

The Influence of Organizational Agility on Organizational Innovation and Perceived Performance Within Organization

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Abstract

The current research investigates the association among Organizational Agility, Organizational Innovation, and Perceived Organizational Performance. The study's participants consist of middle and senior managers from the public and private service sectors in Rawalpindi and Islamabad, Pakistan. A total of 392 respondents completed and returned the distributed questionnaires. The collected data was through SPSS and AMOS software using Structural equation modeling technique. The outcomes indicate a significant impact of organizational agility on both Organizational Innovation and Perceived Organizational Performance. Consequently, the study concludes that organizations should prioritize the enhancement of agility to facilitate innovation and ameliorate their overall performance. The research makes a novel contribution to the existing literature by furnishing fresh insights into the interconnectedness of Organizational Agility, Organizational Innovation, and Perceived Organizational Performance. Nonetheless, certain limitations are inherent in the study, necessitating future research to explore these relationships in diverse contexts and utilizing alternative research methodologies. This study offers valuable insights for practitioners and researchers seeking to elevate organizational innovation and the perception of organizational performance.

Keywords- Organizational Agility, Organizational Innovation, Perceived Performance & Organization

Background of the study

Modern businesses need to embrace agility due to the dynamic market landscape. Flexibility has become paramount for success and growth (Felipe et al., 2016). Research highlights that organizational agility significantly enhances business performance and

competitive advantage (Chen et al., 2014; Ashrafi et al., 2019). Digital transformation denotes the ongoing journey towards higher digital maturity within an organization. It involves integrating digital technologies and practices to foster a digital culture. This evolution empowers companies to improve services, gain a competitive edge, and navigate a complex business environment. Effective implementation of digital transformation strategies has been linked to increased asset returns and overall profitability (Westerman et al., 2012). Information technology (IT) plays a pivotal role in driving organizational success by influencing various operational aspects, thus enabling superior performance compared to competitors (Chen et al., 2014; Grover et al., 2018; Lu & Ramamurthy, 2011). IT forms the foundational framework supporting organizations to create and capture value, fostering innovation, process optimization, and strategic goal achievement.

Leveraging IT equips companies with diverse tools and resources to enhance products, services, and overall performance. Through advanced data analytics, efficient communication networks, and robust information systems, IT capabilities establish a sturdy base for organizations to operate with increased effectiveness and efficiency. IT's impact goes beyond internal operations and influences the external environment. In the rapidly advancing technological landscape, businesses that effectively utilize IT can potentially gain a competitive advantage. IT empowers companies to adjust to market shifts, spot emerging trends, and promptly meet customer demands (Chen et al., 2014; Grover et al., 2018). By leveraging IT capabilities, firms can craft inventive solutions, offer personalized experiences, and maintain an edge in the dynamic business realm (Lu and Ramamurthy, 2011).

The term "organizational agility" pertains to an organization's ability to identify and employ innovative information technology resources (Lee et al., 2015). The dual aspects of information technology, exploration, and exploitation, can mutually reinforce

each other, underscoring the significance of ensuring the viability of an organization's IT capabilities in both the present and the future leads towards organizational innovation and increase its performance (Nwankpa & Datta, 2017). The process of cultivating organizational agility through the integration of IT and innovation presents a considerable and persistent challenge for corporations (Lowry & Wilson, 2016; Teece et al., 2016). It demands continuous and strategic efforts to adeptly navigate the intricacies of today's dynamic business environment. Developing organizational agility involves establishing the proficiency to swiftly acknowledge and adapt to shifts in both internal and external conditions. Information technology facilitates this agility by delivering the essential technological infrastructure and capacities. By harnessing IT tools and systems, entities can improve operational flexibility, streamline operations, and gain real-time insights to inform decision-making (Lowry & Wilson, 2016).

Nevertheless, the establishment of organizational agility through IT and innovation requires an ongoing, holistic endeavor. It encompasses diverse dimensions such as technological advancements, cultural transformation, and strategic alignment (Teece et al., 2016). Organizations need to make investments in nurturing an innovation-oriented culture, fostering collaboration and the exchange of knowledge, and promoting experimentation and the embrace of risk. Furthermore, organizational agility mandates an adaptable mindset and a willingness to embrace change. Leaders play a pivotal role in championing transformative visions and facilitating the essential resources and support for driving innovation through IT. This includes encouraging cross-functional collaboration, cultivating an environment centered on learning, and empowering employees to take ownership of their concepts and initiatives (Teece et al., 2016).

In essence, the role of IT in fostering organizational competence, which in turn influences organizational agility, is becoming increasingly pivotal for perceived organizational performance (Tallon & Pinsonneault, 2011; Lowry & Wilson, 2016).

Scholars contend that organizational agility serves as a manifestation of advanced organizational capabilities, enabling firms to adeptly and skillfully leverage their resources to create value that aligns with various internal and external circumstances and to increase the shareholders wealth by enhancing the performance of an organization (Overby et al., 2006; Teece et al., 2016).

From the above discussion, it is clear that there is a need for more research into effective HR digital transformation to improve the organizational innovation and performance. The study on the effectiveness of digitization by Verhoef et al. (2021) examined the influence of HRM maturity systems, HR strategic involvement, and HR enterprise engagement. It is therefore suggested to investigate further variables impacting the efficacy of HRM digitization from various levels and viewpoints for future studies. Nowadays, organizations are transforming due to advancements in Information Technology. The organizations in Pakistan are going through fundamental changes, and organizational agility is required for Effective HR Digital Transformation. It is observed that organizations that do not have agility cannot successfully implement Effective HR in organizations. This research aims to create a relationship between organizational agility, organizational innovation, and perceived organization's performance.

Research Questions

Based on the above discussion, the following are the research questions of the present study:

1. Does Organizational Agility impact on Organizational Innovation?
2. Does Organizational Agility influence on Perceived Organizational Performance?

