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The effect of management control systems on business performance and innovation organizational as moderating and mediating variable

Agus Setiyawan[a,b*], Tubagus Ismail[a], Munawar Muchlish[a] and Ina Indriana[a]

[a]*University of Sultan Ageng Tirtayasa, Banten, Indonesia*
[b]*Politeknik Tunas Pemuda, Banten, Indonesia*

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ABSTRACT

There were still contradictory results from earlier research on the relationship between organizational innovation, performance, and management control systems (MCS). In order to account for these contradictory results, future studies ought to concentrate on the empirical analysis of Simon's MCS theory. The purpose of the study was to assess the mediation and moderation model in relation to performance, innovation, and MCS. The study intends to broaden the scope by employing a more thorough definition and measurement of research variables. Because the Partial Least Square (PLS) can concurrently assess the existence of a dual dependency relationship of a latent variable, the study used PLS to test the hypothesis. The mediated hypothesis which holds that MCS indirectly affects performance through innovation seems to be supported by these data. All things considered, this study contributes to the understanding of the ambiguous and contradictory conclusions of earlier studies that examined the connection between MCS, innovation, and performance.

1. Introduction

Product and process innovation, the most comprehensive response to market uncertainties, can help businesses reduce their risk through innovation (Guo, Paraskevopoulou, & Santamaría Sánchez, 2019) and is often necessary for an organization's survival in a competitive market (Gunday, Ulusoy, Kilic, & Alpkan, 2011). The findings of these studies highlight the importance of tracing innovation back to its roots (Duygulu, Ozeren, Bagiran, Appolloni, & Mavisu, 2015), who looked at the variables inside a company's culture that boost innovation (Abadi et al., 2021; Aliyyah, Rusdiyanto, & Kalbuana, 2021; N Kalbuana et al., 2021; Prasetyo, Aliyyah, Rusdiyanto, Nartasari, et al., 2021a; Prasetyo, Aliyyah, Rusdiyanto, Suprapti, et al., 2021). Still needed, though, are investigations into the conditions that preceded these breakthroughs (Bernd & Beuren, 2022), due to the fact that the literature analysis of them was fragmented (Guo et al., 2019), nor was the connection between them and environmental ambiguity clarified (Kim, 2022).

Introducing or improving upon brand-new production techniques, distribution channels, or back-end support operations is an example of process innovation (Ramayah, Soto-Acosta, Kheng, & Mahmud, 2020). Innovation in marketing, on the other hand, is about how a business goes about selling its goods and services to customers. Both are able to characterise distinctive stimuli-based patterns but call for distinct approaches (Lopez-Valeiras, Gonzalez-Sanchez, & Gomez-Conde, 2016), environments where they can flourish (Guo et al., 2019), and are uniquely influenced by internal conditions like the company's management control system (MCS) (Kraus, Rigtering, Hughes, & Hosman, 2012). According to (Langfield-smith, 1997), the levers of control is a significant hypothesis because it has the potential to contribute to the explanation of previously discovered MCS research contradictions. According to the findings of (Tucker, Thorne, & Gurd, 2014), the levers of control hypothesis appears to have a substantial impact on ongoing MCS-strategic research. According to (Tessier & Otley, 2012), the concept of levers of control has been utilized frequently in recent years.

* Corresponding author.
E-mail address: 7783220017@untirta.ac.id (A. Setiyawan)

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The chance of success of innovations is connected with high task uncertainty and complexity (Bedford & Malmi, 2015). Development related exercises are portrayed by a maximum usage of assets (Morel, 2021). Managing innovation demands striking a balance between the flexibility of project teams as a fertile field for invention and control to avoid squandering resources and ensuring efficient operations (Höglund, Mårtensson, & Thomson, 2021). It is widely acknowledged that MCS have the potential to control innovation activities (Strauß & Zecher, 2013). (Journeault, De Rongé, & Henri, 2016) MCS can generate positive tensions between these two requisite factors for effective innovation. Multiple studies have demonstrated a growing convergence between the fields of innovation management and management control (Schulze, Townsend, & Talay, 2022).

