



OPEN ACCESS

EDITED BY

Waseem ul Hameed
The Islamia University of Bahawalpur,
Pakistan

***CORRESPONDENCE**

Subtain Abbas
subtain006@gmail.com

SUBJECT

Banking

RECEIVED 17 February 2022

REVISED 15 May 2022

ACCEPTED 01 June 2022

PUBLISHED 30 June 2022

CITATION

Abbas, S., Madni, M., & Razzaq, N. (2022). The relationship between Knowledge Management, Psychological Empowerment, Organization Learning Capability and Innovation Performance in the Private Banking Sector. *Journal of Banking and Social Equity*, 1(1), 47–60.

<https://doi.org/10.52461/jbse.v1i1.1701>

JBSE



DOI



ACADEMIC PAPER

The relationship between knowledge management, psychological empowerment, organization learning capability and innovation performance in the private banking sector

Subtain Abbas^{1*} | Muhammad Madni² | Nimra Razzaq³

^{1*} Institute of Business, Management and Administrative Sciences (IBMAS), The Islamia University of Bahawalpur (IUB), Pakistan.

Email: subtain006@gmail.com

² The City College, Bahawalpur, Pakistan.

Email: muhammadmadni9@gmail.com

³ The Government Sadiq College Women University Bahawalpur Pakistan (GSCWU), Pakistan.

Email: nimrarazzaqiub@gmail.com

ABSTRACT

The main objective of this research project is to describe the innovational performance in private banking sectors within the boundaries of the Bahawalpur Division and explore the determinants of innovation performance (IP). The target population is private banking sectors from three districts: Bahawalpur, Bahawalnagar, and Rahim Yar Khan. Data were collected using the questionnaire in which the Likert scale was employed. Partial Least Square (PLS) was applied for data analysis. It is concluded that knowledge management (KM) has a positive and significant relationship with IP and PE also has a positive and meaningful relationship with IP. Organisations must focus on enhancing the IP of their employees through enforcement of strategies that include practices of KM and enable the employees to be psychologically empowered.

KEYWORDS

Knowledge Management, Psychological Empowerment, Organization Learning Capability, Innovative Performance, Organization Learning Capability, Banking Industry.

1. INTRODUCTION

Innovation is a vital aspect of the development of any organisation. Innovative ideas and techniques play an essential role in the progress of any country. Having an inventive national framework in a nation is one of the most significant pointers suggesting the degree of development potential. Effective and proficient organisations try to make the best use of resources to maintain their supremacy. One crucial source to achieve that is knowledge management (KM) which is intended to get, share and apply knowledge. Knowledge must be one of the authoritative source's organisations need to have. Considering the adequacy of accomplishing the goal of KM, different elements must be kept in mind, such as information gathering, storing, sharing and applying. It is usual for organisations to focus on mediations at the administrative level, introduce innovation, and reach zenith. The significance of KM



different procedures can be adopted by perceiving their effect on numerous factors as found in KM literature (Achrol, 2011; Behnam et al., 2020; Latansa, Adi, & Rohman, 2019; Omar et al., 2020; Simonin, 1999; Yang, Chen, & Wang, 2012). Organisational maintainability can be a spring of chance for organisations, resulting in serious execution. Innovation isn't just significant for a country's economy, but it is also essential for the organisation to maintain their upper hand. An ongoing examination indicated that esteem is necessary for firms in the market economy, while advancement is an instrument to incentivise the firm. Over the ongoing years, the stop of monetary development has been because of low work efficiency. Pakistan is trying to introduce an innovative approach for the future development stage, following rising nations, like Malaysia and Thailand, targeting financial improvement right now. The development exercises are about new techniques and administrations and include new business strategies, processes and administrative models. As it is explored by previous research that innovation assumes a significant job in the drawn-out endurance of organisations. Innovation exercises in the organisation can assist with expanding critical thinking processes and raise the organisation's efficiency by making new thoughts, arrangements, procedures, and techniques adjusted according to the pattern of modern society. For assembling companies, advancement can improve workers' working capability and abilities.

IP in private banking sectors requires improved and advanced knowledge and application. Viable and proficient organisations look to use each source that maintains an upper hand in their competitive environment. One critical source to achieve this upper hand is KM intended to secure, disperse, share and apply. KM has additionally been uncovered that little consideration has been paid to reveal the knowledge sharing practices. Knowledge must be one of an organisation's administrative sources. Considering the adequacy of accomplishing the goal of KM, different elements must be kept in mind, such as information gathering, storing, sharing and applying. It is usual for an organisation to focus on intercessions at the administrative level, innovation, and connections to acquire a worth, corresponding with the confidence in the requirement for successful administration. Since the intensification of KM, innovation is occurring progressively in business. Business firms seriously consider human resource development as an accomplished goal. Administrations of inventive organisations have continuously been in touch with an ongoing insurgency by clients' needs, necessities, and requests through the information-based system. KM and mental strength are unique factors for business organisations. Primarily, researchers opine that mental strengthening and a strong culture for developing human resources need time. Business firms look to construct a neighbourly information technique, which encourages them to share, transmit, and reuse significant bits of knowledge. Momentarily, business organisations present strategies for valuable information sharing and methods of advancement day by day to upgrade inventiveness, development, and business execution. The procedure of advancement in a business organisation vigorously depends on the accessibility of information.

