

# Management Control System and Productivity

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## ABSTRACT

In this study, we determined the impact of management control system on productivity of firms. Specifically, we found that all four antecedents of management control system (financial control, administrative control, computer control and rewards & compensation) influence productivity in all three firms namely Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited (MPPKVVCL) (Power Sector), Bharat Sanchar Nigam Limited (Telecommunications) and Coal India Limited (Coal Industry).

**Keywords:** *Management control system. Productivity, MPPKVVCL, BSNL, CIL*

## 1. INTRODUCTION

The foundation of “Management Control System” (MCS) as a scholastic expression can be linked to the “Harvard Business School” (HBS) for the reason that the two major authors (Ross Walker and Robert Anthony) of this domain, were positioned at this institute who were also the most dominant leaders regarding the revolution from “Accounting” to “MCS” (Strauss & Zecher, 2013). However, it was two authors, Walker and Anthony who started the rising development that was fundamentally initiated by Thomas Sanders, as he was the first one who described “control” in accounting domain during the year 1921-22. Moreover, they were continuous in their efforts concerning the dissemination of ideas postulated by Earle Burchell. He was the first author that made the first suggestion to “Budgetary Control” in accounting domain during the year, 1922-23. As per the work of Zeff (2008), Richard Vancil, who had joined the HBS during the year, 1958, had stated that, for the duration of initial half of 1940’s time period, HBS was busy in the training exercise of military officials and individual executives. Moreover, their operation was related to the enhancement of their analytic ability with the intention of optimization of the management of sparse resources that were left for the country’s war efforts. At that time,

scholars were of the opinion that could be best described by the expression “pouring old wine into a new bottle” and hence, referred to it as the “Management Control”. Thus, it was for the first instance that the contemporary term of “Management Control” was formulated. Following the military service initiation, HBS incorporated this novel domain into the “Industrial Administrator” academic program in the year, 1941 and, then into optional MBA course in the year, 1942. An earliest stride in the direction of a systems method for “Management Control” was initiated in the year, 1965. During this time period, Anthony began for the first time an academic program with a similar title as his influential book (Planning and Control Systems). Then, the subsequent year, he carried on this program, although, its name was transformed to “Management Control Systems”, that brought forward this term in the educational world for the first time (Otley, 1994).

The contemporary literature concerning the “Management Control System” (MCS) is in essence based on the groundwork of the “contingency theoretical framework” (Martin, 2020; Otley, 1980). In simpler terminology, this conceptual conjecture states that intent and utilization of MCS is closely coupled with the organizational environment. Moreover, scholars investigating MCS must also consider as how the vibrant character of any establishment may result in transforming organizational framework and diverse paths in managing system architecture (Martin, 2020). Another theory, i.e., contingency conjecture was not intended to elucidate predictions concerning an establishment. But over a period of time, it may be extended as a business establishment’s inner assets and exterior attributes change. This means that businesses would differentially make use of the control systems as well as the control machinery within it. Nonetheless, the relevance of the contingency premise in preceding research in principle makes use of an inert reductionist method that may inadvertently limit the understanding concerning the dynamic character of the control structure.

Earlier investigations time and again have examined how control structures can differ across organizational circumstances through evaluation of MCS in diverse kinds of companies at a particular point of time. On the other hand, characterising control attributes with these inert typologies essentially undermines the sources and more importantly the development of organizational control structure (Cardinal et al., 2004). Any disparity in organizational background does not necessarily stem from the cross-sectional distinctions, but also relate to the perceptible alterations in a solo firm’s inner and peripheral

functioning surroundings over a period of time. To a great extent like the cross-sectional disparities in an organizational situation, time-changing differentiations in an organizational environment also expected to symbolize changes or transformations in the training that is obligatory to uphold proficient control. In the investigation of the complementarities, various scholars have argued that a system commences down a trail and continues down that course unless an unmodelled energy perturbs it. This signifies the demonstration of the momentum in a particular system. This phenomenon also suggests that some particular events that may occur within the existence of a business firm may serve up as activation for MCS implementation as well as its desertion (Davila & Foster, 2009).