The relationship between MCS and innovation has been the subject of several recent publications in the management accounting and control literature (Barros & Ferreira, 2022). This has allowed for a great deal of knowledge to be amassed, yet the "need to" Management accounting and control literatures have lately released several works that contribute to our understanding of MCS and innovation (Müller, Buliga, & Voigt, 2021). This has enabled for a considerable body of knowledge to be amassed, but more study of the ways in which management accounting and control practise realised by the managerial actors jointly and individually might contribute to and relate to innovation is needed (Marinelli, Bartoloni, Pascucci, Gregori, & Farina Briamonte, 2022). Moreover, (van der Kolk, van Veen-Dirks, & ter Bogt, 2020) the inner workings of control combinations are mostly uncharted territory; control in novel situations is a particularly complex topic with various aspects to consider; so, much remains to be understood (Jannah et al., 2020; Prasetyo, Aliyyah, Rusdiyanto, Nartasari, et al., 2021b; Prasetyo et al., 2021).

The impact of MCS on the dissemination of innovation is consistently reported in the literature (Otley, 2016), factoring in the impact of any unforeseen circumstances, like increased pricing pressure from rivals or a shift in the availability of key raw materials (Chenhall & Moers, 2015a). It is likewise seen that the underlying hypothetical contentions that MCS hinder the execution of developments (Dos Santos, Sallaberry, & Mendes, 2022) have been disproved by data showing how managerial practices like planning and control can permeate even the creative process (Bernd & Beuren, 2022). According to this scenario, MCS is essential to the success of any given firm (Grabner & Moers, 2013) considering their importance in developing winning tactics (Müller et al., 2021), including innovation (Goni & Van Looy, 2022). (Guo et al., 2019) examined MCS utilization and numerous innovation categories and found that both input and output management restrictions are essential for process innovation. According to (Lopez-Valeiras et al., 2016), innovation in both organizations and their processes can be influenced by using MCS in an interactive setting. (Dos Santos et al., 2022) found that strategic and financial planning instruments are the most extensively adopted in incubated enterprises noted for their innovative character when testing the intensity of usage of management control instruments (centered on planning, assessment, and management).

Our research adds significantly to the existing corpus of knowledge. To begin, our work adds to the growing body of literature concerning the role of MCSs in the creative process (Barros & Ferreira, 2023). (Biswas & Akroyd, 2022) A large number of new ideas and business startups fail every year (Davila & Ditillo, 2017). (Davila, Foster, & Jia, 2015) Professional management practices, such as MCSs, can help foster innovation, and practitioners could benefit from instruction on how to do so. Second, most empirical research focuses only on PI, and so the diverse nature of innovation has been overlooked in the existent MCS literature (Biswas, Akroyd, & Sawabe, 2022). (Biswas et al., 2022) We contribute to a more nuanced view of innovation within the framework of command by delineating between product-focused, business-model-focused, and ambidextrous startups. Third, it is generally accepted that various forms of regulation are dependent on one another (Speklé & Widener, 2020). However, the vast bulk of the current study investigates how MCSs can be used for interactive and diagnostic purposes and how this impacts creative output (Bisbe, Kruis, & Madini, 2019).

As a result, we look into how the use of multiple systems for self-regulation influences originality. The importance of these kinds of analyses is highlighted by our result that the usage of belief and interactive control systems is linked to less innovation among startups aiming for business model innovation. Therefore, rather than naively maximizing the usage of control mechanisms, entrepreneurs must carefully construct their control systems in accordance with their innovative objectives.