Thus, this research attempts to minimise the research gap and will glance into the innovational performance of banking sectors picking its KM, PE and learning capability consequences. This research will also include the areas that have not been inquired about within the viewpoint of Bahawalpur banking sector personnel. The researcher will keep the present study's view of organisational learning capability's moderating variable. Finally, the main objective of this research project is to describe the innovational performance in private banking sectors within the boundaries of the Bahawalpur Division and explore the determinants of IP.

2. LITERATURE REVIEW

2.1. Relationship between KM and IP

Each kind of knowledge that is achieved, made, and spread is essential to be supported by approval and putting away knowledge; in any case, a business is perpetually at risk for unexpectedly disremembering to get information underscored that an undertaking puts a great deal of effort into keeping it imaginative, guaranteeing inventiveness and accomplishing profound supportable benefits if it doesn't store its basic information in an appropriate spot. Such a framework or site is likewise required to acknowledge improved aftereffects of information the board for other supportable developments. Writing identified with information refers to that information arrangements, and methodologies affect a business'



presentation using their capacities to improve and continue. In their systematic research of New Zealand organisations, authors presumed that organisations utilising executive techniques were moderately creative and had a superior feasible financial execution. This examination finds regarding accomplishing information about the market, for instance, was essential for empowering oddities that best suit client needs. Information the executive's procedure impacts a proper firm execution by upgrading its creative capacities and aptitudes.

Hypothesis 1: KM has a significant on IP.

2.2. Relationship between PE and IP

The idea of empowerment has gained much popularity in the administration field in the most recent decades. The objective of strengthening administration is to "enable" workers; for example, the designation of dynamic leadership and the arrangement of expanded access to data and assets for people at lower levels of the organisation will improve IP. Ability can be characterised as a person's confidence in his ability to perform activities with aptitude. Self-assurance reflects self-rule over the inception and continuation of work conduct and procedures; settling on choices about work techniques, pace, and exertion are models. Effect alludes to how much an individual can impact vital, managerial, or working results at work.

Undertaking inclusion through strengthening builds a unique feeling of help and inherent inspiration and gives positive work mentalities. Mental strengthening, then again, was portrayed as situated in four discernments that influenced an employee's inborn impulse, in particular importance, ability, self-assurance and effect. This means a fit between a work objective or reason and a person's standards, qualities and convictions. Fitness can be characterised as confidence in performing activities with expertise. Self-assurance reflects self-sufficiency over the inception and continuation of work conduct and procedures; settling on choices about work strategies, pace, and exertion are models. Effect alludes to how much an individual can impact key, authoritative, or working results grinding away. For a considerable time, specialists have tried to distinguish the executive's styles fitting for making a stable hierarchical condition for advancement. A few creators recommend that strong, participative, and community-oriented administration styles are viable in empowering development, and some others distinguish transformational board style as the perfect style for advancing advancement. In their investigation, additionally it is clear from the prior studies that strengthening was decidedly identified with help for advancement, while they discovered a negative connection between strengthening and hierarchical development. They clarify this finding with the impacts of relevant factors. Mental strengthening should cause individuals to feel they have a specific level of independence, feel less obliged by rule-bound angles and self-successful in authorising their work; and in a mix of those highlights empower individuals to be inventive. PE should cause individuals to feel they have a specific level of self-sufficiency, feel less obliged by rule-bound perspectives and be self-powerful in establishing their work; and in a mix of those highlights empower individuals to be inventive. In an exploration led by past study, it was yielded that fruitful use of strengthening was significant for new item execution and development. Additionally, results of a past study demonstrate that better participative administration that brings about mental strengthening would prompt higher advancement, better performance and profitability. In addition, significant results of mental strengthening, such as shared trust and expanded cooperation, are substantial variables for organisational development.

Additionally, it is also exhibited in a past study that a solid positive relationship between strengthening and advancement ability for small and medium measured ventures. As a rule, employees with high mental strengthening adopt an increasingly proactive strategy toward forming and impacting their workplace. In that capacity, empowerment is relied upon be decidedly identified with authoritative advancement. Having a feeling of authority over what to do and how to accomplish one's work would upgrade individuals' limit concerning inventive conduct. Moreover, late research has discovered that cooperation in dynamic procedures and sharing data throughout the organisation reinforced an organisation's advancement capacity and development culture.



In an exploration led by a prior study, it was produced that fruitful utilization of strengthening was significant for new item execution and advancement. Better participative administration that brings about mental strengthening would prompt higher development and better performance and efficiency. In addition, significant results of mental strengthening, for example, shared trust and expanded cooperation are essential variables for organisational advancement. For the most part, employees with high mental strengthening adopt an increasingly proactive strategy toward forming and affecting their workplace. Accordingly, strengthening is relied upon be decidedly identified with hierarchical development. Having a feeling of command over what to do and how to accomplish one's work would upgrade individuals' limit regarding inventive conduct. Supporting this thought, in an exploration directed in Australia, according to the results of a past study, strengthening and advancement were emphatically connected. Moreover, ongoing examination has discovered that interest in dynamic procedures and sharing data throughout the organisation fortified the advancement ability and development culture. Therefore, we hypothesized:

Hypothesis 2: PE has a significant impact on IP.

