



Management Control System and Firm Performance in Nepalese Commercial Bank

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Abstract

Studi ini berfokus pada interaksi antara *control levers* dan *organizational learning* serta dampak Sistem Pengendalian Manajemen (MCS) terhadap kinerja perusahaan di Bank Umum Nepal. Studi ini bertujuan untuk menguji hubungan antara pengungkit MCS (*belief, boundary, diagnostic, interactive*) dan kinerja perusahaan dan menilai peran mediasi *organizational learning* dalam hubungan ini. Studi ini dilakukan dengan menggunakan desain deskriptif dan kausal-komparatif, di mana survei dilakukan dengan memperoleh tanggapan dari karyawan berbagai bank umum di Kathmandu. Temuan studi menyoroti korelasi signifikan antara MCS, *organizational learning*, dan kinerja, yang menyoroti MCS sebagai alat utama untuk meningkatkan kinerja di sektor Perbankan. Studi ini memiliki keterbatasan seperti hanya berfokus pada Kathmandu dan menyarankan penelitian lanjutan untuk memperluas secara geografis dan mengeksplorasi sektor lain.

Keywords: Sistem Pengendalian Manajemen, *Levers of Control*, *Organizational Learning*, Sektor Perbankan.

Abstract

This study focused on the interplay of control levers and organizational learning as well as the impact of Management Control Systems (MCS) on firm performance in Nepalese Commercial Banks. The study aims to examine the relationships between MCS levers (belief, boundary, diagnostic, interactive) and firm performance and assess the mediating role of organizational learning in this relationship. The study was done using descriptive and causal-comparative design, where a survey was carried out by deriving the responses from the employees of various commercial banks in Kathmandu. The findings of the study highlighted the significant correlations between MCS, organizational learning, and performance, highlighting MCS as a key tool for enhancing performance in the Banking sector. This study acknowledges limitations such as focusing only on Kathmandu and suggests future research to expand geographically and explore other sectors for broader applicability.

Keywords: Management Control Systems, *Levers of Control*, *Organizational Learning*, Banking Sector.



Introduction

Performance has become significant to all commercial operations when considering the dynamic of organizations, institutional considerations, and the environment surrounding firms. To remain competitive and achieve sustainable growth, businesses must examine their external and internal environments for opportunities and challenges. Improving a company's performance has become essential for gaining a competitive advantage. This challenge broadened the scope of a company's performance to encompass financial aspect, customer, internal business processes, innovation, and learning considerations (Kaplan, 1984). A company's performance must be emphasized as it has evolved into an engine of economic growth and development. However, due to some identified factors impeding their prospects, such as economic instability, technology, and globalization, developing country firms have faced performance challenges, making it difficult for them to compete with their foreign counterparts despite the abundance of resources at their disposal (Ahmed et al., 2019).

Management controls encompass the strategies and tools that managers utilize to shape the conduct of individuals and teams, aiming to attain an organization's established objectives and goals. These controls may involve personal guidance, operational proficiency, or reward systems. These operational procedures and mechanisms are integrated and employed collectively as fundamental management control systems (MCSs). Various forms of MCS emerge as management enforces corporate control (Jukka, 2021). According to Malmi & Brown (2008), the set of control methods and tools management employs to understand the organization's established objectives and goals is referred to as a management control system. To balance their firm's conditions, management chooses the best combination of these controls. These control procedures and mechanisms are not applied autonomously; instead, they are customized and deployed collectively as a means of managing the systems (Malmi & Brown, 2008). The management control system is the systematic framework that reveals the facets of fundamental values, compartment, supervising, and comment. Simons (1994) proposed Levers of Control (LoC) theory for the management control system. LoC frameworks inform and influence workers to take a determined course of action. LoC framework is divided into four groups of control; namely, Faith control method, Margin control method, Analytical control method, and Interactive control methods. These four control methods are responsible for effective organizational control. According to Bedford and Malami (2015), belief control provides basic standards, ambitions and directions for the company and boundary system communicate threats and risks that the organizations must skip. As per Simons (1995), diagnostic controls observe organizational results and correct deviations from standards superior and subordinates communicate through execution and interactive controls. According to Ismail et al. (2019), organizational learning denotes the training of employees, the experience of the employees, grasping and realization of new information. It is an integral variable that can help businesses obtain a competitive advantage in improving firms' performance (Kim et al., 2017). It was found that the ability to learn and adapt faster and more flexibly than their competitors can solve a company's

problems and also improve the company's strategic approach, operation, and sustainability (Yusoff et al., 2019). Over the last two decades, the LoC paradigm has been a frequently used framework in management control research (Martyn et al., 2016). The findings suggest that the framework should be extended to include more serious organizational challenges, such as sustainability of the organization, ecological reporting, inter-managerial control, antecedent understanding, and MCS outcomes.

