

**Research Article**

From Sustainable Innovation Strategy to Sustainable Financial Performance: The Mediating Role of Management Accounting Information Systems

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Declaration of Interests

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Abstract

Sustainable innovation has become a strategic priority for organizations seeking long-term competitiveness and resilience. This study examines the relationships among sustainable innovation strategy, management accounting information systems, internal process performance, and sustainable financial performance in small and medium-sized enterprises in Pakistan. Data were collected from 329 employees and analyzed using structural equation modeling. The findings reveal that sustainable innovation strategy positively influences management accounting information systems, internal process performance, and sustainable financial performance. Furthermore, management accounting information systems significantly enhance internal process performance and sustainable financial performance while mediating the relationships between sustainable innovation strategy and organizational performance outcomes. These findings suggest that effective management accounting information systems enable organizations to translate sustainability-oriented innovation strategies into improved operational efficiency and sustainable financial performance through timely, accurate, and decision-relevant information. The study contributes to the sustainability and management accounting literature by demonstrating the strategic role of management accounting information systems in enhancing the performance benefits of sustainable innovation. Practically, the findings provide insights for managers, policymakers, and financial institutions seeking to promote sustainability-driven innovation and long-term organizational performance.

Keywords: Sustainable innovation strategy; management accounting information systems; internal process performance; sustainable financial performance; small and medium-sized enterprises, Pakistan.

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1 INTRODUCTION

Small and medium-sized enterprises (SMEs) are crucial for economic growth (Gherghina et al., 2020). The presence of SMEs supports attempts to reduce poverty by generating jobs, inventions, and potential markets for big businesses (Qureshi & Mewada, 2025). Researchers have focused on the performance of small businesses because they are very adaptable to changing environments, especially abrupt changes like those that occurred during the global financial crisis in the 1997–2000's and recently due to Covid19 (Amir et al., 2023; Mehak et al., 2024). The difficulties faced by SMEs during the pandemic have not been adequately addressed by government initiatives to support their existence through tax incentive schemes or other means. SMEs have a number of traits that may prevent them from enhancing their performance, including possession that is strong among a small number of people as opposed to being widely distributed (Adeniji et al., 2024) centralization of decision-making as opposed to decentralization (Johnston et al., 2016), and more correlational than competitive (Kim et al., 2019) product and service development (Hariyati et al., 2023). These aspects are crucial in the context of instability (Raharja et al., 2019). According to Chairuel and Riski (2018) IT has been shown to invest in hardware to make administration and reporting easier. This study examines the connection between improving firm performance and aspects of IT exploitation in business decision-making. Management accounting information systems (MAIS) developed and utilized by SMEs were the subject of this study.

A sustainable innovation strategy (SIS) is the motivation to help businesses perform better, remove financial and regulatory barriers, and provide them with a competitive edge in the marketplace (Grover & Dresner, 2022; Malik et al., 2024). Due to the rapid growth of technology, which has pushed most organizations to develop innovative strategies to collect fast and accurate accounting information, MAIS has undergone a number of alterations during the last ten years of the 20th century. Therefore, there is a pressing need to offer remedies to assist in offering accounting solutions for present issues and work to enhance strategic ideas. Consequently, these purposes call for a collection of instruments that assist in creating an original plan of action (Jelonek et al., 2022; Rasheed et al., 2025). To improve organizational performance, management must be more competent in managing resources (Xiao et al., 2012; Zigan et al., 2008). According to Meybodi (2015), managers in high-level positions and managers from SMEs give strategic comparison performance metrics greater weight. Comprehensive performance cannot be informed by management performance measurement from a single element or perspective (Appannan et al., 2023; Bhargava et al., 1994).

Innovation is a procedure that uses resources and ability to achieve outcomes. By creating the latest production and operational systems to fulfill client expectations, innovation is achieved in the development of the latest products (Burritt et al., 2019; Thanh Thuy Ngoc, 2025). Terziovski (2002) confirmed that innovation has an effect on how well a firm functions in terms of its ability to satisfy customers, be productive, and compete in the technology market. Organizations become more competitive as a result of innovation. SMEs must benefit from competitors to succeed in the marketplace (Alvarez et al., 2010; Jönsson & Devonish, 2009; Un & Montoro-Sanchez, 2010). The performance can be improved using SIS. However, it needs the organization's internal and external environments to support it (Hmaidan et al., 2025). When it comes to lowering costs, enhancing quality, and better utilizing assets, effective internal process management (IPM) increases production (Bititci et al., 2011; Tavitiyaman et al., 2012). Internal process performance (IPP) can be significantly improved using MAIS (Bititci et al., 2011; Davis & Cobb, 2010; Goh, 2012; Hutahayan, 2020; Worlu & Emeka, 2012). The performance of internal businesses correlates with overall business sustainable financial performance (SFP).

