

An Investigation of a Contingency Framework of Management Accounting Practices in Manufacturing Companies of Pakistan

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Abstract

The main purpose of this study is to validate empirically whether the contingent factors that are being utilized abroad also exist in the establishments of Pakistan. Researcher has tried to assess the MA system utilized in Pakistan which was not explored up till now in its entirety. Four contextual variables were considered for this study i.e. strategy (STRG), advance manufacturing technology (AMTEH), top management support (TOPMS) and market orientation (MOR) to develop a contingent framework among these factors, management accounting (MA) and company performance (CPEP). Questionnaire was used to collect data from different manufacturing sectors. The data was collected through non probability sampling technique i.e. (Convenience sampling). Before applying structural equation modeling (SEM), reliability test, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) was applied to finalize the data. The results revealed that all the hypotheses were supported except for H4 which means that STRG, TOPMS and AMTECH have a significant effect on MA; STRG, MOR and MA have a significant effect on CPEP whereas MOR has an insignificant effect on CPEP. Such investigation offers a prospective for scholars to study these tools that are productively engaged by corporations.

Keywords: Contingency Framework, Strategy, Management Accounting, Company Performance.

1. Introduction

During couple of decades researchers have been investigating on management accounting (MA) techniques, its utilization, contingent factors and their effect on performance of business concerns. According to Weygandt, Kimmel, and Kieso (2010) MA furnishes both economic and financial data to supervisors and internal staff stakeholders. This means that MA plays a key role in company's achievements and failure as it plays an important role in company's decision making. This contingent theory has been utilized both in MA and management researches (Henri, Boiral, & Roy, 2015 and Cadez & Guilding, 2012). Establishments ought to be contingent on the situations that they are currently facing, so, no particular MA system is best of all establishments (Otley, 1980 and Oates, 2015). This means that in order to improve performance of an establishment the type of MA system that has been installed there, should be in accordance with the situation that is being currently faced by that organization. Contingency theory is grounded on the premise that the performance of the concern will improve if MA and contingent variable have a good fit between them. This concept of fit has gained remarkable consideration, and has also a long tradition (Otley, 1980, Chenhall, 2003; & Greve, 2004) in literature related to accounting. The ultimate idea behind this concept is to study performance and contingencies holistically so as to understand the relationship between performance and variables that are related to corporation (Drazin and Van de Ven, 1985). So the emphasis is on numerous contingencies and design components instead of on variables that are stressed in the selective and interactive methodologies. Assessing the role played by these contingent aspects and MA techniques will provide management of these concerns with pertinent and precise information to strengthen the position of their organization which in turn results in impact of their operation on the welfare of society and ultimately on economy. So, these types of theories that are based on contingencies can be utilized to further understand the application of MA techniques in manufacturing concern.

For any country's economy, manufacturing sector is just like a spinal cord in human body. In Pakistan it accounts for 13.3% and 14.2% of GDP and employed labor force respectively. However in spite of importance of this sector and also abundant studies that are being carried out on this area, to the best of research's understanding, there is a drought of researches on MA techniques and its contingent factors in Pakistan, mainly in case of manufacturing concerns. If eventually the aim of MA research that is based

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on contingencies is to examine a detailed framework that consist of not only numerous accounting schemes but also contingent and resultant variables (Fisher, 1995), it seems that this research would be a step forward towards the anticipated path (Cadez & Guilding, 2008) particularly from the point of view of Pakistan.

Effectiveness of accounting system is contingent on its compatibility according to the variation in internal and external facets. Four contextual variables are considered for this study that includes three internal ones i.e. strategy (STRG), advance manufacturing technology (AMTEH) and top management support (TOPMS) whereas one in external one i.e. market orientation (MOR) to develop an contingent framework among these factors, MA and company performance (CPER). Thus, through this attempt the researcher is trying to assess MA system utilized in Pakistan which was not explored up till now in its entirety. Therefore an attempt is being made by the researcher to validate empirically that the contingent factors that are being utilized abroad, are existing in the establishments of Pakistan as well. Such investigation offers a prospective for scholars to study these tools that are productively engaged by corporations.

