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## Article

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# **Mediating Role of Organizational Creativity between Employees' Intention in Knowledge Management Process and Organizational Performance: Empirical Study on Pharmaceutical Employees**

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## **Abstract**

Companies try to put efforts in upgrading the intellectual capital and leveraging them to develop and sustain competitive advantage in the business. Considering this view, the study unpacks the relation between knowledge management process (KMP) and organizational performance with the mediation effect of organizational creativity. The employees/users of this system have a pivotal role in the success of the process. This study encompasses the literature by examining the impact of knowledge management process (creation, storage, transfer, usage) from user perspective and study the process with the intention of employees involving to create new products/services to improve organizational performance in the context of Pakistani region. Quantitative research strategy was used and data collected from respondents via survey technique from Pharmaceutical organizations with a sample size of 203 employees. Structural equation modeling was used to check the causal relationship and Haye's process was applied for mediation test. It appeared that organizational creativity plays a mediation role and leads towards invigorating organizational performance. Pharmaceutical professionals should consider that employees' intentions towards KMP are critical to serve the purpose of the system. This research reveals the significance of user intention in KMP and add value to the literature in the context of Pakistan's pharmaceutical sector.

**Key words:** knowledge management process, knowledge creation, knowledge sharing, knowledge usage, pharmaceutical sector.

## **1. Introduction**

The global trends of 21<sup>st</sup> century and ever-changing demands of markets have re-shaped the business environment. It has been giving challenges to conventional principles, which becomes insufficient to drive the success of the organization (Lerro et al., 2014; Tubigi & Alshawi, 2015). Firms need to acquire and retain intellectual resources to pro-actively

engage with the upcoming market trends and utilize them effectively (GarcíaLillo et al., 2018). Although the concept of KM is still in an emerging state, organizations have adopted new ways to improve its operations and the fields of business process modelling, TQM, business intelligence is providing strong base to implement KM system on a wider scale (Kalpic & Bernus, 2006). Therefore, organizations with strong focus on creativity are more aware of market conditions and capable to adapt change (Muñoz-Pascual, Jesús Galende, 2017).

Over the years, Knowledge Management has gathered the attention of scholarly world to analyze it more deeply (Mcfadyenm & Canella, 2004). For this purpose, companies are investing in intellectual capital and leveraging them to develop and sustain competitive advantage in the business (Weisberg, 2010). The sustainability of the firm depends on its ability to learn and equipped itself with knowledge so that it can cope up with the ever-increasing market competition. (Mishra & Uday Bhaskar, 2011; Gold et al., 2001; Lin, 2007). The effective implementation of Knowledge management system (KMS) can lead the business to competitive edge over its competitors (Theriou et al., 2011; Johnny & Bolloju, 2005). Literature has presented both side of arguments which are either in the favor or against of ambidextrous (i.e., exploration and exploitation of knowledge simultaneously) nature of the firm but one of the recent discussions by (González & Blanco Pérez, 2017) on the relationship of exploration and exploitation of knowledge says that these processes yield better results separately.

Knowledge management is not limited to the management of knowledge, but it must focus on the employees who are the providers of knowledge (Tubigi & Alshawi, 2015). Employees bring unique package of knowledge, skills and experiences and can give organization a competitive edge and hence their knowledge becomes a strategic resource (GarcíaLillo et al., 2018). According to Janet et al. (2013), KM process is present in the organization naturally and employees are always engaged in this process (Knowledge creation, Knowledge sharing, Knowledge usage) in some way or the other and contribution of Knowledge is dependent on the opportunities which employee is receiving in the organization (Hasgall & Shoham, 2008).

According to study conducted by Arling & Chun (2011), one of the most effective ways of new knowledge creation and sharing is to have inter-departmental sessions so that employees from different fields can share their opinions. This activity will strengthen the motive behind KM system implementation in the organization. In one of their studies, Lloria & Ortiz (2014) have deeply analyzed Nonaka's model of knowledge creation and suggested that there are many enablers which leads to the knowledge creation including intention of the company or employee to engage in this process. When employees have a positive environment, they will be intended towards displaying required behavior (Škerlavaj et al., 2018). Every employee has an individual-level domain which also develops and enriched when he/she shares his knowledge among colleagues and positive emotions enhance cognitive ability and pushes the mind towards innovation (Zhu et al., 2018 & Hodgins & Dadich, 2017)

From economic view point, Weisberg (2010) posited that explicit knowledge is not costly because it can transfer via IT in a convenient way. On the other hand, tacit knowledge is resided in the minds of the employees which is based on one's own perceptions, observation, experiences. The sharing of knowledge provides benefit to both sharer and

receiver as it will expand their current knowledge base (Chiu & Veras, 2018). The eastern culture is more bend towards hoarding knowledge as the employees believe that by sharing knowledge, their self-worth will decrease and they can lose their job and hence it is difficult to codified their tacit knowledge (Singh et al., 2006; Bock et al, 2005). Moreover, if the employees leave the job at his own or retires, his knowledge remains unshared, which causes a huge loss to the firm (Ma et al., 2014). The intentions towards tacit knowledge sharing have an influence on knowledge sharing behavior. This will result in circulating creative ideas and organizational learning and improving its performance in the long-run (Weisberg, 2010). Additionally, Shahzad et al. (2016) also validated that if KM processes are managed well then it can lead to organizational creativity which will ultimately lead to higher organizational performance.

