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ORIGINAL

Innovation Performance of SMEs: The Vital Roles of Intellectual Capital, Organizational Agility and Organizational Inertia

Desempeño de innovación de las PYMES: los roles vitales del capital intelectual, la agilidad organizacional y la inercia organizacional

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ABSTRACT

This study will investigate the direct effect of intellectual capital on the innovation performance of Pakistani manufacturing SMEs. It also investigates whether the link is mediated by organizational agility and moderated by organizational inertia. A quantitative approach was taken. A self-administered questionnaire was used to gather 230 samples from managers and owners of manufacturing SMEs. The data was examined using version 4.0 of SMART-PLS. A study framework that includes mediation and moderation is used. The findings show that intellectual capital has a beneficial influence on the innovation performance of manufacturing SMEs in Pakistan. Furthermore, organizational agility positively mediates the relationship between intellectual capital and innovation performance, whereas organizational inertia negatively moderates and weakens the intellectual capital-innovative performance relationship. The study theoretically supports the resource-based view (RBV) and dynamic capabilities by providing empirical evidence for how internal resources improve innovation success. Practically, the findings provide managers with strategic insights into managing intellectual capital, agility, and inertia to drive innovation Performance. These relationships are rarely investigated in Pakistan.

Keywords: Intellectual Capital; Organizational Agility; Organizational Inertia; Innovation Performance; SMEs.

RESUMEN

Este estudio analizará el efecto directo del capital intelectual en el desempeño de la innovación de las PYMES manufactureras paquistaníes. También se investiga si el vínculo está mediado por la agilidad organizacional y moderado por la inercia organizacional. Se adoptó un enfoque cuantitativo. Se utilizó un cuestionario autoadministrado para recolectar 230 muestras de gerentes y propietarios de PYMES manufactureras. Los datos se examinaron utilizando la versión 4.0 de SMART-PLS. Se utiliza un marco de estudio que incluye mediación y moderación. Los hallazgos muestran que el capital intelectual tiene una influencia beneficiosa en el desempeño de la innovación de las PYMES manufactureras en Pakistán. Además, la agilidad organizacional media positivamente la relación entre el capital intelectual y el desempeño innovador, mientras que la inercia organizacional modera y debilita negativamente la relación capital intelectual-desempeño innovador. El estudio respalda teóricamente la visión basada en recursos (RBV) y las capacidades dinámicas al proporcionar evidencia empírica de cómo los recursos internos mejoran el éxito de la innovación. En la práctica, los hallazgos brindan a los gerentes conocimientos estratégicos sobre la gestión del capital intelectual, la agilidad y la inercia para impulsar el desempeño de la innovación. Estas relaciones rara vez se investigan en Pakistán.

Palabras clave: Capital Intelectual; Agilidad Organizacional; Inercia Organizacional; Desempeño en Innovación; Pymes.

INTRODUCTION

In today's competitive and erratic business environment SMEs need to be innovative to adapt to the constantly changing environment that puts a lot of strain on them.[1] Innovation performance significantly assists in determining how much innovation gives these organisations a competitive advantage as well as how these organisations benefit from innovation. According to Bate et al.[2], innovation performance is the final and quantifiable outcome of an organization's innovative efforts.

One of the most significant factors in the innovation literature is intellectual capital(IC), which is a source of knowledge production in organizations. Research indicates that intellectual capital has the potential to generate value for a company. The importance of IC as a valuable intangible asset that contributes to a firm's success and generates value has been acknowledged. IC is usually regarded as the primary source of innovation, particularly in SMEs with little tangible resources.[5] IC gives SMEs the ability to create new insights and ideas that improve business performance by making use of and expanding upon existing knowledge, both inside the company and through external supplier networks.[6] According to Pomegbe et al.[7]; Zahoor et al.[8], Intellectual capital is widely acknowledged as the most important component for economic expansion and organizational innovation. Furthermore, it is widely agreed upon by many scholar (Edvinsson and Sullivan, 1996; Bontis, 1998), that intellectual capital encompasses three primary components: human capital (HC), structural capital (SC), and relational capital (RC). These dimensions play a crucial role in generating competitive advantages for businesses.[9]

According to the dynamic capabilities approach, a firm's ability to innovate is largely dependent on its dynamic capability.[10] A company's capacity to adapt to changing circumstances by integrating, developing, and reconfiguring both internal and external competences is a sign of its dynamic capability.[11] According to this perspective, the literature shows that intellectual capital, as a fundamental capability, can aid in the development of dynamic capability, which can enhance the performance of a firm's innovation (Liu et al., 2014; Cho et al., 2023). Thus, academics suggest that organizational agility, a crucial dynamic characteristic, may be crucial in the relationship between intellectual capital and the performance of a firm's innovation.

