

## Effects of Organizational Agility on Organizational Competitiveness with a Mediating Role of Organizational Learning Capabilities

Farhan Ahmed<sup>1</sup>, Samia Saher<sup>2</sup>, Muhammad Shakeel Aslam<sup>\*3</sup>

<sup>1</sup>Assistant Professor, Department of Management Sciences, COMSATS University Islamabad, Lahore Campus, Punjab, Pakistan.

<sup>2</sup>MS Scholar, Department of Management Sciences, COMSATS University Islamabad, Lahore Campus, Punjab, Pakistan.

<sup>3\*</sup>Assistant Professor, Department of Management Sciences, COMSATS University Islamabad, Lahore Campus, Punjab, Pakistan.

**Corresponding author:** [shakeelaslam@cuilahore.edu.pk](mailto:shakeelaslam@cuilahore.edu.pk)

**Keywords:** Organizational agility, Organizational Competitiveness, Organizational learning capabilities, Dynamic capabilities theory, Contingency Theory

**DOI No:**

<https://doi.org/10.56976/rjsi.v6i2.233>

*Uncertainties embedded in the business environment present opportunities as well as risks, hence it is indispensable for organizations to become agile and streamline with uncertainties. The proposed study investigates the nexus among organizational agility, organizational learning capabilities and organizational competitiveness. The study examines how organizational agility and learning capabilities contribute to organizational competitiveness. The underpinnings of the theory of dynamic capabilities by Teece and the contingency theory by Fiedler bolster the rationale for developing hypotheses in this study. The data is collected from 197 respondents working in the footwear industry of Pakistan. Data is analyzed through the partial least square structural equation model (PLS-SEM) using Warp PLS. The findings of this study highlight the strategic value of organizational agility and learning capabilities to enhance competitiveness in organizations.*

## 1. Introduction

The ever-changing landscape of the corporate world engenders myriad uncertainties (Sharifi & Zhang, 1999) and requires organizations to develop capabilities for sensing and adapting to these uncertainties. Recently, organizational agility has emerged as a potent response to counter the threats of internal and external changing business scenarios (Nafei, 2016). Organizational agility is defined as “the ability of an organization to effectively immerse itself in its ecosystem, understood as all the entities that interact in a technological, economic, societal and cultural environment” (Dupont, 2019, p.1).

Organizational agility resolves versatile problems or an organization, for example, it provides new solutions to problems emerging from vulnerable environmental situations (Alzoubi et al., 2011), agile practices also fix challenges associated with competitiveness and effectiveness (Yeganegi & Azar, 2012). Organizational agility is a multidimensional concept and is viewed as a set of practices conceptualized by Charbonnier-Voirin (2011), where its four dimensions are tilted as practices for mastering changes, human resource value-creating practices, cooperative practices and customer value-creating practices.

Although organizational ability is viewed as an elixir for troubles arising from environmental flux and uncertainties, its optimum effectiveness can only be achieved under the presence of organizational learning capabilities. According to Khan (1999), an adequate learning system proves to be a helping hand in highly competitive markets, thus highlighting the importance of OLC. Evidence also suggests that organizational learning facilitates adapting to external realities (Sanaei, 2014), and ensures the successful survival of an organization (Liao & Wu, 2009). According to Goh (2003), an organization’s learning capability is reflective of its ability in ensuring the set of practices and activities which result in productive learning. Chiva et al. (2007, p.226) proposed that OLC are founded on organization-wide acceptance of “experimentation, risk taking, interaction with the external environment, dialogue and participative decision making”. Moreover, organizational learning is the key to gaining competitiveness and maintaining it for the long haul (Armstrong & Foley, 2003; Aslam et al., 2022; Kosiom et al., 2024; Porth et al., 1999).

Extant research reveals that both organizational ability and OLC are key factors in developing organizational resilience and its survival capabilities. Consequently, there seems to be an intuitive link between these two constructs. The nexus between organizational agility and OLC is explored in this research article. It is already established that organizational agility promotes OLC (Mavengere & Tikkamäki, 2013) and contributes towards organizational growth by yielding knowledge, skills and abilities of human assets (Sherehiy, 2008). Furthermore, academicians and practitioners both are convinced that adaptability through organizational learning increases the effectiveness of the organization (El Badawy et al., 2014). That is why organizational agility comes up with those learning techniques that lead to change management (Galliers, 2006).

Likewise, changing business situations, rise in competition and complexity along with the uncertain demands and conditions of the market highlighted the importance of organizational

learning (Fraj et al., 2015; North & Kumta, 2018; Santos-Vijande et al., 2012; Talari & Khoshroo, 2023). The business environment is getting more complicated with every passing day and it has become necessary for today's organizations to be agile enough to understand and address the environmental complications (Zain et al., 2005). Agility facilitates organizations to view a multitude of possibilities and make necessary adjustments to align with the environment.

The dividends for understanding and adapting to the competitive environment are enormous, as Yeganegi and Azar (2012) rightly noted that an appropriate reaction to environmental uncertainties results in higher organizational performance. Additionally, Liao and Wu (2009) described that the growth and survival of an organization can be achieved by organizational learning. Organizational agility empowers organizations to accept and deal with the hurdles of changing business environment to nurture organizational competitiveness (Saha et al., 2016). Similarly, organizational agility and learning capability are the most cardinal factors to aid in organizational survival and to sustain competitiveness (Hamad & Yozgat, 2017).

In this study, the importance of organizational agility and OLC to attain organizational competitiveness is primarily elucidated. Facilitating factors of organizational competitiveness and OLC helped to get a clearer image of their connection with organizational agility (Çakmak, 2023). The findings of this study provide aid to organizations to cope with unpredictable problems constructively. Available research shows that both organizational agility and OLC have been examined thoroughly. Few important findings show that organizational learning supports growth and survival (Liao & Wu, 2009). Similarly, organizational agility is found to be positively related to organizational success (Nafei, 2016). A study in Czech Republic also revealed that organizational agility adds to organizational innovative capabilities as well as organizational competitiveness (Saha et al., 2020). More evidence comes from a study conducted in Jordan where organizational agility influences OLC (Hamad & Yozgat, 2017).

Although these earlier studies reveal important insights about the mechanisms of organizational agility and learning capabilities, no evidence is presented for the mediating role of OLC between organizational agility and organizational competitiveness. This study takes into account the mediating role of OLC in the relationship between organizational agility and organizational competitiveness in Pakistan. Since Pakistan ranks high in uncertainty avoidance, it is difficult to accept change and innovation. The findings of the earlier studies cannot be implemented in other countries as there are differences in the economies, cultures and business environments (Islam, 2004). Future research recommendations may include a study on the relation of business unit agility with organizational capabilities for enhancing OLC (Hamad & Yozgat, 2017).