Several previous studies have examined the factors that influence the IPP and SFP of manufacturing sector (Chaudhry et al., 2020; Hariyati et al., 2019; Saleh & Al-Nimer, 2022). However, empirical evidence on the role of SIS in shaping SFP within SMEs remains limited, particularly in emerging economies (Hutahayan, 2020). Although prior research acknowledges a close association between IPP and SFP, the underlying mechanisms through which SIS translates into these performance outcomes are not yet fully understood. More specifically, the mediating role of MAIS in linking SIS with IPP and SFP has received little empirical attention, especially in the context of SMEs operating in Pakistan. As a result, existing findings remain fragmented and inconclusive, underscoring the need for a more integrated analytical framework. Addressing this gap, the present study investigates the direct effects of SIS on IPP and SFP and, more importantly, examines the mediating role of MAIS in these relationships using data from Pakistani SMEs. By positioning MAIS as a strategic organizational capability that enables the effective implementation of SIS, this study offers a novel contribution to sustainability, accounting, and innovation literature. The proposed framework advances empirical understanding of how SIS-driven initiatives are translated into superior internal processes and sustainable financial outcomes in resource-constrained SME environments. Furthermore, the findings provide actionable insights for policymakers and SME stakeholders, suggesting that targeted support for advanced management accounting systems

can enhance innovation effectiveness and long-term sustainability. Consequently, this study not only fills a critical empirical gap but also contributes to evidence-based policymaking aimed at strengthening SME development in Pakistan.

Following the introduction, the study presents the theoretical background and hypothesis development. The subsequent sections describe the research methodology and empirical analysis. The paper concludes by discussing the findings, highlighting their implications, acknowledging the study's limitations, and suggesting avenues for future research.

2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This Contingency theory, which is frequently used in accounting studies, as claimed Christen and Lovaas (2022), includes contingency factors, such as technological and environmental inconsistency, scale, plan of action, or ideal design. Businesses could then face challenges with less performance brought about by conflict (Safari & Saleh, 2020). According to some studies, the foundation of contingency theory is fit. The four primary categories of fit were selector, interaction, system, and mediating fit. (Saleh & Al-Nimer, 2022). The previous empirical research that uses mediation models and applies them to MAIS gives useful information on how mediating variables influence the SIS-SFP relationship (Krishnan et al., 2021). Recent research notes that to investigate the impact of using MAI on performance, the analysis is, at once, based on the direct and indirect paths, according to which, MAIS represents the cumulative effect of the use of information on FP (Saleh and Al-Nimer, 2022). In line with this view, the current research will formulate a mediation model to examine how MAIS mediates the correlation between SIS, IPP and SFP. Theoretically speaking, RB theory offers a solid way to explain the observed performance heterogeneity in the companies that are in the same industry (Khanra et al., 2022). The RB view highlights the strategic nature of firm-specific resources in creating a long-lasting CA especially when they have VRIN qualities (Saleh and Al-Nimmer, 2022). Companies which use these resources have increased chances to pursue innovation-based value creation strategies which can make them stand out of the crowd and improve performance performance (Al-Abdallah and Al-Salim, 2021). The remaining RB-based studies also indicate that INN is an important process in which strategic resources are converted to an excellent FP (Saleh & Al-Nimer, 2022). In this regard, MAIS is a unique organizational capacity that increases the quality of the decision, reinforces CA, and allows improving FP, especially in the SME (Soewarno and Tjahjadi, 2020; Gerhart and Feng, 2021).

2.1 SIS and IPP

Innovation determines the financial success of a business (Hamel, 1999). Innovation makes use of resources and boosts performance. To address client needs, management innovates both products and procedures (Awoonor-Williams et al., 2004). Terziovski (2002) demonstrates the effects of innovation on IPP (consumer happiness, technical competitiveness, and productivity Terziovski (2002). Internal processes improve and become more competitive through innovation strategies. Empirical literature suggests that IS is a critical determinant of IPP, and firms must carefully consider the nature of their IS to optimize their performance (Edeh et al., 2020; Hutahayan, 2020; Tjahjadi & Soewarno, 2019). Additionally, IPP can also influence IS, highlighting the importance of a feedback loop between strategy and performance (Cao & Chen, 2019; Tajeddini et al., 2020). The first hypothesis was reached using this argument.