Organizational agility(OA) refers to a company's ability to quickly and creatively adjust and adapt to changes in the market.[14] It has been characterized as a primary factor contributing to exceptional company performance.[12] According to the literature, organizational agility is dependent on the use of effective knowledge resources.[15] Many studies have focused on the function of OA in enhancing enterprise competitiveness and attempting to understand the pattern of its impact on performance. According to Cai et al.[16] by streamlining business procedures, organizational agility increases a company's sensitivity to change and its ability to respond to it, hence improving the performance level of organizations. According to researchers, organizational agility is critical to the growth of intellectual capital because it indicates the existence of knowledgeable, creative, and skilled workers as well as strong customer relationships, supportive organizational structures, and systems—all of which give the company a competitive edge.[17] Ahmad et al.(2020); Mubarik et al.(2021), found that no matter how strong Intellectual Capital is, it will have no effect on innovative performance until a dynamic capability, such as organizational agility, is acquired beforehand. OA can promote and facilitate intellectual capital development by fully exploiting the potential of intangible resources, resulting in greater innovative performance. This study suggests that organizational agility serves as a mediator between intellectual capital and organizational innovation performance.

Despite the fact, many organizations experience organizational inertia(OI).[18] According to Organisational Inertia theory, an organization's internal inertia hinders timely responses to external developments and reform efforts. Researchers have found that organizations fail to innovate and change their business models due to inertia.[19] OI refers to an organization's resistance to change to perform scheduled tasks (Hannan & Freeman, 1984; Tjahjadi et al., 2024). This resistance can be linked to the challenges that organizations encounter while attempting to adjust to changes in their surroundings.[22] Inertia negatively impacts organizational effectiveness, which is a type of resistance to change.[23] The current study claims that intellectual capital and organizational inertia negatively influence innovation performance. Businesses can operate at their best when they have a significant amount of intellectual capital.[24] However, irrespective of the quantity of intellectual capital a firm possesses, its performance suffers when it acts lethargic or resistant. Several earlier research has shown that organizational inertia reduces the association between dynamic capabilities and innovation performance in a dynamic environment, which justifies taking into account organizational inertia as a moderating variable.[25]

The current investigation is distinguished by multiple crucial elements. First, it makes use of a more thorough research model that includes organizational agility as a mediating variable and organizational inertia as a moderating factor. For Pakistani manufacturing SMEs, organizational inertia and agility are crucial variables to consider. We suggest that an organization's readiness to accept change determines the impact of intellectual capital on innovative performance. Furthermore, we claim that organizational agility influences intellectual capital first, and then the innovative performance of the company. Second, the study makes use of a unique research setting that involves Pakistani manufacturing SMEs, a setting that hasn't been frequently investigated in

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earlier studies. Given the critical role Pakistani manufacturing SMEs play in the nation's economic development, this setting is especially important.

The rest of the document is organized as follows: in section 2, the formulation of hypotheses is discussed along with a survey of the literature. Section 3 describes the research methodology in full. An overview of the data analysis and conclusions is given in section 4. Finally, section 5 discusses and contributes to the current study.

Literature Review

Intellectual Capital (IC) & Innovation Performance (IP)

According to the RBV, Innovation performance is determined by available resources.[26] Exceptional resources with distinct qualities have strong skills and can significantly boost innovation performance.[27] Organizational Innovation performance can be improved by intangible resources by raising intellectual capital, one of an organization's most valuable assets.[4] The term "intellectual capital" refers to the resources and assets that businesses can use to create value and obtain a competitive edge.[9] On the other hand, the greater a company's intellectual capital, the more distinct its unique competence. Furthermore, the higher the company's distinctive competence, the better its innovation performance.[28] The expertise of the organization might be considered the product of intellectual capital within the firm. Hence, companies with greater intellectual capital do better in terms of innovation.[29] In other words, a company's IC increases its innovative competency, allowing it to improve its new product development performance even further.[30] Numerous earlier research has shown that IC improves organization's innovation performance. The first hypothesis is put forth based on these findings:

H1: intellectual capital has a direct positive impact on innovation performance.