Research Objectives

The following are the research objectives of the present study:

1. To investigate the effect of Organizational Agility on Organizational Innovation
2. To investigate the effect of Organizational Agility on Perceived Organizational Performance

Literature Review and Theoretical Framework

The current section mainly focuses on the key literature regarding the core constructs discussed in this research and the relationship among these constructs. Furthermore, this chapter discussed the theory and logic behind the relationships of study variables. The evidence from the literature is given below:

2.1 Organizational Agility

The concept of organizational agility can be defined as the firm's aptitude to detect shifts in the environment (sensing) and promptly adapt to them (responding) through the reconfiguration of its resources, processes, and strategies (Felipe et al., 2016). Organizational agility pertains to an organisation's capacity to swiftly adjust and react to changes in its internal and external environment. It encompasses recognising and capitalising on emerging opportunities, navigating through uncertain circumstances, and recovering effectively from setbacks or failures. The significance of organizational agility has grown considerably in the present dynamic and rapidly evolving business landscape, where adapting quickly is crucial for maintaining competitiveness.

Organizational agility holds a central position as a key determinant for attaining success and ensuring the survival of an organization within a volatile and dynamic business environment (Kale et al., 2019; Liu and Yang, 2019; Tallon and Pinsonneault, 2011; Vagnoni and Khoddami, 2016). The growing attention towards organizational agility stems from its profound ability to effectively address unforeseen challenges arising from a highly dynamic business landscape through the adept reconfiguration of resources, capabilities, and strategies (Liu and Yang, 2019; Oosterhout et al., 2006; Sarkis, 2001).

In the face of continuous disruptions, intense competition, and rapid market changes, organizational agility emerges as a critical enabler for organizations to navigate uncertainties, seize emerging opportunities, and respond with agility and resilience. By

proactively adjusting their internal systems, processes, and structures, agile organizations can swiftly adapt to new market conditions, customer demands, and technological advancements. This adaptive capacity allows them to stay ahead of the curve, effectively mitigate risks, and capitalize on emerging trends.

In a dynamic and ever-evolving business environment, the ability to respond rapidly and effectively to changes, embrace flexibility, and navigate uncertainty becomes paramount for the survival of organizations (Feizabadi et al., 2019; Nejatian et al., 2018; Sambamurthy et al., 2003; Sherehiy et al., 2007). In the manufacturing industry, organizational agility enables organizations to emerge as frontrunners in delivering cutting-edge solutions at competitive costs, outperforming their competitors (Gunasekaran et al., 2018, 2019). Consequently, agility emerges as a critical success factor for organizations, allowing them to effectively embrace and navigate environmental uncertainty (Vagnoni and Khoddami, 2016; Vecchiato, 2015).

Drawing from the foundation of dynamic capability theory, Teece et al. (2016) delve into the essence of agility and conceptualize organizational agility as a construct influenced by dynamic capabilities. They emphasize that dynamic capabilities are crucial in nurturing organizational agility, enabling organizations to navigate the profound uncertainties stemming from innovation effectively (Teece et al., 2016). In a related study on organizational design, Denning (2017, 2018) argues that achieving agility necessitates a departure from the traditional top-down bureaucratic structure. Instead, organizations should embrace an agile network approach, fostering operational agility to develop products and ventures into unexplored markets. By functioning as an agile network, organizations gain the flexibility and adaptability required to seize market opportunities yet to materialize.

Literature suggests that organizational agility is becoming increasingly important in today's business environment and that organizations that can develop and maintain

agility are likely to be more successful over the long term. Organizational agility is a complex and multifaceted concept requiring a holistic development and implementation approach. By embracing agile methodologies, fostering a culture of experimentation and learning, and empowering teams and individuals, organizations can build the resilience and adaptability needed to thrive in today's rapidly changing business landscape.

Organizational Agility and Organizational Innovation

Organizational agility provides a conducive environment for innovation to thrive. By being flexible and adaptable, organizations can effectively embrace and integrate innovative ideas, processes, and technologies. The ability to respond quickly to changes and experiment with new approaches enhances the organization's capacity for innovation (Lichtenthaler, 2015).

An agile organization can detect shifts in its external conditions and adapt quickly and successfully (Felipe et al., 2016; Zhao, 2018). Companies that want to succeed in today's cutthroat marketplace must equip themselves with information technology that can adapt quickly to new circumstances (Lowry and Wilson, 2016). In other words, IT is becoming increasingly crucial in fostering organizational competency, which determines organizational agility (Tallon and Pinsonneault, 2011; Lowry and Wilson, 2016). We review the literature and propose that organizational agility is a company's capacity to detect and respond to external changes with rapidity, responsiveness, and flexibility using its internal information technology (Ravichandran, 2018; Tallon et al., 2019).

Organizational innovation involves acquiring, sharing, and integrating knowledge to generate novel insights and ideas for improving products and services (Du Plessis, 2007). It encompasses developing or adopting new concepts, strategies, and actions within an organisation's business practices (Wong & Chin, 2007). Recognizing the significance of organizational innovation, the Organization for Economic Cooperation and Development (OECD) introduced it as a pivotal metric in assessing business

practices, workplace organization, and external relations, focusing on the strategic decision-making processes within a company (Camisón & Villar-López, 2014).

Organizational innovation is a dynamic process through which organizations seek to enhance their competitiveness and adapt to changing market demands. It involves a systematic approach to acquiring new knowledge, fostering creativity, and effectively integrating innovative ideas into the organization's practices and operations. By fostering a culture of innovation and continuous learning, organizations can harness the potential of their employees, stakeholders, and external networks to drive forward-thinking initiatives and generate groundbreaking solutions.

The introduction of organizational innovation as a metric by the OECD highlights its recognition as a critical aspect of strategic management. It emphasizes the importance of making informed decisions and embracing innovative approaches to gain a competitive edge in the marketplace. Companies can drive continuous improvement, foster adaptability, and cultivate a forward-thinking and entrepreneurial spirit culture by focusing on organisational innovation. Accordingly, research in this area, like that of Camisón and Villar-López (2014), suggests that innovation at the organizational level can lead to better results. While useful, the contributions above only paint a partial and stagnant picture of innovation in government agencies. When it comes to public sector organizations, our understanding of how the interplay of the necessary antecedents leads to the growth of innovative capacities is limited (Arundel et al., 2019).