2.3. Moderating Effect of Learning Capability on the Relationship between KM and IP

Learning capability (LC) can be conceptualised as "an organisation's capacity to gain from inner and outer sources and to alter or adjust its conduct to mirror the new psychological circumstance, with the end goal of improving its performance". Thus, this investigation proposes five fundamental measurements that speak to LC: receptiveness and experimentation, hazard taking, communication with the outside condition, discourse and collaboration, and participative dynamic. While transparency and experimentation can be characterised as "the degree to which new thoughts and proposals are taken care of and treated thoughtfully", hazard taking can be comprehended as "the resilience of equivocality, vulnerability, and mistakes". The degree of "the connections that a firm keeps up in its quick condition" is characterised as collaboration with the outside condition, and discourse implies a supported aggregate request or a fundamental procedure that upgrades correspondence and permits individuals to see the shrouded implications of words. The last element of LC, participative dynamic, alludes to "the degree of impact that workers have in the dynamic procedure". In this manner, the estimation of LC will be founded on these measurements. In writing, the job of LC on the connection among KMC and advancement execution is conceptualised as LC encourages KMC coming about to higher development execution. Advancement infers "the age and usage of new thoughts, procedures or items". New thoughts can be made through KMC that incorporate the procedures of creation, move, mix and utilisation of further information. As LC measurements, while transparency and experimentation alongside exchange and cooperation open people to a more prominent assortment of bizarre thoughts and increment interior gathering attachment and coordination, participative dynamic builds contribution and pledge to learn and engenders individuals from an organisation to grow new thoughts.

Moreover, hazard taking is likewise fundamental for the age of new thoughts and ought to be endured. In this manner, age and the use of further information and ideas can be activated through inward learning systems. The outer discovery that gets from collaboration with the outside condition impacts KMC. Foundations of coalitions, techniques, innovation moves, and R&D coordinated efforts with colleges and research foundations may empower firms to acquire new information and thoughts. Like this, with its multi-dimensional nature, LC assists firms with producing and installing new ideas and information into authoritative procedures by encouraging the KMC. Therefore, it is proposed that:

Hypothesis 3: LC significantly moderates the relationship between KM and IP.

2.4. Moderating effect of learning capability on the relationship between PE and IP

Earlier research proposes that organisational learning affects item IP (Duque-Grisales et al., 2020; Kang, Hwang, & Park, 2016; Kim, Lim, & Yoo, 2019; Muñoz-Pascual & Galende, 2020; Putra et al., 2020). A past study comprehended innovation as an organisational learning procedure and cases that coordinating



the organisation towards learning encourages advancement viability and effectiveness. PE has an intervening impact on the corporate environment (input) and subsequent behaviours (output). Almost certainly, the more employees see an organisation as giving nonstop learning chances, strengthening, framework organisation, and acute administration, the more probable they will be mentally joined to their organisation. An exploration led by a prior study among workers of Tarbiat Modares University in Iran demonstrates a solid relationship between's hierarchical learning and strengthening.

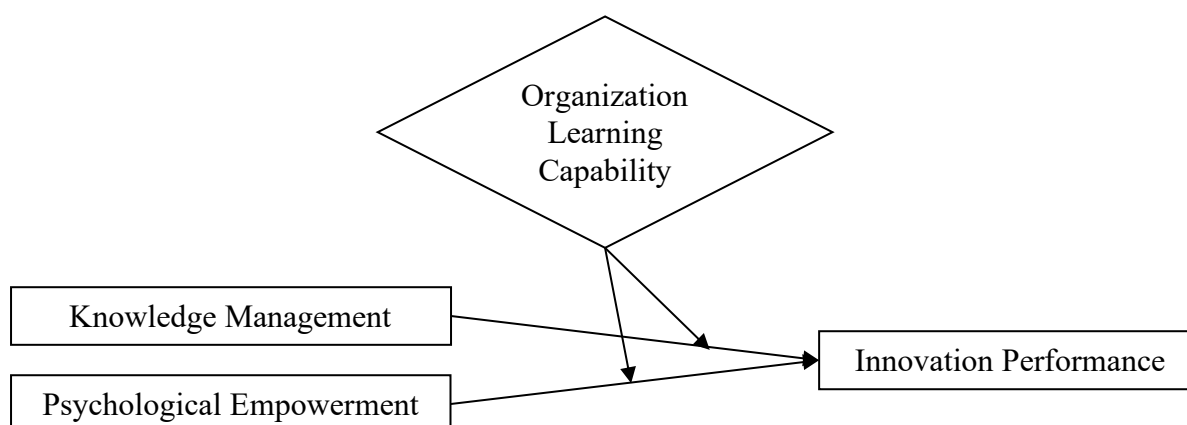


FIGURE 1 Theoretical Framework.

According to the results of a past study it is clear that an organisation's learning direction as the authoritative exercises of making and utilising information is significant to improve the upper hand. Their investigation underscored the significance of learning direction and connected it with development. By inspecting advancement execution instead of by and large firm execution, we abstain from jumbling the impact of other decisive moves that don't have a place with the OLC and development space or may contribute differentially to generally speaking execution. Also, on the opposite side, mental strengthening has an impact on the hierarchical condition (input) and ensuing practices (yield). The more employees see an organisation as giving nonstop learning chances, strengthening, framework organisation, and acute administration, the more probable they will be mentally connected to their organization.

Hypothesis 4: LC significantly moderates the relationship between PE and IP.