H1. SIS has a positive and significant impact on IPP.

2.2 SIS and SFP

A firm's SFP rate demonstrates whether its strategy has an impact on the bottom line. According to Kaplan et al. (2009), a company's outstanding SFP can be improved by implementing both growth and productivity strategies. By boosting productivity through innovation in processes, products, and ideas, companies can turn profits. Productivity may be increased in two ways: (1) by reducing direct and indirect costs, or by more effectively utilizing available financial and material resources; and (2) by reducing the working and fixed capital requirements to support specific business intensity. When businesses balance productivity and prosperity, a connection strategy emerges from a financial perspective. FP is primarily gauged by three factors: (1) an increase in revenue, (2) cost savings or Cost Reductions, and (3) Better Asset Utilization. Innovation determines whether an organization succeeds in achieving better performance (Hamel, 1999). Terziovski (2002) has shown the effects of innovation on firm performance indicators (customer happiness, competitiveness in terms of productivity and technology). Terziovski (2002) proposes three different sorts of strategies: an integrated innovation, an incremental, and a radical approach. The findings of this study demonstrate that

the impact of integrated IS performance is negligible (Cao & Chen, 2019; Edeh et al., 2020). This is due to the fact that, generally speaking, businesses have not yet integrated their systems and developed the capability to work on a network (Lin et al., 2019; Xie et al., 2019). The use of incremental innovation strategies as incentives for long-term innovation is more appropriate than the use of radical innovation strategies for making immediate changes to products and procedures. Therefore, this study proposes the following hypothesis:

H2. SIS has a positive and significant impact on SFP.

2.3 SIS and MAIS

The SIS of SMEs will have an impact on the demand for trustworthy information. Trustworthy information is crucial when implementing innovative initiatives in practice. According to Bromwich (1990), organizations can better manage the challenges of a competitive market using the information found in MAISs. In a highly competitive climate, using the innovation approach focuses on increasing the business value to outperform its competitors and help management track performance. Information systems for management accounting help foresee the outcomes of numerous alternatives used in various tasks, such as planning, regulating, and decision-making. If an organization's information resources can aid information consumers or decision makers, they will be effective. When information is appropriate for decision makers' needs, the decisions they make will be of higher quality, which will eventually improve business performance (Edeh et al., 2020; Gerloff et al., 1991; Hutahayan, 2020; Tjahjadi & Soewarno, 2019). The necessity for trustworthy information systems, particularly MAIS, is influenced by the approach used. Consequently, the third hypothesis is as follows.

H3. SIS has a positive and significant impact on MAIS.

2.4 MAIS and IPP

According to Otley (1980), the contingency approach can be used to evaluate and develop management accounting systems to provide information that can be used for a range of goals that affect the effectiveness of internal processes. The research findings indicate that no single MAIS can be used effectively by all firms in every state. Instead, the contingency method for MAIS Proves this (Gerged et al., 2024; Hummel et al., 2021; Latif et al., 2023). Due to its effect on IPP, IT in MAIS offers opportunities for multinational corporations to enhance management and coordination or to obtain benefits in global marketplaces (Clemons & Row, 1991; Hutahayan, 2020; Kettinger & Lee, 1994; Mahmood & Mann, 1993; Mata et al., 1995; Ross, 1995; Tjahjadi & Soewarno, 2019). The necessity for a trustworthy MAIS affects IPP. Therefore, the following hypothesis was proposed:

H4. MAIS has a positive and significant impact on IPP.

2.5 MAIS and SFP

According to Mia and Chenhall (1994), the quality of an MAIS can enhance organizational performance. According to Chia (1995), the qualities of MAIS, such as their extensive reach and aggregation, will further enhance performance. The findings of Chong and Chong (1997), who conclude that MAIS extensive reach, a crucial antecedent factor in improving performance, is a broad feature, are consistent with those of the study. Mia and Clarke (1999) examined market competitive intensity, MAIS, and corporate performance. The study's findings suggest that the association between market competition intensity and corporate performance is mediated by the utilization of data (Chiu et al., 2019; Jarah et al., 2023). Thus, the fifth hypothesis followed on the arguments mentioned below.

H5. MAIS has a significantly positive impact on SFP.