Modern businesses should view innovation as a crucial strategic approach to thrive in the current knowledge-based and competitive landscape. "The most successful organizations in the global market are seeking the culture of continuous innovation that allows them to improve their competitive edge" Schmitt and Almeida (2020). According to Giesenbauer and Muller-Christ (2020), it is crucial for institutions, especially universities, to adapt to and provide the most suitable solutions to shifting environmental

conditions. Helfat et al. (2007) emphasize that organizational agility facilitates innovation by enabling organizations to "respond quickly to changes in the competitive environment and adapt their resource positions and configurations to support new value creation activities." Teece (2007) highlights the importance of agility in supporting innovation, stating that "organizational agility, the ability to sense, shape, and seize opportunities and threats, is a key driver of innovation. In their study, Lichtenthaler and Ernst (2009) found that organizational agility positively influences organizational innovation, stating that "agile firms tend to be more innovative than their less agile counterparts." Empirical research by Černe et al. (2017) investigated the impact of organizational agility on innovation performance. The study revealed that agile organizations were more successful in generating innovative ideas, implementing them effectively, and achieving better innovation performance.

H1: Organizational Agility has a significant positive impact on Organizational Innovation

Organizational Agility and Perceived Organizational Performance

Agility refers to the organizational capacity to swiftly and efficiently adapt to evolving demands and external influences while upholding the quality of products or services (Ganguly et al., 2009). Organizations must undergo structural reorganization in dynamic environments to align with new processes and resources, enabling them to respond effectively to changing circumstances (Troise et al., 2022).

The ability to embrace agility is crucial to an organization's success and resilience. It entails the agility to anticipate and swiftly respond to emerging trends, customer demands, and market shifts. By actively monitoring the external landscape and being receptive to new information, organizations can proactively adjust their strategies, processes, and resources to align with emerging opportunities or challenges. Agility also entails the capacity to rapidly adapt and optimize internal operations in response to

changing needs. This may involve reconfiguring workflows, reallocating resources, or implementing agile project management approaches to enhance responsiveness and efficiency. By embracing agility, organizations can streamline decision-making processes, reduce lead times, and improve overall operational effectiveness.

It is important to note that agility does not imply compromising the quality of products or services. On the contrary, organizations that embody agility prioritize maintaining high-quality standards while responding to changing needs. They employ robust quality control measures, ensure continuous improvement practices, and foster a customer-centric culture to deliver superior products or services that exceed customer expectations. Kollmann et al. (2017) suggest that perceived performance positively influences the willingness of organizations to invest in agility-enhancing resources and capabilities. In their study, Matsunaga, Asaba, and Uenishi (2015) state that perceived organizational performance is "the extent to which individuals perceive their organization as performing well compared to other organizations in the same industry." The ability of the firm to efficiently and effectively turn existing resources into a new value is what is meant by the term "organizational agility" (Teece et al., 2016). Amit, R. (2013) discusses the concept of a business model and its relationship with organizational agility and perceived organizational performance. It argues that an agile business model enables organizations to adapt quickly to market changes, improving perceived organizational performance.

Organizational agility is closely associated with innovation capability, as it fosters a culture of experimentation, learning, and adaptability. Studies have found that agile organizations are more likely to generate innovative ideas, develop new products, and bring them to market faster, resulting in improved performance. (Jiménez-Jiménez & Sanz-Valle, 2011). The significance of agility in achieving firm success within the current

competitive landscape is well recognized (Roberts and Grover, 2012). Sharifi et al. (2006) highlight that organizational agility is crucial in influencing organizational performance. Swiftly responding to market changes empowers firms to perform better (Zaheer and Zaheer, 1997). The impact of agility on organizational performance can be observed through three primary avenues:

- i. Agility is pivotal in streamlining and redesigning an organization's business processes, enhancing speed, accuracy, and cost-effectiveness.
- ii. Implementing agility involves establishing strategic partnerships with suppliers, contract manufacturers, and distributors, leveraging their logistics, assets, capabilities, and knowledge to improve organizational performance.
- iii. One of the key benefits of operating as an agile organization is the ability to swiftly adapt to changes in customer demand, which positively impacts customer satisfaction and fosters long-term loyalty (Sambamurthy et al., 2003; Khalifa et al., 2008).

Agility in organizations is characterized by their ability to adapt to change while maintaining high-performance levels quickly (Sharifi and Zhang, 1999). According to Jacobs et al. (2011) and Sharifi and Zhang (1999), an agile organization can successfully compete in a market where technological advancements and consumer preferences can rapidly shift. Agile businesses can spot growth possibilities in a crowded marketplace and pursue them doggedly (Sambamurthy et al., 2003). To thrive in a volatile market, an agile company must constantly seek and seize new possibilities (O'Reilly and Tushman, 2008). Tarutè, A. (2019) examines the relationship between organizational agility, innovation, and performance. The evidence suggests a positive association between organizational agility and innovation, with innovation mediating between agility and performance.

This implies that the ability to be agile within an organization positively influences its capacity for innovation, which, in turn, drives overall performance. These findings underscore the crucial role of agility in fostering a culture of innovation and ultimately enhancing organizational performance. In a study conducted by Faisal, Banwet, and Shankar (2006), the relationship between organizational agility and operational performance was explored. The research outcomes demonstrated a significant positive impact of agility on operational performance across various dimensions. Notably, the study found that agility positively influenced improvements in quality, cost reduction, and customer satisfaction, reinforcing agility's importance in driving operational success.

This research shed light on the significance of organizational agility as a key driver of innovation and performance. By embracing agility, organizations can adapt swiftly to changing circumstances, identify new opportunities, and leverage their resources effectively to foster innovation. The ability to innovate, in turn, enables organizations to deliver high-quality products or services, achieve cost efficiencies, and meet or exceed customer expectations. The findings underscore the need for organizations to cultivate an agile mindset, develop flexible processes, and establish a supportive organizational culture that encourages innovation. By doing so, organizations can create a dynamic environment conducive to experimentation, learning, and continuous improvement, ultimately leading to enhanced performance and sustained competitive advantage.

H1: Organizational Agility has a significant positive impact on Perceived Organizational Performance.

Theoretical framework

Based on the extensive literature review and related theories following a theoretical framework of this research is designed.