More specifically, this study focuses on the research question 'how the impact of organizational agility towards organizational competitiveness is mediated by organizational learning capabilities?'

## **2. Literature Review**

### **2.1 Theoretical Foundation**

The theoretical support for current research is derived from the Theory of Dynamic Capabilities by (Teece et al., 1997). This theory supports the ability of an organization to re-design, re-arrange and re-integrate a continuously changing business environments (Teece et al., 1997). The theory further proposes that organizational dynamic capabilities are an amalgamation of three critical factors; (a) sensing: identifying the business opportunities, (b) seizing: re-constructing the procedures, processes and models to align with the changing situations, and (c) transforming: aligning with the changes (Teece, 2014).

The theory of dynamic capabilities aims for an organization to achieve its competitive advantage, specifically by focusing and re-designing its capabilities. Constant changes in the market cannot affect the position and performance of the organization when ultimately agility comes through continuous practices (Teece, 2018).

Another important theoretical component that comes into play is contingency theory (Fiedler, 1964). Contingency theory provides an understanding of the influence of technological, market and environmental factors on the function and design of the organization (Islam, 2004). Contingency theory confirms that organizations cannot work with a single structure to stay in the market and compete successfully. Instead of relying on a single strategy to handle all situations, organizations need a balance between changing situations and their capability mix.

Organizational structure, information system and organizational size should be aligned to perform effectively in every situation (Woods, 2009). Contingency theory informs that no organization can develop and sustain in one best way as different circumstances come with uncertain issues to resolve with unique solutions so to deal with such situations organizations should be proactive and learn to respond effectively (Okumus et al., 2010). It is considered as one of the most appropriate approaches to deal with dynamic environmental conditions because it offers flexible processes to create, develop and implement business strategies (Prajogo, 2016).

Organizational flexibility can help in improving and developing agile practices which leads to handling unpredictable situations and results in efficient outputs. Agile organizations are more competent to face uncertain working environments and unseen changes which means agile practices contribute to attaining new opportunities and customer's changing demands (Shafer et al., 2001). In previous studies, contingency theory mentioned organizational agility as a prime factor in achieving competitive advantage and an organizational coping strategy (Appelbaum et al., 2017).

## **2.2 Hypotheses Development**

### **2.2.1 Organizational Agility and Organizational Competitiveness**

Agility is the potential of an organization to sense the changes in the business environment and respond accordingly (Overby et al., 2006). The uncertainties of complex business

environments can be neutralized in creative ways using organizational agility (Sambamurthy et al., 2007). In view of Charbonnier-Voirin (2011, p.132), organizational agility is a set of practices such as “practices directed towards mastering change (PDTM), practices valuing human resources (PVHR), cooperative practices (CP) and practices valuing customer creation (PVCC)”. Each set of practices helps an organization to develop a posture corresponding to the external environment.

PDTM, allows organizations to have a flexible structure where it is feasible to quickly respond and adapt to critical changes (Goldman & Preiss, 1995). Mastering changes makes it possible for the organization to react to change and to take correct measures for un-predicted situations (Charbonnier-Voirin, 2011). PVHR, creates value for the employees by allowing them to participate in decision-making, giving a flexible work environment and enhancing their creativity (Charbonnier-Voirin, 2011).

Employee empowerment and knowledge enhancement make agile management successful (Lin et al., 2006). CP introduces internal and external cooperation like partnerships with suppliers enabling closer coordination (Goldman & Preiss, 1995). An agile firm follows the strategy of having a good opportunistic pool with the competition so that it can respond positively to the market demands (Yaghoubi & Dahmardeh, 2010). PVCC, creating value for customers comes with providing satisfaction and it happens when an organization has all the solutions feasible for the customers in any impromptu situation (Goldman & Preiss, 1995).

Organizational agility, in terms of all its dimensions, has the potential to neutralize the adverse impacts of complex business environments. Recently it has been found that organizational agility reduces the negative impact of technological and competitive uncertainties on organizational creativity (Darvishmotevali et al., 2020). Hence, organizational agility can be viewed as a strategic tool to enhance competitiveness. A competitive organization keeps up with the competition by developing a better supply chain (Ansoff, 1965), develops a better strategic posture (Porter, 1980). Agility develops acute sensing capabilities in organizations for decoding environmental complexities and gives enough flexibility so that the organization can alter its internal mechanism to align with the external world. As a result, it becomes an effective approach to embrace a competitive environment (Shahrabi, 2012), therefore by adhering to the practices of agility, an organization can achieve fit with the external environment.

Dove (2003) asserted that holding, sharing and managing knowledge effectively, represents agility of the organization, thus, knowledge upgradation, and skill enhancement improve the organization’s competitiveness. In other words, agility can enhance organizational-wide skills, knowledge and abilities, thus enabling it to beat competition and surpass competitors. In this study, organizational competitiveness has been conceptualized as a single-dimensional variable. Based on the theoretical discussion above, following hypotheses are proposed for the relationship between organizational agility and organizational competitiveness.

***H1: Organizational competitiveness is significantly affected by: PDTM (H1a), PVHR (H1b), CP (H1c), and PVCC (H1d)***

### **2.2.2 Organizational Agility and Organizational Learning Capabilities**

Agile organizations adeptly respond to new changes (Overby et al., 2006), effectively manage competitive pressures (Gunasekaran, 1998), efficiently acquire new knowledge and learning (Mavengere & Tikkamäki, 2013), and possess creative capabilities (Sambamurthy et al., 2007). Certain set of practices i.e., PDTM, PVHR, CP and PVCC, are at the heart of obtaining agility (Charbonnier-Voirin, 2011). All these practices have a profound impact on OLC, defined as “the capacity (or processes) within an organization to maintain or improve performance based on experience” (DiBella et al., 1996, p. 363). An organization’s ability to apply an appropriate set of management practices and develop an effective structure that is conducive to employee learning (Goh, 2003) reflects OLC in practice. OLC has also been termed as a key players in enhancing knowledge and learning throughout the organization (Baškarada & Koronios, 2018).

