Impact of Management Control Systems on Capabilities: Evidence from Vietnamese Enterprises

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Abstract

This article aims to evaluate the impact of the management control system on enterprise capacity. The model includes four elements of the management control system: Monitoring, Legitimizing Decisions, Strategic Decision Making, and Focusing on the impact of the enterprise's capabilities including learning capabilities. training and business capacity along with 3 control variables: size, number of years of establishment, and business field of the enterprise. Research data was collected from 308 administrators and accountants in Vietnamese businesses, and then analyzed using regression analysis on SPSS 22 software. Research results show that the factors of Supervision and decision-making strategy, and Focus on interest, the size of the enterprise have a positive impact on the capacity of the enterprise. The size of an enterprise has an impact on the relationship between the management control system and the capacity of Vietnamese enterprises. Control in small businesses is doing better than medium and large businesses in terms of Monitoring and Focusing attention and large businesses have better control in terms of strategic decision-making than the remaining businesses, however, Supervisors' supervision will hurt the capacity development of large enterprises. The research results explain 60% of the impact of these factors on enterprise capabilities, serving as a basis for recommendations to promote the role of management control systems in Vietnamese enterprises.

Keywords: *Management control system, enterprise capacity, learning orientation, capabilities, Vietnam.*

1. INTRODUCTION

Management control systems (MCS) are increasingly being considered important in implementing organizational strategies. The birth of MCS has changed the organization's management method under the impacts of the socio-economic environment and technological development (Ittner & Larcker, 2001; Pham & Hoang, 2019; Dana et al. ., 2021). According to Anthony (1965), MCS is understood as the process by which managers ensure that resources are collected and used effectively to accomplish organizational goals (Anthony, 1965). The management control system includes target control and interaction control. Along with the contributions of Anthony (1965), the theory of management control systems continued to be developed by many scholars, focusing on specific control mechanisms of accounting such as activity-based costing (Cooper & Kaplan, 1991), balanced scorecard (Kaplan & Norton, 1992) and interactive

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systems (Simons, 1994). The efforts of these authors have contributed positively to management control system theory.

Management control systems are constantly changing according to time, context, and business environment. From focusing only on financial information, the management control system has shifted to considering non-financial information such as customer satisfaction, employee loyalty, product quality, and impact. of the business environment…. Management control systems also receive the attention of many scholars in both theoretical and applied aspects, playing an indispensable role in business operations (Saeed et al., 2017). In the context of the strong development of information technology, the development of multinational companies, and global integration, the use of MCS is increasingly expected to help administrators implement strategies and achieve goals. business goals (Widener, 2007; Rehman et al., 2019; Rotzel et al., 2019).

Many studies on the relationship between MCS and enterprise capacity development, specifically learning capacity and business capacity, have been carried out. Studies have shown that learning capacity and business capacity will create competitive advantages for businesses (Lumpkin et al., 2009; Nguyen D.T. & Hoang T. H., 2022). However, some studies show that using goal-based control in MCS will negatively affect the learning capacity of enterprises (Henri, 2006). The impact of target control and interaction control both negatively affect the capacity of enterprises (Mundy, 2010).

Thus, it can be seen that the impact of MCS on enterprise capacity is still unclear. Therefore, in this study, we want to continue to clarify the impact of MCS on the capabilities of Vietnamese enterprises. The research questions posed are: (1) What is the impact of MCS on the capacity of Vietnamese enterprises?; (2) Does the impact of MCS on the capacity of businesses differ according to size, age, and business field?

2. LITERATURE REVIEW

The research was conducted based on resource theory (Resource-based view - RBV) to explain how to effectively utilize an enterprise's resources to achieve a sustainable competitive advantage (Barney, 1991). According to Porter (1980), each enterprise has its competitive advantage, depending on the ability to make a difference, the ability to use resources, and company-level capabilities. Enterprises need to identify resources and exploit and use them effectively, ensuring competitive advantage, which is the basic principle of RBV theory. The most commonly studied firm-level competencies are entrepreneurial orientation and learning orientation (Ripollés & Blesa, 2005; Henri, 2006a; Henri, 2010; Nguyen D.T. & Hoang T. H., 2022).

Learning orientation (LO) is the development of ideas, knowledge, and relationships between past actions and future actions, also seen as a process leading to new behaviors (Chenhall, 2005).

