MCS levers of control to examine organizational performance. In future examine the influence of MCS as a package on organizational performance by using resource orchestration theory. Future studies can use MCS as a package as independent variable; organization culture and organizational capabilities as moderating/mediating variable with organizational performance in developing and developed countries. Future studies can use MCS as a package with organizational performance by using RBV theory.

#### REFERENCES

1. Richard, P.J., et al., Measuring organizational performance: Towards methodological best practice. *Journal of Management*, 2009. **35**(3): p. 718-804.
2. Henri, J.-F., Performance measurement and organizational effectiveness: Bridging the gap. *Managerial Finance*, 2004. **30**(6): p. 93-123.
3. Venkatraman, N. and V. Ramanujam, Measurement of business economic performance: An examination of method convergence. *Journal of management*, 1987. **13**(1): p. 109-122.
4. Hamon, T.T., Organizational effectiveness as explained by social structure in a faith-based business network organization. 2004.
5. Abu-Jarad, I.Y., N.a. Yusof, and D. Nikbin, A review paper on organizational culture and organizational performance. *International Journal of Business and Social Science*, 2010. **1**(3).
6. Li, Y.-H., J.-W. Huang, and M.-T. Tsai, Entrepreneurial orientation and firm performance: The role of knowledge creation process. *Industrial marketing management*, 2009. **38**(4): p. 440-449.
7. Henri, J.-F., Management control systems and strategy: A resource-based perspective. *Accounting, organizations and society*, 2006. **31**(6): p. 529-558.
8. Kariyawasam, A., Impact of management control systems on the return on sales of manufacturing companies in Sri Lanka. *Journal of Business and Retail Management Research*, 2014. **8**(2).
9. Koufteros, X., A.J. Verghese, and L. Lucianetti, The effect of performance measurement systems on firm performance: A cross-sectional and a longitudinal study. *Journal of Operations Management*, 2014. **32**(6): p. 313-336.
10. Hussain, M. and A. Gunasekaran, Non-financial management accounting measures in Finnish financial institutions. *European Business Review*, 2002. **14**(3): p. 210-229.
11. Kaplan, R. and D.P. Norton, The Balanced Scorecard-Measures that Drive Performance. *Harvard Business Review*, 1992. **70**(1).
12. Kaplan, R. and D.P. Norton, Using the balanced scorecard as a strategic management system. 1996, Harvard business review Boston.
13. Aftab, A., et al., Causes of Workplace Stress in Textile Industry of Developing Countries: A Case Study from Pakistan, in *Advances in Social & Occupational Ergonomics*. 2017, Springer. p. 283-294.
14. Ataullah, M., A. Sajid, and M. Khan, Quality related issues and their effects on returns of Pakistan textile industry. *Journal of Quality and Technology Management*, 2014. **10**(1): p. 69-91.
15. Iqbal, M.S., et al., Development of Textile Industrial Clusters in Pakistan. *Asian Social Science*, 2010. **6**(11): p. 123.
16. Shah, U.A. Warraich, and K. Kabeer, Challenges Faced by Textile Industry of Pakistan: Suggested Solutions. *KASBIT Business Journal*, 2012. **5**: p. 33-39.
17. Maqbool-ur-Rehman, S., Whic management accounting techniques influence profitability in the manufacturing sector of Pakistan? *Book Review*, 2011. 53.
18. Hanafi, E. and Z. Fatma, The effect of the integration between levers of control and swot analysis on organizational performance: balanced scorecard approach. *International Journal of Academic Research*, 2015. **7**(1).
19. Duréndez, A., et al., Management control systems and performance in small and medium family firms. *European Journal of family business*, 2016. **6**(1): p. 10-20.
20. Ballesteros Orozco, D., IUnderstanding the impact of Management Control Systems over capabilities and organizational performance, under the influence of perceived environmental uncertainty. 2016.
21. Acquaah, M., Management control systems, business strategy and performance: A comparative analysis of family and non-family businesses in a transition economy in sub-Saharan Africa. *Journal of Family Business Strategy*, 2013. **4**(2): p. 131-146.
22. Akroyd, C. and W. Maguire, The roles of management control in a product development setting. *Qualitative Research in Accounting & Management*, 2011. **8**(3): p. 212-237.