3. RESEARCH METHODOLOGY

The current research aims to explore the determinants of Innovational performance in private banking sectors in Bahawalpur, Pakistan. The present study empirically determines the relationship between the independent and dependent variables by developing and assessing the hypotheses. The present study is a descriptive survey that reveals the impact of KM and PE on IP. According to a past study, a descriptive study is an essential exploration that does not solve the problem or apply the results. Descriptive research is suitable for a clear explanation of population and circumstances.

First, the researcher determines the research variable through the independent variables. The present research variables are KM and PE. The dependent variable is IP, and the moderating variable is learning capability. The research strategy is a survey; to collect the primary data resources and adopt a questionnaire from relevant studies. The current study collected the data one time, so cross-sectional research. There are two types of methodologies involved, time horizon, which is longitudinal research and cross-sectional research.

The target population is private banking sectors from three districts: Bahawalpur, Bahawalnagar, and Rahim Yar khan. The cluster sampling technique was used for this study based on the advice of Shafique (2017), Shafique and Habib (2020), Shafique and Khan (2020a); Shafique and Khan



(2020b), and Shafique and Siddique (2020). Therefore, the researcher used the convenient sampling method to collect the primary data. The rule of thumb determines the sample size of this research; there are four variables in this study. The estimated sample size was 160, but 365 questionnaires were floated to collect the responses from different bankers based on the works of Ahmad, Shafique, and Jamal (2020); Comrey and Lee (2013); Imran et al. (2021); Shafique (2017); Shafique and Habib (2020); Shafique and Khan (2020a); Shafique and Khan (2020b); Shafique and Siddique (2020). The first part of the questionnaire consisted of the Demographic information of the respondents. The second, third, fourth, and fifth parts of the questionnaire consisted of questions about IP, KM, PE, and organisational learning capability, respectively, on the 5-Point Likert scale from strongly disagree to strongly agree (Ahmad et al., 2020; Albassami et al., 2019; Dahri et al., 2019; Hameed et al., 2018; Hameed et al., 2021; Hamid et al., 2019; Hassan et al., 2020; Ul-Hameed, Mohammad, & Shahar, 2018; Ul-Hameed et al., 2019).

4. DATA ANALYSIS

4.1. Demographic Profile

Table 4.1 shows that 47.6 of the respondents were male, 52.4 were female, the majority of the respondents, about 58.7%, had master qualifications, while 34.9% had bachelor's degrees and the remaining 6.3% had PhD qualifications. The third part of the table shows the income of respondents 46% of respondents had 20000-30000 thousand income about 27% respondents had 30000-40000 thousand income and 7.9% respondents had 40000-50000 and remaining 19% respondents were above 50000 income.

TABLE 1 Respondents' Demographic Profiles

Demographic Profile	Frequency	Percentage
Gender		
Male	60	47.6
Female	66	52.4
Total	120	100
Qualification	Frequency	Percentage
Bachelors	44	34.9
Masters	74	58.7
Phd	8	6.3
Total	120	100
Income	Frequency	Percentage
20000-30000	58	46
30000-40000	34	27
40000-50000	10	7.9
50000-Above	24	19
Total	126	100

4.2. Identification and Treatment of Missing Values

TABLE 2 Missing Values Analysis

Variable	No. of Missing Values
Organizational learning Capability	0
KM	0
IP	0
PE	0
Total Missing	0
Total Data Points	0
Percentage Missed	0



After running the test in SPSS for identification of missing values, no missing value is found in the collected data because in making of questioner online, all questions were marked required/mandatory.

4.3. Normality Test

According to a prior study, normality is an essential assumption for multivariate analysis. If skewness and kurtosis cross the limits of normality, this becomes the reason for standard error estimates (Hair Jr et al., 2014). According to Hair, Ringle, and Sarstedt (2013), two tests are essential to check normality: the Kalmogorov-smirnov and Shapiro-wilk test. According to a recommendation about skewness and kurtosis, their acceptable threshold is +1 or -1. The following table contains the value of skewness and kurtosis of variables.

TABLE 3 Normality test of variable

Variable	Skewness	Kurtosis
KM	-0.566	
0.152		
PE	-0.735	
0.327		
Organizational Learning Capability	-0.591	
-0,006		
IP	-0.057	-0.423

The table shows that Skewness and kurtosis of all variables are between the range, which means data is usually distributed. Further, to check the normality of the dependent variable histogram has been drawn using SPSS.