2. Literature Review and Hypothesis Development

2.1 Teory Levers of Control (LOC)

According to (Barros & Ferreira, 2022), the company's objective is reached by the coordinated use of four control mechanisms (beliefs, limits, interactive, and diagnostic). (Lill & Wald, 2021) discusses enabling and restricting levers and their complementarity. Beliefs and interactive controls enable. According to (Barros & Ferreira, 2022), beliefs are the formally communicated and systematically reinforced collection of organizational concepts that define the organization's fundamental values, purpose, and direction. Belief structures open up a world of new opportunities. Systems of control that encourage exploration and discovery, leading to the emergence of novel approaches as individuals across an organization react to opportunities and risks of their own perception (Laguir, Gupta, Bose, Stekelorum, & Laguir, 2022). The interactive

lever promotes organizational learning and creativity by enabling hierarchical face-to-face talks. Tessier and Otley (2012) argues that these two catalysts foster an environment where people are more open to learning new things and sharing what they already know with others.

Borders and medical surveillance are two more tools that can be used as restraints. Organizational boundaries minimize unwanted conduct and risk (Baird, Su, & Munir, 2019). Diagnostic control systems encourage, monitor, and reward personnel to achieve organizational objectives. (Bisbe et al., 2019) thinks these two limiting controls provide opportunity seekers with well-defined aims, quantifiable rewards, and rigorous boundaries. MCS is criticized by LOC theory because of its role in executing strategies (Strauß & Zecher, 2013). Akroyd and Kober (2020) found empirical data supporting the LOC hypothesis.

According to the aforementioned theory, corporate strategy regulation requires integration of all four systems. Due to their interconnectedness, the four systems must be used simultaneously to govern the strategy. (Radtke, Speklé, & Widener, 2023) Trust systems are formal ways for top management to develop, communicate, and enforce business values, objectives, and directions. Managers employ limit systems, which are formal techniques for imposing constraints, to create boundaries and limits. Diagnostic control systems monitor organizational access and address performance infractions. Interactive control systems let leaders directly influence subordinates' decisions. Langfield-smith (1997) believes the LOC is important because it may explain MCS study differences. Tucker et al. (2014) discovered LOC hypothesis influences MCS-strategic research. LOC is used in management accounting research, according (Tessier & Otley, 2012).

2.2 Defining innovation

Since the definition of “innovation” varies greatly from author to author and research tradition to research tradition, it can be challenging to pin down (Endarto et al., 2021; Indrawati, Utari, Prasetyo, Rusdiyanto, & Kalbuana, 2021; Prasetio et al., 2021; Prasetyo, Aliyyah, Rusdiyanto, Kalbuana, & Rochman, 2021; Suryati, Putri, & Hidayat, 2021). In publications from diverse fields, Baregheh et al. (2009) discovered 60 definitions of innovation. Innovation was initially defined by Schumpeter in 1934 (Crossan & Apaydin, 2010). Schumpeter, the “prophet of innovation”, felt that new ideas—whether they be for a product, industrial method, organizational structure, supply chain, or market—are what drive economic growth (Crossan & Apaydin, 2010). Many writers and organizations characterized innovation after Schumpeter (Crossan & Apaydin, 2010). From this study's research, several writers view innovation as the execution of new ideas (Chenhall & Moers, 2015a). Bisbe and Sivabalan (2017) emphasize the importance of MCSs, which see innovation as a regulated process rather than a random occurrence. MCSs' function as coordinators and regulators of new product development processes has grown in significance as this aspect of business strategy has gained prominence (Davila et al., 2015). Also,(Davila & Ditillo, 2017) asserted that the control systems of MCSs may be both adaptable and stable enough to frame behavior, demonstrating that innovation may be controlled inside an organization. The author elaborates by saying that strategic and organizational innovation processes include in-house competences for discovering, developing, and commercializing new ideas (Davila & Ditillo, 2017).

This perspective distinguishes creativity from innovation, notwithstanding their close relationship (Chenhall & Moers, 2015a). Chenhall and Moers (2015b) define creativity as the creation of a new idea, which is the basis for innovation. Also investigating creativity, Adler and Chen (2011) describe it as unique idea creation. According to (Chenhall & Moers, 2015b), when employees come up with new ways of doing things and the organization is able to put those ideas into action, it is innovation.

