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# CORPORATE INNOVATION AND PERFORMANCE NEXUS: THE MEDIATING ROLE OF ORGANIZATIONAL CULTURE

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## ABSTRACT

Innovation has become the key to survival for organizations due to the consistently shifting consumer and market demand. Previous studies have discussed the role of marketing orientation, organization learning, and intellectual capital in the firm's performance, but the mediating role of innovative culture as a performance indicator has not been addressed yet. This study aims to test the relationship between marketing orientation, organizational learning, intellectual capital, and innovation culture as predictors of organizational performance. The study follows a quantitative design, and a survey was performed with 150 respondents; the study sample is derived from the corporate sector in Lahore, Pakistan, and the analysis is performed through SEM. The results indicate a strong relationship between organizational learning, marketing orientation, and organizational performance. Also, the mediation of innovative culture was validated, and the results showed the presence of significant and positive mediation. Thus, the study has verified the role of organizational learning, innovation, and market orientation as predictors of performance. The findings have practical and theoretical implications. Also, the policymakers and managers can use the study's findings to create organization-level and country-level policies for increasing the productivity of performance of the business sector.

## INTRODUCTION

Organizations require innovation to survive in this dynamic world (Yun et al., 2020; Zou et al., 2017). Innovation appears to be the most effective way to improve a company's performance and maximize profits (Youtie et al., 2018). Today, innovation is the most concerning phenomenon (Brem & Nylund, 2021; Gottfredson & Aspinall, 2005). Edison et al. (2013) rightly describe innovation as a multifaceted phenomenon that can be described as a concept, method, product, practice, or service, all of which have market potential and commercial applications. It is needless to mention the relevance of innovation for the organization. However, the overarching question is how an organization can have sustainable innovation? The answer is quite simple; an organization can have it by nurturing an innovation culture.

 

The focus on organizational performance is imperative as it is the essential proponent of success and survival for business entities (Kim & Stepchenkova, 2018). Various factors influence the performance of firms (Shin et al., 2019), and innovation has been discussed several times in the literature (Lööf & Heshmati, 2006; Rosenbusch et al., 2011; Tajeddini et al., 2020), but scholars associate innovation with high-cost consuming expenses such as spending on research and development (Prencipe et al., 2008). Therefore, it is difficult for an ordinary business to be innovative. In this study, it is being proposed that a company can be innovative through its culture that requires minimal investment. Also, other factors that influence the innovation culture and the organizational performance of firms needs to be explored. Thus, the present study focuses on the effects of marketing orientation, organizational learning, intellectual capital, and innovative culture as proponents of performance.

Innovation culture has been discussed several times in the previous literature, but the overarching point is what causes innovation culture. Few scholars have mentioned one or hardly two drivers of innovation culture (Dobni, 2008; Leavy, 2005; Sadegh Sharifirad & Ataei, 2012), but a complete model is absent regarding innovation culture. This study fills that gap and creates a very sound relationship of some significant variables that create an innovation culture. This study is highly significant for all developing countries. In this study, we try to create a relationship of variables that helps form a culture of innovation which ultimately lets the entrepreneurs boost their organizational performance. This research is helpful because rather than suggesting heavy innovation costs, it suggests entrepreneurs change their culture that requires minimum investment. Intellectual Capital, Market Orientation, and Organization Learning are the independent variables that create a culture of innovation and enhance firm performance.

## LITERATURE REVIEW

### Innovation

The story of innovation is frequently traced back to the economist Joseph Schumpeter (1883–1950) and is thus steeped in socioeconomic theory. Schumpeter is credited with popularizing innovation as a powerful weapon for economic growth and development. He saw economic progress as a dynamic process driven by innovative ideas that build new business models through creative destruction processes. Moreover, he said, innovation is the only phenomenon that is evident in the history of mankind. Further, he considered innovation as the only weapon for entrepreneurs to survive in the capitalist `economy.

In the same way, different writers give their own opinion on the topic. Innovation is an improved or a new idea, approach, or method. In addition, it can be considered as the reunification of old ideas and concepts or anything that is now regarded as new or improved. Damanpour (1991) thinks innovation refers to change. Published research suggests that innovation is a decisive driver of long-run competitive edge (Shoham & Fiegenbaum, 2002). Moreover, it also found out that innovation plays a vital role in explaining abnormal stock returns in the presence of market vide investor sentiment (Majid et al., 2021).

### Organization Culture

Culture simply refers to shared values or reflects the organization's beliefs and conventions. It plays a crucial role in determining which areas the organization is willing

to learn from and is more likely to reject changing its viewpoints and policies. Furthermore, it is frequently defined as a set of presumptions, expectations, and rules for existing in the world that is taken for granted. There are many ways in which the term culture has been discussed. When used as national culture, it differentiates nations from nations, but when used in the context of organizations, it differentiates organizations from organizations. As far as organizational culture is concerned. It is thought to be the social glue that holds organization members and expresses their social ideals, beliefs, and values.

Moreover, organization culture can also be described as the set of rituals, attitudes, interpretations, and assumptions that specify characteristics of organizations. An organization is like a roof under which people dream. Organizational culture is a widely used metaphor for describing how businesses differ, how their employees interact, and how businesses and their members interact (Adler & Jelinek, 1986). While learning to solve difficulties involving external variations and internal integration has shown to be valid enough to be taught to new members as the correct approach to perceive, think about, and feel about such challenges.

