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Innovation Practice as a Mediator between Organizational Learning and Organizational Performance in Case of Flower Firms in Ethiopia

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Abstract: Organizational learning (OL) and innovation practices (IP) have an impact on firm performance. To enhance their performance and persist in running, firms must learn, share knowledge and create new ideas. These practices can also benefit the environment in the floriculture industry through waste reduction, better utilization of resources and the introduction of new technologies. Organizational performance (OP) was selected as the outcome variable and the mediating variable was IP in the mediation role in nexus of OL on OP among floriculture firms in Ethiopia. The data collection method used was quantitative with descriptive and explanatory research designs. 415 questionnaires were sent out, with 391 of those being returned. The proposed nexus and mediation were tested using SEM. Outcomes observed that OL meaningful influences IP. IP also has a positive influence on OP, but significant. But OL has not a significant direct impact on OP. It also indicates that the nexus in OL and OP is completely mediated by the presence of IP. The study recommends to floriculture companies to increase the strength of OL and IP to enhance OP. Innovation, improved resource utilization and sustainable growth are possible with effective knowledge sharing and the use of new technologies.

Keywords: *Organizational Learning, Knowledge Acquisition, Innovation Practice, Knowledge Sharing, Organizational Performance, Knowledge Transfer*

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Introduction

What is actually true, is that the companies that invest in the organization learning (OL) and dissemination of their knowledge are more inclined to create new and innovative products that reinforce their strategic position [1]. Likewise, knowledge acquisition, sharing and dissemination in and between enterprises play an important role in influencing enterprise innovation practices [2,3].

Floriculture is one of the relatively new branches within the agriculture industry, mainly engaged in the cultivation and production of flowers for decorative and commercial purposes. The sector has succeeded in addressing a number of challenges at both international and national levels by learning how to do things differently and innovatively [4, 5, 6]. Strategically positioned in East Africa, Ethiopia has become one of the biggest flower exporters in Africa. But the issues that are still encountered by the flower industry are due to low knowledge, low learning process and limited innovation capacities [7].

All floriculture companies require ongoing learning and the development of new concepts to increase their competitiveness and cope with environmental issues. Knowledge sharing and the creation of new ideas can help firms make the best of their resources and help achieve environmental sustainability and organization performance (OP) [8]. These are also positively correlated with firms' innovation practices (IP) [9]. The results of previous studies on these and related issues have been inconclusive, with some showing positive effects of OL on OP by using innovation practices, while others have found negative results.

The organizational learning (OL) process such as acquisition, sharing, diffusion, analysis, willingness to learn, and opportunities for individual development [10] can affect the performance and competitiveness of firms directly or indirectly. It is found from the studies reported in [11] and [12] that organizational learning had weak effect on firm outcomes, when knowledge acquisition, knowledge distribution, skill development, learning capabilities and the willingness to take learning related risks are weak. However, [8] reported that there was a meaningful influence of OL on OP. In a similar way, [13] found that organizational learning efforts are sometimes reported to affect organizational performance, in this case limited to implementation of innovation, but it was not statistically significant. The results were similar in [10] and [14].

But the innovation practice of a company can also drive changes in organizational performance [15]. Thus, it is expected that innovation practices would affect the creation and manufacturing of innovation products. Innovation activities can have limited benefits if taken as a single factor, while knowledge acquisition, knowledge dissemination, communication and organizational commitment to learning can have a contribution to organizational performance as per [16]. In addition, [17] discovered that the innovation practices have an indirect impact on organizational performance by the identification of new opportunities, products and processes. Likewise, [18] and [19] observe that IP had a direct and indirect consequence on firm outcomes.

While organization learning has been an inevitable, but less focused on the nexus in OL, IP and OP in floriculture firms that are experiencing performance-related problems. These relationships have been considered in other organizational settings. For instance, [20] examined the leadership of Nigerian banks SEM with the help of SmartPLS3. In the same vein, [21] analysed 156 CEOs from well-known industries in Spain by applying SEM and SmartPLS. Based on the literature, the researchers analyzed 157 banks and financial institutions in Indonesia with SEM and SmartPLS in study [13] and 57 members of the Federal Government

of Indonesia with ordinary least squares (OLS) in study [24]. Overall, the studies indicate that organizational learning could be directly and/or indirectly significant for OP, IP could act as a mediating mechanism.