In recent era, the influence of MCS on companies' policies as well as business performance has been examined thoroughly and using an empirical approach in abundant studies especially in the last decade (Bin-Nashwan & Obaid, 2017). Such studies were conducted in quite a few developed and promising world economic regions. As the current business environment is routinely characterised as being aggressive, multifaceted, and alterable, business establishment are being constantly challenged. This forces businesses all over the world to implement trade models that assist them to deal with the tactical fears and many risks which are present in the commerce environment. Recent works have also suggested that a powerful connection exists amongst MCS, firm policies, and business performance that could optimistically influence and sustain the formulation and functioning of aggressive strategies (Bin-Nashwan & Obaid, 2017). Consequently, it has become of the essence that executives and firm managers match the suitable control structure with the exact strategy, and execute an efficient scheme that will lead to an elevated performance.

Furthermore, the bond between MCS and firm strategy has been observed for the last twenty years as it enables and augments the managerial performance. Some studies conducted by scholars point out that MCS must be emphasized evidently to complement the business approach as it will enhance the economic advantage and support finer firm performance (Dent, 1990). On the whole, MCS is conceptualized as the development of supervision and endorsement of the utilized assets successfully and economically in surpassing the firm's targets (Anthony, 1965). Elevated organizational performance is attributed to a combination of an establishment's setting, scheme, interior structures and structure (Govindarajan, 1998). Consequently, MCS includes both inner

structures and coordination. In this contemporary aggressive, versatile and fluctuating worldwide trade milieu, firms must apply business strategies which may support them in the recognition of strategic suspicions and hazards in their company environment. In this study, we try to link MCS with productivity of 3 large firms in the state of Madhya Pradesh.

## **2. REVIEW OF LITERATURE**

### **2.1. MCS and Organizational productivity**

The intricacy and drive of today's commerce background entails a meticulous knowledge of the firms' and the dimensions/constructs which are deemed as imperative for competitive accomplishment (Duréndez et al., 2016). MCS has developed into an essential force for the decision making for the business establishments and is regarded as a sustainable economic advantage, provided they are appropriately developed and formulated (Barney, 1991). Financial development, cost accounting structures or monetary diagnosis, amongst other domains, should be the frequently used tools in an organizational setup of all the firms irrespective of their volume (Duréndez et al., 2016). Firm managers must base their business decision on some objective facts, which can only be acquired if the corporation uses diverse fiscal practices that are accessible (Duréndez et al., 2016). Nevertheless, abundant studies imply that the utilization of MCS is not extensive in many sectors. Similarly, there is a rising awareness in analyzing the association between MCS and firms' performances (Bisbe & Otley, 2004) including productivity. Application of MCS plays a vital role in the company's performance, as MCS has become a vital tool which managers ought to take to the planning activities, budgeting, analyzing, quantifying and assessing the functional information for appropriate decision making (Cosenz & Noto, 2015; Duhan, 2007). Both data and planning structures are practical supervision tools in order to achieve the tactical goals of the corporation (Duhan, 2007), produce ingenious innovation and attain the equilibrium in relation to control and being flexible (Simons, 1995). Based on some of the significant studies carried out by many authors in this domain, authors have suggested an affirmative association between MCS and firm performance such as enhanced productivity (Herath, 2007; Ittner & Larcker, 2003).

Therefore, it becomes highly important for the corporations to focus on using MCS in order to augment their firm productivity. MCS is increasingly being used by the management to accomplish the goals and to make certain that the business activities or firms are operating in reference to the set organizational

policies (Chenhall, 2003). Moreover, it can be deemed as a process through which the business managers influence other organizational members in order to apply the business strategies such that the firm goals and objectives can be realized (Anthony & Govindarajan, 2007) by incorporating both monetary and non-monetary performance measures that may further have an effect on the firm's performance. In addition, Chenhall (2003) has categorized MCS as a broader term, which includes management accounting practices in realizing the firms' goals, and as a vital means that gives outside and inner information to support manager's decision-making.