**Innovation and Organization Culture**

During the past few decades, researchers have paid much attention to innovation. In the current dynamic economic environment, innovation is considered an essential strategic driver that protects knowledge, helps gain new opportunities, and ultimately achieves a competitive advantage. Moreover, the increasing global competition is making innovation more centric to competitiveness. Innovation strategy prompts organizations to adopt new technologies, changing markets and modes of competition by making new products, processes, and structures that respond to change (D'Aveni & Gunther, 1994).

On the other hand, culture is typically defined as shared values or how people think. As far as organizational culture is concerned, it is assumed as the strong bond that holds organization members under one roof and expresses their social feelings and values. Moreover, organizational culture can also be defined as a bunch of traits that define your company. Wilkins and Ouchi (1983) rightly describe that an organization culture guides its employees to follow a pattern that leads towards innovation.

Furthermore, it gives employees a sense of goal alignment and aids them in determining what is in the company's best interests. Similarly, Janićijević (2012) adds that the propensity to innovate and how it innovates is influenced by organizational culture. This study proposes that innovation culture is nurtured through some drivers that will be discussed thoroughly.

**Organization Learning**

The phenomenon of Organizational Learning (OL) has been discussed various times in the literature. In the spectrum of strategic management, organization learning is regarded as one of the eminent sources of competitive edge. Theorists argue that learning faster than competitors in dynamic situations is the only way to gain a competitive edge that will last. Furthermore, organization learning creates a relationship between the external environment and an organization. It enables a company to be proactive rather than reactive. Learning knowledge entails expanding one's response capability by better understanding the environment (Dodgson, 1993).

As mentioned earlier, our work has grounded in the Schumpeterian economy. The theory elaborates that innovation is the only way to survive in this turbulent economy. Theorists argue that to innovate, we need a culture of learning. Many renowned theorists find that learning organizations are more flexible and quick to respond to change than their competitors (Dixon & Day, 2007). Many past studies create a positive relationship between organizational learning and innovation culture. According to them, organizational learning is a generation of new knowledge and ideas (Dishman & Pearson, 2003). However, one thing that can be extracted from the literature is the organisation's relationship with technology. As writers like Calantone et al. (2002) utter, organizations committed to learning are more likely to have high-quality technology that would help them build innovation capability.

On the other hand, the study proposes an organisation's internal culture that helps nurture innovation culture because it helps the organizations foster innovation behaviour. In this regard, innovation culture fosters the development of new ideas and stimulates the adoption of new goods, processes, and information by internal capabilities (Hurley & Hult, 1998). There is a practice where everyone in the firm learns (Halim et al., 2015). Learning is considered a process that leads to outcomes. According to Lave and Wagner (1990), knowledge is nothing without any outcome. Furthermore, they see it as a model that separates knowledge from practice and develops a social construction perspective.

Organizational learning is not a novel concept, nor is it limited to building new goods or processes; it must be implemented strategically. Individuals in an organization must have a standard knowledge structure to avoid uncoordinated behaviour, which will result in each doing activities that will assist the organization in achieving its strategic goal (Mezias et al., 2001).

**Intellectual Capital**

Galbraith (1969) was the first to create the term Intellectual Capital (IC), which he defined as a set of competencies that can affect an organization's future actions. Stewart (2010) gives us a comprehensive definition of "IC" as the sum of "everything people know that can give a competitive edge to a firm". Scholars agreed that, during the industrial revolution, physical assets such as land, labour, and capital were the decisive factors. In contrast, today, soft assets are more relevant than physical assets. Intellectual capital is one of the soft assets that a firm can have. Stewart (1991) refined and updated the concept of IC substantially. Physical assets were the deciding factor in determining a firm's value during the industrial period, but attitudes have shifted dramatically since then. Today the focus is on the implicit assets or knowledge (Edvinsson & Malone, 1997) termed it as soft assets –intellectual capital- that matters more than physical assets. In the beginning, the concept was one-dimensional, but it evolved with time. The three dimensions of Intellectual Capital discussed in this study are as follow:

- ***Human Capital***
  It is needless to mention that humans are the building blocks of every organization and its organisational culture. By affecting the ability to acquire new knowledge, HC can be viewed as a primary instrument for an organization to learn (Kang & Snell, 2009). Therefore, we propose that human capital plays a critical role in building

an innovation culture. Moreover, human capital individual and groups, their knowledge plays a decisive role. Previous literature has highlighted the importance of human capital, but there is an absence of its relevance as an Intellectual capital.

Further, the study creates a unique relationship between IC and innovation culture. Human capital includes the competencies, knowledge, and agility that a person possesses in an organization. Brooking (1997) suggests six aspects of human capital: educational degrees, job-related licenses or qualifications, job-related knowledge, job potential, personality traits, and job-related abilities. Some scholars consider it as the acquisition of specific knowledge and skills, and some are agreed on the narrative that it is progressive and exploratory learning. But in this study, we support the narrative of Bontis et al. (2000), who says human capital is an amalgam of -Employees' tacit knowledge, skills, experience, and attitude.