Entrepreneurial orientation (EO) is considered an extension of the concept of organizational entrepreneurship, identified as an important process that contributes to the survival and performance of businesses (Hitt et al., 2001).

MCS is the way administrators ensure the effective use of resources and the accomplishment of strategic goals (Pham & Hoang, 2019). MCS affects individuals within the organization through formal or informal procedures. Common formal procedures of MCS are planning, monitoring systems, reporting, human resources, and information for decision-making. Informal activities such as meetings, information exchange via email, etc. MCS will not automatically improve organizational performance, but it depends on administrators influencing different MCSs to achieve their goals. organization (Langfield Smith, 1997).

The study uses Simons's (1995) Levers Of Control (LOC) theoretical framework and Vandenbosch's (1999) Executive Support Systems (ESS) to classify MCS. Simons's (1995) LOC is widely used, according to which MCS is implemented by balancing the forces of four levers: beliefs control and values; boundary controls; diagnostic controls, and interactive controls. The traditional beliefs and values of the organization will inspire members to perform well at work, towards achieving the organization's goals. Boundary control is the exercise of hierarchical administrative control, establishing rules for individual behavior within the organization. These levers support each other, achieving balance will create strength and efficiency. Target control refers to how the organization's performance is monitored, KPIs are built according to important aspects of strategy (financial, internal processes...) to achieve financial goals and objectives. nonfinancial. Interactive control includes formal communication processes between superiors and subordinates, encouraging subordinates to give ideas to solve problems in the organization. The organization's goals and how to achieve them are based on the opinions of subordinates. According to Simons (1995), the trust, value, and interaction control levers will create positive energy while the remaining two levers will bring negative energy to the organization.

Vandenbosch (1999) approaches MCS from the following aspects: Supervision; Strategic decision-making; Focusing the attention of the organization; and legitimizing organizational decisions. Monitoring represents monitoring activities over a certain period, receiving feedback, and comparing performance with predetermined plans and goals. This type of control is similar to Simons's (1995) goal control. Strategic decision-making is unusual problem-solving, requiring quick, diverse information from members of the organization. This type is similar to Simons's (1995) interactive control. Focusing attention on the organization demonstrates the interaction between superiors and subordinates in implementing strategy, and prioritizing work to be appropriate to achieve goals. This control is similar to Simons's (1995) interactive control. Legitimizing organizational decisions demonstrates justifications for decisions made in the past while ensuring increased action in the future. This control is similar to Simons's (1995) goal control.

From Simons's (1995) and Vandenbosch's (1999) classification, many authors have also added to enrich the concept of MCS. MCS is considered the use of management accounting in a systematic way to achieve company objectives (objective control) and also includes other controls in the relationship between the individual and the organization (controlling the organization). interactive control) (Chenhall, 2003).

Target control is the use of a performance measurement system or KPIs (key performance indicators) to monitor activities and motivate employees to achieve the enterprise's goals in a certain strategy (Widener, 2007). The content of objective control includes Monitoring activities and Legitimizing decisions (Vandenbosch, 1999; Simons, 2000).

Interactive control is a control process in which managers demonstrate interaction with subordinates, encouraging employee participation in the formal debate process (Mundy, 2010). The content of interactive control includes Focus and Strategic Decision Making (Vandenbosch, 1999; Simons, 2000).

The above analysis shows that management control helps managers develop important strategic goals and plans in the organization and monitor their implementation. MCS can be unified as objective control (Monitoring; Legitimizing organizational decisions) and interactive control (Strategic decision-making; Focusing organizational attention). This is also the basis for research, implementation and evaluation of MCS.

The relationship between MCS and enterprise capacity (CAP)