Hence, based on the above-mentioned descriptions, it can be implied that MCS is a means, which is employed in decision-making process as well as executive action process. For several authors as well as scholars, MCS is an element in the performance management system (Anthony & Govindarajan, 2007; Chenhall and Euske, 2007), which is relevant to many real-world applications concerning the management process because it can lead to the accomplishment of the firms' goals and objectives (Chenhall, 2003). It has also been proven that MCS affects the performance of establishments in both private and government sectors (Chenhall and Euske, 2007; Verbeeten, 2008). This thought is quite consistent with the famous works of both Otley (1999) and Heinrich (2002). These two authors have stated that the businesses must systematize their performance management correctly to make certain the MCS can be developed effectively in the course of defining objectives, selecting relevant strategies, assigning resources, and assessing and rewarding the performance in order to obtain enhanced organizational outcomes (Chenhall, 2003). When an MCS system/practice is found to be helpful, subsequently it is expected to be applied and offer contentment to personnel, who then most probably can move towards their tasks with better information (Chenhall, 2003). As a result, these personnel take enhanced decisions and efficiently realize managerial goals that further leads to the firm's productivity. Noticeably, there exist some broad hurdles in regards to the MCS in order to improved executive performance (Chenhall, 2003) such as enhanced business productivity.

Based on the Contingency Theoretical Framework, Otley (1980) composed an estimate concerning the management control attribute to the "Theory of Organizations". Moreover, the work conducted by Tiessen and Waterhouse (1983) established that the arrangement of a business organization is intricately dependent upon the technological structure and the business environment. They

further stated that the efficiency of management process is a contingent feature that influences the organizational formation. The framework of “Contingency Theory” is essentially based on the reality that the firm’s performance stands on the configuration of diverse organizational dimensions in a specified business circumstance. From this perspective, work conducted by Chenhall and Langfield-Smith (1998a, 1998b) investigated the arrangement of diverse variables like “technical accounting control” and also studied its influence on the firm output. Moreover, Chenhall (2003) proposed that MCS has to support firm managers in order to accomplish business goals, principally when they have been well-designed and encourage the management executives (Laitinen, 2014). Hence, an appropriate MCS structure and its arrangement will be affected by definite constructs, which the organizational system runs. These particular factors are briefly explained as:

- i. External business environment in which the organization is working and running its business.
- ii. Technology (the technological structure that is used by the establishment for fulfilling its objectives).
- iii. Organization’s physical structure (arrangement of the internal structure/systems that coordinate for efficient working).
- iv. Size of the establishment.
- v. Organizational strategy (tactics used by the firm in order to realize its goals and plans of action) and,
- vi. Culture.

Further, Abdel-Kader and Luther (2008) in their study suggested that MCS must have a superior level of sophistication, deemed as the organizational system competence for providing leadership, pertinent informational facts for business planning, monitoring, decision making, producing and enhancing value. There may be a number of explanations as to why MCS is advantageous for augmenting the firm performance such as output or productivity:

- First of all, whether managerial predilections are unbalanced or goals cannot be unequivocally distributed into quantitative measures, fruitless discussions from investigative mechanisms are expected to take place (Chapman, 1997). In essence, MCS enhances mutual dedication and synchronized action towards required outcomes; promote the characterization of objectives and their communication, lessening the indecision and leading to superior accomplishments (Adler & Chen, 2011).

- Secondly, MCS must also augment the competence of finding solutions concerning the job-related issues (McGrath, 2001) and carry out assessment, enhancing the team performance in order to provide the solution to any business matter (Cheng & Van de Ven, 1996).

In relation to the MCS and business performance, the study of Dávila (2000) postulated about a positive association between MCS and performance within the firm. In another study on Spanish firms conducted by Bisbe and Otley (2004), it was found out that, more the application of MCS, better was the firm productivity and performance. One more work that included a sample of few industrial firms in New Zealand, it was reported that MCS has a constructive influence on the performance as well. A similar relationship was observed between MCS and productivity by many scholars in many diverse fields of study (Bright et al., 1992; Chenhall & Langfield-Smith, 1998a; Garengo & Bititci, 2007). Another aspect of the research revolving around MCS has focussed on the innovation with the firm that can ultimately lead to the enhanced company performance and improved productivity (Miles & Snow, 1978). Moreover, the increasing competition inherent in the trade environment has forced firms to focus on applying differentiation strategies and better MCS practices that will produce positive outputs in terms of firm performance and productivity (Baines & Langfield-Smith, 2003).