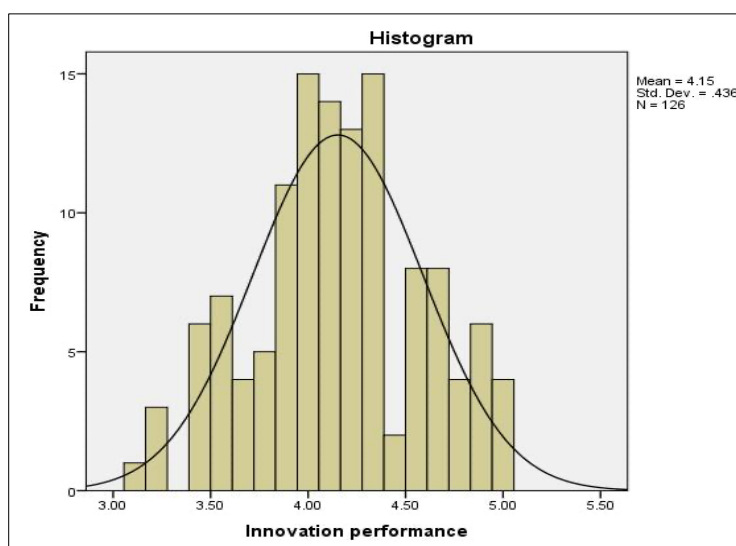


FIGURE 2 Innovation Performance

4.4. PLS Path Model Results

The outer and Inner models will evaluate the PLS path model, generally known as the two-step process. The adoption of the two-step process in evaluating and reporting the PLS path modelling is in line with previous studies (Hair et al., 2017; Hair, 2009; Hair et al., 2010; Hair et al., 2007; Hair et al., 2013; Hair et al., 2012; Hair Jr et al., 2016; Hair Jr et al., 2014; Henseler et al., 2014; Henseler & Fassott, 2010; Henseler, Ringle, & Sinkovics, 2009). All variables were found reflective constructs measurement models is evaluated for reflective constructs.



4.5. Measurement Model Results for Reflective Constructs

The current study used Smart PLS (Henseler et al., 2009). It is most popular data analysis tool (Henseler et al., 2014). Measurement model showing the factor loadings is given in Figure 4.3. Results are given in Table 4.4. All the loadings are higher than 0.5 which confirm reliability of items. Discriminant validity is given in Table 4.5. Additionally, composite reliability is given in Table 4.4.

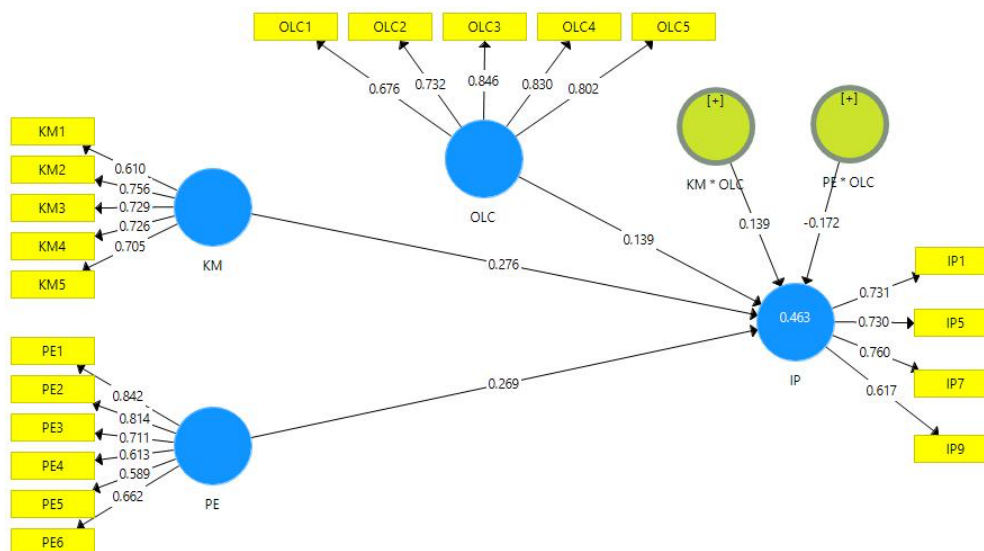


FIGURE 3 Measurement Model for Reflective Latent Constructs

TABLE 4 Indicators' Loadings, CR and AVE

Latent Variables/Indicators	Standardized Loadings	Composite Reliability	Average Variance Extracted (AVE)	
IP	IP1	.731	.803	.617
	IP5	.730		
	IP7	.760		
	IP9	.617		
KM	KM1	.610	.833	.610
	KM2	.756		
	KM3	.729		
	KM4	.726		
	KM5	.705		
PE	PE1	.842	.858	.613
	PE2	.814		
	PE3	.711		
	PE4	.613		
	PE5	.589		
	PE6	.662		
Organizational learning capability	OLC1	.676	.842	.608
	OLC2	.732		
	OLC3	.846		
	OLC4	.830		
	OLC5	.802		

The confirmation of reliability and validity confirm that the study can proceed for further analysis (Hair et al., 2013). Additionally, convergent validity was also assessed (Hair et al., 2013). According to Hair



et al. (2013), validity is important to confirm in PLS-SEM.

TABLE 5 Discriminant Validity

Latent Variable	2	3	4	5
IP	0.711			
KM	0.503	0.707		
OLC	0.419	0.379	0.78	
PE	0.547	0.44	0.494	.712

4.6. Evaluation of the Significance of Path Coefficients

The significance of path coefficients was evaluated using *t*-statistics and *p*-values obtained from the structural model of PLS-SEM using 5,000 bootstrapped samples. Therefore, Figure 4.4 and Table 4.6 below present the statistical estimates of the path coefficients for the structural model.