2. Review of Previous Literature and Hypothesis Development

2.1 Top Management Support

TOPMS plays a critical role in ascertaining the utility of information system in establishments. It is the determination of top supervisors for the success of project by providing necessary means and authority. These people provide company with a vision to improve performance and plan the reform efforts accordingly. They have the vital responsibility of the aspects related to administration, operation and performance. So according to Tarawneh (2010) the utility of MA system depends on TOPMS. According to experts recommendation TOPMS is ultimately liable for the utility of MA execution (Adler et al, 2000; Benjamin et al, 2010). By using various activities researchers have scientifically tested that TOPMS and system's performance are linked positively. Same concept has been applied by Bodnar and Hopwood (2010) and found that among others factors TOPMS is also the one which effects the utilization of accounting information systems. According to Godil D.I and Warraich U.I (2015), TOPMS which is the part of behavioral and organizational aspects has a significant effect on ABC. This concept is in line with Shields (1995) that effective usage of ABC has a link with behavioral and organizational aspects which also includes TOPMS. Ma and Tayles (2009) revealed the fact that modern MA systems shall be utilized if they fulfill the needs of senior management and that is unlikely without the support of senior management. So, the relationship between TOPMS and MA system is further explored through this research and according to above mention explanations the suggested hypothesis is:

H1: TOPMS has a significant effect on the usage of MA systems in manufacturing concerns of Pakistan.

2.2 Advance Manufacturing Technology

Competition is increased in local as well as international markets due to increase in production and expansion in information technology (Laitinen, 2001), which results in updating manufacturing system by these concerns so that they can compete in market (Mia and Clarke, 1999). In order to achieve this task establishment uses AMTEH along with other usual strategies. Enhanced usage of AMTEH leads to alteration in manufacturing processes and utilization of information needs which ultimately leads to changes in MA processes so the demands of AMTECH can be fulfilled (Johnson and Kaplan, 1987). According to Ahmad (2012) the influence of AMTECH on MA system is not only positive but also significant. Companies with sophisticated technology should also use sophisticated MA system to improve outputs and performance (Khandwalla, 1977). According to a research in Poland by Szychta (2002), technology is considered as one of the driving force due to which change in MA system occurs. Abdel-Maksoud et.al. (2005) found the presence of unconventional MA systems in those companies, whom have substantially invested in Just in Time (JIT), AMTECH and Total quality management (TQM). Similarly according to Abdel-Kader and Luther (2008) MA system's changes are explained by the application of AMTECH, TQM and JIT. Positive relation between the expansion of production technology in an organization and MA system has been found out by (Haldma and Laats, 2002; McLean et.al. 2014).

Here the researcher has also tried to explore the relationship between AMTECH and CPER. According to Koc, T. and E. Bozdag (2009) the rapid expansion in range and accessibility of choices in

AMTECH opens key opportunities for not only improving what has been done earlier but also for more essential alternatives that direct towards a vital situation for long term competitiveness. Efstathiades, A.et.al. (2002) found that AMTECH empowers corporations to balance small-batch along with custom-order operations to achieve low-cost efficiency of standardized production in bulk. According to Choobineh F. (1986) AMTECH works on enhancing the overall effectiveness of production system. Pagell M (2000) found that for improving cost, delivery, flexibility and quality producers depends on AMTECH to achieve competitive advantage. Small and Yasin (1997) found that companies that have implemented AMTECH have accomplished better performance factors as compared to those whom have not implemented it. Plants with AMTECHs and are capable of making best fit structure and technology demonstrates better performance (Ghani et al. 2002). So, In the light of aforementioned discussion the relationship between AMTECH, MA system and CPER is further explored through this research. Hence the suggested hypotheses are:

H2: Usage of AMTEH in manufacturing concerns of Pakistan has a significant effect on the usage of MA systems in manufacturing concerns of Pakistan.

H3: Usage of AMTEH in manufacturing concerns of Pakistan has a significant effect on their performance.

2.3 Market Orientation

According to Deshpande and Webster (1993) research, MOR is custom of companies that have precise joint beliefs and principles in assigning the consumer at priority while planning about business. Slater and Narver (1994) discovered that increase in company's existing MO will improve its existing performance in the market. Additionally, according to Ngai & Ellis (1998) there is a strong and positive relation between market oriented firms and their performance. Market oriented organizations shall be in a position to create more value for the clients (Reed et al., 2000) which ultimately results in superior performance of company. Hasnain J.et.al. (2015) found a significant influence of MOR on SMEs performance. According to Kaynak and Kara (2004) MOR is that custom of organization which proficiently creates the needed behavior for the growth of exceptional benefits for clients and finally for the continuous exceptional organizational performance. So, the relationship between MOR and performance is further explored through this research and according to above mention explanations the suggested hypothesis is:-

H4: MOR by manufacturing concerns of Pakistan has a significant effect on their performance.