- ***Structural Capital***
  The previous paragraph draws our attention towards human capital. But some other factors constitute IC. It refers to information that has been codified, stored, and accessed through databases, written procedures, and information systems. In other words, all the expertise other than employees that stay with the company is considered as structural capital. Experts say that coding expertise, techniques, processes, goodwill, patents, and culture are part of organizational competency. Routines, procedures, processes, systems, culture, databases, structures, and intellectual property are all included. According to the researchers like De Pablos (2004) and Aramburu and Sáenz (2011), SC is an intangible asset generated by the intellectual contributions of the firm's personnel. According to several authors, HC produces SC, and the quality of SC is most likely a reflection of the quality of HC. Edvinsson and Sullivan (1996) advised that SC plays a decisive role to support employee activity. SC, they say, is the infrastructure that companies build to exploit their intellectual capital. While corporations do not own HC separately, structural capital belongs to the organization as a whole, according to Cohen and Kaimenakis (2007).

- ***Relational or Customer Capital***
  The next point of IC is relational capital or customer capital. Customers play a pivotal role in deciding the fate of a firm. So, innovation culture cannot be nurtured without getting them in your decisions. Tseng (2009) says IC is essentially the knowledge that a company should transform into market value, and their customer relationship is quite important. This is a particular type of IC called "customer capital" or "relational capital." However, there is a debate whether it is your internal relation or external that makes relation capital. It concentrates on either the relational embeddedness of employees' relationships networks or the quality of their relationships. On the contrary, the counter-narrative argues that relational capital is about your external relations that constitute your customer, suppliers, and strategic partner.

**Market Orientation**

Many experts define innovation as accepting, generating, and implementing new ideas, processes, goods, or services. Organizations innovate for various reasons, including competition, deregulation, resource scarcity, customer needs, and internal organizational

goals, including obtaining distinctive competencies, attaining a higher level of aspiration, and improving the service quality. They are agreed that in this day and age, a firm's success is not even imagined without innovation. (Yamin et al., 1999; Zahra & Covin, 1993) have suggested that success, in the long run, can be achieved through innovation. Over the last two decades, the Marketing Orientation (MO) concept has acquired traction in the marketing literature. MO is proposed as a variable that triggers innovation in this study. The MO phenomenon has been studied from various angles, ranging from its origins to its current status as an internal or external element that continuously influences an organization (Anim et al., 2018).

Marketing revolves around the principle of market orientation. According to the marketing philosophy, the main objective of market-oriented businesses is to determine the requirements and wants of their clients and efficiently and effectively serve those needs and wants (Cadogan & Diamantopoulos, 1995). Market orientation helps organizations satisfy their customers by coordinating their activities and efforts around their needs (Levitt, 1960). Advocates of MO have characterized the occurrence as indicating the extent to which a company's willingness to implement marketing strategies (Kohli & Jaworski, 1990; John C. Narver & Stanley F. Slater, 1990), who first introduced market orientation in the early 1990s. The former presents the cultural perspective of market orientation. On the other side, the latter introduces the behavioural approach of market orientation which was customer-focused. They coined the term "market intelligence" instead of "customer focus" as the primary focus of market orientation since market intelligence, in their opinion, is a more significant notion than a customer focus. Market intelligence constitutes consideration of extrinsic market factors that leads to an effect on customer needs and preferences.

## THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

### Resource-Based View

The RBV is an 'inside-out' perspective, according to which competitive success lies within the firm and for a competitive edge, firms should first look inside (Connor, 2002). Supporters of this viewpoint think that instead of looking outside the corporation for sources of competitive advantage, companies should look within to win the competition. In other words, the core idea of this theory is that a firm should look at the resources and potentials it has instead of getting a niche in the market over the competitors and threats. It argues that it is more beneficial to explore new opportunities using available resources available to the organization.

The theory talks about two assets, tangible and intangible, and according to the theory, intangible assets are more valuable than tangible assets to survive in this competitive world. The RBV model's primary focus is on these resources, with adherents suggesting that they should be prioritized in creating organizational strategy. As far as the study is concerned, a firm should use an innovation culture to enhance firm performance. The skill is internal as well as intangible. We are giving a framework to nurture innovation culture through some drivers, and one of the drivers is Market Orientation. The term considers customers highly significant, and RBV has a solid potential to use your internal resources to satisfy your customers (Srivastava et al., 2001).

In the same way, RBV focuses on the human capital of the firm as it is internally available as well as intangible and the study being discussed gives human capital a significant value (Wright et al., 2001)

**Theory of Dynamic Capabilities**

It's a widely acknowledged occurrence that the central focus is to attain a competitive advantage. Dynamic Capability theory is based on this notion. Before the theory of resource-based view and Dynamic capability, Michael Porter's five forces model was mainstream. Porter (1980), a Harvard Business School professor, devised the tool. It assesses the attractiveness and likely profitability of a given industry. Since its publication in 1979, it has become one of the most widely used and respected company strategy tools. The model talks about external factors affecting your business, such as competitive rivalry, supply power, and buyer. But his critiques say all these factors are external. Several internal factors help a firm to gain competitiveness.