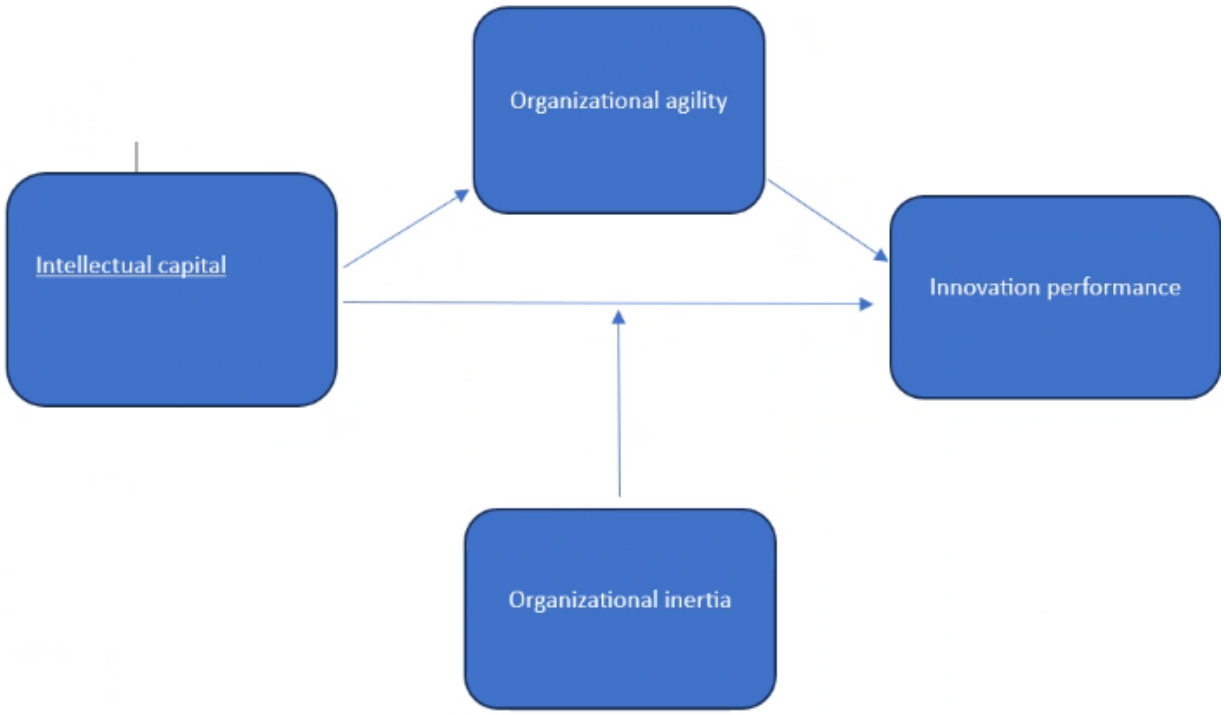

Figure 1. Research conceptual framework

Intellectual Capital (IC) & Organizational Agility (OA)

According to Wahyudi et al. (2023), developing intellectual capital is essential to enhancing organizational agility. Similarly,Barkat & Beh (2018) found that intellectual capital positively and significantly influences organizational agility. These findings align with the work of Gogan et al. (2015), who argue that one of the best tactics firms can use to achieve and preserve organizational agility and a competitive advantage is to prioritize the intellectual capital of their workforce. Hence, we proposed that IC has an impact on OA.

H2: intellectual capital has a direct positive impact on Organizational Agility.

Organizational Agility (OA) & Innovation Performance (IP)

OA is a key factor in driving performance. Yikilmaz & Cekmecelioglu (2023) stress the interdependent role of OA in boosting organizational outcomes and fostering competitive advantage. Greater agility allows companies to enhance productivity, navigate threats, and spark innovation, all contributing to improved performance. In

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volatile, unpredictable environments, OA becomes critical for quickly recognizing and reacting to both threats and opportunities, staying ahead of competitors. Teece et al. (2016) highlight OA's importance in uncertain conditions, providing the essential capabilities—sensing, seizing, and transforming—that are vital for sustained growth and performance. As a result, we claim that organizational agility influences innovative performance.

H3: organizational agility has a direct positive impact on innovation performance.