2.4 Strategy

Structure (STRU) and STRG are vital for consistency in business (Moores and Yuen 2001). In previous literatures both have been recognized as an important component of MA practices. Langfield-Smith (1997) found strategy as a key contingent variable. According to a research of Kober, Ng and Paul (2007) on Australian corporations a two way relationship has been found between STRG and MA system. Kloot (1997) discovered that MA practices at the same time influences on and is influences by strategy. Simons (1987) has included STRG into environmental and technical factors specified by (Waterhouse and Tiessen, 1978). According to Miles, R.E., & Snow, C.C, (1978) strategy of an organization has an influence on MA system. Amara & Benelifa, (2017) have found a significant relation between strategy and MA practices. Gosselin (1997) found that strategy influences the implementation of ABC in strategic businesses.

This research also focuses on how companies use strategies to improve performance. As per some analysts, an organization's strategy is set in accordance to feedback in a competitive environment, and the appropriate match between strategy and environment can increase performance of the company (Chenhall & Langfield-Smith, 2003). According to some researchers viewpoint i.e. Hammad et al, (2010) and Trkman (2010) strategic priorities ought to be backed by recommended MA processes so that the performance can be supported. So, customized MA processes that assist strategies can result in competitive advantage and superior performance. According to Kaplan and Norton (1996) appropriate system for gauging performance encourages actions that are consistent with organization's strategy. So, through current research relationship between STRG, MA system and CPER is further explored and according to above mention explanations the suggested hypotheses are:

H5: STRG adopted by manufacturing concerns of Pakistan has a significant effect on their usage of MA systems.

H6: STRG adopted by manufacturing concerns of Pakistan has a significant effect on their performance.

2.5 Management Accounting

It is documented that MA practices are vital to the success of the company (Hornngren, et al., 2009). Burns and Scapens (2000) proposed that modification in environment might change companies, which ultimately alters the MA practices. According to best of researcher's knowledge and researches that were found by the researcher on application of MA techniques on Pakistani industry, revealed that in these industries still conventional MA system is being followed i.e. according to Maqbool-ur-Rehman (2011), Pakistani manufacturing concerns utilizes traditional MA techniques and hence contemporary MA techniques were not used by many companies. Similarly Godil D.I and Shabib (2013) found that lack of support from top administration, satisfaction of management with current system of costing and dearth of resources were some of the reasons for not implementing activity based costing (ABC) in their textile companies. Same results were found by (Bescos et al., (2002), Cohen et al., (2005) and Askarany & Yazdifar (2007) which were in line with the findings of (Godil D.I and Waraich U.I 2015). Some researchers have anticipated that benefits of traditional MA system could be greater than contemporary methods (Chenhall and Langfield-Smith, 1988). Jiambalvo (2010) noticed that MA is related to utilization of facts and figures to plan and control operation effectively and to make business decisions effectively. Laitinen (2006) identifies that changes in MA methods may have an impact on financial performance. So according to above mention explanations the suggested hypothesis is;

H7: Usage of MA system by manufacturing concerns of Pakistan has a significant effect on their performance.

2.6 Company Performance

Khandwalla (1977) defined performance of corporation as the net result of the joint initiatives of all persons and groups in a company. Performance can be defined in different ways depending upon the point of examination such as for society it is effectiveness of manufacturing processes of those goods that are required by the society, for owner, benchmark would be productivity and earning's growth rate, for employees, treatment of management with them, and for customers, it is different aspects related to product such as price, quality and delivery dates etc. So several aspects need to be considered by management while deciding on their objectives (Khandwalla, 1977). According to Ajibolade (2013) data related to financial performance such as ROA and sales growth is difficult to obtain from owners or management because they are reluctant to provide these types of data. So, subjective measures are recommended by them due to difficulty in obtaining objective measures. According Hoque (2005) traditional (objective) performance measures shall not be used in uncertain business conditions as they are not able to show proper performance of company.