Objectives of the study

The major objective of the study is to examine the impact of a management control system (MCS) on firm performance. This research investigates the influence of Management Control Systems (MCS) on the functioning of commercial banks.

Hypothesis of the study

- a. H1: There is a significant impact of management control system on firms' performance.
- b. H2: There is a significant impact of MCS on organization learning.
- c. H3: There is a significant impact of organizational learning on firm performance.
- d. H4: Organization learning mediates between levers of control and firm performance.

Significance of the study

MCS are crucial in understanding the effectiveness of organizational control, particularly across four main control areas belief, boundary, diagnostic and interactive (Malmi & Brown, 2008). This study is expected to offer guidance to commercial banks in recognizing the various dimensions of MCS and leveraging these aspects to enhance overall performance of the bank. The understanding is that effective MCS implementation can significantly contribute to the operational success of banks (Otley, 2016). Hence, this research is designed to support commercial banks in realizing the full potential of MCS, to ensure better management practices and enhanced bank performance.

Literature Review and Hypothesis Development

Reviewing the LOC literature, there are very few studies have been conducted, that debated the relative among LOC, organizational learning, and firm's implementation. Henri (2006) studied how management control systems (MCS) affect a company's abilities and overall performance, using interactive and diagnostic systems. The research expands the focus from the strategic level to the capability level. In a related context, Grafton et al. (2010) looked at how the use of MCS influences organizational performance by introducing new capabilities. Bobe (2012) introduces strategy implementation along with use of MCS and capacity development and tests the relation between use of MCS, strategy implementation, capacity development, organizational learning, and organizational performance. Mohammad (2019) pointed out that such learning impacts the performance of

manufacturing company. (Adiputra & Sujana, 2021) clearly mentioned that positive and negative forces are believed to be generated by four main levers i.e. beliefs, boundaries, diagnostic, and interactive, which produce active tensions among innovation and strategic changes that must be handled in order to achieve organizational goals. When these four control levers work together to support an organization's strategic goals, they reach their maximum effectiveness (Bruining et al., 2004; Henri, 2006; Mundy, 2010; Widener, 2007). (Do & Mai, 2022) also state that organizational learning serves as a mediating factor in the link between organization learning and performance of the firms

Upon reviewing the existing studies, it was clear that Nepali cases needed more explanation. The previous research missed looking at all four control levers suggested by Simons (1995a). This study adds belief system and boundary system to the two already known levers, diagnostic and interactive control systems, used by past researchers to understand organizational learning and firm performance.

Research Method

The research is based on descriptive and causal comparative research design. Specifically, descriptive research design was used to describe statistical method of demographic variables, and casual comparative research design was employed to analyze the inferential statistics for the impact analysis on organizational performance.

There are 376 branches of commercial bank inside of Kathmandu Ring-road. In the head office of Nepalese commercial bank there were 965 employees were in decision making and managerial level on an average and 376 in branches. Further, 72 percent of decision-making employees were taken from head office and 28 percent of decision-making employees were from branch offices. The stratified sampling was done based on proportionate basis. Total sample size was 299. The respondents were chosen randomly irrespective with their gender and age. Out of 215 decision making level employees from head office, nine employees were selected. Then systematic random sampling was followed by identifying the hierarchy of an employees with the interval of three. Likewise, around three branch managers from each commercial banks were selected based on their opening date. Six points Likert Scale was used in a self-administered questionnaire to collect primary data. Questionnaires were distributed to each bank and its sampled branches personally and was collected later.