Dynamic Capabilities is one of the theories that also regards internal factors along with external factors. They defined a dynamic capability as "the firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments" (Teece et al., 1997). A dynamic capability is a behavioural approach that focuses on upgrading and rebuilding fundamental capabilities that engage dynamic environments to maintain and acquire competitive advantage. It integrates, reconfigures, renews, and recreates its resources and capabilities to improve continually. (Wang & Ahmed, 2007).

The theory gives firm ground to innovation that is the main focus of our study. The discussed study based on innovation and dynamic capability highly supports it. (Hill & Rothaermel, 2003) describe that the ability to adapt to change through innovation is referred to as dynamic capabilities. Moreover, scholars like Helfat et al. (2009) regards innovation capacity as Dynamic capability. Winter (2003) links dynamic capability with organisational learning, which is discussed in this study

## HYPOTHESIS DEVELOPMENT

**Organization Learning and Firm Performance**

Organization Learning can be defined as a process of gathering data and turning it into knowledge. Previous literature creates a strong connection between organizational learning and organizational performance. A well-designed learning system allows a corporation to utilize its resources better and beat its competitors in their respective markets (Raj & Srivastava, 2016). Organizational learning propagates creativity and innovation in the firm, conducive to developing new products and policies (Bontis et al., 2002; Hsu & Fang, 2009; Hurley & Hult, 1998; Raj & Srivastava, 2016). In a recent study by Narsa (2019), it was posited that the learning abilities of the managers enable the organizations to become responsive towards the changes in the market and consumer demands, which in the long run is beneficial to the firms operating in a dynamic environment. In another study by Namada (2017), learning results in a better comprehension of the business systems and processes and enables the organization to become proactive against potential threats and seize the opportunities. Learning is crucial for survival in the dynamic business environment and helps understand and forecast the changing demands of the consumers

and other stakeholders. Previous research has established the impact organizational learning produces on the firm's performance (Bontis et al., 2002; Ghasemzadeh et al., 2019; Namada, 2017; Naqshbandi & Tabche, 2018; Raj & Srivastava, 2016).

H1: Organizational learning has a positive impact on the organizational performance of firms.

**Market Orientation and Firm Performance**

Market Orientation is a concept that focuses on customers as well as on buyers**.** Market orientation MO is a well-known concept in business (Slater & Narver, 1994). It simply refers to creating and delivering goods and services according to the needs and wants of customers. One aspect of the market orientation is the dependence of organizations on the supply network and other partners concerning commercialization and innovation. Thus, the phenomenon isn't concerned with internal strategies, but external networks' locus can be found (Grinstein, 2008; Hurley & Hult, 1998; John C Narver & Stanley F Slater, 1990; Renko et al., 2005). Per John C Narver and Stanley F Slater (1990), the success and profitability of organizations are considered to be the result of the market orientation. By definition, MO deals with helping the firms understand and respond to the needs and services of the surrounding business ecosystem. Thus, firms need to focus on developing their market-oriented competencies to attain a competitive advantage in the market (Ho et al., 2018; Jaworski & Kohli, 1993; Selmi & Chaney, 2018). Wang (2012) found that market orientation influences the performance of firms positively from the hotel industry, SMEs (Buli, 2017), franchising industry (Lee et al., 2015). Specifically, these studies have demonstrated that their market orientations influence positive customer performance and financial (and non-financial) performance of organizations.

H2: Marketing orientation has a significant impact on the organizational performance of firms

**Intellectual Capital and Firm Performance**

Under the RBV, firms or organizations are distinguished due to their unique resources and often are the sources of competitive advantage for the firms as well, and the consideration of intellectual capital as a resource has been growing (Gan & Saleh, 2008; Mehralian et al., 2012). It has been one of the most fundamental proponents for building its strategy (Marr et al., 2003). IC has been considered a strategic resource for organizations to regulate superior performance via value creation and competitive advantage (Clarke et al., 2011; Kang & Snell, 2009; Mention & Bontis, 2013; Vishnu & Kumar Gupta, 2014). Thus, to attain superior performance, the organizations need to develop and identify IC and learn to use it efficiently (Kianto et al., 2017; Phusavat et al., 2011). The review of the extant literature on IC and performance indicates mixed results; some studies have reported positive relationships (Clarke et al., 2011; Gan & Saleh, 2008; Massaro et al., 2020; Mehralian et al., 2012), where some others have reported negative and insignificant relationships (Bayraktaroglu et al., 2019; Firer & Williams, 2003; Gruian, 2011; Tseng et al., 2013; Zeghal & Maaloul, 2010). Thus, there is a need to focus on the relationship between organizational performance and intellectual capital so that the significance of the association can be determined.

H3: Intellectual capital has a significant impact on organizational performance.

**Mediation of Innovation Culture**

After all the terms discussed, the study proposes that organizational culture is an eminent factor behind innovation. Organizational culture has been proven as the most salient factor influencing innovation (Raisch & Birkinshaw, 2008). In other words, we are proposing that all the discussed factors contribute to nurturing the culture of innovation, which ultimately leads an organization to high performance. Marcoulides and Heck (1993) recognize this relationship. They say organizational culture is an eminent factor that can make a difference in firm performance. In the same way, Shehzad et al. signify that organizational culture has a profound impact on its performance.