Previous scholars have shed light on the significance of knowledge management in terms of its processes and its relationship with organizational culture, Organizational strategy, IT infrastructure, KM strategy, KM enablers and KM practices (Lee & Choi, 2003; Daroch, 2005; Shahzad et al., 2016; Christina & Chang, 2015). Few empirical studies have done on the user perspective; employee's willingness/intentions/behavior in using KM system. Despite having sophisticated IT infrastructure and knowledge repositories, firms are unable to attain desired outcomes. One cause is the lack of willingness of employees to involve in Knowledge management process (Johnny & Bolloju, 2005). The locus of knowledge creation is the employee's mind which has over looked in the previous years due to over emphasis on routines/processes of the organization and hence causing hindrance in new knowledge creation (Felin & Hesterly, 2007). The value creation depends on the timely utilization of knowledge resources by the employees (Kalpic & Bernus, 2006). Hence, this research has put its emphasis on the employees rather on the systems of the organization for knowledge creation, sharing and usage. Lucía Muñoz-Pascual & Jesús Galende (2017) proposed to study KM and creativity relationship from different perspective and Karim et al. (2012) suggested to study the behavioral perspective of KM readiness. Moreover, Mariano & Awazu (2016), Adreeva & Kianto (2011) and Heisig et al (2016) suggested to empirically test the mediation role of innovation and KM as a business outcome. The implementation of Knowledge management system varies with organizational culture and yield different results in different geographical regions especially in the eastern region. Mostly scholars have done research in the developed countries which have better systems than developing countries as Iukinem et al. (2015), Adreeva & Kianto (2011) also suggested to conduct a research on KM and innovation in a developing country. Therefore, this research is based on empirical study on the impact of KM process intention of employees on organizational innovation and performance in Pakistan.

This paper presents an integrated model from user perspective of KM to achieve better organizational performance. It's an effort towards expanding the theoretical model provided by Christina & Chang (2015) in their research paper. It highlights the mediation of organizational creativity between KM process intention and firm performance. Further, it provides a foundation to study the domain of KM from user perspective with different antecedents and moderating variables in the context of Pakistan's business environment to further encompass this model. Hence, paving a way towards deeper understanding of

KM system. This study will provide guidance to the corporate sector regarding employee's intentions towards KM process and how it has a linkage with the development of creative products/services and organizational performance.

According to Pakistan pharmaceutical manufacturer association (PPMA), Pharma industry is in developing stage which has tremendous growth potential with numerous operational manufacturing facilities including international companies too. During the last decade, national pharma industry has shown a rapid growth and they are providing simple pills to sophisticated biotech, oncology and value-added generic compounds. This industry is providing good investment opportunity for the international ventures which will generate healthy competition among local facilities and overall growth and success of the pharma sector of Pakistan.

This study implies that pharma professionals must pay attention to the willingness of employees towards KM process. Their positive intentions and behavior towards knowledge creation, sharing and usage will lead towards innovative products and hence improving the performance of the company.

In the decade of 90's the concept of knowledge management come to attention and companies started investing in IT to store knowledge. The conceptualization of knowledge management has its roots in resource-based perspective and the transition from tangible resources to knowledge resources provided a new arena to investigate it in more detail. As per KBV, knowledge is widely distributed and firms can acquire that knowledge as per its capabilities to have a better strategic position (Kalpic & Bernus, 2006). It is critical for the organization to create and replicate knowledge at the right time and produce new products/services in the market to maintain its position in the competitive market (Kogut & Zander, 1995). Additionally, Grant (1996) views KBV as an extension of Resource-based theory and termed knowledge as a strategic resource of the firm. The knowledge-based perspective is based on the fact that organizations will show different performance based on how well they have managed and utilized knowledge resources (Kianto et al., 2014).

The employee's mind is the knowledge creation center and this can be transfer to organization level by learning and aggregating the available knowledge (Kalpic & Bernus, 2006). Employees will be more inclined towards KM process when leaders encourage and take individual attributes into consideration (Holt et al, 2007). Intention toward any behavior is a function of attitude which varies depending on the correspondence between attitude-behavior (Ajzen & Fisher, 1977). Drawing from Baye's theorem, (Ajzen and Fisher, 1975) presented theory of reasoned action (TRA) which states causal relation of attitude and behavior towards target. Considering other factors equal, if employee has a favorable intention, he would more likely to display that behavior (Ajzen and Fisher, 1975). The intention to involve in certain behavior is a function of his attitude (Bock et al., 2005). Hence, this paper has its roots in Knowledge Based View (KBV) and Theory of Reasoned Action (TRA).