Research on the relationship between MCS and enterprise capabilities is still contradictory. Some authors have found a negative relationship between MCS and

enterprise capacity. Henri (2006a, 2006b) shows that targeted control reduces firm capacity. Bisbe and Otley (2004) also showed a negative relationship between MCS and some enterprise capabilities. Widener (2007) points out that the use of interactive control does not facilitate organizational learning. However, many other studies demonstrate that the use of interactive control can promote innovation, facilitate learning (LO), and develop entrepreneurial capabilities (EO) (Henri 2006a; Chenhall, 2005; Mundy, 2010; Pham & Hoang, 2019; Rehman et al., 2021). Orozco (2016) shows that target and interactive MCS both have a positive impact on enterprise capabilities. Vandenbosch (1999) did not find any impact of MCS on enterprise capabilities while Simmons (1995) did not find a significant impact of target MCS on enterprise capabilities. Thus, from an overview of previous research results, MCS's impact on enterprise capacity is still controversial. Therefore, the models and hypotheses in this study want to verify the impact of MCS on the capabilities of businesses, researched in Vietnam.
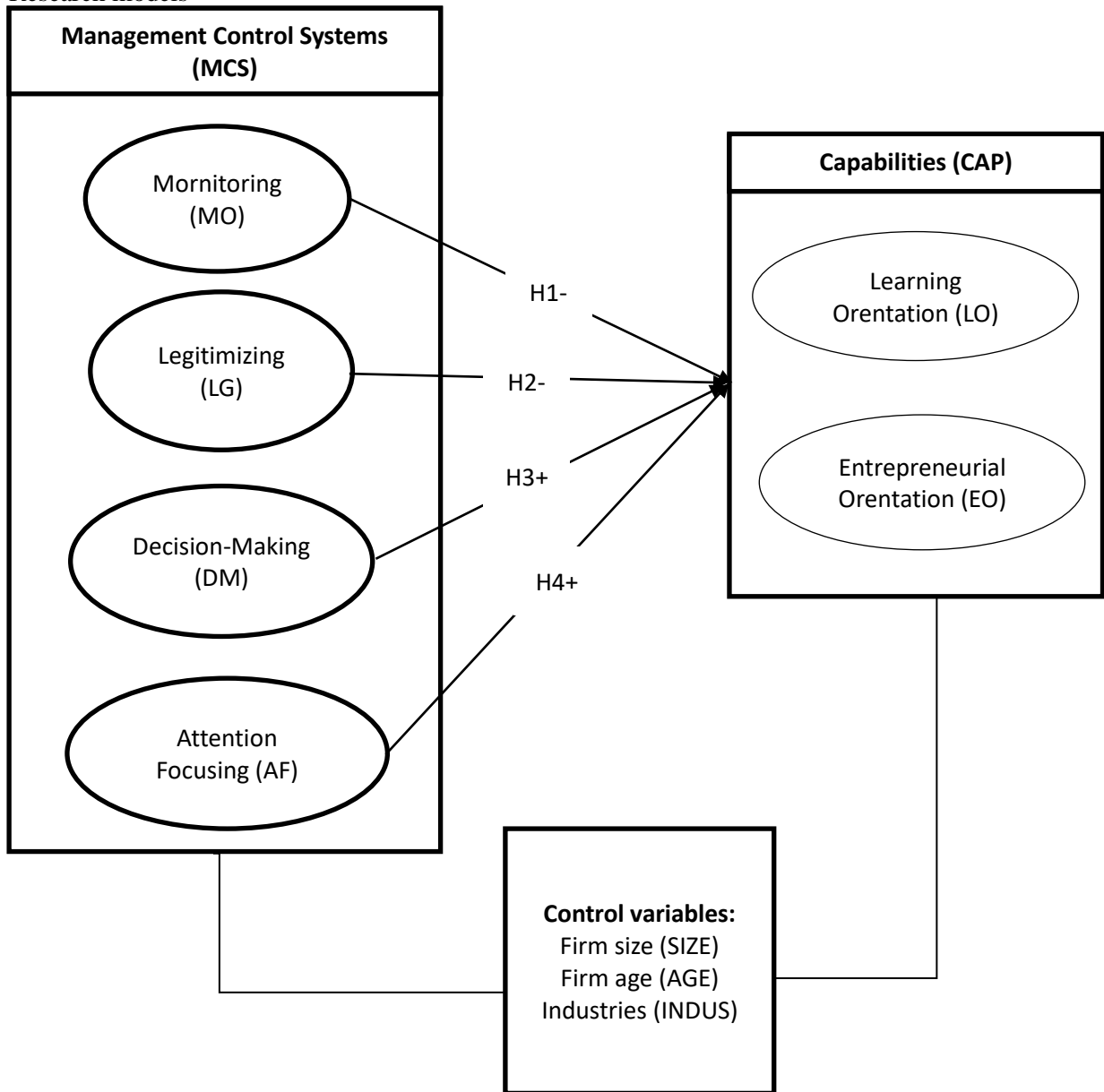
Research models