Methodology

Research Methodology

The current section explains the methodology of the present study, which includes research design and approach, sampling techniques and sample size, data collection method and variable measurements.

Introduction

The research procedure is called the methodology (Allen, Rivkin, & Trimble, 2022). It is a crucial component of every study. Good research cannot be conducted without a reliable approach that enhances the findings. This chapter details the methodology used to perform the current study, and the second chapter discusses relevant literature. The research methodology, sampling strategy, data collecting strategy, measuring instruments, and data analysis methods are discussed in this chapter.

3.2 Research Design

To find a solution, scientists research to learn more about the issue (Sekaran & Bougie, 2010). Time-lagged methodology, a single research method (quantitative), a survey design, inductive reasoning, and positivism philosophy are used in the current research. Reactions of participants of similar work levels at different times are the focus of time-lagged studies. It is commonly employed in developmental, educational, and social psychological contexts to examine whether differences in a given trait among cohorts of individuals of the same work lever were tested at different times. Time-lag designs have the benefit of taking into consideration testing time effects. It provided impartial findings. According to Zechmeister and Posavac (2003), research design provides an all-encompassing method for the study. The current study is quantitative, and its goal is to learn how agility in organizations influences their performance.

As a result, under this framework, we analyzed our study using a questionnaire appropriate for investigating a causal character. The current study is based upon a

deductive approach since it has discovered a theoretical gap in the existing literature and has constructed a model for testing hypotheses to meet that gap. According to Aguinis et al. (2017), deductive approach studies regarded more methodological transparency than other methodologies. In addition, the positivist method was used in this study. In this study, we used a time-lagged design to gather information. Therefore, the current study used a non-probability convenience sampling technique to collect data.

3.3 Measurement Instruments

Standardized scales were modified from previous research and used to tabulate responses in the present investigation. These scales were employed because of their established validity and reliability, contributing to the study's external validity. The questionnaire's instructions were in its first section. After then came the various rating scales on which the respondents were to rate their answers to the various inquiries. Since every variable was measured on a 5-point Likert scale, we tabulated the data as follows:

Table 3.1 Codes for Likert Scale

Codes	1	2	3	4	5
Response	Strongly Disagreed	Disagreed	Neutral	Agreed	Strongly Agreed

Organizational Agility

We used the scale by Zhen et al. (2021) to measure Organizational Agility. Each of the constructs used a five-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5).

Organizational Innovation

To assess organizational innovation, a subset of three items was selected from the original pool of seven items developed by Friedman (2003). Participants were asked to rate these

items using a 5-point scale, ranging from 1 (indicating "Very strongly disagree") to 5 (indicating "Very strongly agree").

Perceived Organizational Performance

The measurement of Perceived Organizational Performance utilized a scale developed by Delaney and Huselid (1996). Participants were asked to rate each item using a 5-point scale, ranging from 1 (representing "Much worse") to 5 (representing "Much better").

Data analysis

After conducting initial descriptive analysis using IBM SPSS Statistics version 24, hypotheses were tested through Squares Structural Equation Modeling (PLS-SEM) using AMOS v24. Covariance based - SEM is frequently employed for the testing of theoretical frameworks (Hair et al., 2017) making it a suitable choice for our study's objectives.

Results and Discussion

Demographics Statistics

The demographic characteristics of respondents of this study are presented in Table 3.2. There were 392 people in this research. There were 263 male respondents (67.1 %) and 129 female respondents (32 %) in this study (32.9 %). Participants' median age ranges from 35 to 45 (n=141; 35.97%). Participants between the ages of 45 and 55 were the second largest age group (n=126; 32.14 %). 20 % (n = 78) of the participants were younger than 35, while 12% (n = 47) were older than 55. Only 16.07% (n=63) of those polled had bachelor's degrees, whereas 41.07% (n=161) had master's degrees, and 32.14% (n=126) had doctoral degrees. Participants with non-degrees bachelor's (n=42; 10.71%) include those with diplomas or certificates. The participants were questioned about their prior employment histories. About 14% (n = 55) of people have participated in the research with less than two years of job experience (14 %). Responses from those with 2-5 years in the job comprised 26.28 % (n=103). The percentage of those with 5-10 years of experience

is 45.41 % (n=178). Of the total number of respondents, 14.29% (n=56) had experience levels of 10 years or more in the workforce.

Table 3.2: Demographic Characteristics

		Frequency	Percent
Gender	Male	263	67.09
	Female	129	32.91
Age	25 - 35 years	78	19.90
	35-45 years	141	35.97
	45-55 years	126	32.14
	55 years and above	47	11.99
Education	Graduate	63	16.07
	Masters	161	41.07
	M.Phil/PhD	126	32.14
	Others	42	10.71
Experience	<2 years	55	14.03
	2-5 year(s)	103	26.28
	5-10 years	178	45.41
	>10 years	56	14.29
Total		392	100

Common Method Bias (CMB)

Harman's single-factor test was run on SPSS for the given data set, with principal component analysis as the extraction technique of choice. Five factors were found to have eigenvalues larger than 1 in the final analysis. The first component accounted for less than

half (42.07 %) of the variation. This proved that CMB was not a factor in the observed data.

Confirmatory Factor Analysis

Various statistical analyses were conducted to assess the acceptability of the measurement model, including the calculation of construct composite reliability, convergent validity, and discriminant validity (Hsu and Lin, 2008; Lim, 2015). The construct composite reliability assesses each construct's reliability (Fornell and Larcker, 1981). In this study, a minimum threshold of 0.70, as recommended by Liu and Wang (2016), was used to determine satisfactory reliability. The results indicated that all constructs exceeded this cutoff value, with reliability coefficients ranging from 0.817 to 0.978 (see Table 4.1). Moreover, each construct exhibited a Cronbach's Alpha value greater than 0.70 (Hair et al., 2014), indicating good internal consistency.

Convergent validity, another important aspect of the measurement model, was evaluated through factor loadings and average extracted variance (AVE) (Fornell and Larcker, 1981). The factor loadings reflect the strength of the relationship between the measurement items and their respective constructs. At the same time, the AVE measures the amount of variance captured by the construct relative to measurement error. To establish convergent validity, the AVE should exceed 0.50, indicating that its measurement items capture more than 50% of the variance in the construct. The factor loadings should also be greater than 0.60, indicating a substantial relationship between the items and the construct (Hair, Ringle, and Sarstedt, 2011).