## **2. Literature Review**

“Knowledge is a concept – like gravity. You cannot see it, but can only observe its effects” (Hunt, 2003). Information is a processed form of data which can be further refined to attain knowledge (Ajmal & Kekale, 2009). Embodied in language, stories,

concepts, rules, and tools, knowledge results in an increased capacity for decision making and action to achieve some purpose” (Long & Fahey, 2000). As per Hodgins & Dadich (2017), it is understood as: “context-specific; created within social interaction; and enacted through problem definition and solution. Knowledge is said to exist on a continuum, fluctuating in form between explicit and tacit”. Explicit knowledge is gathered from inside and outside the organization and then shared to form complex and structured knowledge, this process is called as combination whereas, tacit knowledge is expressed into explicit knowledge through a process named as externalization (Nonaka & Toyama, 2003). The fundamentals of KM have been derived from information system and translated into KM system and shows how social, integrated social, economic and organization factors can lead to a successful KM model (Kulkarni, Ravindran & Freeze, 2007).

In today’s era, where there is bombardment of information and each day brings new challenges to the organizations, it is necessary that employees actively participate in the KM process to cope up with the market needs and provide products/services accordingly (Hasgall & Shoham, 2008). Knowledge is being treated as a resource because it provides creative ideas to the organization which is translated into products/ services and gain market profit out of it (Massingham, 2018). In their study on SMEs, Janet et al. (2013) posited that the owner has the critical role in developing a climate of knowledge creation and sharing. Employees will share knowledge when they are having mutual respect and willingness. Without the direct intervention of owner, employees will not feel at ease in sharing their novel ideas. Majority of the researchers have a consensus on the fact that knowledge expands when it is being shared. However, employees can go in a opposite direction depending on the prevailing circumstances. The intention to hide their knowledge might be due to the pressure of deadlines as in this case employees do not have a time to think beyond their routine task (Škerlavaj et al., 2018).

The successful implementation of KM depends on how well its four processes; knowledge acquisition, conversion, application and protection are implemented timely in the organization (Gold et al., 2001). This paper has adopted the criteria presented by Kayworth & Leidner, (2003) that there are four components in the KM process; Knowledge creation, storage, transfer and application.

### *2.1 Knowledge Creation*

Individuals observe the environment with their own perceptions and view reality in a space termed as Ba (Nonaka & Toyama, 2003). Nonaka’s SECI model of knowledge creation, tacit knowledge is transfer to explicit or codified knowledge via four ways: socialization, combination, externalization, internalization, (Nonaka, 1994). This process can only be successful when positive environment is provided to employees (Arling & Chun, 2011).

### *2.2 Knowledge Storage*

It refers to organizational memory and exists in the form of policy manuals, structural information stored in data base, standard organizational procedures (Alavi & Leidner 1999) and the effective storage and recovery mechanisms allows the organization to swiftly access knowledge (Gold et al., 2001). Although companies make data repositories

but will not yield any benefit unless and until they are highly interactive and user-friendly (Svieby, 2001, Arling & Chun, 2011).

### *2.3 Knowledge Transfer/Sharing*

Knowledge sharing process is just like a communication process in the organization; via inter personal or sharing documents (Alavi & Leidner, 1999, Haas, Hansen, 2007). There are four factors which impact the knowledge sharing process; nature of knowledge, motivation to share, opportunity to share and culture of the organization (Ipe, 2003, Mishra & Uday Bhaskar 2011). The pre-requisite of knowledge transfer is the readiness of an individual or a group to share ideas (Ikhsan & Rowland, 2004).

### *2.4 Knowledge Usage*

“The process by which knowledge is converted into a form that can be understood, absorbed and used by other individuals” (Ipe, 2003). The organizations can take benefit from the knowledge sharing only if it is re-use and applied in activities (Kulkarni et al., 2007). The processes of KM are inter-dependent, and IT can play a critical role in connecting the links in the chain of KM (Alavi, & Leidner, 1999).

#### *2.4.1 KM Process Intention and Organizational Creativity*

“Intention refers to the individual’s readiness to engage in a particular behavior. The individual’s attitude towards a behavior influences the intention to act” (Mafabi et al., 2017). Whereas, “Creativity is the production of a novel and appropriate response, product, or solution to an open-ended task” (Amabile, 2013). Innovation evokes images of mystery, skill, inspiration creative genius, toil and serendipity (Lerro et al., 2014). The interaction of employees with each other will result in sharing of ideas which will helps in circulating the knowledge in the organization (Nold III, 2012). The intentions depend on his perceived behavior control and he can display the required behavior but unable to understand the signals from brain and hence his idea will remain unshared. (Mafabi et al., 2017). The positive intentions will gear towards displaying the required behavior which getting involve in knowledge sharing process (Weisberg, 2010). Additionally, leaders would be at ease in transforming workplace environment when employees are motivated and engaged in creativity (Alzghoul et al., 2018).