Figure 1 illustrates the research model used in this study.

3 RESEARCH METHODOLOGY

This study employed a quantitative research approach to examine the relationships among sustainable innovation strategy, management accounting information systems, internal process performance, and sustainable financial performance in small and medium-sized enterprises (SMEs) in Pakistan. A cross-sectional survey design was adopted to collect empirical data from SME employees. This research design is appropriate for examining relationships among multiple latent constructs and testing the proposed conceptual framework using statistical techniques. The target population comprised employees working in SMEs across Pakistan. A purposive sampling technique was employed to

select respondents who possessed adequate knowledge of their organizations' innovation strategies, accounting information systems, and performance practices. A total of 350 questionnaires were distributed, and 329 valid responses were returned, resulting in a response rate of approximately 94%. The collected responses provided sufficient statistical power for structural equation modeling analysis.

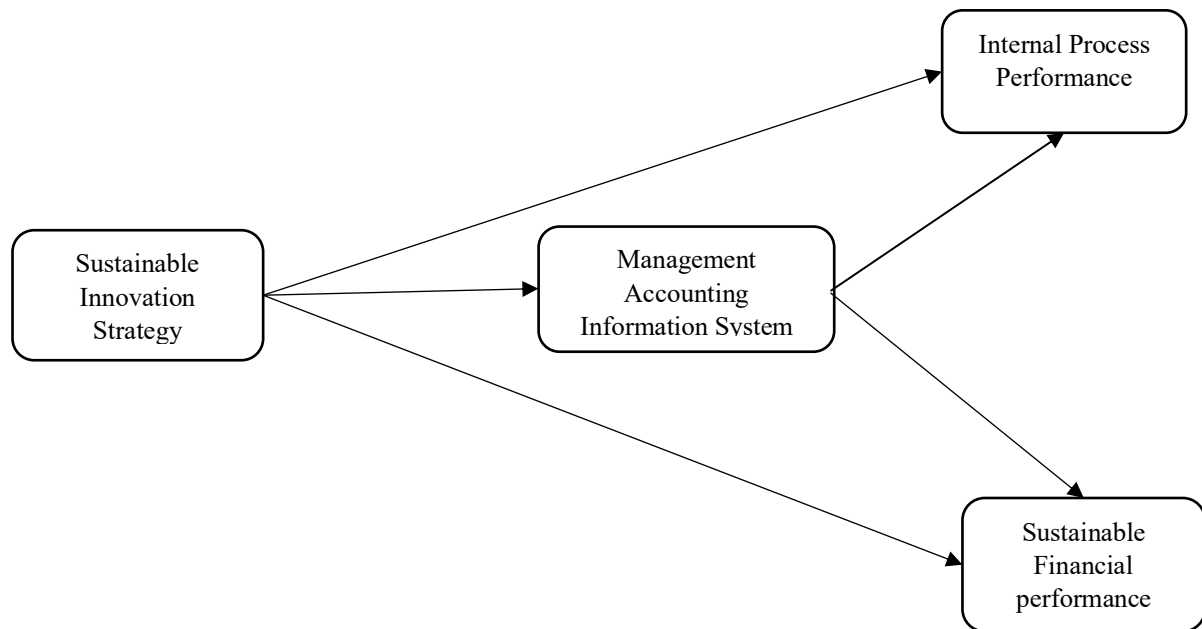


Figure 1. Research Framework

Source: Authors' Own Work.

The measurement instrument was developed by adapting well-established and validated scales from previous studies (Tjahjadi & Soewarno, 2019; Xie et al., 2019; Edeh et al., 2020; Hutahayan, 2020). Minor wording modifications were made to improve clarity and ensure suitability for the Pakistani SME context without altering the original meaning of the measurement items. All study constructs were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Demographic information, including gender, age, educational qualification, and work experience, was collected separately. The collected data were analyzed using SPSS version 28 and AMOS version 26. Data screening was first conducted to identify missing values and ensure data quality. Reliability and validity of the measurement model were then assessed through internal consistency, convergent validity, and discriminant validity analyses. Confirmatory factor analysis was subsequently performed to evaluate the adequacy of the measurement model. Finally, structural equation modeling was employed to test the proposed hypotheses and examine both the direct and mediating relationships among the study constructs. Participation in the survey was voluntary, and respondents were informed about the purpose of the study before completing the questionnaire. The anonymity and confidentiality of participants were maintained throughout the research process, and the collected data were used solely for academic purposes.