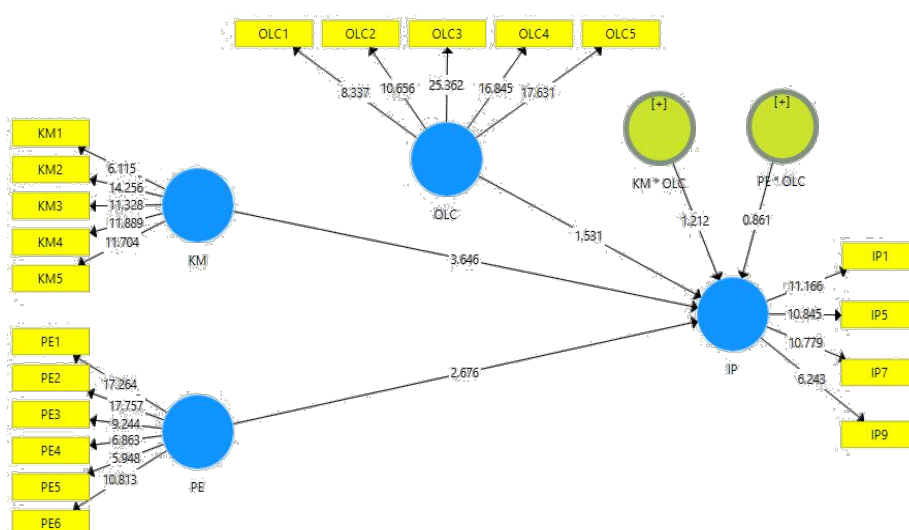


FIGURE 4 Structural Model of the Direct Effect

TABLE 6 Structural Model Results

Hypothesis	Relationship	Beta	S E	t-statistic	p-value	Findings
H1	KM -> IP	0.261	0.076	3.646	0.000	Supported
H2	PE-> IP	0.279	0.101	2.676	0.007	Supported
H3	KM*Organizational Learning capability -> IP	0.108	0.115	1.212	0.226	Not Supported
H4	PE*Organizational Learning capability -> IP	-0.029	0.200	0.861	0.389	Not Supported

4.7. Structural Model Evaluation – Direct Effect

In hypothesising the relationship between dependent and independent variables, H1 postulated that KM would have a significant positive relationship with the IP of the private banking sector of Bahawalpur. However, the results in Figure 4.4 and Table 4.6 showed that such a relationship was insignificant ($\beta=0.261$, $t=3.646$, $p=0.000$). H2 postulated that PE would have a significant positive relationship with the IP of the private banking sector of Bahawalpur. this hypothesis was supported ($\beta=0.279$, $t=2.676$, $p=0.007$). H3 postulated that organisational learning capability as moderator with the relation of KM and IP would have a not significant relationship of private banking sector of Bahawalpur. This hypothesis has values ($\beta=0.108$, $t=1.212$, $p=0.226$).



H4 postulated that organisational learning capability as moderator with the relation of PE and IP would have a not significant relationship of private banking sector of Bahawalpur. This hypothesis has values ($\beta=-0.029$, $t=0.861$, $p=.389$).

5. DISCUSSION AND CONCLUSION

The present research is aimed to analyse the impact of KM and PE on IP in the Banking Sector of Bahawalpur, Pakistan. Other significant experience, in any case, can connect practices or fundamental factors with outlook and is said to improve workers' contribution in learning. There is also a moderating role of organisational learning capability. The first question of the study is the impact of KM on IP? Findings from regression analysis show the significant positive effects of KM on IP. This indicates that KM significantly affects the IP of the employees of banking sectors in Bahawalpur. The second question of the study is the impact of PE on IP? This statistical analysis shows the significant positive effects of PE on IP. There is a solid positive relationship between PE and IP for both little and medium measured ventures. For the most part, employees with high mental strengthening adopt an increasingly proactive strategy toward forming and affecting their workplace. The third question of the study is how learning capability moderates the relationship between KM and IP? Empirical evidence from the survey shows the insignificant impact of organisational learning capability as a moderator between KM and IP. The fourth question of the study is how learning capability moderates the relationship between PE and IP? Empirical evidence from the survey shows the insignificant impact of organisational learning capability as a moderator between PE and IP. KM and PE are the crucial elements determining the amount of IP in the Bahawalpur banking sector. The study suggests that keeping in view the management of information and mental strengthening of employees of the banking sector in Bahawalpur can be more innovative and proactive.

In a nutshell, KM has a positive and significant relationship with IP, and PE also has a positive and significant relationship with IP. Contrary to this, organisational learning capability does not moderate these relationships. In this rapidly changing and dynamic business environment, there is always a need for innovation to keep up with the pace of the changing world. Businesses are always trying to gain a competitive advantage over their competitors, and nowadays, gaining innovation in terms of employees' performance is one of an organisation's core competencies. Thus, organisations must focus on enhancing the IP of their employees through enforcement of strategies that include practices of KM and enable the employees to be psychologically empowered.

5.1. Implications of the Study

The present study aims to analyse and determine the factors affecting IP in the banking sector of Bahawalpur. The recent study adds value to the previous literature on IP and its determinants (e.g., KM, IP). Secondly, this study is helpful for the practitioners and higher authorities to create an innovative version in the banking sector of Bahawalpur. Encourage KM and PE to create a creative environment. Empowering the employees psychologically is meaningful to improve their innovative performance. Management of information is also helpful for employees of banking sectors in this context. Also, this study has provided empirical evidence supporting the grounding theories on which this research was based. Apart from this, this research has also strength in determining the validity and reliability of the research instrument.