Muñoz-Pascual, Jesús Galende (2017) posited that employees will be intended towards sharing their novel ideas when they are provided with incentives and hence leading towards creativity at organizational level. To elaborate the concept, Crossan and Apaydin (2010) termed Organizational innovation as “A production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. It is both a process and an outcome”. There are According to them, there are multi factors which can predict the organizational creativity including people, process, products and culture of the organization (Woodman et al., 1993). The KM system is the integration of processes, technologies and innovative capacity of employees and it is focused on how this integration makes the organization capable of deal with uncertainties of the business environment (ŞTIBLI, 2010). The individuals in this system use their cognitive skills and lead towards generation of innovative collective wisdom in the organization (Saulais & Ermine, 2012). Employees feel a superiority sense while holding tacit knowledge as they

become more important figure in the organization. Now, it's on the part of organization that how it builds and maintain positive relationship with the employees and how it rewards them to share their knowledge (Weisberg, 2010). The intention to share knowledge is highly influenced by his evaluation of the outcome. If the outcome is positive and beneficial, he/she will be more inclined towards displaying that behavior (Mafabi et al., 2017). Hence, employee's positive intentions and behavior is critical in the success of KM process which will be leading towards organizational innovation.

- **H<sub>1</sub>:** There is a positive impact of knowledge management process intention of employees on organizational creativity.

#### 2.4.2 Organizational Creativity and Organizational Performance

“Organizational performance is the ability to cope with all systematic processes relative to its goal-seeking behavior and carry out its organization-adapting and organization-maintaining functions effectively” (Damanpour et al., 2009). The organizations which are inclined towards innovation will be internally strong and inimitable leading towards improved organizational performance (Damanpour & Evan, 1984). The magnitude and speed of innovation paves the way towards higher financial performance returns (Gopalakrishnan, 2000). Moreover, the results are also verified by Damanpour et al. (2009) who discussed different types of innovation including process, technological and administrative leading to improved organizational performance. The knowledge exploration-exploitation combo will lead towards organizational creativity depending on the nature of the firm. The more organization is prone towards upgradation of technological advances and creativity, the more this combo will yield better results (González & Pérez, 2017). A recent study by Mehralian et al. (2018) suggested that performance of the pharmaceutical sector is dependent on how firms are meeting the demands of the customers by providing innovative products and reaping profits from the market. The pressure of rapid advancement in technology and increasing competition has pushed firms towards revising their sources of competitive advantage and re-focus on creativity and knowledge (Lerro et al., 2014).

- **H<sub>2</sub>:** There is a positive impact of organizational creativity on organizational performance.

#### 2.4.3 KM Process Intention and Organizational Performance

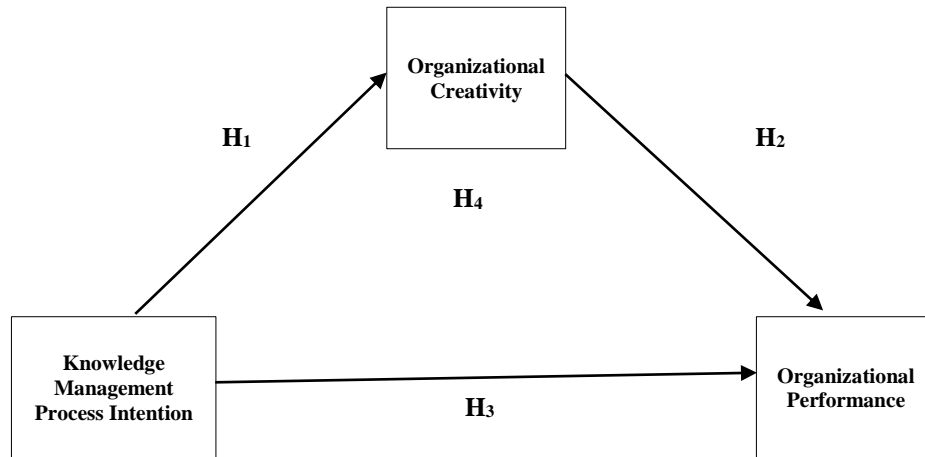
Literature presents variety of definitions of organizational performance based on objective, subjective and mixed/Quasi measures. According to Richard et al. (2009), “Organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment, etc.); (b) product market performance (sales, market share, etc.); and (c) shareholder return (total shareholder return, economic value added, etc.)”. The creation of knowledge through enablers has a positive impact on improving the level of creativity in the organization and hence, leading to the launch of new products in the market which ultimately increase sales and profitability of the firm (Lee & Choi, 2003).

The performance of the firm is now becoming dependent on the knowledge it possesses. The more it has knowledge, the more it will act as a proactive organization (Kianto et al.,



2014). In the same way, Knowledge creation and its sharing by employees with each other can lead to the production of innovative products/services which will ultimately improve the effectiveness of the firm (Yang, 2007). Knowledge management strategies and capabilities lead to improved financial performance in the form of elevated sales and higher profitability via organizational creativity (Shahzad et al., 2016). The intentions and behavior of an individual are inter-related and necessary for the organization. When employees are intended to share their knowledge, their behavior will be in the favor of organizational learning and the overall competitive advantage (Reychav & Weisberg, 2009). Moreover, intentions of employees are strongly related to their knowledge related tasks. This is not only related to employee's individual performance but also to the overall success of KM system and performance of the company (El Said, 2015).

- **H<sub>3</sub>**: There is a positive impact of KM process intention of employees on organizational performance.
- **H<sub>4</sub>**: There is a mediation role of organizational creativity present between KM process intention of employees and organizational performance.