Based on the evidences, OL and IP effect on OP of floriculture companies is unexplored. This study, therefore, investigates the nexus in OL and OL of floriculture enterprises in Batu and explores the IP as a mediator in the relationship between OL and OP of the floriculture enterprises in Batu, Ethiopia.

Objective are:

- i. How does the OL affect OP in the study area floriculture firms?
- ii. How does organizational learning influence the innovation practices of the floriculture companies in the Batu area?
- iii. Is there a significant innovation practice moderation effect between OL and OP of floriculture companies in Ethiopia?

Literature Review

Theoretical Context and Hypothesis Synthesis

The progress of Ethiopian industrial parks reveals that majority of textile industrial parks are government possessed. Industrial parks for leather and pharmaceuticals as well as agro-processing are also available in the country [27, 28]. In 1997 small-scale private enterprises such as the Meskel Flower and Ethio-Flora were started.

The floriculture industry has since increased at a fast pace. By 2025, 251 investors have been licensed by the Ethiopian Investment Agency to operate in the sector. The area under flower production has grown from approximately 922 hectares in 2008 to over 2,500 hectares in 2024. The improvement of knowledge acquisition, sharing, knowledge transfer and commitment to learning [4] is inevitable for sustainability. The number of flower farms that are active, also rose to over 80, and improved innovation practices (IP) [5] were found.

Floriculture also is an important sector in Ethiopia's export of flowers. The sector has been responsible for the country's status as the second biggest flower exporter in Africa and the seventh biggest in the world, as well as foreign exchange earnings and its GDP contribution [29, 30].

Theoretical Lenses

The PRISMA approach was used for identification of the theoretical lenses. Theories that were relevant were first identified from research articles and books. Second, theories were carefully chosen by means of exclusion and inclusion parameters for this study. The assortment was founded on the subsequent standards: recent use, frequency of use, relevance, simplicity and eligibility. Three theories were chosen.

Organizational Learning (OL) Theory is a theory on learning at the individual, group and organization level. It encompasses the production, dissemination and utilization of knowledge to enhance organizational performance (OP) [31]. Various levels of OL activities facilitate the sharing and spread of knowledge in the organization [32, 8].

Institutional theory is an explanation of the way in which firms satisfy their operations through their internal capabilities and knowledge [33]. The theory also highlights the need to build and utilize internal resources [34] and [35]. Some organizations may implement OL practices like

knowledge sharing, acquisition and transfer to enhance innovation and organizational activities [36].

Stakeholder theory posits that companies must take into account not only the interests of their stakeholders but also how they affect stakeholders' welfare as they pursue to enhance OP [18] [37]. Value and OP can be added by resources and support from the stakeholders. The expectations and pressures of stakeholders have also proven to be a driver of innovation practices which firms must manage well [38, 39].

OL and IP

For survival firms need to use organizational learning (OL) and innovation practices (IP) to address social and environmental issues and improve organizational performance (OP). Knowledge sharing contributes to productivity and sustainable economic and environmental growth [40, 12].

The first phase of the Knowledge Absorption (KA) is knowledge acquisition. It's about the capability of the company to discover and acquire new information from internal and external resources [58]. This understanding can assist companies in enhancing their IP and in finding new opportunities [10]. Knowledge sharing is also a means of linking knowledge flows at different levels in an organization [41, 42]. Effective OL propose creative thoughts, brainstorming, training, and technological improvements.

Knowledge Sharing (KS) is discussion of information, thoughts and working practices between people in the workplace. It can directly contribute to the innovation of the firm [45, 46]. It also can indirectly influence innovativeness [47, 42, 21]. Knowledge sharing is a mix of tacit and explicit acquaintance. This process is knowledge distribution and diffusion for innovation [48, 49].

Knowledge transfer contributes to OL. It assists companies to apply current knowledge and discover new opportunities [50, 51]. Better innovation practices can be achieved through the exchange and dissemination of new knowledge. Firms must digest and synthesis information to synthesis original ideas, technologies and offerings [10].

There is a need for effective training processes for innovation, particularly in firms, especially startups. Staffs must know, share and implement new knowledge. This has a positive correlation with innovativeness practices [42,52, 53]. Yet, other studies reported weak positive effects [23]. In general, knowledge collection, sharing and transfer can facilitate the exploration of new opportunities, development of ideas, enhancing creativity and generating offerings in the firm. Thus, present study proposes the following hypotheses:

H1: OL has a foremost inspiration on OP.