2.3 Business performance

Business performance is a trend in academic writing, but its definition is unmanageable due to its many connotations (Hastomo, Karno, Kalbuana, Meiriki, & Sutarno, 2021; Nawang Kalbuana, Kusiyah, et al., 2022; Nawang Kalbuana, Taqi, Uzliawati, & Ramdhani, 2022, 2023; Uzliawati, Kalbuana, et al., 2023; Uzliawati, Taqi, Muchlish, & Kalbuana, 2023). Thus, no general definition of this term exists (Farooq, 2021). Business performance is the attainment of profitability, sales, market share, and firm-strategic goals (Hult, Hurley, & Knight, 2004). The measuring of company success is typically debated using subjective or objective measurements (Aliyyah, Prasetyo, et al., 2021; Aliyyah, Siswomihardjo, et al., 2021; Luwihono et al., 2021; Prasetyo, Aliyyah, Rusdiyanto, Utari, et al., 2021; Susanto et al., 2021). Profitability, cash flow, and market share can all be measured using this kind of analysis. Market share, profit margin, product quality, and employee turnover are only some examples of relative performance indicators used in the subjective approach (Vij & Bedi, 2016).

Recent research by Farooq (2021) suggests two strategies to assess company success. The first step is for respondents to rate their progress over the past three years in comparison to that of a major competitor or the industry average. Second, secondary data and surveys allow for unbiased evaluation of performance worth. According to (Vij & Bedi, 2016), subjective and objective business performance measurements are strongly correlated. Dess and (Radomska, Wołczek, & Szpulak, 2021) suggest that objective performance measurements are better than subjective ones. (Kennett, Hu, Maritz, & Sun, 2020) provide a two-dimensional performance viewpoint. Financial success, full utilization of resources, and market

share are all measures of objective performance. Another is subjective performance, which encompasses service quality, personnel satisfaction, and customer satisfaction. Return on investment and return on sales are two examples of business performance indicators that are directly tied to innovation (Al Mamun, Fazal, & Muniady, 2019).

3. Hypothesis development

MCS improves performance, according to LOC theory. Through the use of MCS, creative models, conversations, and actions can be constructed (Davila et al., 2015). The LOC theory requires firms to extensively deploy MCS with the four control systems having varied but complimentary responsibilities to boost creativity, according to Davila and Ditillo (2017). The belief system inspires employees to innovate to uphold company ideals. Without constraints, a belief system is ineffective. Innovation's hunt for possibilities may pose economic hazards without strategic constraints.

Interactive control systems may spread innovation-related knowledge (Journeault et al., 2016). Interactive control systems provide double-loop learning for inventive behavior, according to (Journeault et al., 2016). Executives are aided in exploring new avenues and launching innovative projects by use of interactive control systems (Garcia Osma, Gomez-Conde, & de las Heras, 2018). Henri and Wouters (2019) proposed that diagnostic control systems would help make the most of the benefits of interactive control systems on creativity within organizations. If the diagnostic control system isn't supported, an interactive control system may lose its advantages. According to the study, a control package incorporating all four of these approaches has been shown to significantly increase creative output. The model of innovation type connection and MCS of (Davila et al., 2015) outlines the four control systems and their complementary roles needed to boost incremental and radical innovation. Simons (1994) found that creative businesses employ MCS more intensely using data from over 100 companies. Based on the aforementioned, MCS (control packages of belief, limitation, diagnostic, and interactive systems) may boost creativity. The resources-based hypothesis that innovation improves performance is as follows. One of the most crucial parts of an organization's strategy is innovation, which helps organizations compete in local and worldwide marketplaces. (Davila et al., 2015).