**Figure 1: Research Model**

### 3. Research Methodology

This research aims to target those industries where innovation is the key to success and that are knowledge-intensive organizations. The companies where the core competency of the business is having innovative products or services. These companies are pro towards knowledge management process (creation, sharing, storage and usage) and the performance of the company is highly dependent on the level of innovative products being offered to the customers. In the corporate sector of Pakistan, there are many national and multi-national organizations which are dealing in these industries. The Industries in this domain are from Information technology, Pharmaceutical, Engineering and Telecom sector. The existence and growth of these industries are dependent on the level of creative products which they put forward. Hence, this study has taken Pharmaceutical sector. The unit of analysis was employees working in different

departments of the organization. The survey methodology was taken and the instrument was self-administered. A cross-sectional research was carried out by considering convenience sampling under the umbrella of non-probability sampling technique. The sample size is calculated using the rule of thumb recommended by Hair et al. (2010) that there should be at least 10 respondents per item. There are 22 items in the questionnaire, so research sample was consisted of 220 employees. To measure KM process intention, instrument has adopted from Christina & Chang (2015) to measure KM process (Creation, storage, transfer, and usage) intention of employees and for measuring organizational creativity and organizational performance, the instrument is adopted from Lee & Choi (2003). To analyze the data, Structural equation model has been used for regression analysis and model fitness whereas to analyze mediation effect, Haye's process has been applied.

#### **4. Data Findings**

##### *4.1 Sample*

The participant pool showed a majority of male professionals comprising 72% whereas females showed 28% working in pharmaceutical sector. Out of total respondents, 60% were post-graduates and 29% were graduates depicts higher number of educated employees. As far as the working tenure is concerned, 52% were in 1-5 years category and 24% were in 6-10 years shows that majority of the employees are having adequate experience in their current organization.

##### *4.2 Reliability and Validity*

The constructs are checked for reliability and validity and after that hypotheses are tested using structural equational modelling and Hayes process. To measure inside data consistency, reliability is checked. According to Nunnally (1978), the reliability varies with the stages of the study. If the researcher is on early stage, reliability between 0.5 and 0.6 would be considered as appropriate. Whereas according to Hair et al. (2010), 0.6 is the lower limit for Cronbach's  $\alpha$  in an exploratory research. In this study, the results of Cronbach's  $\alpha$  for all the variables are more than 0.7. The individual item reliability is measured by examining the item-to-construct loadings for each construct. As per Nunnally (1978), an adequate study must have an alpha value of 0.7. The constructs are assessed for reliability using Cronbach's alpha and it is clear from the table that all items are displaying acceptable reliability values.

**Table 1: Cronbach's  $\alpha$ , Item-To-Constructs Loadings, CR and AVE of Factors**

Constructs	Cronbach's $\alpha$	Items	Factor Loadings	CR	AVE
<b>Intention to create Knowledge</b>	0.89	KC1	0.61	0.79	0.51
	0.88	KC2	0.71		
	0.88	KC3	0.84		
<b>Intention to store Knowledge</b>	0.89	KS1	0.91	0.79	0.61
	0.88	KS2	0.63		
	0.89	KS3	0.71		
<b>Intention to transfer Knowledge</b>	0.89	KT1	0.91	0.71	0.63
	0.89	KT3	0.67		
<b>Intention to use knowledge</b>	0.88	KU1	0.75	0.73	0.51
	0.88	KU2			
<b>KMP intention</b>				0.93	0.63
<b>Organizational Creativity</b>	0.89	OC1	0.73	0.87	0.64
	0.89	OC2	0.68		
	0.89	OC3	0.85		
	0.89	OC4	0.79		
	0.89	OC5	0.74		
<b>Organizational Performance</b>	0.89	OP1	0.75	0.78	0.53
	0.89	OP2	0.60		
	0.89	OP3	0.79		
	0.89	OP4	0.64		

The Reliability of first variable (Knowledge Management Process Intention) is 0.923 which includes 12 items. Whereas, Organization creativity is having 0.873 which includes 5 items and the reliability of Organizational performance is 0.786 which contains 5 items. It is clearly shown from the above tables that the measurement scale is reliable. In order to check the convergent validity, AMOS 21.0 has been used and measurement model is checked. The squared multiple correlations are checked and average variance explained is calculated. According to *Fornell & Larcker (1981)* AVE (Average Variance Explained) greater than 0.4 shows that convergent validity exists in the model. The average of variances is calculated; KMP intention=0.63, OC=0.64, OP=0.53 which are above 0.4, which shows that convergent validity exists in the model. To find whether discriminant validity is present, squared correlation of each construct is calculated. To have discriminant validity, it is necessary that Maximum shared variance must be less than Average variance explained ( $MSV < AVE$ ). In this data, MSV of KMPI ( $0.04 < 0.71$ ), OC ( $0.30 < 0.62$ ), OP ( $0.04 < 0.53$ ) which shows that discriminant validity exists in the data.