Organizational Agility (OA) mediates the effect of Intellectual Capital (IC) and Innovation Performance (IP)

According to Brüggemann et al.(2022), different factors can affect the relationship between IC and OIP. Additional factors can deepen the understanding of this link. It makes appropriate to take organizational agility into account as a mediating factor between intellectual capital and innovation, as competitive advantage is essential for innovative Performance because agility emphasizes an organization's capacity to adapt swiftly to shifts in the market and in customer demands, hence enhancing competitive advantage.[36] According to[21], organizational agility is the capacity of a business to assist in the search for pertinent information, enabling the application of this knowledge to the creation of new goods or the response to new competitors. According to Mikalef & Pateli (2017), there is prior research in strategic management that supports the notion that organizational agility significantly impacts a company's efficiency. Intellectual capital and organizational agility together can provide important new perspectives on what motivates innovation in business models. Based on literature, the following hypothes is established:

H4: organizational Agility mediates the relationship between Intellectual capital and innovation performance.

Organizational inertia (OI) moderates the effect of Intellectual Capital (IC) and Innovation Performance (IP)

According to Godkin (2010), Organizational inertia refers to the tendency to resist change or adapt slowly to changes in the external environment. This can be attributed to a variety of causes, including established routines, existing structures, and processes that have become embedded over time. Organizational inertia can make it difficult for businesses to respond effectively to new possibilities or threats, compromising their long-term success and competitiveness. Inertia will prevent organizations from implementing changes (Teece, 1997). To maintain a competitive edge and adapt to changes in the external environment, organizations need to manage intangible assets like intellectual capital.[26] Regretfully, not every organization has intellectual capital that can evolve with the times. Since inertia is an organization's inclination to resist change, it plays a significant role in this resistance(Teofilus et al., 2022). Several prior research have found that OI reduces the impact of IC on innovation outcomes. Prior research has shown that organisational inertia has a negative impact on innovation. The positive effect of IC on performance will be influenced by the degree of OI. As inertia develops, the favorable impact of intellectual capital on innovative performance declines. Thus, we suggest that the connection between intellectual capital and innovation performance will be negatively impacted by inertia. So, the fifth hypothesis can be proposed as the following.

H5: organizational inertia negatively moderates the relationship between intellectual capital and innovation performance.

METHOD

Measurement of variables

To meet the study objectives and analyze the relationships between components, a scale (questionnaire) was adapted through previous published studies on four factors, intellectual capital, organizational agility, organizational inertia and innovation performance. A panel of academic specialists was given the questionnaire from the faculty of business and management after modifications to raise the standard of the survey. A seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree), was used in the study to assess the characteristics under consideration. Prior to the formal distribution, a pilot test was conducted using 30 questionnaires with 30 SME managers to ensure both validity and reliability. According to Hair et al.(2013) guidelines, none of the construct factor loadings fell below 0,40. Additionally, the scale's validity and reliability were evaluated, and all items met the composite reliability threshold of 0,70, as prescribed by[41]. Table 1 shows the measures adapted from the prior research.

Sampling and data collection

To achieve the aim of the study, Pakistan's manufacturing SMEs were selected as the study population. Punjab (the province of Pakistan). There are two primary reasons why the SME sector was selected as the research population. First, the largest portion of the nation's economy is represented by the Punjab SME sector.[42] Second, the lack of resources that Punjabi SMEs frequently confront makes it difficult for them to prosper in a turbulent economy.[43] In order to limit the research population to companies with up to 150 employees, the study used a non-probability, purposive sampling strategy.[44] This study collected cross-sectional data using a

self-administered survey approach. Given that the major structures were evaluated at the organizational level, we specifically invited top executives knowledgeable with the enterprise's strategy, such as the CEO, senior managers, and other high-ranking officials. The sample size was 230, determined using the G*Power technique to ensure generalizability and accuracy. According to this method, the selected sample size is appropriate for the study's requirements.[45] Out of 400 distributed questionnaires, 230 were received and further analyzed. The response rate was 58 % which is considered satisfactory.

Table 1. Measurement Items

Serial	No of Statements	No of Items	Reference
1	Intellectual Capital	17	(Bontis (1998), Bozbura (2004), Martín-de Castro & Delgado-Verde (2012)
2	Organizational agility	4	Malcom (2021)
3	Innovation Performance	5	Al-Khatib et al. (2021), Hung and Chou (2013), Li et al. (2019)
4	Organizational Inertia	13	Godkin & Allcorn (2008)

RESULTS

In this study, PLS-SEM will be employed in the analysis. SEM, a multivariate method for exploring structural correlations, is commonly utilized. It allows multiple variables to be analysed simultaneously in an integrated model (Hair et al., 2014). PLS-SEM can aid in the conception of structures and hypotheses that can be tested using empirical data. It may help demonstrate the intricacies of causal modelling. Another major rationale for utilizing it in this work, according to Akhter (2020), is that it ensures model estimation with a small sample size and many latent variables. Because of the limited sample size and non-parametric character of the data, PLS was preferred over other methods.