4 EMPIRICAL ANALYSIS

The data collected underwent various statistical tests such as frequency distribution analysis, descriptive and normality tests, and reliability analysis. The study also used demographic variables such as sex, age, level of education, and experience to understand the characteristics of the participants. The demographic description of the participants is provided in a Table 1 that indicates that out of 329 respondents, 180 were male, representing 54.7% of the sample, while 45.3% were female. The majority of respondents (131) were aged between 25 and 35 years. Regarding education, 61.4% of the respondents held a Master's or MS degree, and 144 respondents had two to five years of experience, which accounted for 43.8% of the sample. These findings suggest that most participants were highly qualified and skilled individuals teaching in colleges and universities with experience in the SME sector.

Table 1. Demographic Description of Participants

Demographics	Features	Frequency	Percent
Gender	Male	180	54.7
	Female	149	45.3
	Total	329	100.0
Age	Less Than 25 Year	105	31.9
	25 to 35 Years	131	39.8
	35 to 45 Years	78	23.7
	More Than 45 Years	15	4.6
	Total	329	100.0
Experience	Less than 2 Year	46	14.0
	2 to 5 Year	144	43.8
	5 to 8 Year	108	32.8
	More than 8 Year	31	9.4
	Total	329	100.0
Education	14 Years or Below	19	5.8
	16 Years	202	61.4
	17 Years or Above	108	32.8
	Total	329	100.0

Source: Authors' own work

To assess the presence of potential outliers, descriptive statistical analyses were conducted for all study constructs. Key distributional indicators, including minimum and maximum values, means, skewness, and standardized loadings, were examined to evaluate data quality. As reported in Table 2, the observed mean values across all items fall within the expected range of the measurement scale. Each construct exhibits a minimum value of 1 and a maximum value of 5, indicating that all responses are within the predefined scale boundaries and that no extreme values are present in the dataset.

Table 2. Descriptive Statistics, Normality and Skewness

Items	Minimum	Maximum	Mean	Skewness	Loading
SIS1	1	5	3.19	-.252	.835
SIS2	1	5	3.32	-.309	.867
SIS3	1	5	3.33	-.357	.804
SIS4	1	5	3.22	-.247	.803
SIS5	1	5	3.18	-.206	.824
SIS6	1	5	3.18	-.194	.837
MIAS1	1	5	3.42	-.376	.824
MIAS2	1	5	3.36	-.298	.789
MIAS3	1	5	3.35	-.284	.810
MIAS4	1	5	3.38	-.322	.814
IPP1	1	5	3.45	-.521	.892
IPP2	1	5	3.43	-.472	.853
IPP3	1	5	3.45	-.554	.830
IPP4	1	5	3.50	-.590	.868
SFP1	1	5	3.58	-.502	.822
SFP2	1	5	3.50	-.410	.822
SFP3	1	5	3.58	-.474	.852
SFP4	1	5	3.66	-.665	.849

Source: Authors' own work

The SIS items report mean values ranging from 3.18 to 3.33, reflecting moderate levels of agreement. MAIS items demonstrate acceptable skewness values between -0.284 and -0.376 , suggesting no significant deviations from normality. The IPP items show strong standardized loadings ranging from 0.830 to 0.892, indicating satisfactory measurement reliability. SFP items report mean values between 3.50 and 3.66, suggesting relatively higher performance perceptions among respondents.

Table 3. Model Fitness

Measure	Estimate	Threshold	Interpretation
CMIN	336.259	--	--
DF	129.000	--	--
CMIN/DF	2.607	Between 1 and 3	Excellent
CFI	0.965	>0.95	Excellent
SRMR	0.036	<0.08	Excellent
RMSEA	0.070	<0.06	Acceptable
P-Close	0.124	>0.05	Acceptable

Note: CMIN/DF indicates chi-square value or degrees of freedom, root mean squared error approximation is called RMSEA, and CFI represents the comparative fit index. **Source:** Authors' own work

Table 3 reports the SEM-based goodness-of-fit results for the proposed model. The findings indicate an adequate overall model fit, as all fit statistics conform to established evaluation criteria. The CMIN/DF ratio of 2.607 lies within the acceptable range of 1 to 3, reflecting satisfactory model parsimony. The CFI value of 0.965 surpasses the recommended cutoff, signifying a strong comparative fit. Additionally, the SRMR value of 0.036 remains substantially below the threshold, providing further evidence of model adequacy. While the RMSEA value of 0.070 slightly exceeds the most stringent criterion, it is still considered acceptable, and the corresponding P-close value of 0.124 supports a reasonable approximation of the model to the observed data.