Innovation seems a primary organizational strategy to outperform in this continuously changing corporate world. As innovation is so crucial to a company's success and survival, they need to figure out how to innovate successfully (Prajogo & Ahmed, 2006). For infusing innovation, organization learning is an important driver. It is evident in the literature that learning is a foundation for acquiring a sustained competitive advantage and a fundamental variable that leads to greater long-term performance. In other words, company competitiveness relies on acquiring and applying knowledge, enabling them to give customers more value (Ghasemzadeh et al., 2019). In this study, we propose that innovation is nurtured in an organization with its culture. Therefore, culture is a mediator between organizational learning and innovation performance. In this particular study, Corporate culture has been identified in several studies as a moderating element that leads to improved performance in general and innovation in particular (Martín-de Castro et al., 2013). Thus, based on this discussion, the following hypothesis is proposed;

H4: Innovation culture significantly mediates the relationship between organizational learning and performance.

In the previous literature, we have seen scholars have created a robust connection between MO and innovation. Different studies prove that MO has a significant impact on innovation performance. The link between MO and organizational outcomes such as innovation performance is vast across all sizes and industries (John C. Narver & Stanley F. Slater, 1990). This study creates a link among three variables MO, innovation culture, and organization performance. There is minimal research on how MO has infused a culture of innovation and ultimately enhances firm performance. Understanding consumers' current and future needs are critical for organizations to foster an innovative culture to continuously improve and develop products and services that fulfil their wants and needs (Pelham & Wilson, 1995). Market orientation has a significant impact on innovation as the understanding of the requirements and demands of the customers' aids in developing efficient products that, along with the line, increase the profitability and sales of the organization (Atuahene-Gima, 1996, 2005). The study by Grinstein (2008) indicated that competitor and customer orientations of the firms positively influence the innovation consequences. In other studies, Atuahene-Gima (2005), Ho et al. (2018), and Udriyah et al. (2019) show that increased focus on the competitor and customer orientations (MO) enhances the willingness of the firm to develop new services and products. Newman et al. (2016) also found a significant and strong association between marketing orientation and radical and incremental innovations at the firm, leading to outstanding performance. Thus, based on this discussion, the following hypothesis is proposed;

H5: Innovation culture significantly mediates the relationship between market orientation and organizational performance

Intellectual Capital is, in other words, an extension of RBV. The knowledge-based view shows knowledge as the most valuable resource a corporation may have because of its impact on total work organization and performance. Some scholars believe that IC is more closely related to knowledge management (Ramadan et al., 2017). Knowledge, competence, skills, organizational culture, and other intangible and invisible attributes that are difficult to measure but critical for driving innovation are at the heart of company performance and competitive advantage (González-Loureiro & Pita-Castelo, 2012). IC has an impact on firm performance. But, in this research work, we are linking IC with innovation culture because of scholars such as Liu et al. (2009) and Tseng (2009), who believe intellectual capital plays a significant role in nurturing the culture of innovation. Thus, based on this discussion, the following hypothesis is proposed;

H6: Innovation culture significantly mediates the relationship between intellectual capital and organizational performance

## CONCEPTUAL FRAMEWORK

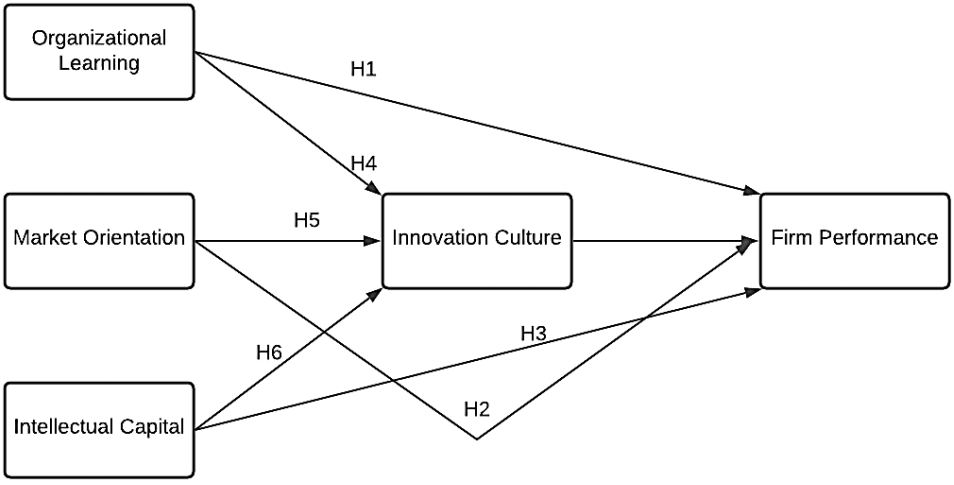


**Figure 1: Conceptual Model**

## METHODOLOGY

In the present study, the research population is unknown, and thus the sampling method used in the study is the non-probability sampling technique of convenience sampling. The convenience sampling techniques prove valuable and helpful when constraints on the resources, i.e., cost and time availability, are bounded (Saunders et al., 2007; Saunders et al., 2015). The sample size for the study is decided based on the item response theory that is being applied (ITR) (Lord, 1980). Under this theory, the number of respondents is based upon the total number of items present in the questionnaire. The items are multiplied by either 10 or 20 to get an appropriate sample, which would aid in getting significant and

authentic results. In the present study, there are 33 items in the questionnaire, so in adherence to the ITR, the items are multiplied by ten, i.e., 33*10=330. Thus, the appropriate sample size, in this case, is 330-350 individuals employed in Pakistan.