5.2. Limitations and Future Recommendations

There are some limitations for the current study, which address future research. The first limitation is that data in this study is collected from the employees of the banking sector of Bahawalpur, and the sample size is small; future studies can collect data from any other industry or locality and increase the sample size to achieve more fruitful results. The second limitation is that this study is cross-sectional; future studies can longitudinally conduct this research and use other sampling techniques. The present study identified KM and PE as determinants of IP. The prospective study can use other variables in this model



such as peer support, leadership styles, e.g., ethical leadership, transformational leadership etc. Also, this study uses organisational learning capability as moderating variable. Another study can come up with another moderating or use organisational learning capability as a mediator. Apart from these, other limitations of this study include a shortage of time and resources to research in a more productive manner.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

REFERENCES

- Achrol, R. S. (2011). Evolution of the marketing organization: new forms for turbulent environments. *Journal of marketing*, 55(4), 77-93. <https://doi.org/10.1177/002224299105500406>
- Ahmad, S., Shafique, O., & Jamal, W. N. (2020). Impact of perceived corporate social responsibility on banks' financial performance and the mediating role of employees' satisfaction and loyalty in Pakistan. *Journal of Accounting and Finance in Emerging Economies*, 6(3), 765-774. <https://doi.org/10.26710/jafee.v6i3.1361>
- Albassami, A. M., Hameed, W. U., Naveed, R. T., & Moshfegyan, M. (2019). Does KM expedite SMEs performance through organizational innovation? An empirical evidence from small and medium-sized enterprises (SMEs). *Pacific Business Review International*, 12(1), 11-22. http://www.pbr.co.in/2019/2019_month/July/2.pdf
- Behnam, M., Sato, M., Baker, B. J., Delshab, V., & Winand, M. (2020). Connecting customer KM and intention to use sport services through psychological involvement, commitment, and customer perceived value. *Journal of Sport Management*, 34(6), 591-603. <https://journals.humankinetics.com/view/journals/jsm/34/6/article-p591.xml>
- Comrey, A. L., & Lee, H. B. (2013). *A first course in factor analysis*. Psychology press. <https://doi.org/10.4324/9781315827506>
- Dahri, A. S., Hameed, W. U., Nawaz, M., Sami, A., & Bux Shah, S. K. (2019). Nurses' Job Satisfaction is Burned out by their Leaders and Stress. *Journal of Managerial Sciences*, 13(2). https://qurtuba.edu.pk/jms/default_files/JMS/13_2/13-158-171.pdf
- Duque-Grisales, E., Aguilera-Caracuel, J., Guerrero-Villegas, J., & García-Sánchez, E. (2020). Does green innovation affect the financial performance of Multilatinas? The moderating role of ISO 14001 and R&D investment. *Business Strategy and the Environment*, 29(8), 3286-3302. <https://doi.org/10.1002/bse.2572>
- Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial management & data systems*. <https://doi.org/10.1108/IMDS-04-2016-0130>
- Hair, J. F. (2009). *Multivariate data analysis*. <https://digitalcommons.kennesaw.edu/facpubs/2925/>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective*. New Jersey: Pearson Prentice Hall. https://www.researchgate.net/publication/237009923_Multivariate_Data_Analysis_A_Global_Perspective
- Hair, J. F., Money, A. H., Samouel, P., & Page, M. (2007). Research methods for business. *Education+ Training*, 49(4), 336-337. <https://doi.org/10.1108/et.2007.49.4.336.2>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long range planning*, 46(1-2), 1-12. <https://ssrn.com/abstract=2233795>
- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and