3 Methodology

The structured questionnaire was used to collect data from different manufacturing sectors. The questionnaire was adopted from previous researches such as Grover (1993); Krumwiede (1998); Guilding and McManus (2002); Langfield-Smith (2003); Hoque (2004); Abdel-Kader and Luther (2006); Isa & Thye (2006); Jusoh & Parnell (2008) and Askarany & Smith (2008). The data was collected through non probability sampling technique i.e. (Convenience sampling). The method was used due to reluctance of managers to disclose the data. According to Kent (2001) minimum of 100 data points are required for quantitative data analysis. This might result in more realistic and relevant results. D. Smith & Langfield-Smith (2004) indicated that although the recommended sample size is 200 data points to create suitable fit measures and to avoid inappropriate inferences. So here both the requirements are being fulfilled by taking the sample of 251 companies. Data on internal factors i.e. (STRG, AMTEH and TOPMS), external factors i.e. (MOR); MA and CPER was collected by using 5-point Likert scale to rate the intensity of usage of these variables among manufacturing companies of Pakistan. The questionnaire was designed in consultation with experts and was tested through pilot study among manufacturing companies of Pakistan. Due to this procedure slight changes were made to make the questionnaire according to Pakistani markets. STRG and MOR were measured through 3 questions, TOPMS was measured through 4 questions, AMTECH and MA

was measured through 5 questions and CPER was measured through 7 questions. The relationship among variable is shown in Figure 1.

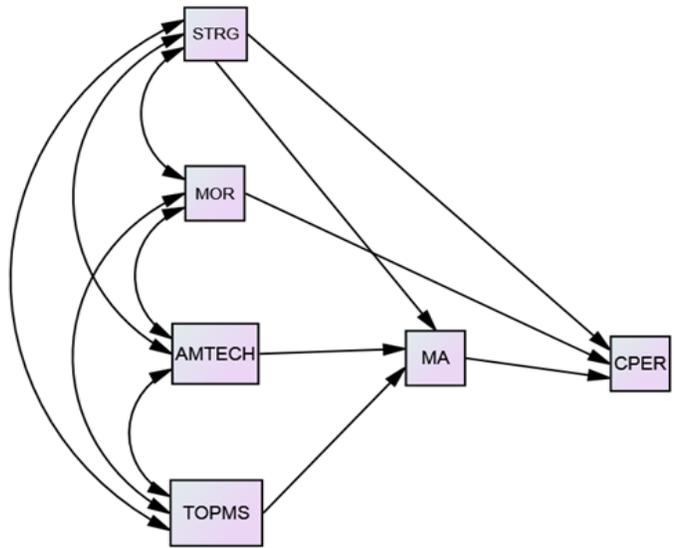


Figure No. 1 Conceptual Model

Before applying structural equation modeling (SEM), reliability test, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) was applied to finalize the data.

4 Results

In Table 1 correlation matrix has been shown which depicts the correlation of independent variables.

Table No. 1: Correlation b/w Variables (Independent)

	AMTECH	STRG	TOPMS	MOR
AMTECH	1.00	0.225	0.318	0.003
STRG	0.225	1.00	0.401	-0.108
TOPMS	0.318	0.401	1.00	-0.177
MOR	0.003	-0.108	-0.177	1.00

Through this matrix, issue of multicollinearity has been tested. So here it is evident that there is no issue of multicollinearity in this model as the correlation between the variables is weak i.e.(≤ 0.8).

4.1 Reliability

In Table 2 results of reliability test has been presented through Cronbach alpha's value. According to Nunnally (1978), it is vital for validation of data, whereas, consistency level between to measures is highlighted through this.

Table No. 2: Outcomes of Reliability Analysis

Variables	Items	α Values
Company Performance	7	0.869
Management Accounting	5	0.806
Advance Manufacturing Technology	5	0.889
Strategy	3	0.811
Top Management Support	4	0.827
Market Orientation	3	0.719
Overall	27	0.862

The values are between 0.719 - 0.889 which are more than 0.60, the least criteria presented by (Hair, Anderson, Tatham, & Black, 1998).

4.2 Kaiser–Meyer–Olkin (KMO) and Bartlett’s Tests of Sampling Adequacy

The sampling adequacy of research has been checked through (KMO) and Bartlett’s tests shown in Table 3. For all items the KMO value is 0.868 i.e. 86.8%, which shows the satisfactory level of sampling adequacy in comparison with bench mark of 0.5, i.e. 50% (Leech, Barrett, & Morgan, 2005, p. 82). The substantial difference in the properties of correlation matrix and identity matrix has been shown with the help of Bartlett’s test of sphericity in Table 3.

Table No. 3: Results of KMO and Bartlett’s tests.

KMO measure of sampling adequacy	0.868
Bartlett’s test of sphericity approx. chi-square	3125.797
Degree of freedom (Dof)	351
Probability	0.000

According to Leech et al., (2005, p. 82) if the value is less than 0.05 it shows a substantial difference. So here the data is suitable for factor analysis as p value is significant at 1% level.