Organizational learning capability enables the personnel of an organization to learn and adopt new knowledge (Hashim & Review, 2013), thus, providing an organization with updated knowledge, better skills and re-constructing strategies to support learning practices and accomplish the organization’s goals ultimately (Sherehiy, 2008). Since PDTM, PVHR, CP and PVCC are anchored around important knowledge practices, therefore organizational agility has direct impact on an organization’s learning capability. The variety of resources held by an organization supports learning practices and directly encourages human resources to deliver competitive work (Ambrosini, 2003). In this perspective, PDTM allows the necessary flexibility of structure making swift adjustments, adapting to the environmental flux (Goldman & Preiss, 1995) and taking correct measures for unpredicted situations (Charbonnier-Voirin, 2011).

Similarly, the reflection of new skills and abilities in the performance of personnel depicts that learning occurs in the organization (Senge, 1990). In this regard, PVHR encourages participative decision-making, the flexibility of the work environment and using a novel approach (Charbonnier-Voirin, 2011). In other words, learning capabilities are inculcated among the organizational personnel by practicing of valuing human resources. Organizational agility creates a proactive sense and response abilities and organizational learning supports updated knowledge and skills therefore organizational learning and organizational agility contribute in amplifying performance and developing competitive advantage (Mavengere & Tikkamäki, 2013).

Furthermore, OLC refer to an organization's ability to acquire, assimilate, and apply knowledge from both internal and external sources (March, 1991). It is also documented that collaboration with partners is instrumental in becoming agile (Farsani et al., 2012). In this regard, CP facilitates internal and external cooperation like building partnerships with suppliers and exchanging knowledge among individuals at the workplace (Goldman & Preiss, 1995). Helfat and Peteraf (2009) suggest that organizational agility is closely linked to the ability to learn from experience and adjust strategies accordingly. They argued that learning capabilities enable organizations to develop the necessary skills, knowledge, and routines to respond effectively to changing circumstances. In this regard, PVCC provides satisfaction and it happens when an

organization has all the solutions feasible for the customers in any impromptu situation (Goldman & Preiss, 1995). After the review of relevant literature, we have abstracted the following hypothesis.

***H2: Organizational agility (PDTM, PVHR, CP and PVCC) has significant effect on organizational learning capability.***

### **2.2.3 Organizational Learning Capabilities and Organizational Competitiveness**

With competitive pressures continuously increasing, organizations are on the lookout for new strategies to remain competitive and financially viable. The answers to the woes for remaining competitive lie in acquiring new knowledge and becoming an active learner. Organizational learning capability is the capacity to learn and adopt any new knowledge and then convert it for any new process or procedure to gain effective output and competitive advantage (Hsu & Fang, 2009). OLC enables an organization to bring all those skills into use which can be a source of achieving a competitive advantage (Alikhani & Fazlollahtabar, 2014). Thus, OLC can be translated into a new and improved set of products and services adding to its competitiveness.

Since OLC lead an organization to promote a system of knowledge sharing and continuous learning, therefore the organization can leverage a competitive advantage over others moreover agile practices can collaborate with learning to achieve a competitive advantage (Farsani et al., 2012). By virtue of its learning capabilities, an organization can improve its sensing and forecasting capabilities thus it is in a better position to leverage business opportunities (Tece, 2007), hence gaining a competitive advantage. Learning capabilities are known to assist in diminishing the negative effects of the revelation of any change in the internal or external business environment thus enabling to re-adjust the resources to gain competitiveness (Slater & Narver, 1995). Based on our understanding of the extant literature for both OLC and organizational competitiveness, the following hypothesis is proposed

H3: OLC has a significant effect on organizational competitiveness.

### **2.2.4 Mediation of Organizational Learning Capabilities in the Relationship Between Organizational Agility and Organizational Competitiveness**

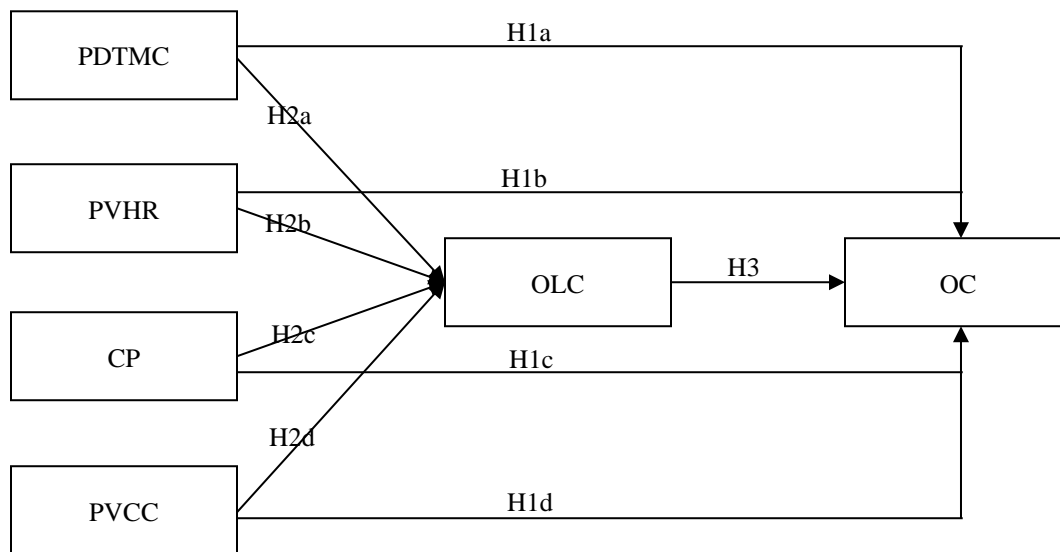
A mediating variable is a variable that establishes the relationship between dependent and independent variables. In other words, the influence of independent variables on dependent variables is explained by the presence of a mediating variable. Current research takes OLC as mediating variable, where it is influenced by organizational agility and in-turn it influences organizational competitiveness. As noted earlier, agile organizations have a set of practices that allows organizational members to learn new skills and become more knowledgeable, consequently, agility has an impact on learning capabilities.

Since agile organizations are mastering change (PDTM), value their personnel contribution (PVHR), have established cooperative networks (CP) and create value for their customers (PVCC), therefore a culture is established where experimentation is a routine activity, risk-taking is acceptable, and dialogue is encouraged for acquiring and interpretation of employee knowledge, consequently learning capabilities are developed.

On the other hand, an organization equipped with learning capabilities is not only more efficient and effective but also better at innovation and understanding market trends. As a result, these learning capabilities develop ways to outperform competitors, reduce uncertainties, create superior quality products and be innovative (Alikhani & Fazlollahtabar, 2014; Chen et al., 2009; Darvishmotevali et al., 2020), thus securing the competitiveness of the organization. As learning capabilities are related to both organizational agility and organizational competitiveness, therefore, the variable takes on a mediating role.