Items loading ranged from 0.696 to 0.814 (> 0.60), while AVEs for all constructs were over 0.50. Therefore, the instrument's convergent validity was assured. MaxR (H) and the mean shared values (MSV) were above the cut-off.

Table 4. 1: Factor Loadings, CR, AVE and Sqr. AVE

Predictor	Outcome	Std Beta	CR	AVE	MSV	MaxR(H)
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	ORGAGL6	0.76				
	ORGAGL10	.786 ***				
	ORGAGL12	.780 ***				
	ORGAGL5	.782 ***				
	ORGAGL20	.781 ***				
	ORGAGL25	.754 ***				
	ORGAGL3	.740 ***				
	ORGAGL23	.766 ***				
	ORGAGL18	.757 ***				
	ORGAGL22	.777 ***				
	ORGAGL21	.773 ***				
	ORGAGL30	.756 ***				
	ORGAGL28	.758 ***				
ORGAGL	ORGAGL26	.750 ***	0.978	0.587	0.404	0.979
	ORGAGL27	.759 ***				
	ORGAGL2	.776 ***				
	ORGAGL19	.764 ***				
	ORGAGL17	.776 ***				
	ORGAGL11	.753 ***				
	ORGAGL13	.766 ***				
	ORGAGL16	.790 ***				
	ORGAGL1	.743 ***				
	ORGAGL31	.778 ***				
	ORGAGL15	.788 ***				
	ORGAGL29	.749 ***				
	ORGAGL7	.773 ***				
	ORGAGL9	.741 ***				
	ORGAGL24	.744 ***				

	ORGAGL14	.773 ***				
	ORGAGL4	.763 ***				
	ORGAGL8	.783 ***				
	ORGAGL32	.771 ***				
	PORGP2	0.729				
	PORGP3	.729 ***				
	PORGP6	.771 ***				
PORGP	PORGP7	.696 ***	0.894	0.545	0.293	0.895
	PORGP5	.730 ***				
	PORGP4	.761 ***				
	PORGP1	.752 ***				
	ORGINN2	0.768				
ORGINN	ORGINN1	.814 ***	0.817	0.598	0.404	0.821
	ORGINN3	.735 ***				

Note: 1: CR = Composite Reliability; AVE = Average Variance Extracted, MSV = Mean share value; ORGAGL = Organizational Agility; PORGP= Perceived Organizational Performance; ORGINN = Organizational Innovation

