



# Economics and Business Quarterly Reviews

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**Ahmed, N. S. H., Atan, T. & Yeşilada, F. (2024). The Effect of Organizational Learning and Knowledge Management in Innovation in SMEs: Study on the Machinery Production Companies. *Economics and Business Quarterly Reviews*, 7(1), 113-126.**

ISSN 2775-9237

DOI: 10.31014/aior.1992.07.01.563

The online version of this article can be found at:  
<https://www.asianinstituteofresearch.org/>

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Published by:  
The Asian Institute of Research

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# The Effect of Organizational Learning and Knowledge Management in Innovation in SMEs: Study on the Machinery Production Companies

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## Abstract

Researching this topic in SMEs is important because it may help SMEs become active players in accessing regional, national, and international markets through organizational learning, knowledge management, and innovation. In addition, there is a perceived knowledge vacuum due to the dearth of research on the interplay of these three factors in the canonical American literature. This research establishes a theoretical connection between innovation, knowledge management, and organizational learning. This research focused on medium and small-sized businesses in Libya that produce metal goods and machinery. On the other hand, it sheds light on how the connection between organizational learning, knowledge management, and innovation may be applied to businesses of varying sizes and in a variety of industries. This might spark some fresh inquiry, so the thinking goes. They should recognize the significance of their role in regulating free market competition and stimulate innovation in firms by giving priority to the impact of innovation in generating excellent service on the performance of employees. By taking this tack, we can foster a healthy level of competition while also elevating the value of innovation within companies. It is recommended that job-seeking employees give preference to businesses where learning has priority because of the positive effects that collective learning awareness in learning organizations and the idea of being open to learning have on employee performance.

**Keywords:** Organizational Learning, Knowledge Management, Innovation, SMEs, Machinery Production Companies.

## 1. Introduction

New market conditions created by globalization and rapid and continuous change in information technology have caused businesses to face fierce competition conditions. These conditions have also required businesses to adapt

to changing environmental conditions and to design their structures, strategies and systems to meet environmental needs. While businesses design their structures and strategies according to the changing needs and expectations of the environment, they have also had to plan how and by what methods they will acquire and develop company-specific resources and capabilities (Deshpandé et al., 1993). Changes in the environment and technology have made competitive conditions more uncertain and unpredictable. As a result, companies have begun to lose their power to provide competitive advantage, even if their existing resources and capabilities are distinctive. In this turbulent and complex period, the survival of companies and their ability to gain sustainable competitive advantage depends on transforming their core competencies into dynamic capabilities that can create strategic value. In order to gain dynamic capabilities, it is of great importance for companies to develop their learning capabilities in a way that also supports their technological innovation capabilities (Calantone et al., 2002).

Organizational learning is an increasingly important capability in a volatile market environment under the influence of turbulent and dynamic conditions. These conditions have transformed knowledge into a key concept. Organizational learning capability is all organizational and managerial practices that facilitate the learning process. Organizational learning capability supports organizations in acquiring knowledge and experience, transfer and integration of knowledge, and therefore continuous learning. Since organizational learning ability also supports adaptation to the external environment, it contributes to a more realistic prediction of possible opportunities and threats created by environmental uncertainty and change (Choi & Lee, 2002). Technological innovation capability has become one of the minimum conditions of competition for almost all industries and market segments. Because companies' ability to gain competitive advantage depends on combining organizational resources with technological innovation. The increasing pressure of global competition, decreasing product life cycle and ease of imitation require companies to innovate in order to maintain their competition. Therefore, companies have had to increase their innovation capabilities and improve their technological innovations in order to develop and commercialize new technologies (Hu et al., 2009).