**H4: Through the mediation of OLC, organizational competitiveness is significantly affected by: PDTM (H4a), PVHR (H4b), CP (H4c), and PVCC (H4d).**

Figure No 1: Theoretical Framework



Notes: PDTMC = Practices directed towards mastering change, PVHR = Practices valuing human resources CP = Cooperative practices, PVCC = Practices valuing customer creation, OLC = Organizational Learning Capabilities, OC = Organizational Competitiveness.

### 3. Methodology

#### 3.1 Research Design, Population and Sample

The research is conducted in the footwear industry of Pakistan. PFMA (2024, para 1) reports that “Pakistan produces a wide range of footwear to cater for the needs of a variety of



customers – -men and women, boys and girls, pedestrians and joggers, business executives and bureaucrats, office goers and hawkers, squash and hockey players, cricketers and footballers, mountaineers and foresters, policemen and soldiers, specially designed footwear for the disabled, in fact, all those who need footwear according to their choice and special requirements”. The industry does not only cater to the needs of the 250 million Pakistani population but also exports footwear worth USD 26.787 million during the months of July-August 2021, an increase of 19.17% from July-August 2020, to the different developed and developing countries of five continents of the world (PFMA, 2024).

Thus, the footwear industry is one of the growing industries of Pakistan not only in terms of size and adapting the latest developments in modern footwear technology and technical knowledge to compete in the global market. Recently, the industry adapted state-of-the-art designs and patterns developed in European countries and innovated new and trendy designs by using their innovative skills (PFMA, 2024). In the recent past, various footwear manufacturers have added new service brands to their existing products.

Further, these companies have incorporated modern information and communication technologies in their operations and started using the latest marketing modes such as social media, email marketing, etc. to attract the potential market base. Footwear companies competing in the global market seem to be agile enough, having sufficient learning capabilities and competitiveness, making the sector an appropriate case to conduct this research.

In total, 15 footwear manufacturers exporting their footwear and working in the vicinity of Lahore, Gujranwala, Sialkot and Gujrat were approached for data collection. Respondents were carefully selected through judgmental and snowball sampling (Saunders et al., 2009) considering their understanding of the understudy variables via face-to-face survey. They were further briefed about the purpose, methodology, and potential usefulness of the research and their queries were addressed on the spot. An assurance was given to the respondents that their identity would strictly be kept anonymous and would not be disclosed to anyone or at any forum. Further, it was clearly expressed that the research is purely an academic activity, the data given by them will be kept confidential and will not be used for any commercial activity. In total, 300 questionnaires were administered, out of which we received 243 questionnaires with a total response rate of 81%.

However, we rigorously checked whether each questionnaire was filled up properly and completely and found 46 questionnaires incompletely and inappropriately responded. Thus, we were left with 197 questionnaires completed in all respects with an active response rate of 66% which were further used in the study for data analysis. As we used WarpPLS 7.0 for data analysis, we calculated the required sample size through the sample software package using the Gamma exponential method and inverse square root method power of estimation (Cohen, 1987, 1992; Kock, 2016).

Thus, according to the guidelines of Kock and Hadaya (2018), we considered the default values: minimum absolute significant path coefficient = 0.197, significance level = 0.05, and

required power level = 0.80, indicating that a minimum of 146 and 160 responses for the above-mentioned methods respectively are enough to run the PLS-SEM in WarpPLS. The sample size of 197 of this research suffices for this requirement.

### 3.2 Measures

Previously developed instruments with established validity and reliability are used for data collection purposes. Measures of organizational agility are adapted from the scale developed by of (Charbonnier-Voirin, 2011). Sample item statements from this scale are “our organization is fast in identifying consumer’s changing demands”. The construct of organizational learning capability was measured using eight items adapted from the study of Chiva et al. (2007). A sample item is “people here receive support and encouragement when presenting new ideas”. To measure organizational competitiveness using a six-item scale from the study of Vandebosch (1999) and made necessary customizations to make it fit with the current research. A sample item is “our organization moves faster than the competitors”. The data was collected on a five-point Likert-type scale 1 ranging from 1 being strongly disagree to 5 being strongly agree.

## 4. Results

For analysis of data, Partial Least Square Structural Equation Model (PLS-SEM) using WarpPLS7.0 is used in this research paper. This analysis technique is popular for its flexibility, robustness and rigor (Haenlein & Kaplan, 2004; Hair et al., 2017). PLS-SEM also offers another important advantage i.e., it can be used for relatively smaller sample sizes (Chin et al., 2003). Furthermore, using PLS-SEM is advantageous, as it can run all tests in a single model that are required in research such as reliability, validity, multicollinearity, and regression analyses. PLS-SEM is run in two stages. In the first stage, we run a measurement model to test the data's validity, reliability, multicollinearity, and common method bias (CMB). The second stage comprises the structural model applied to compute the relationships between the study’s variables and the hypotheses.

### 4.1 Measurement Model

In the measurement model, we first test the convergent and discriminant validity of the data. The confirmatory factor analysis presented in **Table 1** reflects the loading of each item into its corresponding latent variables (Hair et al., 2019). Considering the criteria of factor loading > 0.50, the item statements of all variables are found to be valid and thus retained in the model for further analysis (Hair et al., 2019). The average variance explained (AVE) for each variable is



**Table No 1: Convergent Validity, Reliability, Multi-collinearity**

	PDTMC	PVHR	CP	PVCC	OLC	OC	P
PDTMC1	0.723						<0.001
PDTMC2	0.831						<0.001
PDTMC3	0.822						<0.001
PVHR1		0.886					<0.001
PVHR2		0.845					<0.001
PVHR3		0.852					<0.001
CP1			0.847				<0.001
CP2			0.857				<0.001
CP3			0.865				<0.001
CP4			0.876				<0.001
PVCC1				0.891			<0.001
PVCC2				0.901			<0.001
PVCC3				0.898			<0.001
PVCC4				0.501			<0.001
OLC1					0.584		<0.001
OLC3					0.659		<0.001
OLC4					0.726		<0.001
OLC5					0.771		<0.001
OLC6					0.792		<0.001
OLC7					0.754		<0.001
OLC8					0.749		<0.001
OC1						0.754	<0.001
OC2						0.807	<0.001
OC3						0.817	<0.001
OC4						0.831	<0.001
OC5						0.846	<0.001
OC6						0.84	<0.001
AVE	0.63	0.741	0.742	0.657	0.522	0.666	
CR	0.836	0.896	0.92	0.879	0.883	0.923	
Adj. R <sup>2</sup>	-	-	-	-	0.33	0.21	
Full Col. VIF	1.176	1.289	1.449	1.197	1.571	1.223	

Notes: AVE = Average Variance Explained, CR = Composite Reliability, Full Col. VIF = Full Collinearity Variance Inflation Factor.