Figure 1. Proposed research model

Research hypothesis:

H1: Monitoring (MO) hurts enterprise capacity (CAP)

H2: Legalization of decisions (LG) hurts enterprise capacity (CAP)

H3: Strategic decision-making (DM) has a positive impact on enterprise capabilities (CAP)

H4: Attention focus (AF) has a positive impact on enterprise capacity (CAP)

H5: The impact of MCS on the capacity of CAP enterprises differs according to enterprise size

H6: The impact of MCS on the capacity of CAP enterprises differs according to the age of the enterprise

H7: The impact of MCS on the capabilities of CAP enterprises differs according to business fields

3. RESEARCH METHODS

First, based on Simoms' (1995) LOC theory and Vandenbosch's (1999) ESS theory on the impact of MCS on enterprise capabilities, we inherited the scale to build a preliminary questionnaire. This questionnaire was sent to 05 business accountants and 05 lecturers from universities in Vietnam, including the National Economics University, the University of Labor and Social Affairs, and the Water Resources University to evaluate their performance. understandability, clarity, and suitability to achieve research goals. Based on comments from the above subjects, we built an official questionnaire.

Next, the official questionnaire was created on Google Forms and sent to the emails of Vietnamese businesses according to the convenient sampling method. The respondents were accountants and administrators. The questionnaire is divided into 3 parts: (1) Personal information; (2) Enterprise information; (3) Evaluation of MCS; and (4) Assessment of the enterprise's capabilities. Questions about MCS and enterprise capabilities are formulated on a 5-level Likert scale, from 1-Never (Strongly Disagree) to 5- Very Often (Strongly Agree). These survey questions aim to answer the research question about the impact of MCS on the capabilities of businesses and compare them according to control variables such as age, size, and business field of businesses.

Finally, the data collected was 315 votes. After checking and cleaning the data, the number of valid votes is 308 to perform quantitative analysis on SPSS 22 software through the following steps: Testing the reliability of the scale; EFA exploratory factor analysis; Multivariate regression analysis; and Group comparison test.

Research scale

Measuring scale for MCS: (1) Objective control includes Monitoring (4 observed variables) and Legalization of regulations (9 observed variables) inherited from Henri (2006a), Vandenbosch (1999), Shurafa and Mohamed, (2016); (2) Interactive control includes Focus on focus (07 observed variables) and Strategic decision making (07 observed variables) inherited from the scales of Brockman and Simmonds (1997), Shurafa and Mohamed, (2016).

The dependent variable Enterprise Capacity (CAP) includes Learning Capacity (LO, 4 observed variables) used from the study of Lumpkin et al. (2009), Rehman et al. (2019), and Business Efficiency (EO, 8 observed variables) according to the work of Lumpkin et al. (2009), Rehman et al. (2021).

Regarding control variables, enterprise size in terms of the number of employees (under 100, small scale; 100-200 medium scale; > 200 large scale); The age of the enterprise is

divided into 3 levels (under 5 years, from 5-10 years, over 10 years); Types of enterprises include private capital enterprises, state-owned enterprises, and non-profit enterprises; Based on the industry in which the enterprise operates, including manufacturing, construction, trade and services, and others.

Details of surveyed enterprises (Table 1) show that in terms of scale by number of employees, the majority of enterprises are small-scale with fewer than 100 employees (168; 54.5%), followed by from 100 to 200 people (94; 30.5%). Regarding the number of years in operation, there are more businesses from 5 to 10 years than businesses under 5 years and over 10 years (151; 49%). The above characteristics are typical of Vietnamese enterprises when the majority of enterprises are small and medium-sized, and start-up enterprises are increasing in total number. Therefore, the survey subjects are representative of Vietnamese businesses.