According to the resources-based approach, creativity is a valuable, hard-to-copy, and irreplaceable organizational skill. (Henri & Wouters, 2019) Innovation provides sustainable competitive advantage and boosts organizational success. Previous study shows that innovation boosts organizational performance. (Otley, 2016) Arguments and empirical data suggest innovation improves performance. Based on the preceding ideas, MCS may indirectly affect performance via innovation. This research did not present a hypothesis regarding how MCS directly affects performance, hence route c is a dividing line. MCS does not affect performance since it does not provide a competitive edge (Henri & Wouters, 2019).

H_1: *MCS has an indirect positive effect on Business Performance through innovation.*

Moderation may also play a role in the mediated relationship between MCS and either innovation or performance. Bisbe et al. (2019) stated the LOC theory ambiguously allowed moderators. MCS moderates innovation-performance relationships. Innovation improves performance with MCS, as seen in the moderation model above. Innovation and MCS positively impact performance, according to the model. Innovation affects performance more with intensive MCS usage. According to the LOC theory, competent managers should utilize MCS to concentrate employees on strategic concerns like innovation (Henri & Wouters, 2019). According to the contingent approach, strategy (including innovation strategy) affects performance depending on the structural backdrop, especially MCS (Chenhall & Moers, 2015b). Organizational support is essential to turn innovation plans into performance improvements.(Bisbe & Malaguenõ, 2015) MCS are essential to the organization's internal environment and help translate strategy and innovation into performance.

Several MCS responsibilities help strategy and innovation processes work well. First, MCS guides the innovation process to match the organization's strategy. Second, the MCS integrates internally to address innovation uncertainty. (Bisbe & Malaguenõ, 2015) Research and data imply that innovation strategy selection causes strategic uncertainty. Managers use MCS to regulate operations and overcome uncertainty to accomplish organizational objectives (Narayanan & Boyce, 2019; Otley, 2016). Managers that utilize MCS to guide and concentrate employees in the innovation process may boost performance. Innovation also changes the organizational setting, creating uncertainty. MCS helps adapt to uncertainty. Henri and Wouters (2019) claim that MCS may maximize innovation's performance benefits. In light of the aforementioned, we propose the following theory:

H_2: *There is a positive interaction between Innovation and MCS in influencing business performance.*

4. Methodology

Data is collected through mail surveys and e-mail surveys to the controllers of each company. Because of their presumed familiarity with the organization's management control system, controllers were selected as respondents (Riyanto, 1997; Lane, 1999; Jermias dan Gani, 2004). The study used a total design method developed by Dillman (1978) and followed the advice of (Strauß & Zecher, 2013) on some strategies to improve response. These strategies include: the use of a concise

questionnaire of three pages, the questionnaires have been tested in advance to ensure that respondents understand the contents of the question, use of the cover letter, utilization of a letter of recommendation from the Institute of Management Accountants Indonesia about the importance of this research for the management of the company, inclusion of a reply envelope to make it easier for respondents to return the questionnaire, and , use of follow-up procedures.

To keep or alter established patterns of organizational behavior, managers employ MCS, which consist of formal and information-based procedures and routines. The MCS construction is measured with 17 question items developed by (Widener, 2007) on a 5-point scale. In this context, "organizational innovation" refers to the extent to which a company uses or buys in new technologies, processes, goods, or services. This research adapted the instruments used by Scott and Tiessen (1999) which have covered technical and administrative innovations.

Hypotheses are evaluated using structural equation modeling (SEM) using the warp PLS software. The advantages of this method of statistical analysis led to its selection. To begin, SEM-PLS works well with this study paradigm since it employs latent variables and accounts for measurement errors. Furthermore, numerous dependencies in this study's models can be tested concurrently using SEM analysis. Finally, component-based SEM (PLS) allows for complicated model estimation with a relatively small data set.