Also presented in **Table 1** which is higher than the cut-off value of 0.50 for each variable (Byrne, 2010). These measures indicate that the data has the required level of convergent validity. We further test the convergent validity using Fornell and Larcker’s criteria (Fornell & Larcker, 1981). As presented in **Table 2**, the square roots of AVE are higher than the paired correlation. We also ensured discriminant validity through HTMT ratios as shown in **Table 3**. In other words, the intra-construct correlation is higher than the inter-construct correlation in the case of each variable indicating that each variable stands distinct from other variables and has the required level



of discriminant validity. Further, the reliability of the study’s variables has been ensured through composite reliability, as shown in **Table 1** (Henseler et al., 2015). This research is cross-sectional and the data has been collected at a single point in time thus CMB’s test following Herman’s guidelines (Kock, 2020) has been applied.

Following this method, we loaded the item statements of all latent variables into a single construct and ran the model. The AVE of the single latent variable model is 0.236 – quite less than the threshold value i.e. 0.50 (Kock, 2020), indicating that there is no issue of CMB in the data. **Table 1** also reports R2 and adjusted R2 indicating the variance explained in the dependent variable by its independent variables. Lastly, the variance inflation factor (VIFs) for all variables are presented in the table ensuring that the data is free from the issue of multi-collinearity considering its cut-off value i.e. < 3.30 (Aiken et al., 1991). The structural model is presented in the next section.

**Table No 2: Discriminant Validity – Fornell and Larcker Method**

	PDTMC	PVHR	CP	PVCC	OLC	OC
PDTMC	(0.794)					
PVHR	-0.302	(0.861)				
CP	-0.146	0.359	(0.861)			
PVCC	0.116	0.072	0.08	(0.811)		
OLC	-0.057	0.289	0.501	0.324	(0.722)	
OC	-0.223	0.254	0.166	0.246	0.301	(0.816)

**Notes:** Square roots of AVE are shown on diagonal.

**Table No 3: Discriminant Validity (Hetero Trait and Mono Trait Ratios (HTMT))**

Variables	PDTMC	PVHR	CP	PVCC	OLC	OC
PDTMC						
PVHR	0.400***					
CP	0.187***	0.422***				
PVCC	0.167***	0.088***	0.091***			
OLC	0.150***	0.351***	0.587***	0.382***		
OC	0.283***	0.293***	0.186***	0.274***	0.343***	

**Notes:** Good if < 0.90, Best if < 0.85. P values: \*\*\* = <0.001

### 4.2 Structural Model

After testing the statistical assumptions of the data, we present the structural model in **Figure 1** which reports the coefficients of the relationship between different variables along with their significance level. **Table 4** also presents the results of each path analysis along with the decision

Figure No 2: Structural Model

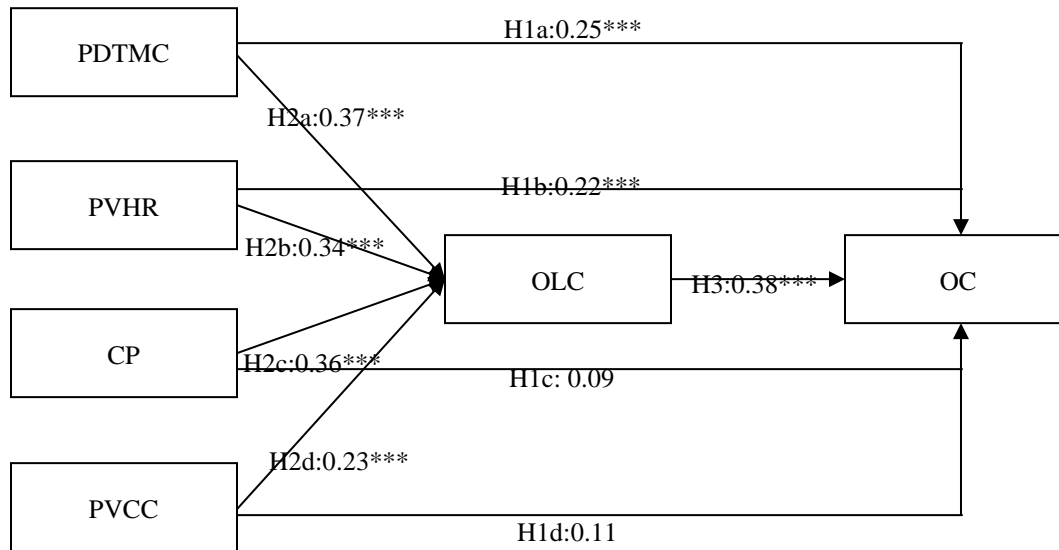


Table No 4: Decisions of Hypotheses

Hypothesis No.	Independent Variable	Mediating Variable	Dependent Variable	Path Co-efficient	Decision
1a	PDTMC	-	OC	0.25***	Supported
1b	PVHR	-	OC	0.22***	Supported
1c	CP	-	OC	0.09	Not
1d	PVCC	-	OC	0.11	Not
2a	PDTMC	-	OLC	0.37***	Supported
2b	PVHR	-	OLC	0.34***	Supported
2c	CP	-	OLC	0.36***	Supported
2d	PVCC	-	OLC	0.23***	Supported
3	OLC	-	OC	0.38***	Supported
4a	PDTMC	OLC	OC	0.14**	Supported
4b	PVHR	OLC	OC	0.12*	Supported
4c	CP	OLC	OC	0.14**	Supported
4d	PVCC	OLC	OC	0.09*	Supported

\*\*\*. Significant at 0.01 level

\*\*. Significant at 0.05 level

\*. Significant at 0.1 level

of the hypotheses. As shown in the figure, the first dimension of organizational agility PDTMC has significant and positive effects on OC [ $\beta=0.25, p<0.001$ ], providing significant support for hypothesis 1a. Hypothesis 1b conceived the positive effects of the second dimension of organizational agility PVHR on OC which is supported as well [ $\beta=0.22, p<0.001$ ]. The third dimension CP significantly positively affects OC [ $\beta=0.09, p>0.05$ ], indicating that hypothesis 1c

is not supported. Likewise, PVCC is found to have insignificant effects on OC [ $\beta=0.11$ ,  $p>0.05$ ], providing no support for hypothesis 1d.