4.3 Total Variance Explained

Total variance explained is utilized to explain the variance partition among prospective variables. Eigenvalues of more than 1.0 shows the utility of factors, which is evident in Table 4. Additionally cumulative value of all 6 factors is 64.44%.

Table No. 4: Results of variance explained.

Items	CPER	MA	AMTECH	STRG	TOPMS	MOR
Eigenvalues	7.70	2.75	2.14	1.82	1.72	1.28
Variance explained by each factor in %	28.50	10.18	7.93	6.73	6.37	4.73
Cumulative variance explained in %	28.50	38.68	46.61	53.34	59.71	64.44

4.4 Factor Analysis

4.4.1 Exploratory Factor Analysis

Further Exploratory factor analysis has been carried out though principal component method by Varimax rotation as shown in Table 6. The same has been used by other researchers (Amin, 2012; Raza et al., 2015). A questionnaire consisted of 54 questions was reduced to 27 items representing 6 groups of items. Additionally as the factor loading is greater than 0.50 it is said to be significant and considerable for analysis of data (Kaiser, 1974), and hence displaying strong validities i.e. construct and convergent validity, whereas, discriminant validity also exists as there was no cross loading in rotated component matrix (Tharenou et al., 2007).

Table No. 6: Results of Principal Components Analysis

Items	Company Performance	Advance Manufacturing Technology	Management Accounting	Top Management Support	Strategy	Market Orientation
CPER 1	.790					
CPER 2	.779					
CPER 3	.738					
CPER 4	.705					
CPER 5	.704					
CPER 6	.649					

CPER 7	.599								
AMTECH 1		.882							
AMTECH 2		.851							
AMTECH 3		.824							
AMTECH 4		.810							
AMTECH 5		.620							
MA 1			.733						
MA 2			.728						
MA 3			.726						
MA 4			.638						
MA 5			.634						
TOPMS 1				.807					
TOPMS 2				.794					
TOPMS 3				.770					
TOPMS 4				.691					
STRG 1					.813				
STRG 2					.777				
STRG 3					.767				
MOR 1								.818	
MOR 2								.776	
MOR 3								.774	

4.4.2 Confirmatory Factor Analysis (CFA)

CFA shows the relationship of observed variable with unobserved variable (Byrne, 2010). Here the researcher has used eight Goodness of Fit (GoFit) indices to analyze the model. According to different researchers, for e.g. Bentler (1990), Marcoulides and Schumacker (2001), Byrne (2010) and Kline (2011) following measures are utilized extensively i.e. the proportion of χ^2 statistics to DoFr (CMIN/DoF), GoF index (GFI), adjusted GoF index (AGFI), normed fit index (NFI), Tucker-Lewis Index (TLI), comparative fit index (CFI) and root mean square error of approximation (RMSEA) with PCLOSE.

Table No.7. Model Fit Statistics

Goodness of Fit Measures	CMID/DF	ECVI	GFI	AGFI	NFI	CFI	TLI	RMSEA	PCLOSE
	2.79	0.174	0.99	0.92	0.979	0.986	0.89	0.085	0.179

In Table 7 (CMIN/DoF) is 2.79 and it is less than 3 with a (p-value) of (0.000) as suggested by Byrne (2010). Other indices of model-fit include ECVI = 0.174; GFI = 0.99; AGFI = 0.92; NFI = 0.979; CFI = 0.986; TLI = 0.89 and RMSEA = 0.085 with (PCLOSE = 0.179). The blend of these outcomes proposes that the CFA model seems to display a good model-fit in between the variables i.e. observed and unobserved (Byrne, 2010).

4.5 Structural Relationship among Variables by Using SEM

With the help of above analysis, it was found a good model fit so now the researcher was in the position to find out the results of hypothesized model through SEM (Byrne, 2010). Figure 1 illustrates the structural relationship among the variables i.e. TOPMS, AMTEH, MOR, STRG, MA and CPER.

4.5.1 Test of generalizability

The study used ECVI in SEM analysis to test whether the research findings may be generalized or expected to cross-validate in a new sample (Loehlin, 2004). However it has no specified range (Byrne, 2010), but smaller results show more prospect of generalization (Herscovitch and Meyer, 2002, p. 479). Here the value of ECVI was 0.174 which shows great prospective of generalization within the same sector.