In Table 5, the CR and AVE are used to identify the presence of discriminant validity. AVE is a tool for determining convergent validity for each concept. The threshold value for CR was greater than 0.7, CR for SIS was 0.946, CR for IPP was 0.957, CR for SFP was 0.931, and CR for MAIS was 0.926. The findings show that the observed value of CR for all variables is greater than 0.7, which shows that our model is a good fit. Whereas the AVE for IS is 0.747, IPP is 0.846, AVE value for FP is 0.771, and the value of MAIS is 0.926, which lies in the range of the threshold value that is greater than 0.5.

Table 4. Validity Concerns and HTMT Analysis

Constructs	CR	AVE	MSV	IS	IPP	FP	MAIS
IS	0.946	0.747	0.351	0.864			
IPP	0.957	0.846	0.329	0.538***	0.920		
FP	0.931	0.771	0.356	0.523***	0.535***	0.878	
MAIS	0.926	0.757	0.356	0.593***	0.573***	0.597***	0.870

Constructs	IS	IPP	FP	MAIS
IS				
IPP	0.533			
FP	0.514	0.549		
MAIS	0.590	0.587	0.601	

Note: CR: Composite Reliability, AVE: average variance extracted; MSV: mean shared variance. **Source:** Authors' own work

Both indicators show convergent validity in our data, as they both lie under the threshold criteria. The MSV value for SIS was 0.351, the IPP value was 0.329, the SFP value was 3.56, and the MAIS value was 3.59, which was less than 0.5. This means that the relationship of IS with itself is higher compared to other variables, and the IPP relationship with itself is 0.920, which is higher than other variables and so on. The values in the confirmatory factor analysis indicate that the model of our study is fit and hence acceptable, so the researcher applied structural equation modeling in this research. Structural relationships among the study variables were examined using SEM, a multivariate analytical technique suitable for testing complex causal models. Table 5 presents the results of the hypothesis testing based on the SEM estimates. Statistical significance was evaluated using p-values, where values below the accepted threshold indicate significant relationships. The sign of the standardized estimates reflects the direction of the relationships. The results indicate a significant direct effect of IS on MAIS, with an estimated coefficient of 0.593 (S.E. = 0.048), confirming a positive association between these constructs. IS also exhibits a significant direct effect on FP ($\beta = 0.261$, S.E. = 0.060), indicating that IS contributes positively to FP.

Table 5. Hypothesis Testing (SEM)

Hypothesis	Hypothesis Path	Estimate	S.E.	C.R.	P	Status
H1	SIS → IPP	.303	.065	5.120	.000	Accepted
H2	SIS → SFP	.261	.060	4.294	.000	Accepted
H3	SIS → MAIS	.593	.048	11.274	.000	Accepted
H4	MAIS → IPP	.400	.073	6.641	.000	Accepted
H5	MAIS → SFP	.449	.068	7.125	.000	Accepted
H6	SIS → MAIS → IPP	.237	.043	5.272	.010	Accepted
H7	SIS → MAIS → SFP	.266	.042	4.278	.010	Accepted

Source: Authors' own work

In addition, IS demonstrates a positive and significant influence on IPP, with an estimated coefficient of 0.303 (S.E. = 0.065). Furthermore, MAIS shows a significant direct effect on FP ($\beta = 0.449$, S.E. = 0.068), suggesting that higher levels of MAIS utilization are associated with improved FP. Similarly, the relationship between MAIS and IPP is positive and significant, with an estimated coefficient of 0.400 (S.E. = 0.073). The findings further reveal that the indirect pathways involving IS and MAIS exert a significant effect on IPP, with an estimated coefficient of 0.237 (S.E. = 0.043), supporting the mediating role of MAIS. A screenshot of SEM analysis is provided below in Figure 2.