5. Result and discussion

Of the 150 questionnaires sent, two were returned to the researchers because the company concerned had been delisted from the Indonesian Stock Exchange. There was a response rate of 42.16 percent, with 460 businesses providing responses that could be used for analysis (Kurnianingsih & Indriantoro 2001; Mardiyah & Gudono, 2001; Lau & Sholihin, 2005). Table 1 presents descriptive statistics on MCS consumption, which reveal a mean value of 65.79. Since this result is significantly higher than the theoretical range average of 51.00, it demonstrates the heavy MCS use within the sample. The sample companies in Table 2 have a high level of innovation, as indicated by an average score of 27.00, which is substantially higher than the theoretical mean value of 24.00. The achievement of organizational performance is somewhat over the aim stated with an average of 18.91 a little higher compared to the theoretical range middle value of 18.00.

Table 1
Descriptive Statistics

Construction	Average	Standard Deviation	Median	Theoretical Range	Current Range
MCS	65,79	14,91	68,00	17,00-85,00	19,00-85,00
IO	27,00	6,98	28,00	8,00-40,00	8,00-40,00
BP	18,91	5,07	19,00	6,00-30,00	7,00-28,00

Table 2's correlation matrix reveals a statistically significant and somewhat substantial positive link between MCS and organizational creativity (r=0.613). The Correlation Coefficients indicate a positive and statistically significant relationship between SPP and organizational performance. Because the mediated relationship needs a high correlation between the independent, mediated, and dependent variables, these findings provide preliminary evidence in favor of the mediation hypothesis (Baron and Kenny, 1986). By contrast, the moderation model requires that the moderating variable does not correlate significantly with the independent and dependent variables.

Table 2
The results of the correlation

Construct	MCS	IO	BO
MCS	0,873	0,613**	0,667**
IO	0,613**	0,853	0,597**
BP	0,667**	0,597**	0,859

Information:
** significant at a rate of 0.01
* significant at a rate of 0.05

The following methods can be used to examine whether or not innovation acts as a moderating factor between MCS and BP: Making direct assessments of the effects of MCS on performance (track c). Doing indirect effects estimates simultaneously using the triangle PLS SEM Model, namely MCS → BP (track c), MCS→ IO (tract a), and IO → BP (track b). To have a mediating impact, (i) the model's path coefficient c must be statistically significant (1), and (ii) both the model's path coefficients a and b must be statistically significant (2).

The following is the verdict about mediation: The mediation hypothesis is not supported if the c″ path coefficient of the model estimate (2) continues to be significant and unaltered (c″=c). Partial mediation will occur if the C″ route factor of

value c″ is smaller (c"c) but still significant. This is a full mediation.

Goodness of fit is demonstrated by (1) and (2), where APC and ARS values are statistically significant and AVIF values are less than 5. Table 3 shows that all the necessary conditions for the mediation test have been met, including the presence of significant coefficients (c = 0.697, a = 0.637, and b = 0.261).

Table 3
Hypothesis Test Results

Path	*Direct Effect*		*Indirect Effect*	
	Coefficient	p-value	Coefficient	p-value
MCS → IO			0,637	0,001
IO → BP			0,261	0,032
MCS → BP	0,697	0,004	0,526	0,009
Model Fit Indicator				
Average Path Coefficient (APC)	0,786	0,001	0,586	0,001
Average R-square (ARS)	0,587	0,001	0,576	0,001
Average Variance Inflation Factor (AVIF)	1,000		1,784	

In model (1), the direct effect coefficient of MCS versus performance (c) was found to be 0.697 and statistically significant. The indirect effect coefficient for MCS towards performance (C″) decreased to 0.526 according to the estimate of model (2), although this was still statistically significant. This proposes a sort of partial mediation or, in other words, innovation that partially mediates the influence of MCS on performance. The data from the experiments corroborated the first hypothesis, which proposed that MCS has a secondary impact on performance. The impact of MCS on productivity is partially buffered by inventiveness. Moderated regression analysis (MRA) calculated with SEM-PLS is used to test the moderation hypothesis. The innovation and MCS interaction coefficient is of particular interest because of its potential utility in evaluating MCS's moderating role in the relationship between innovation and performance. If the interaction factor is positive and statistically significant, then H2 is correct.