Characteristics of respondents

Table 2 describes the respondents' demographics. According to the data, most respondents are male (82,17 %), indicating that the sample is dominated by men. Most responders (61,3 %) have a master's degree, indicating a high level of education. In addition, most respondents (38,2 %) are general managers.

Table 2. Distribution of respondents

Demographics	Frequency	Percentage
Gender		
Male	189	82,17
Female	41	17,82
Educational Level		
Master	141	61,30
Degree	89	38,69
Diploma	0	
Designation		
CEOs	67	29,13
General Manager	88	38,26
Senior Manager	73	31,73
Others	2	0,89
Total	230	100

For every variable in this study, we calculated the mean and standard deviation. The findings are displayed in table 3, which provides the following means and standard deviations for each variable: intellectual capital: 3,23, organizational Agility: 4,76, organizational inertia: 4,58 and innovation performance: 3,48, the total number of respondents were 230.

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Table 3. Results of Descriptive Statistics

Constructs	N	Minimum	Maximum	Mean	Std. Deviation
MIC	230	1	7	3,23	1,40
MOA	230	1	7	4,76	1,45
MOI	230	1	7	4,58	1,60
MIP	230	1	7	3,48	1,22
Valid N (listwise)	230				

Note: IC= Intellectual Capital, OA= Organizational Agility, OI = Organizational Inertia, IP= Innovation Performance

The measurement model

Figure 1 depicts the measurement model, and table 4 discusses its validity and reliability. The results show that the composite reliability (CR) ratings are greater than the minimum cutoff value of 0,70, ranging from 0,845 to 0,957. This signifies that the results are consistent with earlier studies. The average variance extracted (AVE) values, which vary from 0,551 to 0,701, are likewise over the acceptable threshold of 0,50. The results show that all item factor loadings range from 0,70 to 0,95, and the Cronbach's alpha value for each construct is greater than 0,70.

Table 4. Convergent validity and reliability of constructs

Variable	A	CR	AVE
OA	0,944	0,957	0,600
IC	0,827	0,845	0,604
OI	0,843	0,917	0,701
IP	0,875	0,912	0,551

Note: IC= Intellectual Capital, OA= Organizational Agility, OI = Organizational Inertia, IP= Innovation Performance.

Table 5. Correlation Matrix

Variables	OA	IC	OI	IP
OA	1,000			
IC	0,524	1,000		
OI	0,030	0,020	1,000	
IP	0,482	0,491	0,042	1,000

Note: IC= Intellectual Capital, OA= Organizational Agility, OI = Organizational Inertia, IP= Innovation Performance.

Results in table 5 indicate the strength and direction of their interactions. A strong positive correlation (0,524) exists, demonstrating that better organizational agility is connected with higher intellectual capital in the sample. There is a moderate positive correlation (0,491) between IC and IP, implying that higher intellectual capital leads to better innovation outcomes. Similarly, organizational agility has a moderate positive connection with innovation performance (0,482), implying that greater agility promotes innovation. In contrast, organizational inertia (OI) exhibits very poor relationships with organizational agility (0,030), intellectual capital (0,020), and innovation performance (0,042), implying that it is mainly independent of these variables. Overall, the findings indicate that gains in organizational agility and intellectual capital can lead to improved innovation performance, whereas organizational inertia has minimal impact on these characteristics in this dataset.

The findings of table 6 showed that all variables exhibit a strong correlation. The correlation between OA and IP is significantly positive (0,613, p 0,01). Consequently, a correlation of (0,521, p 0,01) was observed between the OA and IC. Lastly, the correlation between the IC and IP was the weakest (0,531, p 0,01). The model's well-fitness was evaluated after confirming that all research variables were substantially correlated. Results show that the model is fit for further data analysis.

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Table 6. Discriminant validity

	OA	IC	OI	IP
OA	0,713			
IC	0,521	0,721		
OI	0,0211	0,0213	0,821	
IP	0,613	0,531	0,0421	0,624

Note: IC= Intellectual Capital, OA= Organizational Agility, OI = Organizational Inertia, IP= Innovation Performance.