Table 1. Enterprises Characteristics

Characteristics		Frequency	Percent (%)
SIZE	< 100 people	168	54.5
	100-200 people	94	30.5
	> 200 people	46	14.9
AGE	< 5 years	80	26.0
	5-10 years	151	49.0
	> 10 years	77	25.0
INDUSTRY	Manufacture	92	29.9
	Construction	18	5.8
	Commerce & services	167	54.2
	Other	31	10.1
	Total	308	100.0

Source: Author's compilation

4. RESEARCH RESULTS

The reliability of the scale

The study evaluates the reliability of the scales using Cronbach's Alpha reliability coefficient to reflect the level of close correlation between observed variables in the same factor LO, EO, and MCS. All factors ensure Cronbach Alpha reliability of 0.6 or higher, then the observations in each scale are suitable to perform exploratory factor analysis (Hair et al., 2022). Table 2 shows that all Cronbach Alpha coefficients are greater than 0.6, proving that the observed variables in the same scale are closely related, and suitable for exploratory factor analysis.

Table 2. Reliability Statistics

Factors	Cod	Cronbach's Alpha	N of Items (N = 39)
Monitoring	MO	.900	4
Legitimizing	LG	.961	9
Decision-Making	DM	.954	7

Attention Focusing	AF	.936	7
Learning Orientation	LO	.950	4
Entrepreneurial Orentation	EO	.947	8

Source: Software processing results

Exploratory factor analysis (EFA)

Exploratory factor analysis aims to evaluate the convergence and discrimination of factor groups, reaffirming the structure of the scales. Perform exploratory factor analysis for 02 groups: MCS (04 factors) and Capabilities (02 factors). The MCS group's KMO and Bartlett's test results show that Sig. = 0.000 < 0.05; KMO coefficient is high (0.962 > 0.5) (Table 3). This result shows that the observed variables in the population are correlated with each other and EFA factor analysis is very appropriate. The results show that the observed variables form 04 factors, suitable for the target control group and interactive control according to the original observed variables.

Table 3. Exploratory Factor Analysis_MCS Use

Rotated Component Matrix _MCS uses

	Component			
	LG	DM	AF	MO
LG5	.747			
LG6	.720			
LG7	.713			
LG2	.708			
LG1	.707			
LG8	.705			
LG9	.705			
LG4	.682			
LG3	.677			
DM3		.798		
DM4		.782		
DM6		.708		
DM7		.699		
DM5		.689		
DM2		.685		
DM1		.648		
AF4			.754	
AF3			.732	
AF7			.717	
AF6			.704	
AF5			.687	

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.962
Bartlett's Test of Sphericity	Approx. Chi-Square	8777.715
	df	351
	Sig.	0.000

AF2		.681	
AF1		.618	
MO2			.768
MO3			.758
MO4			.725
MO1			.714

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Source: Software processing results

The Capabilities group's KMO and Bartlett's test results show that Sig. = 0.000 < 0.05; KMO coefficient is high (0.941 > 0.5) (Table 4). This result shows that the observed variables in the population are correlated with each other and EFA factor analysis is very appropriate. The results of the exploratory factor analysis of this group show that the observed variables form two factors, consistent with the LO and EO groups according to the original observed variables.

Table 4. Exploratory Factor Analysis_ Capabilities

Rotated Component Matrix[a]_Capabilities

	Component	
	EO	LO
EO4	.828	
EO5	.815	
EO3	.802	
EO2	.794	
EO8	.758	
EO6	.746	
EO1	.736	
EO7	.631	
LO1		.866
LO4		.858
LO3		.848
LO2		.821

KMO and Bartlett's Test_ Capabilities

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.941
Bartlett's Test of Sphericity	Approx. Chi-Square	3739.328
	df	66
	Sig.	0.000

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Source: Software processing results

Multivariate regression analysis

After analyzing the reliability and exploratory factors, evaluate the impact of target control and interactive control on enterprise capacity (CAP) using regression analysis to test hypotheses according to the model. research form.

The Adjusted R Square coefficient of the model is 0.6 (P-value <0.01) showing that the model can explain 60% of the total impact of the factors "Learning ability" and "Business ability" on performance. productivity of enterprises. Results Table 5 shows that the factors MO, DM, AF, and SIZE have a positive impact on CAP, all of which are statistically significant. The factors also do not have multicollinearity because the VIF coefficients are all less than 3 (Hair et al., 2022).