H2: OL has a substantial influence on IP.

Innovation and OP

Innovation is the capability to acculture through unexpected changes in dynamic environments [54]. It also includes the continuous scanning, filtering and exploration of new products and processes that can be used to identify and develop opportunities to increase firms' profitability [52]. Innovative practices (IP) assist companies to stay competitive. Customer satisfaction is another key for the success of the firm. According to [17] and [48] IP is the capacity of developing new and novel products and solutions. To enhance the management skill and

performing ability, the firms should always focus on the improvement of their practices and capability of innovation [49, 55, 57].

Innovative technologies can be used to enhance the efficiency of business operations. It can also enhance the its potential to generate new product and services [43, 44, 45, 46]. New and innovative products and services can contribute to short-term productivity and long-term sustainable development. Modern technologies can help to cut down on costs, increase efficiency, and stimulate innovation [45]. Thus, new technologies, products and services can contribute to the growth and financial performance of firms.

H3: IP has influence on OP.

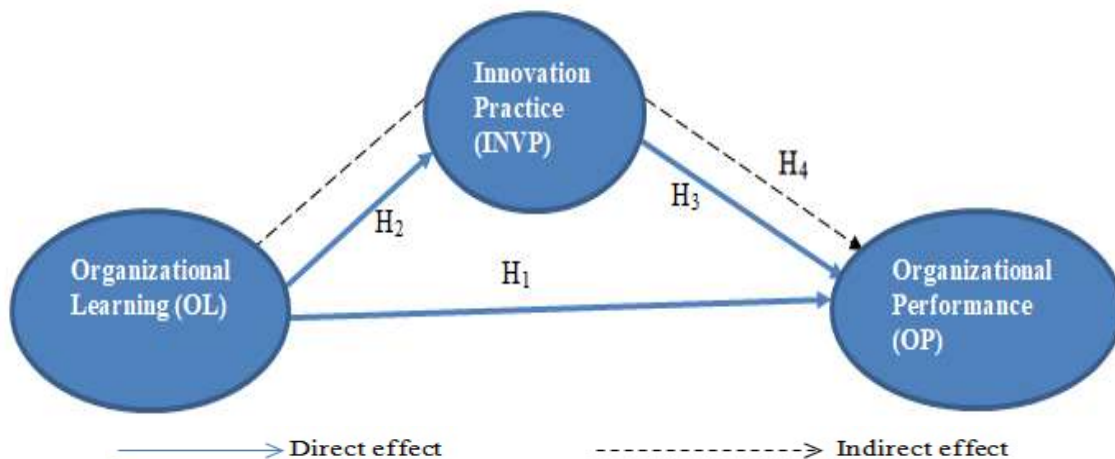
Mediation of Innovation in OL and OP

OL is an important factor in firm growth. It is the learning, sharing and utilization of knowledge. Such activities can foster innovative behaviour [2]. New ideas in the firm can be generated to tackle work barriers, creating new solutions [51]. Business people also seek information and knowledge to satisfy customers and increase sales and profits. This renders a need for improvement in OP and competitiveness by IP [21]. Companies that gain knowledge from various external sources are able to spot and capitalize on new opportunities. This may directly and indirectly impact IP and the outcomes of businesses [29]. OL also fosters creativity in relation to new knowledge and processes of work and creation of new products. These activities can enhance IP and at best indirectly contribute to firm efficiency [10, 30]. Some other earlier studies reveal that there is an indirect correlation between OL and firm productivity [52, 53, 56]. Thus, OL can impact the success of a company via IP.

H4: IP mediates in OL and OP

Proposed Model

Figure 1: Proposed model



Source: Literature analysis

Methods and Materials

Research Approach and Design

Quantitative view inspects opinions, attitudes, behaviors with related measurable factors. It helps test or challenge beliefs about a particular issue [46]. It also examines relationships and correlations among different variables [48]. The quantitative approach focuses on objectivity, generalization, and accurate measurement using statistical methods [50]. It helps identify

patterns and explain the nature of the nexus. Mainly its focus to apply findings to a larger sample or population [51]. The approach uses mathematical and statistical methods to analyze data. It can be based on experimental or non-experimental methods. Based on these principles, this study used a quantitative approach. It used a cause and effect and descriptive style. SEM was used to examine the relationships among OL, IP, and OP. SEM combines features of factor analysis with linear regression [47]. It helps test relationships among several variables at the same time. It can also test hypotheses, estimate multiple relationships, and assess the overall model fit.