### 3. RESEARCH METHODOLOGY

#### 3.1. Objectives of the study

1. To study the impact of administrative control (AC) on productivity.
2. To study the impact of finance control (FC) on productivity.
3. To study the impact of computer-based control (CC) on productivity.
4. To study the impact of reward system (RW) on productivity.

#### 3.2. Hypothesis of the study

$H_0^1$ . There is no significant relationship between administrative control (AC) and productivity

$H_0^2$ . There is no significant relationship between finance control (FC) and productivity

$H_0^3$ . There is no significant relationship between computer-based control (CC) and productivity

$H_0^4$ . There is no significant relationship between reward system (RW) and productivity

### **3.3. Scope of the study**

The present study was confined to Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited (Power Sector), Bharat Sanchar Nigam Limited (Telecommunications) and CIL (Coal Industry).

### **3.4. Sample and Sampling design used in study**

Convenience sampling using an online survey design was used to target respondents from MPPKVVCL (Power Sector), BSNL (Telecommunications) and CIL (Coal Industry). The respondents were selected from different managerial hierarchies during the main study. The sample size for final study was calculated as per Hair et al. (2010) method. 20 are the final number of questions which when multiplied by 'ten' (10) equals '200' (computed on the basis of the number of data items). However, questions were distributed to more than 500 respondents in the 3 selected companies.

### **3.5 Statistical Techniques used in the study**

Various statistical tools like reliability testing, factor analysis and regression analysis were used. The reliability testing was done through Cronbach alpha test. Further, the scales adopted were subject to factor analysis using SPSS. Sampling adequacy measures and rotated component analysis determine the scale structure. Finally, the relationship between MCS and Organisational productivity was determined through Regression Analysis based on p-values and R-square.

## **4. DATA ANALYSIS AND INTERPRETATION**

### **4.1 Data Cleaning**

The data was cleansed for outliers, un-engaged replies, and missing responses before conducting analysis to meet the study objectives. The study was carried out using the SPSS 25.0 software on a data set of 509 (collected answers).

### **4.2 Pearson correlation**

The "Pearson correlation" between the five variables was calculated, and the findings are displayed in Table 1. All of the factors are statistically significant and positively correlated, as shown in the table. None of the correlations are more than 0.70, indicating that multicollinearity is not present.



Table 1 Pearson Correlations

	MCSP	FC	RW	AC	CC
<b>MCSP</b>					
<b>Pearson Correlation</b>	1	.340**	.415**	.312**	.305**
<b>Sig. (2-tailed)</b>		.000	.000	.000	.000
<b>N</b>	509	509	509	509	509
<b>FC</b>					
<b>Pearson Correlation</b>	.340**	1	.306**	.306**	.312**
<b>Sig. (2-tailed)</b>	.000		.000	.000	.000
<b>N</b>	509	509	509	509	509
<b>RW</b>					
<b>Pearson Correlation</b>	.415**	.306**	1	.454**	.495**
<b>Sig. (2-tailed)</b>	.000	.000		.000	.000
<b>N</b>	509	509	509	509	509
<b>AC</b>					
<b>Pearson Correlation</b>	.312**	.306**	.454**	1	.480**
<b>Sig. (2-tailed)</b>	.000	.000	.000		.000
<b>N</b>	509	509	509	509	509
<b>CC</b>					
<b>Pearson Correlation</b>	.305**	.312**	.495**	.480**	1
<b>Sig. (2-tailed)</b>	.000	.000	.000	.000	
<b>N</b>	509	509	509	509	509

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 4.3 Regression Analysis

#### 4.3.1 "Organisational Productivity" and "Financial Control".

With "Organisational Productivity" as the dependent variable and "Financial Control" as the independent variable, linear regression is used.

Table 2 (a) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.340 <sup>a</sup>	.116	.114	1.12901	.116	66.280	1	507	.000

The value of R, which reflects the correlation coefficient, is 0.340 in regression Table 2 (a). It may be concluded that "Organisational Productivity" has a strong link to "Financial Control". Furthermore, "R<sup>2</sup>" is the "coefficient of determination" with a value of 0.116, indicating that "Financial Control" accounts for 11.6% of the variance in "Organisational Productivity".