Organizational learning is the main source of asset protection and development for all organizations, regardless of their field of activity, size and capital structure. Organizational learning is of greater importance for SMEs, which are looking for a market gap suitable for their existing resources and experience, especially in the product market segment they are in (Dasgupta & Gupta, 2009). For SMEs, which are constantly in search of both market and innovation, gaining new knowledge and understanding along with organizational learning has become the driving force of technological development. In contrast to the advantages of large and established enterprises in developing technological innovation, especially in terms of resource provision, SMEs face various disadvantages such as lack of capital, low market share and affecting a limited part of the market. Despite these disadvantages, SMEs can act more effectively and flexibly in the small-scale but privileged product market that can make a difference, which is outside the core capabilities of experienced and large-scale enterprises operating in the main market or that is not profitable for large enterprises (Yu et al., 2017). In addition, meeting the raw material needs of the main market and the production of complementary or intermediate products are largely provided by SMEs. SMEs, with their flexible and entrepreneurial features, take part in the multidimensional broad network structure of the main market as a supplier, producer or service provider, and within this network structure, they can access new market opportunities and become a global player. This reveals that SMEs can protect their assets if they are flexible and innovative. On the other hand, it has been observed that studies on organizational learning and technological innovation are generally based on findings obtained from large-scale companies. On the other hand, the limited number of studies investigating the relationship between organizational learning and firm performance of SMEs shows that there is a research gap on the subject (Noruzi et al., 2013). The fact that organizational learning, knowledge management and innovation can contribute to SMEs becoming active players in accessing both regional, national and international markets has increased the importance of researching the subject in SMEs.

In addition, although many empirical studies have been conducted on organizational learning ability, technological innovation ability and firm performance, there has been little consensus on the relationship between the three variables due to their multidimensional nature. It has also been found that there is a dearth of research on how organizational learning capacity mediates the connection between technical innovation capacity and business performance. In addition, the limited number of studies examining the relationship between these three variables in the domestic literature has been considered as a research gap. In this context, the study conceptually determines

the relationship between organizational learning and knowledge management and innovation. The study was conducted on small and medium-sized manufacturing companies in the metal products and machinery occupational groups in Libya. On the other hand, it provides insight into the applicability of the relationship between companies' organizational learning, knowledge management and innovation to companies of different scales and sectors. It is thought that this situation may encourage new research.

## 2. Literature Review

In order for organizational learning to occur, individuals and teams must share their mental models as well as their emotions; The organization must improve itself in the processes of acquiring, using and disseminating information. As a result of these efforts, synergy is created. Organizational learning emerges as a result of this synergy and provides greater output compared to both individual and group learning outcomes. The concept of learning organization, which was first put forward for businesses, began to be evaluated in schools, which are considered one of the most important institutions of learning, in the following years (Liao & Wu, 2010). The amount of knowledge that humanity has access to today is far above the level that can be taught by transferring it. For this reason, attention is mainly focused on accessing information rather than information transfer. School organizations basically aim to make education and training services more effective. School is an organization that is directly involved in the learning process, but in such organizations there is an imbalance between teaching and learning purposes. The school has an organizational structure that mainly teaches. On the other hand, school is an organization that must learn as much as it teaches. In order for the school to have a learning structure, significant changes are needed in the school philosophy and culture. Education is a process that begins with the birth of a person and continues until the end of life (Stata, 1989). The education received in youth can affect individuals' educational futures and changes in their personalities, as well as on their ideas and habits. The International Commission for the Development of Education has stated that lifelong learning is the most important element in reaching the educational society. In order for this to happen, educational institutions must first transform into learning organizations. In this direction, teacher-student roles will also change and the student is expected to play a more active role in his own development process. Within the scope of this change, teachers should use many resources in the school to increase classroom capacity. Teachers should learn in groups in accordance with the staff development policy followed by the school. To have a learning organization strategy, three complementary strategies are needed (Abdi et al., 2018).

Thanks to information, organizations understand how they need to do the job and how they can run the job better. Necessary and accurate information helps the organization get ahead of its competitors by assisting in strategic decisions. Information constantly provides advantages (Sanz-Valle et al., 2011). With knowledge, earnings increase and the advantages continue. Knowing more is always more advantageous than knowing less. It may be thought that less information has clearer and more distinct boundaries, but this does not guarantee that better decisions will be made (Uddin et al., 2016).