Population and Sample

A suitable sample was taken to represent the study population. Batu has a lot of flower factories. In the area, skill training, teamwork and the transfer of knowledge are common. Thus, probability sampling was employed. Samples were taken from five major flower production areas having a large number of flower factories [11]. About 20,000 regular and contract workers in the flower industry around Batu were the study population. Also, the sample size was taken into account, as it corresponds to the number of variables in the proposed SEM model with AMOS software. One rule of thumb proposes, the sample size be approximately 10 times the count of variables [21]. Most studies suggest that 300 to 500 is sufficient. In addition, Cochran's (1977) method was employed to derive the final sample size, to ensure that an adequate sample and to accommodate for possible non-response.

$$n_0 = \frac{Z^2 pq}{e^2}$$

n_0 is the optimum sample size here. The confidence level $Z = 1.96$. The both estimated proportion and $1 - P(q)$ will be 0.5. Margin of error $e = 0.05$. Using these values, n_0 was calculated to be 384.

So, corrected formula is

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

In this, n represent sample size and N is population. total of 377 staff members identified with random sampling. Lotteries were used to select the fair ones. An extra 10% (38) were added to allow for non-response. Hence, questionnaires were sent to 415 samples of staff. Self-administered questionnaire was implied to found the primary data. Structured instrument was administered to the employees of flower production in the Batu area of Ethiopia.

Research Instrument

Researchers standardized and tailored the survey questionnaire based on confirmed proxies in other studies. The 6 items from [45] were used to measure OL. A 6 item inventory from [47] was used to determine IP. The 6 items in [8] and [9] were used to measure OP. All instruments were rated on likert scale (5-otion). The responses were given on a scale of “strongly disagree” to “strongly agree.” All 18 items were used in the study. All items were kept for further analysis as they had good factor loading.

Reliability and validity statistics

The variables dimension was analyzed using Exploratory Factor Analysis (EFA based on factor loadings. PCA with varimax rotation was used in the analysis. EFA assisted in the reduction of items and the discrimination among the variables. Items with a cross loading more than 0.4 and loadings of determinants bigger than 0.4 were retained. Those that have loadings of less than 0.4 have been removed. Thus, OL3 and OL2 were discarded from OL. Table 2 indicates that OP4 and OP5 have been removed from OP.

Sample Adequacy Test

To check for the appropriateness of data for factor analysis KMO test was used. The KMO value ranges from 0.8 to 0.9, which implies that the sample is adequate while a value near 0.9 means that the sample is excellent [16]. KMO valuation presented in Table 2. The Bartlett's test was found appropriate ($p < 0.001$). The KMO lies from 0.804 to 0.859. The results show that the data were appropriate for a factor analysis. Items with factor loadings < 0.5 were removed and loadings of remaining items lies 0.612 to 0.963. Typically factor loadings of > 0.5 are good values for representing latent variables. The following table lists the results (Table 2).

Confirmatory Factor Analysis (CFA)

The dimensions of constructs were tested with CFA to confirm by using AMOS. Each of the constructs was analysed independently using CFA. The model fit criteria were assessed for each construct. The results satisfying the model fit requirements were kept for further analysis (Table 1). CFA was also used to assess convergent and discriminant validity.

Table 1: Model Fitness

Model Fitness Index	Threshold	OL	IP	OP
Chi ² /DF	≤ 3.00	1.842	1.675	2.306
GFI	$\geq .95$	.981	.986	.990
AGFI	$\geq .95$	.967	.972	.964
TLI	$\geq .95$	.988	.991	.996
FCI	$\geq .95$	.982	.987	.998
RMR	$\leq .05$	.018	.015	.011
RMSEA	$\leq .05$	.032	.028	.052
P Value	$\geq .05$	.074	.086	.057

Source: SPSS, 2023

The indices of model fitness in table 1 were used to give an evaluation of the projected model and its goodness of fit. Its overall fit is depicted by Chi²/DF. Its fitness is evaluated by GFI, AGFI. TLI bases its comparison with a "baseline" model and found fit. Overall Model fit is indicated by FCI. The difference amongst the observed and estimated value is shown as RMR. RMSEA is an approximation error of the model. P Value indicates the future model is a decent fit. In general, these indices were used to determine the applicability of the models for further analysis.