23. Auzair, S.M. and K. Langfield-Smith, The effect of service process type, business strategy and life



- cycle stage on bureaucratic MCS in service organizations. *Management Accounting Research*, 2005. 16(4): p. 399-421.
24. Baines, A. and K. Langfield-Smith, Antecedents to management accounting change: a structural equation approach. *Accounting, Organizations and Society*, 2003. 28(7): p. 675-698.
25. Davila, T., An empirical study on the drivers of management control systems' design in new product development. *Accounting, Organizations and Society*, 2000. 25(4): p. 383-409.
26. Henri, J.-F. and M. Journeault, Eco-control: The influence of management control systems on environmental and economic performance. *Accounting, Organizations and Society*, 2010. 35(1): p. 63-80.
27. Lopez-Valeiras, E., M.B. Gonzalez-Sanchez, and J. Gomez-Conde, The effects of the interactive use of management control systems on process and organizational innovation. *Review of Managerial Science*, 2016. 10(3): p. 487-510.
28. Tsamenyi, M., S. Sahadev, and Z.S. Qiao, The relationship between business strategy, management control systems and performance: Evidence from China. *Advances in Accounting*, 2011. 27(1): p. 193-203.
29. Bin-Nashwan, S.A., N.S. Abdullah, and M.M. Obaid, A review of literature in management control system (MCS) business strategy, and firm performance. *International Journal of Management Research and Reviews*, 2017. 7(2): p. 99.
30. Dropulic, I., Design of management control systems—A study of joint stock companies in Croatia. *Management: Journal of Contemporary Management Issues*, 2014. 19(2): p. 157-167.
31. Dropulic, I., The effect of contingency factors on management control systems: a study of manufacturing companies in Croatia. *Economic Research-Ekonomska Istraživanja*, 2013(1): p. 369-382.
32. Junqueira, E., et al., The Effect of Strategic Choices and Management Control Systems on Organizational Performance. *Revista Contabilidade & Finanças*, 2016(AHEAD): p. 0-0.
33. Obeidat, B.Y., et al., The Effect of Intellectual Capital on Organizational Performance: The Mediating Role of Knowledge Sharing. *Communications and Network*, 2017. 9(01): p. 1.
34. Richards, P., et al., Measuring organizational performance as a dependent variable: Towards methodological best practice. *Strategic Management Journal*, 2008.
35. Lusthaus, C. and M.-H. Adrien, Organizational assessment: A review of experience. *Universalia Occasional Paper*, 1998. 31.
36. Dess, G.G. and R.B. Robinson, Measuring organizational performance in the absence of objective measures: the case of the privately-held firm and conglomerate business unit. *Strategic management journal*, 1984. 5(3): p. 265-273.
37. Fisher, J.G., Contingency theory, management control systems and firm outcomes: past results and future directions. *Behavioral Research in Accounting*, 1998. 10: p. 47.
38. Malmi, T. and D.A. Brown, Management control systems as a package—Opportunities, challenges and research directions. *Management accounting research*, 2008. 19(4): p. 287-300.
39. Abernethy, M.A. and P. Brownell, The role of budgets in organizations facing strategic change: an exploratory study. *Accounting, Organizations and Society*, 1999. 24(3): p. 189-204.
40. Kaplan, R. and D.P. Norton, The balanced scorecard: translating strategy into action. 1996: Harvard Business Press.
41. Kaplan, R. and D.P. Norton, Transforming the balanced scorecard from performance measurement to strategic management: Part I. *Accounting Horizons*, 2001. 15(1): p. 87-104.
42. Flamholtz, E.G., T. Das, and A.S. Tsui, Toward an integrative framework of organizational control. *Accounting, Organizations and Society*, 1985. 10(1): p. 35-50.
43. Bonner, S.E. and G.B. Sprinkle, The effects of monetary incentives on effort and task performance: theories, evidence, and a framework for research. *Accounting, Organizations and Society*, 2002. 27(4): p. 303-345.
44. Grant, R.M., The resource-based theory of competitive advantage: implications for strategy formulation. *California management review*, 1991. 33(3): p. 114-135.
45. Abdullahi, S.R., et al., The role of budget and budgetary control on organizational performance: A case study of tahir guest house, kano state, Nigeria. *International Journal of Innovative Research in Information Security*, 2014. 4(2): p. 22-28.
46. Pimpong, S. and H. Laryea, Budgeting and its impact on financial performance: The case of non-bank financial institutions in ghana. *International Journal of Academic Research and Reflection*, 2016. 4(5).