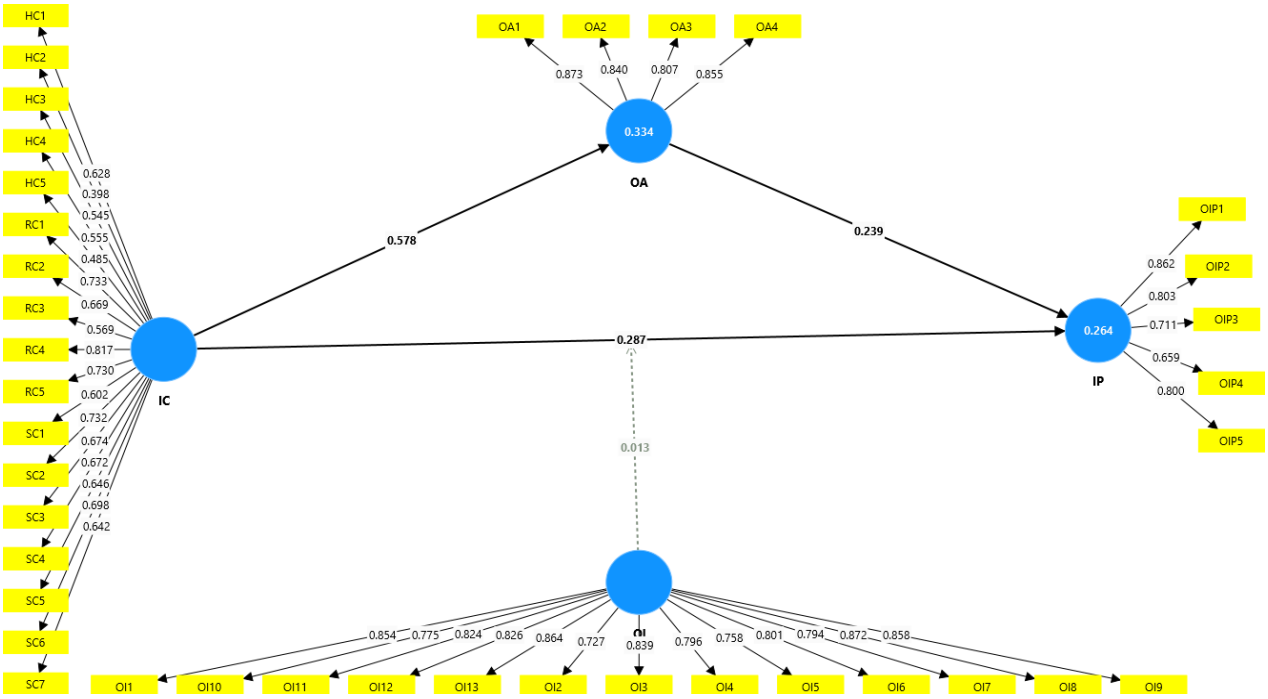

Figure 2. Measurement Model

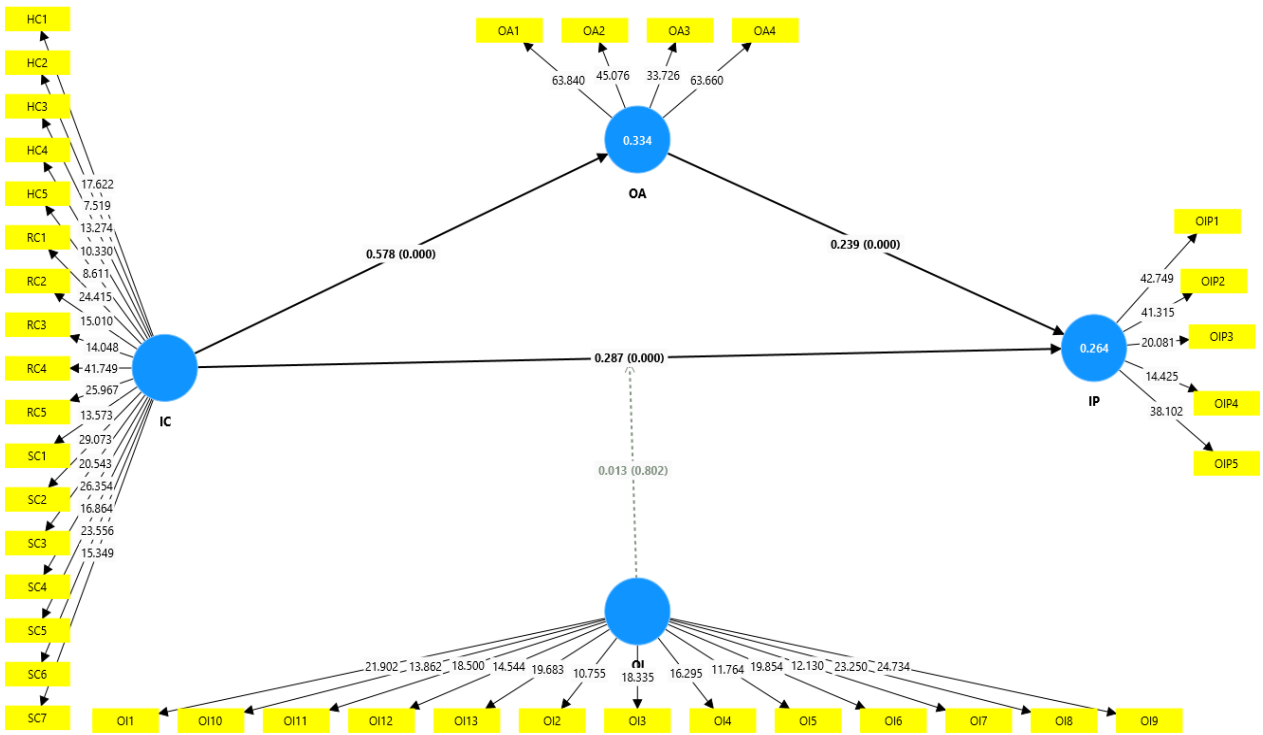

Figure 3. Structural Model

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Structural model

The findings supported the acceptance of the H1, H2, and H3 hypotheses. Table 7 shows that (IC) has a strong positive impact on both (IP) and organizational agility. Additionally, organizational agility (OA) improves innovation performance (IP). All correlations are statistically significant, as evidenced by their high t-statistics. Specifically, it revealed that Intellectual capital significantly influenced both organizational agility and innovation performance. The empirical analysis of the structural model indicated that intellectual capital had a greater impact on organizational agility ($\beta = 0,578$, t= 14,320, $p < 0,05$). Results also show a positive impact of Intellectual capital on innovation performance(ß =0,287 , t=5,241, $p < 0,05$).

Table 7. Structural Equation Modelling (direct relationships)

Hypothesis	IV		DV	B	SD	t-statistic	Decision
H1	IC	>	IP	0,287	0,055	5,241	Accepted
H2	IC	>	OA	0,578	0,040	14,320	Accepted
H3	OA	>	IP	0,239	0,047	5,045	Accepted

Note: IC= Intellectual Capital, OA= Organizational Agility, OI = Organizational Inertia, IP= Innovation Performance.

Mediation Analysis

Table 8 shows the results regarding the hypotheses related to the mediating role of organizational agility in the relationship between Intellectual Capital and Innovation Performance. The coefficient (ß = 0,138) indicates a significant positive association between intellectual capital and innovation performance through organizational agility. The standard deviation (SD = 0,029) indicates low variability and good precision in the estimate. With a t-statistic of 4,745, which is significantly higher than the 1,96 threshold, the mediation effect is highly significant at the 5 % level. This shows H4 is Accepted.

Table 8. (mediating relationship)

Hypothesis	IV	Mediator	DV	B	SD	t-statistic	Decision
H4	IC	OA	IP	0,138	0,029	4,745	Accepted

Note: IC= Intellectual Capital, OA= Organizational Agility, OI = Organizational Inertia, IP= Innovation Performance

Moderation Analysis

Table 9 depicts the relationship between Intellectual capital and Innovation Performance is moderated by Organizational Inertia. The low ß value (0,013), high SD (0,054), and low t-statistic (0,251) show a weak and statistically insignificant association. Though the ß values are not negative but still it is very low that we can say that it shows statistically insignificant. Which means that H5 is Accepted.