- recommendations for future applications. *Long range planning*, 45(5-6), 320-340.
<https://doi.org/10.1016/j.lrp.2012.09.008>
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European business review*, 26(2), 106-121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hameed, W.-U., Nadeem, S., Azeem, M., Aljumah, A. I., & Adeyemi, R. A. (2018). Determinants of e-logistic customer satisfaction: a mediating role of Information and Communication Technology (ICT). *International Journal of Supply Chain Management (IJSCM)*, 7(1), 105-111. <https://ojs.excelingtech.co.uk/index.php/IJSCM/article/view/1932>
- Hameed, W. U., Basheer, M. F., Iqbal, J., Nisar, Q. A., Meo, M. S., & Razzaq, S. (2021). Women Entrepreneurs and Microfinance Institutions: A Way to Create New Ventures. In *Handbook of Research on Nascent Entrepreneurship and Creating New Ventures* (pp. 211-227). IGI Global. <https://doi.org/10.4018/978-1-7998-4826-4.ch010>
- Hamid, S. N. A., Shahid, M. N., Hameed, W. U., Amin, M., & Mehmood, S. (2019). Antecedents of job stress and its impact on nurse's job satisfaction and turnover intention in public and private hospitals of Punjab Pakistan. *International Journal of Scientific & Technology Research*, 8(10), 129-137. <https://www.researchgate.net/publication/340279962>
- Hassan, S. G., Hameed, W. U., Basheer, M. F., & Ali, J. (2020). Zakat compliance intention among self-employed people: evidence from Punjab, Pakistan. *Al-Adwah*, 34(2), 80-96. <https://www.researchgate.net/publication/339054717>
- Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., Ketchen Jr, D. J., Hair, J. F., Hult, G. T. M., & Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational research methods*, 17(2), 182-209. <https://doi.org/10.1177/1094428114526928>
- Henseler, J., & Fassott, G. (2010). Testing moderating effects in PLS path models: An illustration of available procedures. *Handbook of partial least squares: Concepts, methods and applications*, 713-735. https://doi.org/10.1007/978-3-540-32827-8_31
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited. [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014)
- Imran, Z., Shafique, O., Sarwar, S., & Jamal, W. N. (2021). The impact of KM environment on KM effectiveness: through mediating role of knowledge sharing process in branch banking of Pakistan. *South Asian Journal of Management*, 15(1), 97-117. <https://doi.org/10.21621/sajms.2021151.06>
- Kang, S., Hwang, J., & Park, S. (2016). The effect of external knowledge search on IP: the moderating effect of knowledge protection and environment uncertainty. *KM Research*, 17(3), 117-136. <https://doi.org/10.15813/kmr.2016.17.3.006>
- Kim, C. Y., Lim, M. S., & Yoo, J. W. (2019). Ambidexterity in external knowledge search strategies and IP: Mediating role of balanced innovation and moderating role of absorptive capacity. *Sustainability*, 11(18), 5111. <https://doi.org/10.3390/su11185111>
- Latansa, M. Y., Adi, T. J. W., & Rohman, M. A. (2019). Analysis The Effect of Total Quality Management, Technology, and KM on Product Quality in Indonesia Construction Industry. *IPTEK Journal of Proceedings Series*, (5), 527-535. <https://doi.org/10.12962/j23546026.y2019i5.6426>
- Muñoz-Pascual, L., & Galende, J. (2020). Ambidextrous relationships and social capability as employee well-being: The secret sauce for research and development and sustainable IP. *International journal of environmental research and public health*, 17(9), 3072. <https://doi.org/10.3390/ijerph17093072>
- Omar, S. R., Ab Karim, S., Isa, S. S., & Omar, S. N. (2020). Enlivening the effect of tourists' knowledge and involvement on Malaysian heritage food (MHF) towards food tourism image in Malaysia. In *Destination Management and Marketing: Breakthroughs in Research and Practice* (pp. 268-290). IGI Global. <https://doi.org/10.4018/978-1-7998-2469-5.ch016>
- Putra, R. B., Yeni, F., Fitri, H., & Melta, D. J. (2020). The Effect Of Board Of Commissioners Ethnic,



- Family Ownership And The Age Of The Company Towards The Performance Of The Company LQ45 Company Listed In Indonesia Stock Exchange. *ADI Journal on Recent Innovation*, 1(2), 85-92. <https://doi.org/10.34306/ajri.v1i2.27>
- Shafique, O. (2017). *Impact of Micro-credit Financing on Women Empowerment and Poverty Eradication in Pakistan*. Asia e University. <https://online.fliphtml5.com/sppgg/zvow/?1596443468694>
- Shafique, O., & Habib, M. (2020). Over-Indebtedness of Rural Micro-credit Financing in Bahawalpur: An Impediment to their Social & Financial Mobility. *Journal of Accounting and Finance in Emerging Economies*, 6(2), 559-569. <https://doi.org/10.26710/jafee.v6i2.1254>
- Shafique, O., & Khan, M. (2020a). Factors affecting bankers' behavioral intention to adopt green banking: an empirical analysis of banks in Pakistan. *Journal of Business and Social Review in Emerging Economies*, 6(2), 835-843. <https://doi.org/10.26710/jbsee.v6i2.1258>
- Shafique, O., & Khan, R. M. N. (2020b). An Empirical Study on the Impact of Micro-Credit Financing on the Socio-Economic Status of Small Agriculturists in Pakistan. *Journal of Business and Social Review in Emerging Economies*, 6(3), 1051-1061. <https://doi.org/10.26710/jbsee.v6i3.1367>
- Shafique, O., & Siddique, N. (2020). The impact of microcredit financing on poverty alleviation and women empowerment: an empirical study on Akhuwat Islamic Microfinance. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(8), 548-562. <https://archives.palarch.nl/index.php/jae/article/view/3644>
- Simonin, B. L. (1999). Ambiguity and the process of knowledge transfer in strategic alliances. *Strategic management journal*, 20(7), 595-623. [https://doi.org/10.1002/\(SICI\)1097-0266\(199907\)20:7%3C595::AID-SMJ47%3E3.0.CO;2-5](https://doi.org/10.1002/(SICI)1097-0266(199907)20:7%3C595::AID-SMJ47%3E3.0.CO;2-5)
- Ul-Hameed, W., Mohammad, H., & Shahar, H. (2018). Retracted: Microfinance institute's non-financial services and women-empowerment: The role of vulnerability. *Management Science Letters*, 8(10), 1103-1116. <http://dx.doi.org/10.5267/j.msl.2018.7.001>
- Ul-Hameed, W., Mohammad, H., Shahar, H., Aljumah, A., & Azizan, S. (2019). The effect of integration between audit and leadership on supply chain performance: Evidence from UK based supply chain companies. *Uncertain Supply Chain Management*, 7(2), 311-328. <http://dx.doi.org/10.5267/j.uscm.2018.8.001>
- Yang, L.-R., Chen, J.-H., & Wang, H.-W. (2012). Assessing impacts of information technology on project success through KM practice. *Automation in construction*, 22, 182-191. <https://doi.org/10.1016/j.autcon.2011.06.016>





© 2022 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license. The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