47. Mutai, N.K., Influence of balanced scorecard on performance of safaricom kenya limited. 2015, School of business, university of Nairobi.

48. Anthony, R.N., Planning and Control Systems: A Framework for Analysis [by]. 1965: Division of Research, Graduate School of Business Administration, Harvard University.
49. Hoque, Z., A contingency model of the association between strategy, environmental uncertainty and performance measurement: impact on organizational performance. *International Business Review*, 2004. 13(4): p. 485-502.
50. Mohamed, R., et al., Strategic Performance Measurement Systems and Organisational Capabilities: Using Levers of Control. 2008.
51. Hameed, A., M. Ramzan, and H.M.K. Zubair, Impact of compensation on employee performance (empirical evidence from banking sector of Pakistan). *International Journal of Business and Social Science*, 2014. 5(2).
52. Mehran, H., Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics*, 1995. 38(2): p. 163-184.
53. Rizal, M., M. Idrus, and M.R. Djumahir, Effect of compensation on motivation, organizational commitment and employee performance (studies at local revenue management in Kendari city). *International Journal of Business and Management Invention*, 2014. 3(2): p. 64-79.
54. Simons, R., Levers of Control (Boston: Harvard Business School Press). 1995.
55. Chenhall, R.H., Integrative strategic performance measurement systems, strategic alignment of manufacturing, learning and strategic outcomes: an exploratory study. *Accounting, Organizations and Society*, 2005. 30(5): p. 395-422.
56. Ittner, C.D., D.F. Larcker, and T. Randall, Performance implications of strategic performance measurement in financial services firms. *Accounting, Organizations and Society*, 2003. 28(7): p. 715-741.
57. Barney, J.B., Firm resources and sustained competitive advantage. *Journal of Management*, 1991. 17(1): p. 99-120.
58. Penrose, E., The Theory of the Growth of the Firm Wiley. New York, 1959.
59. Onyango, N.G., et al., Organizational capabilities and performance of sugar companies in Kenya. *International Journal of Management Research & Review*, 2012. 5(10).
60. Shurafa, R. and R.B. Mohamed, Management control system, organizational learning, and firm's performance: An empirical study from developing economy. *International Journal of Advanced and Applied Sciences*, 2016. 3(10): p. 79-88.
61. Nuhu, N.A., K. Baird, and R. Appuhami, The Association between the Use of Management Accounting Practices with Organizational Change and Organizational Performance, in *Advances in Management Accounting*. 2016, Emerald Group Publishing Limited. p. 67-98.
62. Uyar, A. and C. Kuzey, Does management accounting mediate the relationship between cost system design and performance? *Advances in Accounting*, 2016. 35: p. 170-176.
63. Rasid, S.Z.A., et al. The Mediating Effect of Management Accounting Systems on the Relationships between Contextual Variables and Organizational Performance. in *Global Business and Social Science Research Conference*, Radisson Blu Hotel, Beijing, China. 2011.
64. Hanzlick, M. and R. Brühl, bManagement Control Systems as a package. 2013.
65. Teeratansirikool, L., et al., Competitive strategies and firm performance: the mediating role of performance measurement. *International Journal of Productivity and Performance Management*, 2013. 62(2): p. 168-184.
66. Henri, Management control systems and strategy: A resource-based perspective. *Accounting, organizations and society*, 2006. 31(6): p. 529-558.
67. Nunnally, J., Psychometric Theory (2nd Edit.) McGraw-Hill. Hillsdale, NJ, 1978.
68. Meyers, L.S., G. Gamst, and A.J. Guarino, Applied multivariate research: Design and interpretation. 2016: Sage publications.
69. Fornell, C. and D.F. Larcker, Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 1981: p. 39-50.
70. Baron, R.M. and D.A. Kenny, The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 1986. 51(6): p. 1173.
71. MacKinnon, D.P., A.J. Fairchild, and M.S. Fritz, Mediation analysis. *Annu. Rev. Psychol.*, 2007. 58: p. 593-614.
72. Zhao, X., J.G. Lynch Jr, and Q. Chen, Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of consumer research*, 2010. 37(2): p. 197-206.
73. Chhillar, P., Management control systems and corporate governance: a theoretical review. *Asia-Pacific Management Accounting Journal*, 2016. 10(2).