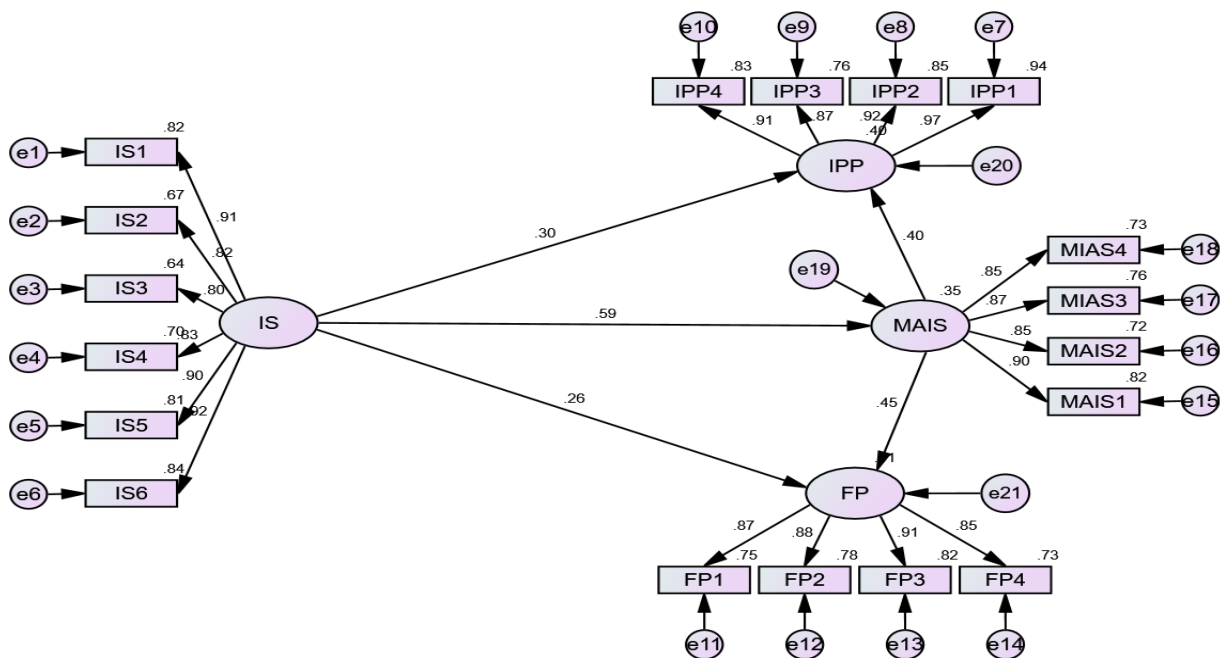


Figure 2. SEM Analysis

Source: Authors' own work

5 DISCUSSION ON RESULTS

Financial success and sustainable SIS are related to IPP. Technology adoption, process innovation, and product innovation are crucial components of an effective SIS. IPP, such as those for managing operations, managing customers, innovation, and social and governmental procedures, are impacted by the implementation of SIS. A successful internal process will increase efficiency, which in turn will have an impact on a successful process for managing customers, which in turn will influence SFP. The process of producing things or services by transforming inputs into outputs is referred to as the process of managing operations (Edeh et al., 2020; Rasheed et al., 2025; Tjahjadi & Soewarno, 2019; Trevlopoulos et al., 2024; Xie et al., 2019). This task involves prioritizing the degree of efficiency in the utilization of scarce resources when making quick judgements in daily operations. Management is governed by the operations management process, which refers to the ongoing control over all supporting business processes (Tajeddini et al., 2020; Tjahjadi & Soewarno, 2019).

According to this study, the SME sector in Pakistan continually increases the effectiveness of the process of managing operations and customer service through the innovation of products and processes. As mentioned in the previous discussion, the SME sector in Pakistan consistently participates in social processes for the benefit of stakeholders, paying close attention to current laws and regulations. The research findings from Terziovski (2002) and Jones (2004) provide evidence to support the aforementioned theory. Innovation is referred to as a process in an organization that makes use of resources and abilities to generate new goods or services, as well as the latest systems for manufacturing and operating to satisfy client demands. (Jones, 2004) Terziovski (2002) offers evidence to support the claim that innovation affects IPP metrics, such as firm productivity. A successful IPP has an impact on the SFP of sustainable SIS. As a result, the SFP of an organization is related to the IPP (Hutahayan, 2020; Jarah et al., 2023; Lin et al., 2019).