**Data Collection Method**

The study follows a quantitative design, and a survey was performed with 150 respondents; and the sample of the study is derived from the corporate sector in Lahore, Pakistan. The study employed self-administered questionnaires as instruments for data collection. A total of 350 questionnaires were distributed among the potential respondents, and 150 were received back, getting a response rate of 43%.

**Measurement of Variables**

Organizational performance is defined as the output of the organization for a record time measured against forecasted performance. According to Ellinger et al. (2002), organizational performance encompasses the product market performance, financial performance, and return ratio to the shareholders. In the present study, organizational performance is the dependent variable. It has been measured based on the scale used by Hernández-Linares et al. (2021). Innovation culture is defined as the culture or environment created at the workplace through which leaders cultivate unconventional thinking and appreciate its application. Organizations create innovative cultures for finding ways to increase profits, increase employee engagement, and focus on the well-being of employees and the overall health and performance of the business. In the present study, innovation culture is a mediator and has been measured based on the scale used by Aksoy (2017). Organizational learning is defined as the process of knowledge creation, retention, and transference within an organization. In the present study, organizational learning is an independent variable and measured based on the scale used by Naqshbandi and Tabche (2018). Market orientation is defined as a business approach that focuses on customer needs and seeks to satisfy them by creating superior product value and ascertaining customer satisfaction. In the present study, MO is an independent variable and measured based on Hernández-Linares et al. (2021). Intellectual capital refers to the intelligible assets that contribute to the performance and bottom line of the organization. The present study measured intellectual capital based on the scale used in Kianto et al. (2017).

## ANALYSIS AND RESULT

**Descriptive Statistics**

The next step in the analysis is to evaluate the descriptive properties of the data. The descriptive analysis is an integral component of the analysis. It presents an overall summary, data statistic and informs of the response orientation of respondents and the normality of the data. The mean, normality, and minimum & maximum values are represented in table 1. It can be seen that the minimum and maximum values in the table coincide with the measurement scale, i.e., the endpoints of these values and the 5-point Likert scale are the same. That shows that there were no extreme values present in the data, and thus the data is free from outliers.

**Table 1**
**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation | Skewness | |
|---|---|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error |
| OrgLearn | 150 | 1.00 | 5.00 | 3.5256 | .90337 | -.291 | .198 |
| MarkOrian | 150 | 1.00 | 5.00 | 4.0008 | .72505 | -.914 | .198 |
| IntelCapit | 150 | 1.00 | 5.00 | 3.7800 | .71457 | -.814 | .198 |
| InnCulture | 150 | 1.80 | 5.00 | 3.6187 | .73030 | -.379 | .198 |
| OrgPerform | 150 | 1.00 | 5.00 | 3.6133 | .87690 | -.352 | .198 |
| Valid N (listwise) | 150 | | | | | | |

**KMO and Bartlett's Test**

The KMO and Bartlett's tests are preliminary tests performed on the data before subjecting it to confirmatory factor analysis and structural equation modelling. This test is performed to evaluate the adequacy of the sample. The value of the KMO indicator lies between 0 and 1, and a value closer to 1 indicates that the sample data is adequate.

**Table 2**
**KMO and Bartlett's Test**

| Sample Adequacy | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .842 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 3566.750 |
| | Df | 528 |
| | Sig. | .000 |

**Factor Analysis**

The primary purpose of the factor analysis is to evaluate the variance contributed by the underlying factors or items, measured through a large number of observed variables (MacCallum, 1983). The rotated component matrix has been used in the present analysis. The factors are rotated to make them easier to interpret. The rotation allows for different factors to explain and predict the items, and each of the factors explains more than a designated item. A structure of factors is termed a simple structure, and this goal of rotation cannot be consistently achieved. By looking at the results of the rotated factor matrix, it should be determined what extent of simple structure has been achieved as it is the key for understanding the underlying factor structure in the items. The matrix of components shows the Pearson correlation values between the components and different items. These correlation values are called factor loadings. If there is more than one loading loaded per item, it indicates the presence of cross loading in the data. Cross loading can complicate the factor interpretation and needs to be solved by using some redistribution mechanism.

Table 3 below reports the rotated components matrix and shows that almost all of the indicators have a factor loading of more than 0.7. These are acceptable under Hair et al. (1998) as they required a minimum of 0.5 loadings but preferred loading value above 0.7. The results indicate that all of the factors contribute effectively to the overall construct, and also, no issue of cross-loading can be found in the data shown in the rotated component matrix; thus, the data is reliable.