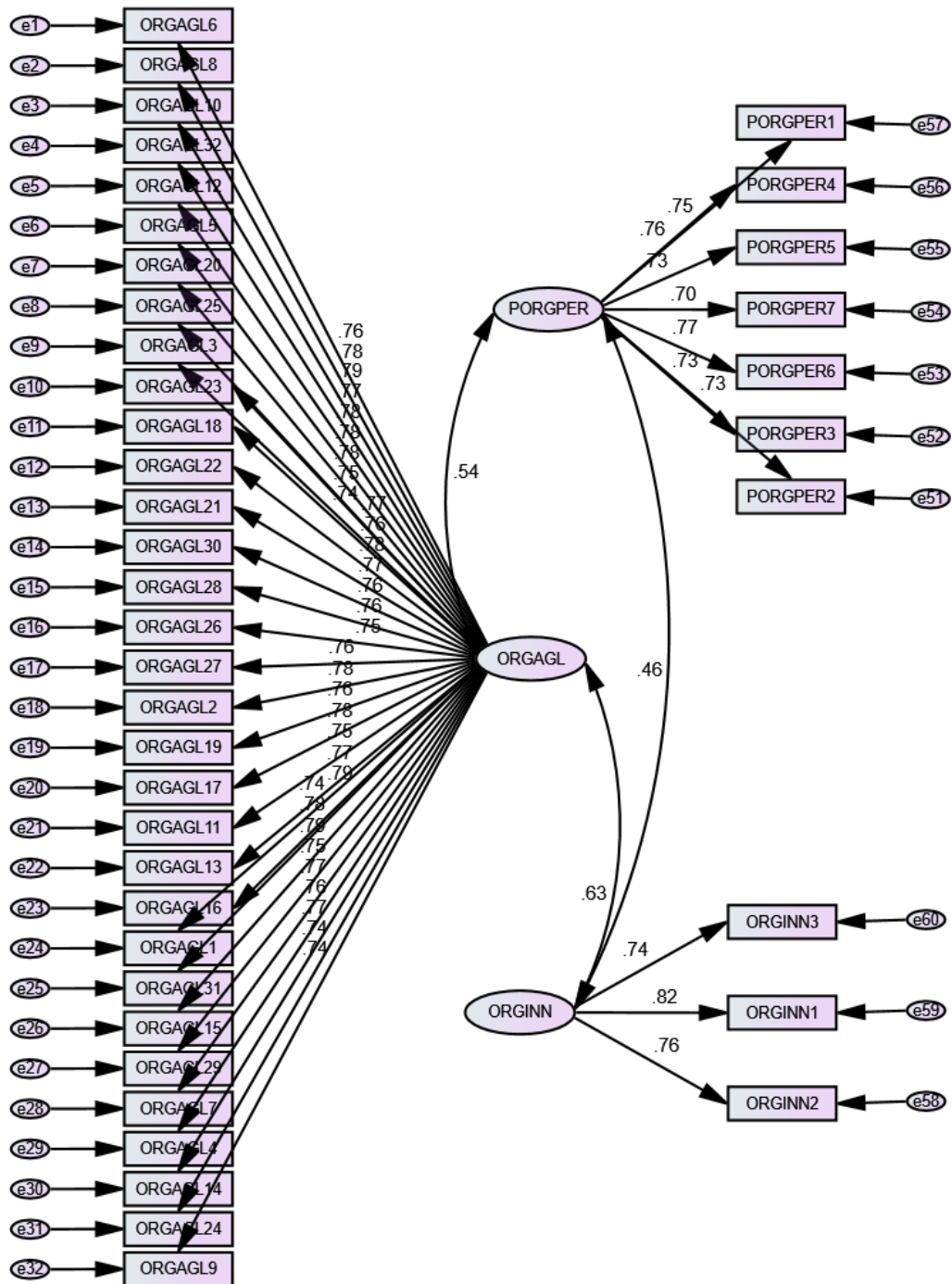


Figure 4.1: Measurement Model

Fornell and Larcker (1981) proposed comparing the square root of the average variance extracted (AVE) with the correlations between constructs to assess an instrument's discriminant validity. However, this approach has been criticized by several scholars who questioned its adequacy as a measure of discriminant validity (Fornell and Larcker, 1981; Benitez et al., 2019). In response to these concerns, Henseler, Ringle, and Sarstedt (2015) introduced an alternative method called the Heterotrait-Monotrait (HTMT) ratio to evaluate discriminant validity. According to Henseler et al. (2015), a ratio below 0.85 is ideal for establishing discriminant validity (Ogbeibu, Senadjki, & Gaskin, 2018; Benitez et al., 2019).

In the current study, the HTMT ratios for the constructs were computed and presented in Table 4.2. The range of HTMT ratios observed was from 0.458 to 0.635, below the recommended threshold of 0.85. This finding confirms the discriminant validity of the constructs, indicating that they are distinct from each other and measure unique aspects of the underlying latent variables.

Table 4. 2: Heterotrait-Monotrait (HTMT) ratio

	ORGAGL	PORGP	ORGINN
ORGAGL			
PORGP	0.541		
ORGINN	0.635	0.458	

Furthermore, the adequacy of the structural model was assessed by examining its goodness of fit. As reported in Table 4.3, the model fit indices fell within the generally recognized range. A satisfactory level of model fit was indicated by the values of CF1 = 0.963, NFI = 0.902, and TLI = 0.961. Moreover, the values of RMSEA = 0.037 and SRMR = 0.033 also suggested a good model fit, aligning with the ranges recommended by previous research (Hair et al., 2014; Vieira, 2011; Hu & Bentler, 1999; Tanaka, 1993). All fit indices met the threshold conditions, indicating a favorable level of model fit.

Consequently, it can be concluded that the inferential statistics based on the structural model are valid and reliable.

Table 4. 3: Model Fit Indices

Indices	Estimate	Threshold
CMIN	1254.811	--
DF	816.000	--
Relative Chi-Square (χ^2/df) (CMIN/DF)	1.538	Between 1 and 3
Comparative Fit Index (CFI)	0.963	>0.95
Square Root Mean Residual (SRMR)	0.033	<0.08
Root Mean Square of Error Approximation (RMSEA)	0.037	<0.06
PClose	0.758	>0.05
Normed Fit Index (NFI)	0.902	>0. 90
TLI	0.961	>0. 90

Descriptive Statistics and Correlation

Table 4.4 displays the findings of the correlation analysis and the descriptive statistics. According to these descriptive data, all respondents' mean ORGAGL score was 3.28 (Standard Deviation = 0.967). In terms of organization innovation (ORGINN) (Standard Deviation = 1.056) and perceived organizational performance (PORGPOR) (Standard Deviation = 0.934), the average scores are 3.18 and 3.54, respectively.

To assess the normality of the data, kurtosis and skewness measures were utilized, following the approach suggested by Kline (2005). Descriptive statistics can be used to assess both skewness and kurtosis. In structural equation modelling (SEM), skewness levels between -3 and +3 and kurtosis values between -10 and +10 are generally acceptable (Brown, 2006). SEM is known for its robustness, and modest deviations from these limits may not necessarily indicate significant violations of assumptions. The

skewness and kurtosis values are presented in Table 4.4. The skewness values ranged from -0.762 to 0.294, falling within the permissible range. Similarly, within acceptable limits, the kurtosis readings ranged from -1.066 to -0.553. Therefore, based on these results, it can be concluded that the data distribution is approximately normal.

Table 4. 4: Descriptive statistics and Correlation analysis

	Mean	Std. Deviation	Skewness	Kurtosis	ORGAGL	PORGP	ORGINN
ORGAGL	3.28	0.967	-0.588	-0.824	0.766		
PORGP	3.54	0.934	-0.655	-0.638	0.541***	0.739	
ORGINN	3.18	1.056	-0.275	-0.992	0.635***	0.459***	0.773

To examine the relationship between the variables, Pearson correlation coefficients were computed. Table 4.4 summarises the findings. The relationship between ORGAGL and perceived organizational performance (PORGP) is positive and statistically significant ($r = 0.541, p < 0.001$). According to the data, there is a positive and statistically significant association between organizational agility (ORGAGL) and organizational innovation (ORGINN) ($r = 0.635, p < 0.001$). Additionally, there is a positive and statistically significant relationship between perceived organizational performance (PORGP) and organizational innovation (ORGINN) ($r = 0.459, p < 0.001$).

There is moderate degree of correlation between the variables so there is no multicollinearity problem. The diagonal values represent the square root of AVE. Since the correlations between the variables are smaller than the square root of the AVE values, the instruments are discriminately valid according to (Fornell and Larcker's, 1981) criteria.

Multivariate analysis

Structural equation modelling was used to delve even deeper into the study model. Multiple regression analysis was used to examine the study's hypotheses further. Perceived organizational performance (PORGPER) and innovation (ORGINN) are outcome variables whereas organizational agility (ORGAGL) is an explanatory variable.

Organizational Agility (ORGAGL) direct effect on perceived organizational performance (PORGPER) and organizational innovation (ORGINN)

An examination of the direct impact of organizational agility (ORGAGL) on outcome variables like organizational performance (PORGPER) and organizational innovation (ORGINN) is conducted in the first structural equation modelling (SEM) model (figure 2). The standardized results are reported in Table 4.5. The results showed that organizational agility (ORGAGL) has a significant positive ($\beta = 0.543$, $p < 0.001$) influence on organizational innovation (ORGINN). Assume the H1a is true. This model has an R-squared value of 0.30. The results reveal that 30% of the variation in organizational innovation may be attributed to organizational agility (ORGAGL) (ORGINN).