4.6 Hypotheses Testing

Total of seven hypotheses were tested in this study, the result of these are shown in Table 8. Critical ratio (CR) is the result of division of standardized regression weights (SRW) and standard error (SE). Each hypothesis is supported if CR is more than ± 1.96 (Byrne 2010). So here all the hypotheses were supported except for H4. Further it is clear from Table 8 that TOPMS has a significant and positive impact on MA with SRW and p-value of (0.141, 0.034) respectively, AMTEH has a significant and positive impact on MA with SRW and p-value of (0.245, 0.000) respectively, AMTEH has a significant and positive impact on CPER with SRW and p-value of (0.089, 0.016) respectively, STRG has a significant and positive impact on MA with SRW and p-value of (0.290, p 0.000) respectively, STRG has a significant and positive impact on CPER with SRW and p-value of (0.225, 0.000) respectively and MA has a significant and positive impact on CPER with SRW and p-value of (0.222, 0.000) respectively. However MOR has a negative insignificant impact on CPER with SRW and p-value of (-0.046, 0.132).

Positive and significant impact of STRG, TOPMS and AMTEH on MA is in line with previous researches for e.g. Szychta (2002), Kober, Ng and Paul (2007), Godil D.I and Warraich U.I (2015) and Amara & Benelifa, (2017). Similarly Positive and significant impact of MA, STRG and AMTECH on CPER is also in line with earlier researches i.e. Pagell M (2000), Chenhall & Langfield-Smith, (2003), Laitinen (2006), Koc, T. and E. Bozdog (2009), Hammad et al, (2010), Jiambalvo (2010) and Trkman (2010). However the insignificant result of MOR to CPER may be due to size of sample or due to environment of Pakistani manufacturing sector.

Table No. 8: Standardized Regression Weights for the Research Model

Hypothesis	Regression Path	SRW	SE	CR	p-Value	Remarks
H1	TOPMS \longrightarrow MA	0.141	0.067	2.115	0.034	Supported
H2	AMTECH \longrightarrow MA	0.245	0.042	5.841	***	Supported
H3	AMTECH \longrightarrow CPER	0.089	0.037	2.400	0.016	Supported
H4	MOR \longrightarrow CPER	-0.046	0.030	-1.507	0.132	Not Supported
H5	STRG \longrightarrow MA	0.290	0.058	5.011	***	Supported
H6	STRG \longrightarrow CPER	0.225	0.049	4.558	***	Supported
H7	MA \longrightarrow CPER	0.222	0.053	4.183	***	Supported

5 Conclusion and Discussion

The main purpose of this is to investigate the contingency framework of management accounting practices in manufacturing companies of Pakistan. Four contextual variables were considered for this study i.e. strategy (STRG), advance manufacturing technology (AMTEH), top management support (TOPMS) and market orientation (MOR) to develop an contingent framework among these factors, MA and company performance (CPER). Therefore an attempt was being made by the researcher to validate empirically that the contingent factors that are being utilized abroad, also exist in the establishments of Pakistan. The data was gathered from different manufacturing sectors with the help of questionnaire that was adopted from previous researches and includes 27 items. Convenience sampling was utilized due to reluctance of managers to disclose the data. The researcher has gathered the data from the sample of 251 companies. The researcher has applied different statistical tests to investigate the contingency framework of management accounting practices in manufacturing companies of Pakistan. The results revealed that all the hypotheses were supported except for H4 which means that STRG, TOPMS and AMTECH have a

significant effect on MA, STRG, MOR and MA have a significant effect on CPER whereas MOR has an insignificant effect on CPER.

6 Recommendations

The findings of this research can be useful for conceptualization and for further application in different industries. It was found here that the model applies in western countries is equally applicable in Pakistan. The results suggest that there is a need to an increased utilization of AMTECH in Pakistani manufacturing businesses as it helps to achieve better usage of MA and also to improve CPER. Companies with sophisticated technology should also use sophisticated MA system to improve outputs and performance. There is also a need to apply differentiation STRG to support MA and to improve CPER. Results also revealed that in Pakistan industries still conventional MA system is being followed, so there is need to upgrade this system to achieve better CPER. It is also suggested that proper training programs shall be arranged for the operators of MA techniques to boost the effectiveness of the system and ultimately to increase CPER.

7 Limitations and Future Research

The researcher has used qualitative tools to gauge the performance of businesses which is criticized due to lack of objectivity. Another issue is the lack of interest from respondents' side while filling these questionnaires, which results in incorrect data. For future researches more factors need to be explored that effect MA. Other sectors can also be included to widen the span of research. The changes in practices can be analyzed by collecting data for no. of years rather than for single year. Comparison of Pakistani businesses related to MA usage with businesses of developing nations can be carried out to further understand the phenomena.

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