Table 9. Structural Equation Modelling(Moderating relationship)

Hypothesis	IV	Moderator	DV	ß	SD	t-statistic	Decision
H5	IC	OI	IP	0,013	0,054	0,251	Accepted

DISCUSSION

This study aimed to examine the impact of intellectual capital on innovation performance in manufacturing SMEs of Pakistan. Furthermore, it is intended to investigate the mediating function of organizational agility in the relationship between intellectual capital and innovation performance and the moderating influence of organizational inertia. Pakistan's manufacturing SMEs industry is widely regarded as one of the country's primary economic drivers.[52] We hypothesize that intellectual capital will positively correlate with innovative performance. In addition, the findings are consistent with earlier research of Al-khatib (2022). They stated that human capital—an intangible asset—plays a key role in developing organizational skills focused on innovation through education, training, and the utilization of people's implicit knowledge. As per Lo et al. (2020), human capital is regarded as an organizational capability that can be employed to address diverse administrative and technical issues, in addition to reaping the benefits of novel insights and harnessing them to foster innovation. According to findings, intellectual capital has a favorable and considerable impact on organizational agility. This result is consistent with studies of Al-azzam et al. (2017). Furthermore, research by Hajevar & Kharazian (2016) has shown that valuing employees' intellectual capital is one of the best ways for businesses to create and maintain a competitive edge and improve organizational agility. Moreover, the findings of organizational agility and innovation performance is consistent with Guo et al. (2023). The present study confirms the mediating impact of organizational agility on

the relationship between intellectual capital and innovation performance. The present findings is constant with the claims of Al-azzam et al. (2017). The research of Al-azzam et al. (2017) was carried out on 550 members of Jordanian service sector. This research investigated that organizational agility fully mediates the relationship between three IC dimensions (HC, SC, and RC) and organizational excellence. The findings of the research suggest that the more organizations develop and retain their Iintellectual capital, the more adaptive and successful they will be in a volatile environment and generate the highest innovative performance in the turbulent environment. Moreover as per Baikuni et al. (2022) the primary source for creating organizational agility is human capital, which is a characteristic of human resources that initially derives from knowledge and skills. The infrastructure supporting the aspects of agility is comprised of structural capital, which is mostly discussed in the literature. This includes organizational culture, databases, information systems, processes, manuals, patents, routines, and structures. Even when a company has exceptional individuals, it won't function at its best if it lacks the infrastructure to support its contributions. Relational capital pertains to external entities, encompassing associations within the industry, government, state, informal networks, and agents, customers, suppliers, rivals, partners, clients, and shareholders.[56] These wide links made it simpler to apply the agility dimensions at the individual and institutional levels. Moreover, organizational inertia will mitigate the impact of intellectual capital on innovation performance. The findings suggest that OI weakens the relationship. This is consistent with prior studies in many research settings that suggest that OI decreases the effect of dynamic skills on innovation performance.[25] It could occur when businesses are overly accustomed to strict routines, outdated policies, and practices.[50] SMEs are more closely associated with their reluctance to innovate in the context of this study. Organizations' inability to adapt or inertia will prevent them from implementing changes;[39] (Nedzinskas et al., 2013).

CONCLUSIONS

This study concludes a novel theoretical perspective by offering new causal explanations for the factors influencing innovation performance. Specifically, it highlights how organizational agility can play a critical role in enhancing the effectiveness of an organization's intellectual capital, thereby boosting innovation performance. Additionally, the study demonstrates that organizational inertia negatively moderates the relationship between intellectual capital and innovation performance, weakening this connection. As such, the research makes a valuable explanatory contribution, providing insights that may aid scholars and practitioners in the fields of innovation and knowledge management in gaining a deeper understanding of the relationships within the study's framework. This study is also relevant for SME owners and policymakers. First, it emphasizes the importance of effectively implementing an intellectual capital approach within organizations. Second, to enhance innovation performance, policymakers and national innovation agencies should support SMEs in developing organizational agility. For instance, offering training programs for entrepreneurs and SME leaders to better understand and foster an agility-driven culture in their businesses should be a key agenda for SME development in emerging economies. Third, recognizing the role of organizational inertia during economic crises can help practitioners make informed decisions to adapt effectively and maintain a competitive edge. SME managers are encouraged to consider the negative moderating effect of organizational inertia on intellectual capital and its impact on innovation performance. Practitioners should be aware that organizational inertia weakens the positive relationship between intellectual capital and innovation performance, with SMEs exhibiting higher levels of inertia experiencing a less pronounced positive effect compared to those with lower inertia.

Limitations and future research

First, the study used a cross-sectional data methodology, which has drawbacks, most notably the uncertainty of causal linkages. To acquire a better understanding of the correlations between the factors, longitudinal research would yield more reliable results throughout time. Second, the study used questionnaires to collect data. Alternative methods, such as interviews, may provide richer insights. Finally, the study only included participants from the Punjab manufacturing SME sector, restricting the findings' applicability to other economic sectors. Future research could look at other sectors, such as industry or services, as well as different countries and cultures, to widen the findings' relevance.

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