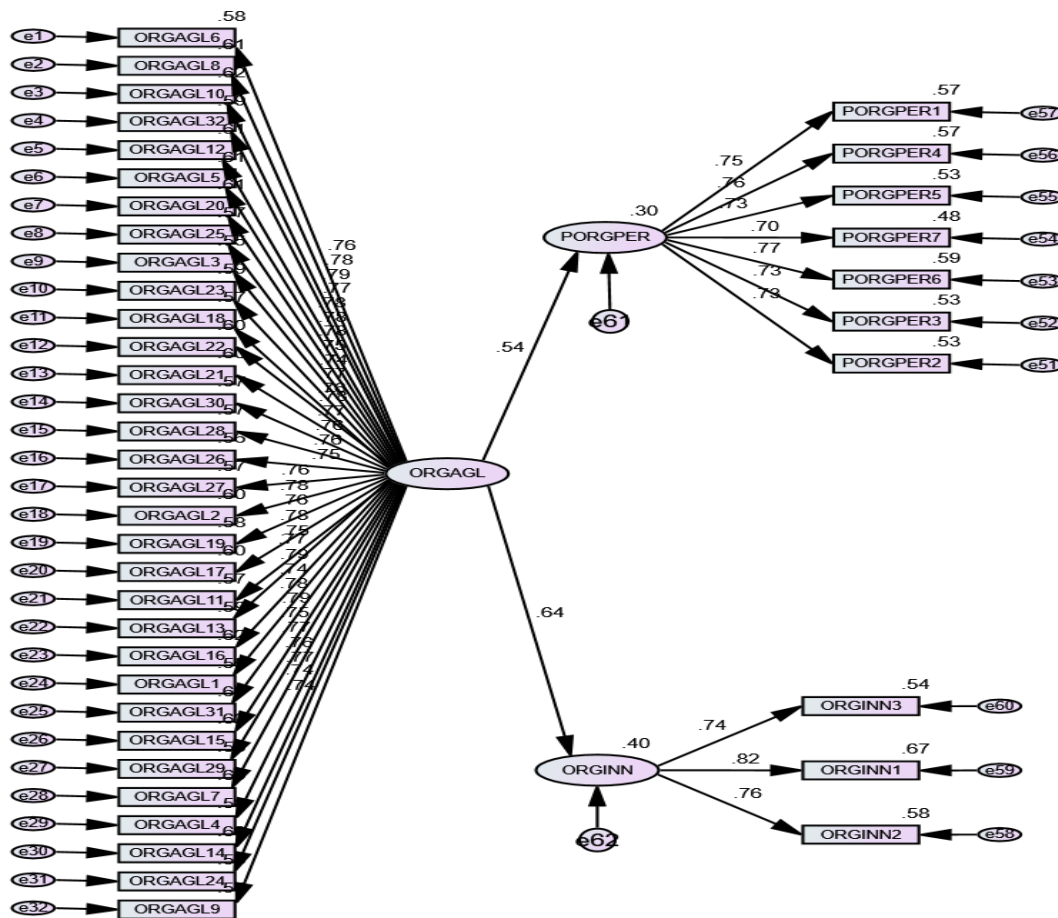


Figure 2: Direct Effect of ORGAGL on PORGPAPER and ORGINN

Furthermore, organizational agility (ORGAGL) also has a positive and significant ($\beta = 0.64, p < 0.001$) effect on perceived organizational performance (PORGPAPER). H1b is true. This relationship has an R-squared value of 0.40. R-squared values above 0.40 imply that 40% of the variance in organizational performance (PORGPAPER) may be attributed to the presence of an agile organization (ORGAGL).

Table 4. 5: Direct Effect of organizational agility (ORGAGL) on perceived organizational performance (PORGPAPER) and organizational innovation (ORGINN)

Outcome	Predictor	Estimate	S.E.	C.R.	P	R - Square	Hypothesis
ORGINN	<--- ORGAGL	.636	.061	10.494	***	0.30	H1a Accepted

Outcome	Predictor	Estimate	S.E.	C.R.	P	R - Square	Hypothesis
PORGP	<--- ORGAGL	.543	.054	9.336	***	0.40	H1b Accepted

Discussion and Results

The first hypothesis, "Organization agility has a positive and significant impact on organizational innovation", is accepted. There is ample evidence in the academic literature to support the hypothesis. Many empirical studies have examined this relationship and found a strong and consistent positive association between agility and innovation.

Organizational agility improves organizational innovation, which further enhances organizational performance. The results supported that organizations with higher levels of agility are more likely to be innovative, and this effect is stronger in industries characterized by high levels of uncertainty and turbulence. Organizations that adapt quickly to changing circumstances and are responsive to customer needs and market trends are more likely to be innovative and successful in today's rapidly changing business environment (Romero & Molina , 2011).

Darvishmotevali et al. (2020) Investigated connection between agility, innovation, and performance in Irish SMEs provides further evidence for the beneficial effect of organizational agility on innovation. Organizational agility was found to have a favorable impact on both innovation and performance, with the latter benefiting more when innovation was treated as a secondary outcome.

Organizational agility and innovation are two closely related concepts that can significantly impact the success of an organization. To be agile is to adapt rapidly and successfully to new circumstances, whether by shifting market conditions, client requirements, or other external reasons. Conversely, innovation introduces novel and superior processes within an industry (Harraf et al., 2015).

The association between organizational agility and creativity is intricate and multifaceted. On the one hand, an agile organization is more likely to be innovative because it is better equipped to respond to market and customer needs changes. An agile organization can quickly pivot to new opportunities and take advantage of emerging trends, leading to innovative new products and services (Holbeche, L. 2019).

On the other hand, innovation can also drive organizational agility. Keeping up with the competition and shifting market conditions may be achieved through constant innovation. This can help an organization be nimbler and more responsive, improving overall organizational agility. The further theoretical justification for the positive impact of organizational agility on organizational innovation can be explained by the firm's Resource-Based View (RBV) and Dynamic Capability Theory.

According to the RBV of the business, for a business to maintain a competitive edge over the long term, it must have access to resources that customers can't get anywhere else (Barney, 1991). In this context, organizational agility can be considered a valuable resource that is difficult for competitors to imitate. This is because agile businesses are better equipped to meet the evolving demands of their customers and maintain a lead over their rivals.