The association between SIS and FP is mediated by MAIS. The study's findings suggest that approximately 52% of Pakistan's SME businesses give MAISs little thought. This is seen in the companies' generally basic technology and software. However, in Pakistan, 48% of SME employ a trustworthy MAIS. Information requirements for strategy implementation will be impacted by IS in all business elements employed by organizations. This is consistent with the findings of Bromwich's (1990) study, which shows how information in an MAIS can assist businesses in overcoming obstacles in the marketplace. The findings also reveal that MAIS's data concentrates on boosting businesses' value added in order to provide them with a competitive advantage over rivals (Cao & Chen, 2019; Chiu et al., 2019; Edeh et al., 2020). This ultimately increases the firm performance. The technique employed also affects the requirement for a trustworthy information system, such as that offered by management accounting. Dependable, dependable, and punctual. According to Chenhall and Morris (1986), a MAIS is a collection of information that is comprehensive, timely, and integrated. Innovation in strategy implementation determines the necessity for a trustworthy MAIS (Hutahayan, 2020; Jarah et al., 2023; Lin et al., 2019).

Therefore, innovation in strategy implementation determines the demand for a trustworthy MAIS. However, a trustworthy accounting information system had an effect on FP in this study. It consistent with studies done by different philosophers, such as Mahmood and Mann (1993), Kettinger et al. (1995), and Ross et al. (1995), who came to the opinion that because the MAIS has an impact on IPP, it presents potential for multinational firms to increase coordination and it may be exploited to obtain a competitive edge in the global market. Information technology innovation plays a significant role in this strategy (Cao & Chen, 2019; Edeh et al., 2020; Tjahjadi & Soewarno, 2019). To achieve a strong IPP, which in turn has an effect on good FP, the company's IS will determine the need for a trustworthy MAIS with broad scope and integration. As a result, innovation in strategy execution defines the requirement for a trustworthy MAIS, which in turn influences the efficiency of internal business processes, which in turn influences FP.

6 RESEARCH IMPLICATIONS

This study has served implications in the SME industry in Pakistan as it focuses on the need to constantly innovate and embrace information technology in order to attain their objectives, remain competitive in the world market, and be more competitive than their competitors. The paper highlights the importance of aligning the performance measurements to the strategy of a company and the existence of a causal relationship between financial and non-financial ones. In addition, the results of the study support the importance of a sufficient MAIS to make specific decisions and the utility of intellectual capital as a resource that is worth using to increase the competitive advantage of a company and support its growth. The theoretical implication of the research can also be applied to the accounting education in Pakistan because the results of the study can be utilized to revise the accounting curricula so that it incorporates contingency theory-specific variables, including intellectual capital, MAIS, IPP, customer performance and their relationship with FP. By including these variables, it is possible to develop a theoretical framework that can explain the cause-and-effect relationships between innovative strategy, reliable MAIS, internal processes, customers, and FP. The accounting practice must be incorporated in course materials to have the students taught the latest techniques in MAIS, maybe in a management accounting lab. The accounting system aspect of the accounting educators and management can use the results of this research as a point of departure when assessing learning content and curriculum. It is necessary to have accounting educational materials that incorporate the present accounting practices to break the perception that the accounting research is only relevant to academia. To sum up, the research provides some contribution to the field of business management especially in the SME sector by highlighting the role of innovation, MAIS in action plan implementation, and the role of improving the capacity of a company to compete within the global market. The practical

implications of the findings of the study on the business community are as follows, and theoretical implications on accounting education and research in Pakistan.

7 STUDY CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

The findings of this study support the notion that SIS significantly influences IPP and SFP, and that SIS also has a positive and significant role in MAIS. Ideas for further research To enhance corporate procedures: The study's findings teach Pakistani SME's firms the value of information technology and sustainable innovation in implementing business strategies and giving them a competitive edge in the face of globalization. The research findings help raise awareness among company managers or their equivalents, particularly in Pakistan, of the significance of an adequate AIS so that businesses can offer reliable accounting information systems for making a decision as well as the function of IC because possessing knowledge satisfies the criteria for being distinct resources that can give firms a competitive edge to create value. In further studies, human, customer, and structural capital can be combined to analyze intellectual capital. It is conceivable that several restrictions may have affected the outcome. It is anticipated that future research will separate respondents into these two business groups (both public and private). Further research is anticipated to include service providers, as this study only included industrial firms that operate production processes. Unlike in the BSC idea, the survey questions were unable to explore the relationships between indicators' causes and effects. Moreover, researchers can further study it in different sectors and areas other than Pakistan. Finally, the study identified certain limitations with regard to its research scope and data analysis. First, the investigation of IS implementation has been restricted to the SME sector in Pakistan, with no exploration of its application in the business and educational sectors. Second, researchers have encountered difficulties in obtaining a clear definition of the classification of medium and large SMEs from available data sources in Pakistan.

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