Table 2 (b) ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	84.485	1	84.485	66.280	.000 <sup>b</sup>
Residual	646.258	507	1.275		
Total	730.743	508			

a. Dependent Variable: MSCP

b. Predictors: (Constant), FC

The model fit is shown in Table 2 (b). The regression model is statistically significant, with  $F=66.2$ , ( $p<0.01$ ), indicating that "Organisational Productivity" as a dependent construct is more reliable, and the regression model is statistically significant.

**Table 2 (c) Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.325	.179		12.977	.000
FC	.374	.046	.340	8.141	.000

a. Dependent Variable: MCSP

Table 2 (c) shows that the "standardised Beta" ( $\beta$ ) for "Financial Control" is statistically significant and positive ( $\beta=.340$ ,  $t=12.97$ ,  $p<0.05$ ), indicating that "Organisational Productivity" and "Financial Control" have a substantial and favourable relationship.

As a result, the hypothesis "There is no major influence of Organisational Productivity on Financial Control" is unsupported. This suggests that "Financial Control has a major influence on Organisational Productivity".

#### 4.3.2 "Organisational Productivity" and "Reward System".

With "Organisational Productivity" as the dependent variable and "Reward System" as the independent variable, linear regression is used.

**Table 3 (a) Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.415 <sup>a</sup>	.172	.170	1.09238	.172	105.371	1	507	.000	1

The value of R, which reflects the correlation coefficient, is 0.415 in regression Table 3 (a). It may be concluded that "Organisational Productivity" has a strong link to "Reward System". Furthermore, "R<sup>2</sup>" is the "coefficient of determination" with a value of 0.172, indicating that "Reward System" accounts for 17.2% of the variance in "Organisational Productivity".

**Table 3 (b) ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	125.739	1	125.739	105.371	.000 <sup>b</sup>
Residual	605.004	507	1.193		
Total	730.743	508			

The model fit is shown in Table 3 (b). The regression model is statistically significant, with  $F=105.3$ , ( $p<0.05$ ), indicating that "Organisational Productivity" as a dependent construct is more reliable, and the regression model is statistically significant.

**Table 3 (c) Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.674	.206		8.141	.000
	RW	.536	.052	.415	10.265	.000

Table 3 (c) shows that the "Standardised Beta" ( $\beta$ ) for "Reward System" is statistically significant and positive ( $\beta=.415$ ,  $t=10.2$ ,  $p<0.05$ ), indicating that "Organisational Productivity" and "Reward System" have a substantial and favourable relationship.

As a result, the hypothesis "There is no major influence of Reward System on Organisational Productivity is unsupported". This suggests that "Reward System" has a major influence on Organisational Productivity".

#### 4.3.3 "Organisational Productivity" and "Administrative control".

With "Organisational Productivity" as the dependent variable and "Administrative control" as the independent variable, linear regression is used.

**Table 4 (a) Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin - Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.312 <sup>a</sup>	.097	.096	1.14058	.097	54.712	1	507	.000	1

The value of R, which reflects the correlation coefficient, is 0.312 in regression Table 4 (a). It may be concluded that "Organisational Productivity" has a strong link to "Administrative control". Furthermore, "R<sup>2</sup>" is the "coefficient of determination" with a value of 0.097, indicating that "Administrative control" accounts for 9.7 % of the variance in "Organisational Productivity".

**Table 4 (b) ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	71.176	1	71.176	54.712	.000 <sup>b</sup>
Residual	659.567	507	1.301		
Total	730.743	508			

The model fit is shown in Table 4 (b). The regression model is statistically significant, with  $F=54.7$ , ( $p<0.05$ ), indicating that "Organisational Productivity"

as a dependent construct is more reliable, and the regression model is statistically significant.

**Table 4 (c) Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.527	.170		14.892	.000
AC	.329	.044	.312	7.397	.000

Table 4 (c) shows that the "Standardised Beta" ( $\beta$ ) for "Administrative control" is statistically significant and positive ( $\beta=.415$ ,  $t=10.2$ ,  $p<0.05$ ), indicating that "Organisational Productivity" and "Administrative control" have a substantial and favourable relationship.

As a result, the hypothesis "There is no major influence of Administrative control on Organisational Productivity" is unsupported. This suggests that "Administrative control has a major influence on Organisational Productivity".