Dynamic Capability Theory, on the other hand, suggests that organizations need to build and reconfigure their capabilities to adapt to changing environments (Teece et al., 1997). In this context, organizational agility can be considered a dynamic capability that enables organizations to adapt to changing circumstances and innovate in response to new challenges and opportunities.

The favourable influence of organizational agility on organizational innovation has been supported theoretically, and empirical research has confirmed this. Moreover, Jeston (2014) explained the positive impact of agility on innovation by suggesting that agility enables organizations to be more proactive and innovative in their approach to problem-

solving, allowing them to refine existing offerings or create brand-new ones to satisfy consumer demands more closely. In summary, the Resource-Based View of the firm and Dynamic Capability Theory provide a theoretical justification for the positive impact of organizational agility on organizational innovation. Empirical studies have also supported this relationship, highlighting the importance of organizational agility as a valuable and dynamic resource that enables organizations to innovate and gain a competitive advantage.

Organizational agility and innovation are two critical factors that can significantly impact an organization's success. By fostering a culture of innovation and continually investing in organizational agility, organizations can stay ahead of the competition and adapt to changes in the market, driving growth and success in the long term. In conclusion, the empirical evidence suggests that organizational agility is positively and significantly related to organizational innovation. More agile organizations are better able to respond quickly to changing circumstances, adapt to new technologies, and meet customer needs, ultimately leading to greater innovation and success.

The result confirmed the approval of the second hypothesis of this study that “organizational agility has a positive and significant effect on perceived organizational performance”. The result is also consistent with previous research. Organizational agility has been recognized as a key factor for organizations to achieve high levels of performance and competitiveness (Saha, P., 2017).

According to the Dynamic Capability Theory, organizational agility is a dynamic skill that enables efficient and effective responses to shifting external pressures, which may help explain the observed correlation (Teece, Pisano, & Shuen, 1997). As per this hypothesis, Agile firms are more likely to thrive in uncertainty and provide novel solutions to problems. There is a favourable correlation between organizational agility and members' impressions of the company's success, and research backs this up. For

instance, (Pulakos et al., 2019) research showed that higher levels of organizational agility were associated with higher levels of perceived innovation and financial success. Similarly, research revealed that organizational agility had a beneficial influence on innovation performance in Irish SMEs (Govuzela, 2019). The study's findings demonstrated that knowledge management capabilities moderated the relationship between organizational agility and perceived organizational performance.

In conclusion, there is strong empirical evidence linking organizational agility to higher ratings of actual performance. This relationship is supported theoretically by the Dynamic Capability Theory, which highlights the significance of organizational agility as a dynamic capability that allows organizations to effectively and efficiently respond to changing environmental demands and innovate, which can lead to improved performance.

The practical implications of the finding that organizational agility significantly positively influences organizational innovation and perceived organizational performance are manifold. Firstly, organizations should invest in developing a culture of agility that allows for quick adaptation to changing market conditions, customer needs, and technological advancements. This could involve rethinking traditional hierarchical structures and implementing more flexible, cross-functional teams that can respond quickly to emerging opportunities and threats.

Secondly, organizations should prioritize the development of innovation capabilities by providing employees with the necessary resources, training, and support to generate and implement new ideas. This may involve creating dedicated innovation teams, providing training programs, and establishing innovation metrics to track progress, success and enhance perceived organizational performance.

Thirdly, organizations should foster a culture of experimentation and risk-taking, where failure is seen as an opportunity for learning and improvement rather than a sign of

incompetence. This can help to encourage employees to take calculated risks and experiment with new ideas, which can lead to breakthrough innovations and performance.

Furthermore, the practical implications of the finding also suggest that organizations should create an innovation-friendly environment that encourages creativity, open communication, and cross-functional collaboration. This can be achieved by promoting a culture of innovation and establishing mechanisms for idea generation and sharing, such as innovation workshops, idea management platforms, and cross-functional innovation teams.

Additionally, the findings highlight the importance of strategic alignment between organizational agility, innovation and perceived organizational performance. Organizations should ensure that their innovation strategy is aligned with their overall business strategy, and goals and that agile practices are integrated into their innovation processes to enable rapid prototyping and testing of new ideas.

Conclusion

The current research adds valuable insights to the literature on organizational behavior and human resource management by investigating relationship between organizational agility, organizational innovation and perceived organizational performance. The study highlights the significance of the organizational agility and its positive effects on organizational innovation and perceived organizational performance. Overall, this study contributes to the growing body of research on the role of digital transformation in HR processes and its impact on organizational outcomes.

Two hypotheses were formulated for this study. The targeted population of this study was middle and senior managers of the public and private service sectors (Higher education, IT companies and Banks). Sample data was collected from twin cities, i.e., Rawalpindi and Islamabad, Pakistan. The final sample of this study was 392 who filled

out and returned the questionnaires. Data were analyzed through descriptive and inferential statistics using SPSS and AMOS software. The hypothesized relationships were tested using structural equation modelling. All hypotheses were found statistically significant and accepted.

The results of this study demonstrate that organizational agility has a significant and positive impact on organizational innovation, and perceived organizational performance. The practical implications of this study suggest that organizations should focus on enhancing their agility, investing in fostering innovation and improve their overall performance. Furthermore, this study contributes to the existing literature by providing new insights into the interrelationships between organizational agility, organizational innovation and perceived organizational performance. Nonetheless, this research is subject to various limitations. Primarily, the investigation was confined to a particular setting, potentially limiting the findings' applicability to different contexts. Secondly, the reliance on self-reported data introduces the possibility of bias. Lastly, this study did not consider external factors, such as industry and market conditions, regarding their influence on the interconnections among the variables.

Therefore, future research should explore the relationships between organizational agility, organizational innovation and perceived organizational performance in different contexts and using different research methods. Future research could also address these limitations using longitudinal designs and objective performance measures. The study can be further extended to explore the complex relationships between HRM practices, innovation, and performance outcomes with mediating and moderating role of digital transformation, and learning climate respectively. This study provides valuable insights for practitioners and researchers interested in enhancing organizational innovation and perceived organizational performance.

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