Table 2: Convergent Validity Test

Construct	Items	Initial	Extraction	AVE	KMO	Bartlett's Test (Sig.)
OL	OL1	1.000	0.941	0.898	0.856	0.000
	OL2	1.000	0.957			
	OL3	Deleted	—			
	OL4	1.000	0.782			
	OL5	1.000	0.946			
	OL6	1.000	0.874			

IP	IP1	1.000	0.908	0.847	0.846	0.000
	IP2	1.000	0.903			
	IP3	1.000	0.911			
	IP4	1.000	0.851			
	IP5	1.000	0.919			
	IP6	1.000	0.624			
OP	OP1	1.000	0.914	0.836	0.812	0.000
	OP2	1.000	0.862			
	OP3	1.000	0.771			
	OP4	Deleted	—			
	OP5	1.000	0.778			
	OP6	1.000	0.907			

Source: Survey outcome, 2024

In Table 2, the AVE for the three dimensions is between 0.836 and 0.898. The values are all the same or more to the recommended standard of 0.50. So convergent validity is achieved [45]. To check the discriminant validity (DV), AVE square root of each construct was matched with the dimension's correlation [36], that is shown on the diagonal of Table 3. The standards are more to the other constructs for which they are correlated. This means that the dimensions are different with others. Thus, adequate DV has been evidenced.

Table 3: Discriminant Validity Test

Variables	OL	IP	OP
OL	0.951		
IP	0.893**	0.924	
OP	0.725**	0.754**	0.919

** Significant at 0.01

Source: SPSS, 2024

In table 3 and 4, CR and Alpha (Cronbach) were applied to judge core uniformity [24]. Generally, values ranging from 0.70 to 0.95 are reliable [16]. The values of Cronbach's Alpha on this work are shown in Table 4 and are in the range 0.922 – 0.965. The all values found higher to 0.70. The CR worths lies 0.749 to 0.835. The results reveal consistency of the all constructs.

Table 4: Reliability statistics

Variables	alpha	CR	Items
OL	0.948	0.835	6
IP	0.965	0.767	6
OP	0.922	0.749	6
Overall Scale	0.973		18

Source: SPSS, 2024

Data Collection and Analysis

To confirm accuracy with completeness of the primary data, researcher were verified it prior to SEM analysis [53]. Questionnaires that were not completed or were not appropriate were not used in subsequent analysis. The data were then subsequently coded, entered and cleaned for descriptive and inferential analysis. As for the relationship between OL, IP and OP, the

study adopted the SEM framework. In the mediation analysis, the relationships between OL and OP were analyzed while controlling for IP. Data analysis was carried out with descriptive analysis by using SPSS 24. The study variables were studied in relation to their direct and indirect effects by SEM analysis using AMOS 26.

Informed Consent

Participants in this study were humans. The consent forms were completed prior to the respondents answering the questionnaire.

Ethical Approval

The ethical standards were adhered to during the collection of data. Appropriate University ethical approval (CoBE/MGMT/048/07) has been obtained in writing. Research was carried out by of Helsinki ethical declaration.

Outcome and Discussion

Response Rate

Selected respondents were given 415 questionnaires. This number was reduced to 391 by those that were completed and returned. Twenty-four questionnaires were rejected due to being incomplete or having the same answer for every question. So, the response rate was 94%. The demographics are shown in Table 5. The data reveals that the percentage of males 65.0% and females 35.0%. More than half of the respondents (52.4%) were aged 31–40, about 34.3% were aged 18–30, while 9.2% were 41–50 years. Only 4.1% were 50 years and older. Concerning education, most respondents (74.7%) had a bachelor's degree. Approximately 20.2% possessed a master's degree and 5.1% a TVET/ diploma qualification. When it comes to work experience, 55.2% had a six to 10-year experience. About 32.7% had 0–5 years of experience, 10.2% had 11 to 15, and 1.8% had 15 years and more experience. The overall predominantly male, comparatively well-educated and in the active working age. They may have knowledge or past experiences that can assist OL, KS and KT, thereby aiding in new ideas and/or OP.