#### 4.3.4 "Organisational Productivity" and "Computer control".

With "Organisational Productivity" as the dependent variable and "Computer control" as the independent variable, linear regression is used.

**Table 5 (a) Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.305 <sup>a</sup>	.093	.091	1.14350	.093	51.845	1	507	.000	1

The value of R, which reflects the correlation coefficient, is 0.305 in regression Table 5 (a). It may be concluded that "Organisational Productivity" has a strong link to "Computer control". Furthermore, "R<sup>2</sup>" is the "coefficient of determination" with a value of 0.093, indicating that "Computer control" accounts for 9.3% of the variance in "Organisational Productivity".

**Table 5 (b) ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	67.792	1	67.792	51.845	.000 <sup>b</sup>
Residual	662.951	507	1.308		
Total	730.743	508			

The model fit is shown in Table 5 (b). The regression model is statistically significant, with  $F=51.8$ , ( $p<0.05$ ), indicating that "Organisational Productivity"

as a dependent construct is more reliable, and the regression model is statistically significant.

**Table 5 (c) Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.603	.164		15.882	.000
CC	.320	.044	.305	7.200	.000

Table 5 (c) shows that the "Standardised Beta" ( $\beta$ ) for "Computer control" is statistically significant and positive ( $\beta=.305$ ,  $t=7.2$ ,  $p<0.05$ ), indicating that "Organisational Productivity" and "Computer control" have a substantial and favourable relationship.

As a result, the hypothesis "There is no major influence of Computer control on Organisational Productivity" is unsupported. This suggests that "Computer control has a considerable influence on Organisational Productivity".

## 5. CONCLUSION

The study hypotheses were developed once the goals were established, and three companies were chosen for the sample. Convenience sampling was used to acquire the information using an online survey. There were 509 people in the sample. Various statistical approaches were used to analyse the data. The regression analysis enabled the link between independent and dependent variables to be investigated.

Based on the outcomes of the study, it can be stated that all four factors, namely financial control, administrative control, rewards and compensation, and computer control have an impact on firm's productivity. These results are consistent with those of previous investigations (Dana et al., 2021). As a consequence, the latest research added to the prior findings. The present research, on the other hand, was done in a unique cultural setting, which contributes to the existing literature. Furthermore, the present investigation revealed discrepancies in the study variables across the three companies selected for the study.

This work has suggested that all four antecedents (financial, administrative, computer and rewards) influence productivity in all three firms chosen in this work. These findings are similar to some of the previous works conducted (Dana et al., 2021). Individuals and groups within organisations are motivated and increase their performance via reward and pay systems that provides alignment between their objectives and activities and those of the organisation. The

underlying premise is that the presence of clear incentives and compensation leads to higher effort, while the lack of explicit rewards and compensation leads to decreased effort (Bonner & Sprinkle, 2002). Administrative control systems guide employee behaviour by organising people and groups, monitoring behaviour and determining who is responsible for employee behaviour, and describing how tasks or behaviours are to be completed or not performed and thus, influence productivity. Management accounting and financial controls if used properly accelerates reaching the goals of companies

This research has many theoretical outcomes. To begin, this research adds to the literature by constructing and testing a novel empirical theoretical model that incorporates the MCS package (financial, cybernetic/computer, incentives and compensation, and administrative control) which is tested in 3 firms. Furthermore, this research made use of status and usage in all three companies. Prior research has overlooked the status and usage of MCS across diverse sectors. Moreover, this work has also identified the success and failure factors across three sectors. Furthermore, this study has also examined the diagnostic procedures adopted and computer controls in three sectors. Therefore, the current research adds to the existing body of knowledge in relation to multiple domains.

This study's results have some practical implications for business management. According to the findings, managers should concentrate on the MCS package when determining company success for enhancing productivity. Furthermore, the use of organisational resources can be used for superior outcomes. Businesses should pay close attention to the MCS package as a whole because individual components of the MCS package may not deliver nearly as many advantages as the whole package can do. This research can help owners and managers by focusing on success and failure factors identified within organisations. Financial, cybernetic/computer, incentives and compensation, administrative control and financial control are all essential resources in achieving company's success and objectives. Moreover, senior executives must participate in corporate decision-making processes for enhanced firm performance.

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