Further, OLC is found to be positively and significantly affected by PDTMC [ $\beta=0.37$ ,  $p<0.001$ ], PVHR [ $\beta=0.34$ ,  $p<0.001$ ], CP [ $\beta=0.36$ ,  $p<0.001$ ] and PVCC [ $\beta=0.23$ ,  $p<0.001$ ] indicating that hypotheses 2a, 2b, 2c and 2d are supported. Further, OLC is reported to have significant and positive effects on organizational OC [ $\beta=0.38$ ,  $p<0.001$ ] thus, hypothesis 3 is supported. Apart from the direct effects, it is also hypothesized in this research that the four dimensions of organizational agility have significant effects on OC through the mediation mechanism of OLC. It is found that through the mediation of OLC, OC is significantly affected by PDTMC [ $\beta=0.14$ ,  $p<0.01$ ], PVHR [ $\beta=0.12$ ,  $p<0.05$ ], CP [ $\beta=0.14$ ,  $p<0.01$ ] and PVCC [ $\beta=0.09$ ,  $p<0.05$ ], providing support for hypotheses 4aa, 4b, 4c and 4d are supported. The next section discusses these findings in the light of existing literature and the context of this research.

## 5. Discussion and Conclusion

Being agile means that an organization can continuously keep track of technological, social, market, and other uncertainties to adopt an appropriate strategic posture. By virtue of organizational agility, managers can construe a better sense of marketplace uncertainties and shun negative ramifications. Like organisms, organizations also need sensing and adapting capabilities to survive in the competitive ecosystem of the corporate world.

Since agility enables organizations to quickly adapt to new circumstances, respond to customer demands, and seize opportunities (Gunasekaran, 1998; Overby et al., 2006), the learning becomes an integral part of agility practices. Organizational agility nurtures sensing and adapting capabilities and helps in securing competitive advantage. A firm's competitiveness emerges when an organization responds to the environmental pressures, risks and opportunities in a superior fashion to its competitors. Organizational practices i.e., PDTM, PVHR, CP and PVCC infuse agility in an organization and realize its potential of attaining competitive advantage.

Organizational agility as a function of PDTM, PVHR, CP, PVCC provides means and mechanisms to learning as well as gaining competitiveness. The component of PDTM allows an organization to scan the business environment to anticipate risks and gain market information in a timely fashion. Consequently, this function allows the organization to learn about new trends, develop new products and offer new solutions to customer needs. This function also paves the way for accepting a culture of change, hence organization does not become a closed system or stagnant relative to competition. The PDTM practices support creativity and continuous innovation in the organization hence increasing knowledge repository and enhancing learning capabilities.

Similarly, the practices of PVHR also support organizational learning and ensure organizational competitiveness. PVHR enables organizational personnel to rapidly transmit new learning to others hence skill bases are broadened in the organization. Moreover, PVHR aims to build new skills of employees in line with future firm needs and establishes an evaluation system

that connects individual employees' learning to organizational objectives. These practices therefore allow employees to learn from each other and embed new knowledge into organizational routines and systems, thus increasing organizational learning capabilities and performing activities in a superior way than competitors. Practices valuing human resources, such as employee empowerment and participation in decision-making, create an environment that fosters continuous learning and skill development (Charbonnier-Voirin, 2011). OLC are enhanced through the promotion of experimentation, risk-taking, interaction with the external environment, dialogue, and participative decision-making (Chiva et al., 2007).

Cooperative practices as a set of agility functions also support organizational learning capabilities and increase organizational competitiveness. CP establishes a mesh of relationships among employees by facilitating internal cooperation, linking people with diverse skills and profiles and making teamwork a norm. This network of cooperation facilitates the flow of ideas and increases the knowledge repository in the organization. CP also develops partnerships with external organizations to leverage opportunities as they emerge, consequently, the organization adds to its learning capabilities and develops products and services superior to its competitors.

The agility practices of PVCC also make unique contributions toward organizational learning capabilities and organizational competitiveness. This function enables the organization to track customers' needs and preferences precisely and to establish long-term cooperation with customers. This function also focuses on creating superior value for customers and offering innovative products. The execution of this function brings valuable customer-related knowledge to the organization. This knowledge improves learning capabilities and enables the firm to beat the competition.

### **5.1 Theoretical Contributions**

This paper adds to the robustness of the constructs of organizational agility, OLC and organizational competitiveness. The finding proves that the proposed framework establishing a link between organizational agility and organizational competitiveness is consistent with the predictions of the theories i.e., the theory of dynamic capabilities and contingency theory. The research framework adds to the existing knowledge by demonstrating that organizational agility as a set of practices i.e., PDTM, PVHR, CP and PVCC increases competitiveness enabling a firm to survive in the complex business environment.

Furthermore, the finding of this paper also establishes the relevance of theories i.e., organizational agility and OLC with the organizational practices. For example, the data collected from respondents and tested for the proposed hypothesis shows that theoretical predictions have empirical support rendered by this paper's findings. The tenets of dynamic capabilities and contingency theory both have been explained for their impact on competitiveness as well as impact on agility and learning capabilities.

## 5.2 Practical Implications

The findings of this study also hold practical implications for business managers. The findings can be applied to the real-world problems of a complex business environment. Business managers on a routine basis deal with the challenges of dynamic and complex business environments. By understanding the findings of this study, a business manager can devise strategies to minimize the negative impact of dynamic and uncertain business environments. For instance, business managers can implement organizational agility practices to counter the threats of complex business environments. This paper explains in detail how agility practices including mastery, recognizing the value of human resources, and developing cooperative networks and mechanisms to create customer value will generate a positive impact on organizational learning as well as competitiveness.

Business managers can take an inventory of practices at their respective organizations and compare those with the scope of practices outlined in this research paper. In case they fall short of the agility practices at their respective organizations, they need to inculcate new practices to their personnel so as to leverage organization wide competitiveness. Similarly, business managers can also compare learning practices at their respective organizations with the set of learning practices mentioned in this paper. By doing so they can overcome any shortcomings of learning practices and increase their repository of learning capabilities.

An important implication of this research paper is related to policy-making in organizations. Since leadership ensures the availability of necessary resources and support for fostering agility and learning practices within the organization, therefore, they can take insights from this research and make policies facilitating the fostering of organizational agility and learning capabilities. The policy side can also benefit from this research by isolating important learning capabilities and developing policies for acquiring, disseminating of knowledge across the organization.