Table 5: Impaction of MCS and control variables on CAP

Independent variables (N= 308)	Cod	Coef (Beta)	95% CI
Monitoring	MO	.252***	0.13; 0.33
Legitimizing	LG	.130	-0.01; 0.23
Decision-Making	DM	.178*	0.04; 0.28
Attention Focusing	AF	.277***	0.14; 0.4
Industry	INDUS	-.037	-0.04; 0.01
Size	SIZE	.109**	0.02; 0.13
Age	AGE	-.034	-0.08; 0.03

(* P<0.05; ** P<0.01; *** P<0.001)

Source: Software processing results

Group comparison

From the results of regression analysis, the only scale has a positive impact on CAP, with statistical significance. We compare the impact of MCS on CAP by scale. The results are in Table 6.

Table 6. Multiple Regression results: Fims Size

MCS uses	Firm Size (Beta)		
	Small	Medium	Large
MO -> CAP	0.328***	0.297**	-0.303*
LG -> CAP	.099	0.266*	.057
DM -> CAP	0.148*	-.032	0.713***
AF -> CAP	0.369***	0.254*	-.020

 (* p < 0.1; ** p < 0.05; *** p < 0.01)

Source: Software processing results

Group comparison results (Table 6) show that, based on size, each type of control has an impact on different types of businesses with different sizes. MO's impact on CAP is different between enterprises of scale, in which small and medium-sized enterprises have a positive impact and large enterprises have a negative impact. Small-sized enterprises have a higher MO impact on CAP than medium-sized enterprises. LG only has a positive

impact on the CAP of medium-sized enterprises. DM has a positive impact on CAP according to large and small enterprises, in which the level of impact on large enterprises is higher than that of small enterprises. AF has a positive impact on CAP according to small and medium-sized enterprises, the level of impact according to small enterprise size is higher.

5. CONCLUSION AND DISCUSSION

Research results (Table 7) show that MCS impacts businesses' capabilities (learning ability and business ability).

Table 7. Summary of hypotheses

Hypothesis	Causal path	Coefficients	Hypothesis supported
H1	MO -> CAP	.252***	Yes, opposite
H2	LG -> CAP	.130	No
H3	DM -> CAP	.178*	Yes
H4	AF -> CAP	.277***	Yes
H5	MCS -> SIZE -> CAP	-.037	No
H6	MCS -> AGE -> CAP	.109**	Yes
H7	MCS -> INDUS -> CAP	-.034	No

(* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$)

Source: Software processing results

Thus, the research results show that control through Monitoring (MO) has a positive impact on enterprise capacity, contrary to the initial hypothesis. Previous studies have argued that controlling the interaction by monitoring the management control system will help businesses' learning and business capacity become better (Chenhall, 2005; Mundy, 2010; Orozco, 2016; Shurafa and Mohamed, 2018; Pham & Hoang, 2019; Rehman et al., 2021). This study proves that this argument is suitable for Vietnamese businesses. The research results are the basis for recommendations for businesses to improve capacity through control, contrary to previous results of Henri (2006a, 2006b), and Otley (2004). However, this study has not shown the impact of target control through Decision Legitimization (LG) on enterprise capacity. This result is consistent with Vandenbosch's (1999) and Simmons's (1995) research.

Interactive control through Strategic Decision Making (DM) and Attention Focus (AF) both have a positive impact on enterprise capabilities. This result agrees with many previous studies that interactive control can promote innovation, facilitate learning, and develop business capabilities (Mundy, 2010; Orozco, 2016, Shurafa and Mohamed, 2018; Pham & Hoang, 2019; Rehman et al., 2021). This study provides further evidence to counter the negative results of Widener (2007) and Otley (2004). This research is the basis for managers of Vietnamese enterprises in promoting enterprise capacity by enhancing interaction control, focusing attention, and establishing programs and action plans as well as New initiatives to implement business strategy.

Research also shows that the size of an enterprise has an impact on the relationship between control and enterprise capacity, accordingly, control in small enterprises is doing better than in medium and large enterprises in terms of monitoring and concentration. attention and large enterprises have better control over strategic decision-making than other enterprises. In large enterprises, supervision will hurt the development of enterprise capacity, in contrast to the remaining enterprises.

Research results comparing the impact of MCS on enterprise capacity according to enterprise size have suggested new issues about the relationship between management control and enterprise capacity development. Large-scale enterprises need to strengthen control over strategic decision-making and encourage employees to be proactive in their work instead of regular monitoring measures. Small and medium-sized enterprises need to implement simultaneous control of goals and interactions to improve the capacity of enterprises.

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