**Table 3**
**Rotated Component Matrix**

| | Component | | | | |
|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** |
| OL1 | | | .745 | | |
| OL2 | | | .828 | | |
| OL3 | | | .772 | | |
| OL4 | | | .786 | | |
| OL5 | | | .796 | | |
| OL6 | | | .835 | | |
| MO1 | | .768 | | | |
| MO2 | | .736 | | | |
| MO3 | | .837 | | | |
| MO4 | | .788 | | | |
| MO5 | | .795 | | | |
| MO6 | | .807 | | | |
| MO7 | | .690 | | | |
| MO8 | | .762 | | | |
| IC1 | .769 | | | | |
| IC2 | .771 | | | | |
| IC3 | .711 | | | | |
| IC4 | .782 | | | | |
| IC5 | .792 | | | | |
| IC6 | .769 | | | | |
| IC7 | .809 | | | | |
| IC8 | .772 | | | | |
| IC9 | .711 | | | | |
| IC10 | .711 | | | | |
| INC1 | | | | .781 | |
| INC2 | | | | .808 | |
| INC3 | | | | .794 | |
| INC4 | | | | .777 | |
| INC5 | | | | .804 | |
| OP1 | | | | | .838 |
| OP2 | | | | | .800 |
| OP3 | | | | | .811 |
| OP4 | | | | | .875 |

**Construct Validity**

The construct validity is based on the results of the convergent and the discriminant validity. The composite reliability and the average variance extracted are used to measure the convergent validity. The results in table 4 shows that the values of CR are more significant than 0.7, and AVE is also greater than 0.5, which are per recommended ranges (Bagozzi & Yi, 1988). Thus, the convergent validity is present. The discriminant validity is based on correlations or loadings of factors that show that each variable discriminates

from the other. MSV and self-correlation values are also high and per the requirements for discriminant validity. Thus, both subtypes of construct validity are present.

**Table 4**
**Convergent and Discriminant Validity**

| | CR | AVE | MSV | INC | OL | MO | IC | OP |
|---|---|---|---|---|---|---|---|---|
| **INC** | 0.877 | 0.590 | 0.181 | **0.768** | | | | |
| **OL** | 0.885 | 0.565 | 0.046 | 0.192 | **0.751** | | | |
| **MO** | 0.912 | 0.566 | 0.303 | 0.373 | 0.168 | **0.753** | | |
| **IC** | 0.915 | 0.520 | 0.078 | 0.279 | 0.004 | 0.202 | **0.721** | |
| **OP** | 0.930 | 0.769 | 0.303 | 0.426 | 0.215 | 0.550 | 0.275 | **0.877** |

**Model Fitness**

The CFA is applied in the study as well. Confirmatory factor analysis is used to determine whether the construct measurements are compatible with the researcher's understanding of the nature of the factor or construct. The CFA's goal is to see if the data matches the postulated measurement model. The CFA permits the testing of the viability of the research model as a whole, not simply the number of factors, and this test is mainly driven by theory (Thompson, 2004). The fitness of the model or the CFA is run before the application of the structural equation modelling. Several indices or measures evaluate the model fitness: CFI, IFI, RMSEA, CMIN, and GFI. The results have been presented in table 5, along with the thresholds for each value. The CMIN<3, i.e., 1.47, GFI is equal to 0.80, CFI is more than 0.90, i.e., 0.937, IFI is more than 0.90, i.e., 0.936, and RMSEA is less than 0.08, assuming a value of 0.0506. The results showed that the data is in the valid range, thus showing that the data fit the hypothesized measurement model. Thus, the SEM can be run on the study's variables to test for the hypothesized relationships.

**Table 5**
**Model Fit Indices**

| CFA Indicators | CMIN/DF | GFI | IFI | CFI | RMSEA |
|---|---|---|---|---|---|
| Threshold Value | ≤ 3 | ≥ 0.80 | ≥ 0.90 | ≥ 0.90 | ≤ 0.08 |
| Observed Value | 1.469 | 0.800 | 0.936 | 0.937 | 0.056 |

## HYPOTHESIS TESTING

The structural equation modelling technique has been applied for hypothesis testing. It is a multivariate technique that is applied to test the validity of the research model. SEM is considered a combination of factor analysis and multivariate analysis techniques (Kerlinger, 1966). The structure of the SEM is such that it replicates the structure of a covariance matrix of the research model's measures. SEM has been chosen for application as it estimates multiple interrelated dependencies through a single technique or procedure. It is one of the most used and popular statistical methodologies in quantitative research. The results of the analysis are presented in table 6. The table lists the direct, indirect, and total results.

The total results reflect both the direct effect of the independent and the indirect effect of the mediators. Thus, the direct effects will be considered to understand the impact and

the relationship between the independent and dependent variables. The first relationship being tested is between intellectual capital and organizational performance. It can be seen that the impact of intellectual capital on organizational performance is insignificant, and thus the hypothesis is rejected. The following relation tested is between the market orientation and organizational performance. The results indicate that the market orientation has a significant and positive influence on the organizational performance of the firms. A unit increase in the market orientation will increase the organizational performance by 41.4 per cent. The third independent factor is organizational learning. A unit change in organizational learning produces a positive change of 15.4 per cent in the organizational performance, and thus the hypothesis is accepted. One mediator in the study, i.e., innovation culture, significantly affects two of the three direct relations. It can be seen that a unit increase in the market orientation will initiate a mediation effect of 0.3 per cent in the organizational performance. Similar results are reflected for the impact of innovation culture on market orientation and organizational performance; thus, these two hypotheses are accepted. However, the results indicate that innovation culture didn't significantly mediate the association between organizational learning and organizational performance, and thus, the hypothesis is rejected.