## 5.3 Limitations and Future Direction of the Study

One of the limitations of the current study is its limited focus on specific industries and organizational contexts, consequently, the generalizability is limited. Future research can explore a broader range of industries and include a larger sample size to enhance the external validity of the findings. Additionally, longitudinal studies could provide a deeper understanding of the long-term effects of organizational agility and learning capabilities on competitiveness. The following limitations appeared prior and during the research in this domain. Due to time and resource limitations inherent in a master's thesis, the study may be constrained in terms of data collection and analysis. A longer timeframe or larger-scale study might provide a more comprehensive assessment of the effects of organizational agility on organizational competitiveness and the mediating role of OLC.



All variables of this study are related to organizational practices, variables with employee-level relevance weren't incorporated in this study. Future research can expand by incorporating employee-level variables. For example, employee empowerment, team trustworthiness, job-related cognition, etc. These are a few of the important employee-related variables which can be incorporated into future research models.

## References

- Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. Sage Publications.
- Alikhani, M., & Fazlollahtabar, H. (2014). A mathematical model for optimizing organizational learning capability. *Advances in Operations Research*, 1, 490210.
- Alzoubi, A. E. H., Al-otoum, F. J., Albatayneh, A. K. F., & Sciences, R. i. A. (2011). Factors associated affecting organization agility on product development. *International Journal of Research and Reviews in Applied Sciences*, 9(3), 503-515.
- Ambrosini, V. (2003). *Tacit and ambiguous resources as sources of competitive advantage*. Springer.
- Ansoff, H. I. (1965). *The concept of strategy: An analytic approach to business policy for growth and expansion*. McGraw-Hill.
- Appelbaum, S. H., Calla, R., Desautels, D., & Hasan, L. (2017). The challenges of organizational agility (part 1). *Industrial and Commercial Training*, 49(1), 6-14.
- Armstrong, A., & Foley, P. (2003). Foundations for a learning organization: organization learning mechanisms. *The learning organization*, 10(2), 74-82.
- Aslam, M. S., Ali, I., Qammar, A., Kiwan, L., & Dhir, A. (2022). How knowledge acquisition creates a competitive edge? A qualitative inquiry from international consultancy alliance. *International Marketing Review*, 39(3), 653-681.
- Başkarada, S., & Koronios, A. (2018). The 5S organizational agility framework: a dynamic capabilities perspective. *International Journal of Organizational Analysis*, 26(2), 331-342.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: basic concepts, applications, and programming*. Routledge.
- Çakmak, Z. (2023). Adapting to Environmental Change: The Importance of Organizational Agility in the Business Landscape. *Florya Chronicles of Political Economy*, 9(1), 42-53.
- Charbonnier-Voirin, A. (2011). The development and partial testing of the psychometric properties of a measurement scale of organizational agility. *M@ n@ gement*, 14(2), 119-156.
- Chen, Y.-S., Lin, M.-J. J., & Chang, C.-H. (2009). The positive effects of relationship learning and absorptive capacity on innovation performance and competitive advantage in industrial markets. *Industrial marketing management*, 38(2), 152-158.



- Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information systems research*, 14(2), 189-217.
- Chiva, R., Alegre, J., & Lapiedra, R. (2007). Measuring organisational learning capability among the workforce. *International Journal of Manpower*, 28(3/4), 224-242.
- Cohen, J. (1987). *Statistical power analysis for the behavioral sciences* (revised edition). Hillsdale, NJ: Laurence Erlbaum Associates, Publishers.
- Cohen, J. (1992). Statistical power analysis. *Current directions in psychological science*, 1(3), 98-101.
- Darvishmotevali, M., Altinay, L., & Köseoglu, M. A. (2020). The link between environmental uncertainty, organizational agility, and organizational creativity in the hotel industry. *International Journal of Hospitality Management*, 87, 102499.
- DiBella, A. J., Nevis, E. C., & Gould, J. M. (1996). Understanding organizational learning capability. *Journal of management studies*, 33(3), 361-379.
- Dove, R. (2003). Knowledge management and agility: Relationships and roles. In C. W. Holsapple (Ed.), *Handbook on knowledge management: Knowledge directions* (pp. 309-330). Springer.
- Dupont, L. (2019). Agile innovation: Creating value in uncertain environments. *Journal of Innovation Economics Management*, 28(1), 1-5.
- El Badawy, T. A., Srivastava, S., & Sadek, M. B. (2014). Assessing the relationship between emotional intelligence, job satisfaction and organizational learning capability in private higher educational institutions in Egypt and India: A comparative study. *International Journal of Business Administration*, 5(6), 38-47.
- Farsani, J. J., Bidmeshgipour, M., Habibi, M., & Rashidi, M. M. (2012). Intellectual capital and organizational learning capability in Iranian active companies of petrochemical industry. *Procedia-Social Behavioral Sciences*, 62(1), 1297-1302.
- Fiedler, F. E. (1964). A contingency model of leadership effectiveness. *Advances in experimental social psychology*, 1(1), 149-190.
- Fornell, C., & Larcker, D. F. (1981). *Structural equation models with unobservable variables and measurement error: Algebra and statistics*. Sage Publications.
- Fraj, E., Matute, J., & Melero, I. (2015). Environmental strategies and organizational competitiveness in the hotel industry: The role of learning and innovation as determinants of environmental success. *Tourism management*, 46(1), 30-42.
- Galliers, R. D. (2006). Strategizing for Agility: Confronting Information Systems Inflexibility in Dynamic Environments. In R. D. Galliers (Ed.), *Agile information systems* (pp. 1-15). Routledge.
- Goh, S. C. (2003). Improving organizational learning capability: lessons from two case studies. *The learning organization*, 10(4), 216-227.
- Goldman, S., & Preiss, K. (1995). *Agile competitors and virtual organizations: Strategies for enriching the customer*. Van Nostrand Reinhold.
- Gunasekaran, A. (1998). Agile manufacturing: enablers and an implementation framework. *International journal of production research*, 36(5), 1223-1247.