Table 5: Demographics

Category	Frequency	%
Gender		
Male	254	65.0
Female	137	35.0
Total	391	100.0
Age Range		
18–30	134	34.3
31–40	205	52.4
41–50	36	9.2
More than 50	16	4.1
Total	391	100.0
Learning Level		
TVET / Diploma	20	5.1
Bachelors	292	74.7
Masters	79	20.2
Total	391	100.0
Experience in Years		
0–5	128	32.7
6–10	216	55.2

11–15	40	10.2
Above 15	7	1.8
Total	391	100.0

Source: Survey outcome, 2024

Structural Model Assessment

Prior to the main analysis, the SEM and CMB assumptions were checked. The skewness values for OL, IP, and OP were -0.676, -0.544, and -0.323, respectively. These are residing -1 to 1. The kurtosis standards were -0.984, -1.173, -1.221, correspondingly, lies under acceptable range of 2 to 2 [42] which is acceptable. For this reason, it was concluded that the data are normally distributed. In addition, multicollinearity was checked by VIF. If the VIF value is less than 10, then multicollinearity is not a very significant issue [8]. The VIF values obtained were 4.93 for OL and 4.91 for IP. This means that there is multicollinearity not exist. Harman's one aspect test [16] was employees for CMB. The EFA for OL, IP, and OP yielded a single factor variance of 34.26%. This is lower than the 50%. Thus, CMB was not an issue. The results obtained from the SEM are presented in figure 2 and the results of the hypothesis are presented in table 6. R^2 for OP and IP were 0.57 and 0.80. This indicates that 57% of the variance in OP and 80% of the variance in IP is accounted for by the model.

Direct and Indirect Effects

Table 6 reveals that IP has a meaningful nexus on OP with standardized $\beta = 0.75$. The standardized beta coefficient of OL in the context of IP is also positive and high at 0.89. The results are similar to the results reported by [35] in which there was a strong correlation between IP and OP. Some of the previous studies also revealed that KA, knowledge sharing, KT and commitment to OL are factors that can affect innovative behavior and business outcomes [2, 28, 36]. The results also indicate that the impacts of OL on IP are significant. The beta coefficient of path from OL to IP is 0.893 with a standard error of 0.023 and a CR of 39.167. Since the CR is more than 1.96, the nexus is statistically proper. This indicates that the enhancement of better OL can boost the strength of IP. New product and new technology applications also provide opportunity to boost OP in the case of firms with such capabilities [48, 50]. The results indicate that OL impacts on OP are completely mediated by IP. This is because OP is improved primarily by means of OL. This is confirmed by [24, 32] where it was found that OL also improves IP, and by IP, it improves OP. In [52] similar results were obtained. Other studies have reported that there is no significant direct effect of OL [36, 42].