Models

The partial least square method was used to measure the model of the study as,

$$Y1 = a + B_1X_1 + B_2X_2 + e$$

$$Y2 = a + B_1X_1 + e$$

Where,

Y1= Firm Performance, Y2= Organizational Learning, B₁, B₂ = Standardize Coefficient, X₁= Management Control System (MCS), X₂= Organizational Learning (OL) and e=Statistical error

Reliability and Validity

Consistent result made with repetitive measurements based on the characteristic & a scale produces is called reliability (Malhotra, 2006). It demonstrates the consistency of results based on data collecting and analysis methodologies. Reliability is more important in a Likert-type questionnaire with several variables testing the theory (Saunders et al., 2007). It is measured by the instrument in Cronbach’s alpha. Cronbach’s alpha measures how interconnected the items in a questionnaire are interrelated (Pallant, 2007). It’s coefficient ranges from 0 to 1 and should be more than 0.7 (Nunnally, 1978). Convergent and discriminant validity are the two criteria used to assess the validity of reflective measurement models (Hair et al., 2011). To determine convergent validity the researcher must evaluate the average variance extracted (AVE). An AVE value of 0.50 or above, indicates a coefficient degree of convergent, reflecting that underlying variable describes greater than one-half of its values. According to (Hair et al., 2011), two metrics have been proposed for discriminant validity: the Fornell-Larcker criterion and cross loadings. According to Fornell & Larcker (1981), a latent construction shares more variation with its assigned indicators than with another latent variable in the structural model. The AVE of any latent structure should be bigger than its highest squared correlation with any other latent construct in statistical terms. The second requirement of discriminant validity is typically more lenient: an indicator’s loading with its associated latent construct should be higher than its loadings with all other constructs i.e., the cross loadings (Hair et al., 2011).

Result and Discussion

Results

The association test was performed through correlation analysis to measure the relationship among management control systems, organizational learning, and firms’ performance.

Table 1. Correlation matrix

LVs	LVs		
	MCS	Learning	Performance
MCS	1		
Learning	0.528***	1	
Performance	0.567***	0.616***	1

*** Correlation is significant at the 0.001 level (2-tailed)

The calculation of correlation matrix revealed that there was the significant relationship among the variables. Firstly, there was a statistically significant

moderate positive correlation between Management Control System (MCS) and Learning ($r = 0.528, p < 0.001, df = 297$). This implies that higher levels of MCS are associated with increased learning. Similarly, MCS demonstrated a moderate positive correlation with Performance ($r = 0.567, p < 0.001, df = 297$). This indicates that performance levels also tend to rise as MCS levels increase. Furthermore, there was a stronger positive correlation between Learning and Performance ($r = 0.616, p < 0.001, df = 297$). This suggests that higher learning achievements were associated with enhanced overall performance. The obtained p-values, all less than 0.001, underscore the statistical significance of these correlations, reinforcing the reliability of the observed relationships. In summary, the findings suggest interdependence among MCS, Learning, and Performance, providing valuable insights into the potential connections between cognitive skills, learning outcomes, and overall performance in the examined context.

Composite Reliability (CR) belief system, boundary system, diagnostic system, interactive system, learning system, and firms' performance, 0.925, 0.918, 0.926, 0.925, 0.886, and 0.854 respectively which exceeds the acceptable threshold 0.7. The composite reliability (CR) was higher than the average variance extracted (AVE) in all constructs. Hence, the constructs had a convergent validity. Fornell-Larcker Criterion is used for validity test of latent variables belief system, boundary system, diagnostic system, interactive system, learning system, and firms' performance. The square root of the average variance (AVE) exceeded the corresponding correlation, suggesting the discriminant validity.

Table 2. R-square

	Learning	Performance
R²	0.393	0.384
AdjR²	0.391	0.380
MCS	0.627	0.522
Learning		0.141

Using the full model test, the R-squared value of 0.384 indicates that approximately 38.4% of the variance in dependent variable firms' performance was explained by the set of predictor variables, which includes the components of the Management Control System (belief, boundary, diagnostic, and interactive), and organizational learning.

Table 3. F-Square

	MCS	Learning	Performance
MCS	0	0.646	0.268
Learning	0	0	0.019
Performance	0	0	0

The F-Square of 0.646 represents the effect size of the relationship between the MCS and organizational learning, 0.268 between the MCS and performance, and 0.019 between organizational learning and performance. An F-Square suggests that the MCS, and organizational learning explain a significant proportion of the

variability in the firms' performance variable. This indicates that MCS and organizational learning have a meaningful impact on the firm's performance.

The mediation effect of organizational learning was analyzed between the management control system (MCS) and firms' performance (FP).