**Table 6**
**Structural Equation Modeling**

| | | IntelCapit | MarkOrian | OrgLearn | InnCulture |
|---|---|---|---|---|---|
| **Total Effect** | InnCulture | .175** | .298** | .113 | .000 |
| | OrgPerform | .157 | .464** | .173* | .169* |
| **Direct Effect** | InnCulture | .175** | .298** | .113 | .000 |
| | OrgPerform | .128 | .414** | .154* | .169* |
| **Indirect Effect** | InnCulture | .000 | .000 | .000 | .000 |
| | OrgPerform | .030* | .050* | .019 | .000 |

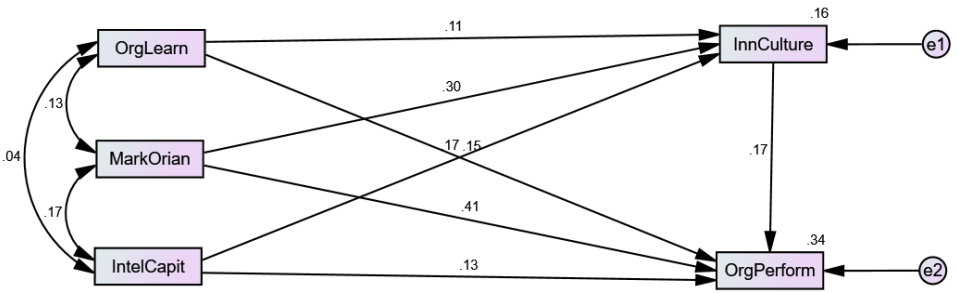


**Figure 2: SEM**

## SUMMARY

The following table shows the status of the acceptance/rejection of the hypotheses.

**Table 7**
**Status of hypothesis**

| Sr.No. | Hypothesis | Status |
|---|---|---|
| 1 | Organizational learning has a substantial impact on organizational performance. | Accepted |
| 2 | There is a significant impact of market orientation on organizational performance | Accepted |
| 3 | Intellectual capital has a significant impact on the organizational performance | Rejected |
| 4 | Innovation culture significantly mediates the relationship between organizational learning and performance. | Rejected |
| 5 | Innovation culture significantly mediates the relationship between market orientation and organizational performance | Accepted |
| 6 | Innovation culture significantly mediates the relationship between intellectual capital and organizational performance | Accepted |

## CONCLUSION

The present study aimed to evaluate the status of marketing orientation, organizational learning, intellectual capital, and innovation culture as predictors of the performance of the organizations or firms. The study was carried out in Lahore, Pakistan, and considered both service and manufacturing sector organizations. The study identified that organizational learning and marketing orientation predict the performance of the firms, i.e., increased focus of the manufacturing and service sector firms on these factors could lead to improved organizational performance. However, the results indicated that the intellectual capital doesn't effectively increase or decrease the performance of firms. The findings have also illustrated that an innovative culture at the workplace significantly mediates the relationship between market orientation and organizational performance and intellectual capital and organizational performance. However, the relationship between innovative culture and organizational learning and organizational performance is not significant. Thus, indicating that an innovative environment and attention towards organizational wellbeing will lead to better performance.

## IMPLICATION OF STUDY

This study has implications in academia because it is a multifaceted concept, and future researchers can explore more determinants of innovation culture. Moreover, it has many implications for young entrepreneurs as it gives them a way to infuse innovation in their respective organizations without rendering heavy expenses. The study has several practical implications as well. The study focuses on the effects of innovation and other capabilities on organizational performance. The study's findings are pragmatic and include assertions of other scholars in the context of innovation and performance. Managers and policymakers

can use these findings to establish policies and procedures for rendering the benefits from dynamic capabilities, resources, and culture of the organization and using it to instigate effective performance. Pakistan is a developing country, and such advanced organizational practices are still under development. However, the findings clearly show that innovation culture is a strong antecedent of organizational performance. Moreover, managers can view the results of this study and focus on the development of policies targeting the development of organizational learning and strengthening the intellectual capital and marketing orientation of the firms while developing an innovative culture to increase the productivity and performance of the organizations.

## LIMITATIONS

Every study is implicit to some limitations in terms of research design and conceptual framework. The present study's data has been primarily collected from Lahore, Pakistan, which makes the results biased towards the experiences and perceptions of the employees working in Lahore. Thus, the results aren't generalizable to the whole country or other developing countries. The sample size for the present study is small (only 150 respondents); it is recommended that the study sample be increased to verify the relationships among the variables. Also, the study isn't specified to one sector or industry, and on a convenience basis, data was collected from service and manufacturing organizations. It is recommended that to specify the study's scope and focus on the innovation culture and performance of organizations ultimately, a specific sector or industry should be focused on in future studies.

Furthermore, the data has been collected from employees only, and thus there can be a degree of biasedness in their responses. Thus, it is suggested that future researchers focus on collecting data in the form of diodes, i.e., from leader/manager and employee, to evaluate the perspectives of followers and leaders. Similarly, the data was collected based on the cross-sectional technique. There is a possibility that people's perspectives change after some time, and thus it is recommended that future researchers incorporate the longitudinal design in future studies.

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