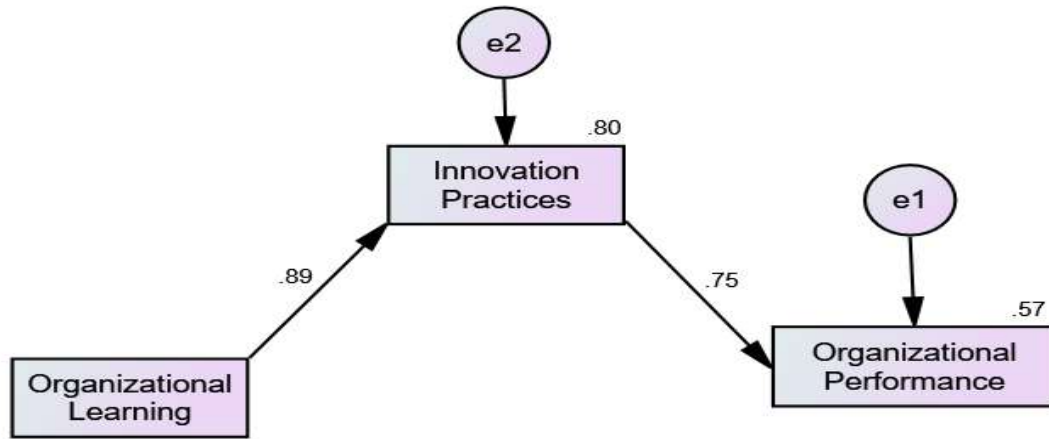
Mediation Effect

The direct impact of OL to IP was 0.89. The mean increase in OL corresponds to a mean increase in IP of 0.89 SD (assuming other factors are constant). IP's direct effect on OP was 0.75. This means that for a one standard deviation increase in IP, there is 0.75 of a standard deviation increase in OP. OL indirectly affected OP through IP with an effect of ~ 0.67 . This was calculated as $0.89 \times 0.75 = 0.67$. So, for every increase by 1 standard deviation in OL, OP will increase by 0.67 standard deviations via IP. The straight result of OL on OP was irrelevant, but the indirect result of IP on OP was significant. Therefore, IP act as a full mediator. Thus, OP improves by the combined effect of IP and OL.

Table 6: Regression Weight

Construct	Std. Coefficient	S.E.	C.R.	P	Hypothesis
IP $\leftarrow$ OL	0.898	0.019	47.263	***	H2
OP $\leftarrow$ IP	0.748	0.028	26.714	***	H3
OP $\leftarrow$ OL	0.148	0.068	2.176	0.030	H1
OP $\leftarrow$ IP $\leftarrow$ OL	0.692	0.032	21.625	***	H4

Figure 2: SEM model



Source: AMOS, 2024

Table 7: Model suitability

χ^2/df	P	SRMR	GFI	TLI	CFI	RMSEA
1.118	.528	.005	.998	.997	.995	.012

Source: AMOS result, 2024

The model was found to meet the criterion of fit as demonstrated in Figure 2 and Table 7. OL has a very positive impact on IP. This implies that firms can enhance their IP through boosting knowledge acquisition, communication and knowledge transfer between their employees. Advent of new technologies, designs with novel products can further enable innovation. But, OL without IP has a negligible direct effect on OP. IP is crucial for businesses to adapt to market and business changes. Overall, H3 and H4 were accepted, and H1 was not rejected. Thus, IP plays an important mediating role between OL and OP.

Conclusions, Recommendations and Future directions

The prime focus to understand the OL impact on OP in the floriculture firms in the Batu area, as a mediator of IP. The results obtained were as follows. The SEM results reveal that OL have no direct influence on OP. But OP is highly positively affected by OL, via IP. This indicates that OL may not be sufficient for enhancing firm performance. There is a need to translate knowledge and learning into good IP for the firms. So, the companies should focus more on IP to enhance OP. Indirect effect of OL on OP through IP was also obtained at the result of which it was found to be 0.67. This means that IP is a key element in OL-OP relationship. Thus, floriculture companies should recommend to boost their IP and concentrate on other factors that could also enhance OP. Other OL dimensions and other factors that might affect floriculture companies' performance should be explored through future studies. Other studies in other sectors and places can be done as well to provide general evidence.

Theoretical Implication

This study builds on the current research on OL, IP, and OP. The proposed model is the integration of the selected theories and results of existing studies. Helps to understand how OL can affect IP and how IP can affect OP. Additionally, It way forward to the existing scant observations on OL in the context of floriculture companies. It highlights the IP mediation in the nexus in OL and OP. In line with this, learning and knowledge sharing, based on OL theory,

can motivate staff to innovate. The relationship of IP and product innovation, process innovation, and innovative technology is also a connection. OL and IP can assist workers to adjust products and services to evolving needs. There are additional perspectives that add significant insight to the study of how firms respond to internal capabilities and stakeholder expectations: The institutional theory and stakeholder theory. In general, good IP can help companies optimize their OP.

Practical Implication

Floriculture needs to continue to be committed to OL for social and environmental issues. Promoting new ideas and good practice can enhance the performance of the firm and help to achieve environmental sustainability [47]. Firms should be monitored regularly by relevant bodies to establish new products, new ideas and improvements in existing products. Innovation and enhanced OP can be achieved through the use of IP, which is something that floriculture companies should pay more attention to [38]. In this study, only a limited number of dimensions were used for measuring OL, IP and OP. Other dimensions can be added for mediation. Present observation was also related only to floriculture businesses. Further studies will consider other prospects and on geographic areas.

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Contribution of authors:

Rajesh Gupta participated in discussion, proof reading and preparing final draft.

Vikki Sharma is a theoretician and theorist of theoretical lenses.

Abdulakim Erbo Gobena writes down the literature review and engraves the data analysis part.

Shashi Kant was framed the theoretical foundation.

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