To check whether the items have an adequate factor loading or not, confirmatory analysis is done by using Measurement model. The values of loading below 0.5 are eliminated from the data. The two items of knowledge management process intention were below 0.5 so they were removed. Moreover, one item of organizational performance was also having low factor loading and hence eliminated for further data analysis. To check the correlation among variables, Pearson Correlation co-efficient is used by most of the statisticians. It's the standard value of covariance which lies between -1 and +1. The

values closer to zero indicates weak correlation. For instance, if there is 0.7 correlation between two variables, it means that if one variable increases, other also increases by a proportionate amount. If the value of coefficient is zero, it means there is no correlation between variables.

**Table 2: Correlation Matrix**

Variables	1	2	3
Knowledge management process intention (1)	1		
Organizational creativity (2)	0.432**	1	
Organizational Performance (3)	0.175*	0.203**	1

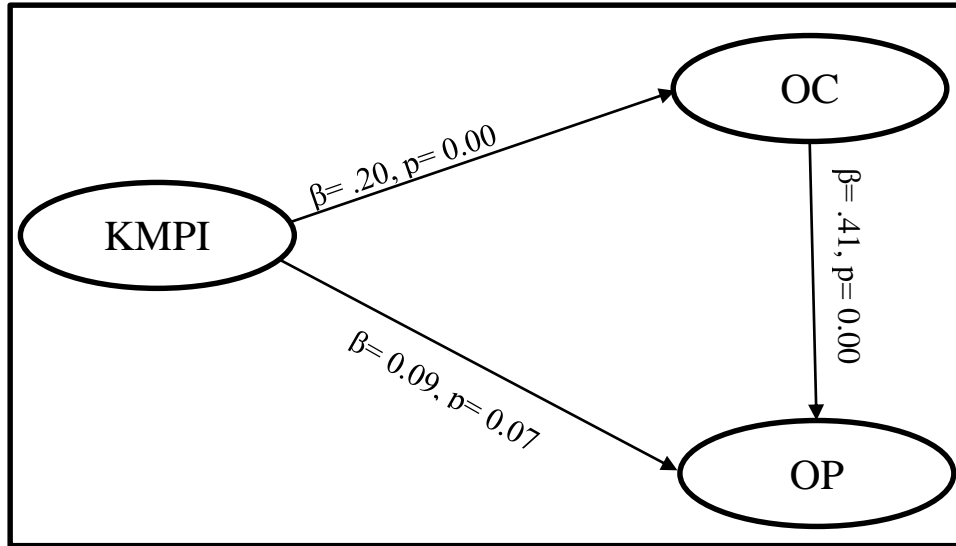
\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed)

The above table shows that all the variables of study are having significant correlation. The Correlation coefficient of Knowledge management process intention and Organizational creativity is 0.432\*\* which shows that there is highly significant relationship among these variables. Correlation value of Knowledge management process intention and Organizational performance is 0.175\* which shows that there is very weak but significant relationship between these variables. Whereas, correlation value of 0.203\*\* of Organizational creativity and Organizational performance shows that there is weak but highly significant relationship.

#### 4.3 Testing Hypothesis

After analyzing the correlation, the next step is to check the causal relationship between variables. Correlation only explains the correlation but not about the predictor and the outcome variable. Hence, for further study regression method is used (Field, 2009). For this purpose, AMOS 21 version is used for Structural equation modelling. According to Sandu et al. (2018), this tool provides benefit in terms of measuring errors by including both observed and unobserved variables. As per Ullman & Bentler (2013), SEM is a confirmatory technique and it estimates, evaluate and modified (if necessary) the model. The motive behind is to check the strength of the model and whether it adequate or any modification is required.



**Figure 2: Structural Model**

The relationship between knowledge management process intention and organizational creativity is supported with a value  $\beta$  of 0.20 and p value of 0.00. It shows that the intentions of employees towards KM process will lead to organizational creativity. The second path which is organizational creativity towards organizational performance is also supported with a value  $\beta$  of 0.413 and p value of 0.00. It shows that those companies who are producing innovative products will be reaping more benefits and will have high returns in terms of market share etc. However, the direct path which is between knowledge management process intention and organizational performance is not supported. The value of  $\beta$  is 0.09 and p value is 0.07.