According to Table 4, there is no statistically significant relationship between innovation and MCS. In addition, the estimates also showed no significant increase in explanatory power by incorporating interactions into the model. The result shows an increase after the interaction is inserted at only about 1%. Depicts for the model where MCS and IO are the only primary effects. Shows that adding a main effect and interaction effect to the model only raises to 53%. Overall, this result shows that the MCS hypothesis as moderation of the relationship between IO and BP is not supported.

Table 4
Hypothesis Testing Results

Construct	Coefficient	SE	t-count	p-value	VIF
IO	0,364	0,140	2,049	0,018	1,984
MCS	0,765	0,170	3,462	0,002	2,086
IO × MCS	0,045	0,142	0,256	0,365	1,720
Model Fit Indicator					
APC	0,390			0,001	
ARS	0,634			0,001	
AVIF	1,972				

In order to obtain robust research results, a number of analyses were carried out. First, consistent with the study, the first analysis was done by replacing the self-rating BP construction of the questionnaire with the objective performance measurement of ROA and ROE. The secondary information contained in the financial statements is used to calculate both of these performance proxies. Tabulated below are the findings from our analysis of the mediation model. The findings corroborate the primary interpretation of IO as a partial mediator of the association between MCS and BP.

Table 5
Analysis Results: Effect of Mediation

Path	*Direct Effect*		*Indirect Effect*	
	Coefficient	p-value	Coefficient	p-value
MCS → IO			0,637	0,001
IO → BP			0,247	0,007
MCS → BP	0,490	0,001	0,374	0,003
Model Fit Indicator				
APC	0,490	0,001	0,426	0,001
ARS	0,242	0,005	0,352	0,001
AVIF	1,000		1,338	

Table 6
Analysis Results: Effect of Moderation

Construct	Coefficient	SE	t-count	p-value
IO	0,380	0,106	2,502	0,007
MCS	0,476	0,134	3,040	0,001
IO * MCS	0,032	0,117	0,239	0,500
Model Fit Indicator				
APC	0,332			0,001
ARS	0,339			0,005
AVIF	1,457			

The second analysis is done by controlling the effect of the size of the company. IO size variables are one of the contextual factors that influence the role of MCS. The size of the company is projected with the total assets which are subsequently entered as a control variable by following the procedure. The results are presented in which shows that there is no change in the significance of each path coefficient thus supporting IO as a mediation variable.

6. Conclusions

SEM-PLS results provided empirical backing for the mediation model. All findings are in agreement with the LOC theory, which proposes that successful businesses combine all four control systems into a single control package to boost creativity and productivity. The results corroborate the resource-based hypothesis, which postulates that a business's ability to develop and maintain distinctive, high-value competencies gives it a lasting edge in the marketplace.

This study's findings may shed light on why previous investigations into (Bisbe & Malaguenõ, 2015). In this work, we broadened the definition and assessment of MCS and IO to demonstrate the critical role that SPP plays in enhancing creativity and organizational success. Based on the results of this investigation, it appears that additional factors moderate the connection between MCS and BP. This research also confirms that MCS has a beneficial effect on BP (Journeault et al., 2016) investigation into how MCS can be leveraged for business success. The capacity to balance and combine these four control systems is a crucial and difficult-to-replicate competitive advantage that MCS may provide.

Previous incongruent findings about the MCS can be explained by this study's use of the levers of control theory, which incorporates the MCS as a mechanism of applying strategies and generating new strategies. The outcomes of this research provide credence to the hypothesis that MCS, IO, and BP form a mediated interaction. This study has certain caveats that could be taken into account in subsequent investigations. One potential weakness of statistical testing is a limited sample size. Furthermore, these samples are restricted to the industrial sector, making it unable to generalize the results to other sectors. Larger samples and/or studies outside of manufacturing could be used in future studies. Second, this study uses cross-sectional survey design therefore it can't confirm causation correlations between factors. This study's findings on causation can only be understood in a theoretical context. Longitudinal survey methods or controlled laboratory tests could be used in future studies to more reliably establish such links between variables.

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