Table 4. Bootstrapped Total Path

LVs	Original Est.	Mean	SD	T	2.50% CI	97.50% CI
MCS->Learning	0.627	0.633	0.035	17.791	56.100	0.701
MCS->Performance	0.610	0.616	0.033	18.32	0.550	0.679
Learning->Performance	0.141	0.135	0.065	2.153	0.006	0.26

Table 4 summarizes the test result of structural modeling. Firstly, MCS has a total effect of 0.627 with t-statistics of 17.791, positively influencing learning. Secondly, Learning has a total effect of 0.141 with t-statistics of 2.153, positively influencing performance. Lastly, MCS has a direct effect of 0.610 with t-statistics of 18.32 which positively influences performance. Since all the effects were significant, the mediation effect can be seen in the path.

Table 5. Mediation Analysis

Path	Coefficient	Indirect Effect	Direct Effect	VAF Method
MCS to Learning	0.627			
Learning to FP	0.141	0.088		
MCS to FP	0.522		0.610	14.483

It was found that organizational learning significantly impacted the management control system and firm performance. The direct impact of MCS to firm performance was 0.610. The general guidelines were if the VAF is less than 20 percent, it considers as a low mediation where is if VAF is more significant than 20 percent and less than 80 percent could be categorized as a typical partial mediation Hair et al. (2017), and if VAF is above 80 percent it indicates a full mediation. However, this table shows that, the VAF is only 14.483 percent, which explain that organizational learning had a low mediating role between the management control system and firms' performance.

Discussion

The findings of the study clearly explain that there is a significant impact of management control system on firms' performance which is supported by the findings of Henri (2006) and Bobe (2012). Similarly, the research also observes that there is a positive impact of MCS on organization learning, this fact was similar to the findings of Mohammad (2019) and (Do & Mai, 2022). Findings of this study also state that positive impact of organizational learning on firm performance and organization learning mediates between levers of control and firm performance these findings were also match with the findings of (Adiputra & Sujana, 2021) and (Bruining et al., 2004; Henri, 2006; Mundy, 2010; Widener, 2007).

Conclusions

The analysis of this study started with zero order analysis and proceeded to the high-order analysis to examine the effects of specific MCS components on firm performance and organizational learning. The findings revealed a substantial impact of MCS on the firm's performance, supported by robust measures of validity and reliability, as well as high outer loadings. Further insights were gained through using R-Square and F-Square metrics, which quantified the effect size and the proportion of variance explained, highlighting the significant influence of MCS on firm performance.

The study established that MCS substantially influenced learning and performance, it determined that organizational learning had a negligible mediating impact on the relationship between MCS and performance. The findings from the Variance Accounted For (VAF) analysis suggested that the influence of Organizational Learning as a mediator was comparatively insignificant, as it accounted for a mere 14.483% of the variance in the relationship between MCS and Firm Performance.

This study highlighted a major effect of organizational learning on firm performance, indicating the significance of fostering a learning-oriented culture for achieving positive organizational outcomes. The research also provided empirical support for the hypothesis that Organizational Learning acts as a mediator between the MCS and Organizational Performance. While the direct impact of MCS on performance was evident, the mediation analysis highlighted the intermediary role of organizational learning in this relationship.

Action Implication

The findings of this study offer practical implications for Nepalese Commercial Banks in enhancing their performance with the help of Management Control Systems (MCS). By doing so, banks can improve their strategic decision-making, increase adaptability to market changes, and achieve sustainable growth. Similarly, organizational learning as a mediator represents the need for continuous employee development and training to leverage MCS to its full capacity.

Strengthening belief systems within banks is crucial for developing common understanding of values and goals of the banks among employees that foster a cohesive work environment. Implementing clear boundary systems is important in determining acceptable practices, thus mitigating risks and ensuring regulatory compliance are met. Additionally, utilization of diagnostic control systems might effectively allow for better performance monitoring and management of the bank. This also facilitates informed decision-making and timely corrective actions, if needed.

In addition to these interactive control systems should be focused to encourage open communication and quick responses which is essential for adapting to market fluctuations and utilizing emerging opportunities posed by the market. Promoting a culture of continuous learning and knowledge exchange in banks can significantly enhance the benefits of MCS, leading to increased banking agility and innovation. Bank can ensure greater effectiveness and acceptance by actively engaging employees in the development and application of MCS. Meanwhile, it

should be noted the alignment of MCS to match the unique environment of each bank, with flexibility for adjustment to changing environments.

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