**Table 3: Research Hypotheses and Results**

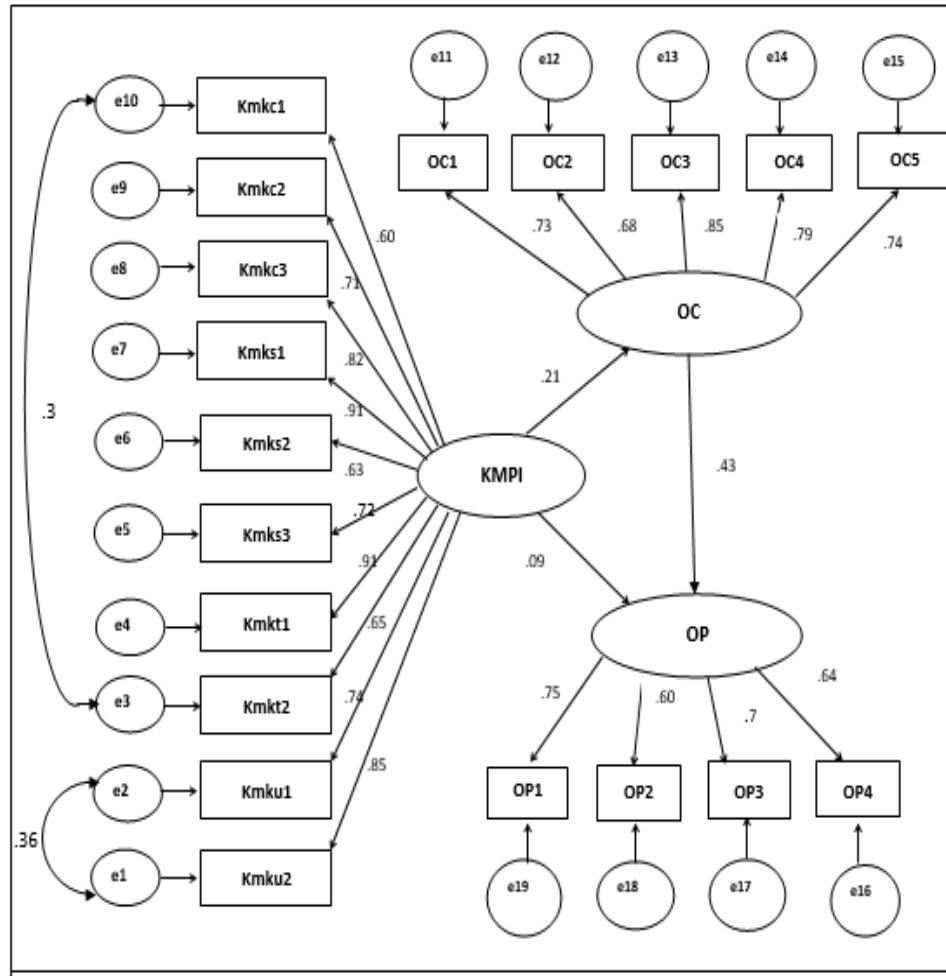
Hypotheses	$\beta$	p	Results
<b>H1:</b> There is a positive impact of Knowledge management process intention of employees on organizational creativity.	0.20	0.00	Supported
<b>H2:</b> There is a positive impact of Organizational creativity on organizational performance.	0.413	0.00	Supported
<b>H3:</b> There is a positive impact of KM process intention of employees on organizational performance	0.09	0.07	Not Supported

#### 4.4 Measures of Fit

The research model has modified by considering the goodness of fit of the model to the data. For this purpose, the errors of items are correlated to achieve minimum threshold values suggested by the researchers. As per Sandhu et al. (2018), the model modification involves the correction and measurement of error in the model. It is more flexible approach as compared to other techniques. The co-relating of error terms is a tricky step and one must do it carefully. The correlation done within factor error is justifiable as compared to correlation of error terms with different latent variable (Hooper et al., 2008). There are various groups of measures of fit such as sample discrepancy function which is based on the sample size, measures based on the population discrepancy (RMSEA), a goodness of fit index (GFI), Comparative fit index (CFI). Researchers have different opinions regarding each type of indices. The details for having adequate model has provided by Bentler and Bonnet (1980) in which the comparative fit index (CFI), goodness of fit index (GFI) and normed fit index (NFI) must exceed 0.9; the adjusted goodness of fit index (AGFI) should exceed 0.9; and the standardized root mean square error of approximation (RMSEA) should not exceed 0.08. The modification is done by correlating two error terms within a factor and model modification shows results CFI=0.91, NFI=0.86, AGFI=0.82, RMSEA=0.07, which are acceptable values. For the structural model,  $\chi^2/df$  does not exceed 5 Bentler and Bonnet (1980), suggesting an acceptable model fit.

**Table 4: Measures of Model Fitness**

<b>Level of Significance</b>	<b><math>\chi^2</math></b>	<b>Df</b>	<b>CFI</b>	<b>NFI</b>	<b>AGFI</b>	<b>RMSEA</b>
0.00	326.455	198	0.91	0.86	0.82	0.07



Fitness indexes: Chi-square/df: 1.64, CFI: 0.91, NFI: 0.86  
AGFI: 0.82, RMSEA: 0.07

**Figure: 3 Modified Fitness Model**

*4.5 Mediation*

One of the purposes behind this study was to check the mediation role of organizational creativity between knowledge management process intention and organizational performance. For the purpose, Process Macro by Hayes has been applied.

**Table 5: Mediation (Direct / Indirect Effect)**

Total effect	Direct effect	Indirect effect	P-Value
0.129	0.062	0.067	0.000

The direct effect is almost half of the total effect which shows that partial mediation exists in the model. The mediation model is significant with a p value 0.00 and indirect effect size 0.067. The results are aligned with the Knowledge based view (Kogut & Zander, 1995; Grant, 1996 that knowledge is a critical resource and will translate into innovative products and improved performance of the company. Hence, creativity possess the central and pivotal role in maintaining competitive advantage. The results give useful insights by advancing the research on user perspective in KM process (Christina & Chang, 2015) and highlighting the role of creativity. Moreover, the mediation role of creativity between KM system and organizational performance is also validated by (Shahzad et al., 2016).