- Haenlein, M., & Kaplan, A. M. (2004). A beginner's guide to partial least squares analysis. *Understanding statistics*, 3(4), 283-297.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 2nd Ed. Sage Publications.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*, 31(1), 2-24.
- Hamad, Z., & Yozgat, Y. (2017). Does organizational agility affect organizational learning capability? Evidence from commercial banking. *Management Science Letters*, 7(8), 407-422.
- Hashim, A., & Review, B. (2013). A conceptual framework for antecedents and consequence of organizational learning capability. *Information Management and Business Review*, 5(12), 577-583.
- Helfat, C. E., & Peteraf, M. A. (2009). Understanding dynamic capabilities: progress along a developmental path. In (Vol. 7, pp. 91-102): Sage publications Sage UK: London, England.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
- Hsu, Y.-H., & Fang, W. (2009). Intellectual capital and new product development performance: The mediating role of organizational learning capability. *Technological Forecasting and Social Change*, 76(5), 664-677.
- Islam, N. J. I. r. o. a. s. (2004). Sifarish, sycophants, power and collectivism: Administrative culture in Pakistan. *International Review of Administrative Sciences*, 70(2), 311-330.
- Khan, S. A. (1999). Building organizational learning capability. *Indian Journal of Industrial relations*, 35(1), 74-84.
- Kock, N. (2016). Non-normality propagation among latent variables and indicators in PLS-SEM simulations. *Journal of Modern Applied Statistical Methods*, 15(1), 299-315.
- Kock, N. (2020). Harman's single factor test in PLS-SEM: Checking for common method bias. *Data Analysis Perspectives Journal*, 2(2), 1-6.
- Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information systems journal*, 28(1), 227-261.
- Kosiom, T., Uzel, J., Oloo, D., & Bana, W. (2024). Strategic Organizational Learning Capability and Sustainable Competitive Advantage of Seed Companies in Kenya. *Journal of Applied Humanities and Social Sciences-ISSN 2791-1594*, 3(1), 1-20.
- Liao, S.-h., & Wu, C.-c. (2009). The relationship among knowledge management, organizational learning, and organizational performance. *International journal of business and management*, 4(4), 64-76.
- Lin, C.-T., Chiu, H., & Tseng, Y.-H. (2006). Agility evaluation using fuzzy logic. *International journal of production economics*, 101(2), 353-368.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87.



- Mavengere, N. B., & Tikkamäki, K. (2013). Organizational learning, agility and social technologies for enhanced organizational performance. World Conference on Computers in Education, Torun, Poland.
- Nafei, W. A. (2016). Organizational agility: The key to organizational success. *International Journal of Business Management*, 11(5), 296-309.
- North, K., & Kumta, G. (2018). *Knowledge management: Value creation through organizational learning*. Springer.
- Okumus, F., Altinay, L., & Chathoth, P. (2010). *Strategic management in the international hospitality and tourism industry*. Routledge.
- Overby, E., Bharadwaj, A., & Sambamurthy, V. (2006). Enterprise agility and the enabling role of information technology. *European Journal of Information Systems*, 15(1), 120-131.
- PFMA. (2024). *Pakistan Footwear Industry*. Retrieved May 25 from <https://pakfootwear.org/pakistan-footwear-industry/#:~:text=Pakistan%20produces%20a%20wide%20range,and%20foresters%2C%20police%20and%20soldiers%2C>
- Porter, M. E. (1980). Industry structure and competitive strategy: Keys to profitability. *Financial analysts journal*, 36(4), 30-41.
- Porth, S. J., McCall, J., & Bausch, T. A. (1999). Spiritual themes of the “learning organization”. *Journal of organizational change management*, 12(3), 211-220.
- Prajogo, D. I. (2016). The strategic fit between innovation strategies and business environment in delivering business performance. *International journal of production economics*, 171(1), 241-249.
- Saha, N., Chatterjee, B., Gregar, A., & Saha, P. (2016). The impact of SHRM on sustainable organizational learning and performance development. *International Journal of Organizational Leadership*, 5(1), 63-75.
- Saha, N., Saha, T., Gregar, A., & Saha, P. (2020). Organizational Agility and Organizational Learning: Do They Accelerate Organizational Innovation and Competency? 15th European Conference on Innovation and Entrepreneurship, Rome, Italy.
- Sambamurthy, V., Wei, K.-K., Lim, K., & Lee, D. (2007). IT-enabled organizational agility and firms' sustainable competitive advantage. ICIS 2007 proceedings, 91,
- Sanaei, S. (2014). The relationship between organizational learning and readiness for change (willingness to change) among high school teachers. *Kuwait Chapter of the Arabian Journal of Business Management Review*, 3(12), 226-237.
- Santos-Vijande, M. L., López-Sánchez, J. Á., & Trespalacios, J. A. (2012). How organizational learning affects a firm's flexibility, competitive strategy, and performance. *Journal of business research*, 65(8), 1079-1089.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students*. Prentice Hall.
- Senge, P. M. (1990). *The art and practice of the learning organization*. Doubleday.

- Shafer, R. A., Dyer, L., Kilty, J., Amos, J., & Ericksen, J. (2001). Crafting a human resource strategy to foster organizational agility: A case study. *Human Resource Management, 40*(3), 197-211.
- Shahrabi, B. (2012). The role of organizational learning and agility in change management in state enterprises: A customer-oriented approach. *International Research Journal of Applied Basic Sciences, 3*(12), 2540-2547.
- Sharifi, H., & Zhang, Z. (1999). A methodology for achieving agility in manufacturing organisations: An introduction. *International journal of production economics, 62*(1-2), 7-22.
- Sherehiy, B. (2008). *Relationships between agility strategy, work organization and workforce agility*. University of Louisville.
- Slater, S. F., & Narver, J. C. (1995). Market orientation and the learning organization. *Journal of marketing, 59*(3), 63-74.
- Talari, M., & Khoshroo, M. (2023). Impact of industry competitive intensity on brand performance: mediating role of market orientation and organizational learning. *Journal of Research in Marketing and Entrepreneurship, 24*(2), 270-291.
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal, 28*(13), 1319-1350.
- Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of international business studies, 45*(1), 8-37.
- Teece, D. J. (2018). Dynamic capabilities as (workable) management systems theory. *Journal of Management and Organization, 24*(3), 359-368.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal, 18*(7), 509-533.
- Vandenbosch, B. (1999). An empirical analysis of the association between the use of executive support systems and perceived organizational competitiveness. *Accounting, Organizations and Society, 24*(1), 77-92.
- Woods, M. (2009). A contingency theory perspective on the risk management control system within Birmingham City Council. *Management Accounting Research, 20*(1), 69-81.
- Yaghoubi, N., & Dahmardeh, M. R. (2010). Analytical approach to effective factors on organizational agility. *Journal of basic applied scientific research, 1*(1), 76-87.
- Yeganegi, K., & Azar, M. (2012). The effect of IT on organizational agility. 3rd International Conference on Industrial Engineering and Operations Management (IEOM 2012), Istanbul, Turkey.
- Zain, M., Rose, R. C., Abdullah, I., & Masrom, M. (2005). The relationship between information technology acceptance and organizational agility in Malaysia. *Information & management, 42*(6), 829-839.