## 5. Discussion

This study aims to validate the model by considering intentions of employees towards knowledge management process. It includes intention to create knowledge, intention to store knowledge, intention to share knowledge and intention to utilize knowledge. The ultimate aim of having KM process in the organization is to utilize knowledge timely and produce innovative products/services. This links towards enhancing the performance of the company in terms of its share and competitive position in the market. The knowledge-intensive organizations are those where knowledge updates mandatory and organizations need to be competitive in order to survive in the industry. The pharmaceutical industry also counts in knowledge-intensive sector (Mehralian et al., 2018).

Unlike previous studies, this research has provided new insights. The relationship between Knowledge management process intention of employees and organization creativity. The p value is 0.001,  $\beta=0.20$  and  $R^2=0.19$  which shows that it is significant and the result is supported by previous studies (Lin, 2007; Yang, 2007; Zhu et al., 2018) which focused on the employees involving in KM process to make innovative products. Specifically, the employees intended to create, share and utilize knowledge will lead towards individual learning as well as creativity (Saulais & Ermine, 2012). The result is strengthening the attitude-behavior relationship based on Theory of reasoned action (TRA) by (Ajzen and fisher, 1975; Ajzen and fisher 1977) and confirming the stance of (Brock et al., 2005) that positive behavior will lead towards knowledge sharing and idea creation. However, some of the studies in Indian region posited that eastern region is more prone towards hiding knowledge and they are not willing to be involved in the knowledge sharing process (Singh et al., 2006) which is opposing to the findings of our research.

The relationship between organizational creativity and organizational performance is significant with the p value 0.00,  $\beta = 0.41$ . The strength of the model is  $R^2 = 0.04$  and the result is supported by various studies both in developed and developing countries (Gopalakrishnan, 2000; Lee and Choi, 2003; F. Damanpour et al., 2009). The results are validating the stance by (Kogut & Zander, 1995; Grant, 1996) in Knowledge based view (KBV) that creativity will lead towards higher organizational performance. However, the direct relationship between knowledge management process intention of employees and organizational performance is insignificant with p value 0.07 and  $\beta=0.09$ . There can be other hidden antecedents of organizational performance in the model which are not studied in the model. Moreover, Knowledge management process and organizational



performance are mostly studied with some mediating and moderating variables in the literature which can be reason behind insignificant result. The mediation role of organizational creativity between knowledge management process intention of employees and organizational performance is significant with a p value of 0.00. It depicts that employee's willingness to involve in knowledge management process will lead towards organizational performance via organizational creativity.

## **6. Theoretical Contribution and Managerial Implications**

The study of employee's intentions and behavior in Knowledge management process is vital for its fruitful results. The positive intentions of employees improve the propensity of involving their selves in KM process with full dedication. With respect to TRA (Azjen & Fisher, 1975), the favorable attitudes and intentions will be leading towards desired behavior. Hence, employees with willingness toward KM process will be more creative and produce novel products. Together with Knowledge Based view market (Kogut & Zander, 1995; Grant, 1996), the successful KM process will lead organization towards better market position.

### *6.1 Contribution to Pakistan's Academia*

Although there are previous studies on KMP in eastern region but few in South-Asian context (Bhatt, 2011), and even less (Shahzad et al., 2016) are conducted in Pakistani region. This study validates TRA (Azjen & Fisher, 1975) by showing favorable results in the attitude-behavior correspondence within in given situation. The Creativity level enhances as the willingness of employees increases towards KM process and sharing their novel ideas. The study is unique as it has taken behavioral perspective of knowledgeable workers in KM process which is not studied before, and hence, contributing towards academic literature in Pakistan.

From managerial perspective, this study provides insights on behavioral aspect of employees so that Pharma professionals will carefully consider the willingness of employees to involve in KM process. Managers need to understand that employees are key holders of tacit knowledge and their willingness is critical for the creation of innovative products. Therefore, when designing or implementing the KM process, management must ensure that employees are well-informed and ready to adapt the system. The more they have favorable intentions, the more they will be actively involving in KM process.

## **7. Limitations**

This study has its limitations in considering one sector and sample size is also restricted due to data collection from one city. Further studies must include different sectors to have a more generalized view of the phenomenon. Since, every employee has responded all variables so same respondent error prevails in the data. Due to time and cost constraints, cross-sectional survey is done which can be improved by considering longitudinal study in future studies.

## **8. Avenues for Future Researchers**

It is expected that future scholars will further study employee's intentions and behavior in different sectors (IT, Engineering, Manufacturing etc) and considering organizational culture to present an integrated model. Moreover, the moderating role of leadership impacting the behavior of employees still present an avenue to explore further in Pakistan's corporate sector.

## 9. Conclusion

Knowledgeable and creative minds are strategic and competitive resource for the organizations. The positive intentions and behavior of employees is pivotal for the success of knowledge management process in the organization. Conversant employees will be involved in idea generation which leads to innovation and competitive position of the firm. In this regard, this study analyzes the mediation role of creativity between KM process intention of employees and organizational performance. It revealed significant relationship between knowledge management process intention of employees and organizational creativity and also significant mediation of organizational creativity between KM process intention of employees and organizational performance.

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