It is a comprehensive management practice carried out to achieve positive business results by increasing the intellectual capital of the business. Information management effectively organizes people's experience, expertise, talent, thought, dedication, innovation, tendency, practice, idea, dream and competence, and directs the energy created by organizational and personal practices that benefit from these into the organization and organizes the situations that are considered as part of news sources in order to achieve the organization's goals (Antunes & Pinheiro, 2020). It is an act of integration. This approach is used to increase the market value of the company, manage information in different ways and gain competitive advantage. In addition, knowledge management strives to make knowledge productive in areas such as obtaining, sharing, developing and using productive knowledge in order to increase company performance. One of the areas where competition is fiercest is the production and use of information. To be relevant and competitive in today's market, companies need to know what their people are good at and how to put that information to use (Pérez López et al., 2004).

In line with the organization's objective, information management seeks to consistently enhance organizational performance, efficiency, and production level (Schneckenberg et al., 2015). At the same time, supporting

innovations and new knowledge production is one of the goals of knowledge management. These goals can be achieved by increasing the level of participation and cooperation within the organization and making teamwork possible. Today, the information society has created a very deep competitive environment in terms of both organizational and employee profiles. This situation has brought with it new management approaches and different organizational structures. Due to the qualitative differences in the workforce, different management styles and organizational structures are also on the agenda. On the other hand, these innovations are not only due to the differentiation in the workforce, but are also largely supported by the necessity of gaining competitive advantage in issues such as speed, cost and quality (Nouri et al., 2017).

Organizational structures and management processes must be overhauled for successful information management. Some authors argue that this type of change should be much more radical than the concepts of Reengineering and Total Quality Management (Martin & Matlay, 2003). Experts with this idea believe that information management is the only valid solution in the current economic order. For this reason, in addition to the management approach, business processes and organizational structure must also change radically in accordance with the new understanding. In order to survive in the information economy, organizations must constantly produce and develop new information and use the information produced in the most efficient way. For this, an organizational structure and culture that will encourage continuous knowledge production and innovation and is open to development is needed (Khan & Khan, 2019). Every product, process, and service offered by an organization should incorporate the accumulated wisdom of its members. Achieving and maintaining a sustainable competitive edge will be challenging for the business if the relevant information cannot be easily obtained in the proper manner. These days, businesses can't afford to ignore their workers' vast stores of information if they want to stay relevant and competitive. Instead, they should cultivate and reap the benefits of these ideals. New products and services are made possible through innovations, which also cause shifts in the market's economic dynamics (Abbas et al., 2020). Deshpande, Fearley and Webster (1993) conducted a study on 50 businesses in Tokyo to analyze the relationships between customer orientation, innovation, business performance and common culture. The study results showed that the main determinants of business performance are customer orientation and innovation. In addition, it was concluded that organic culture and market culture were associated with good performance, while hierarchical and clan cultures were associated with poor performance. Innovative organizational culture is essential for businesses that want innovation. In order to create an innovative organization, first of all, an organizational structure suitable for innovation, innovation symbols, ceremonies that reward innovative behavior, and an institutionalized innovation management and control system are needed. In addition, continuous training and development opportunities should be provided for employees at all levels (Walker, 2016).

The segment that is the recipient of the service tends to constantly demand better in the face of all the negativities that may be encountered. Due to this situation, businesses should pay attention to their performance. The performance level of the business is determined by the level at which the business can realize the benefit and economic value demanded from it with its existing resources (Nawab et al., 2015). Therefore, if the obtained value is below the targeted value, it is considered as low performance. If the obtained value is more than the targeted value, it is considered high performance. In this case, for businesses with normal or high performance values, maintaining the current performance value in the following periods is sufficient. On the other hand, if the performance level is low, studies should be carried out to increase performance by investigating the source of the problems and producing solutions (King, 2009). High levels of performance are essential for the survival of any firm, whether it is a public or private sector enterprise, in today's highly competitive market. None of the parts makes up the whole that is the company and its workers. This is why employee achievement on an individual level is a key performance indicator for any given business. In other words, having high-performance people is crucial for firms to achieve their goals and establish competitive advantage in their sectors. Determination of remuneration, reward, promotion and bonus systems within the business are also elements directly related to employee performance (Rao et al., 2018).

In today's global competitive environment, the rate of change is very high. In such an environment, high innovation performance provides great gains to organizations. In order to keep up with the ever-changing business landscape, innovative companies are more likely to see change, apply new ideas, solve issues in novel ways, take calculated risks, outperform the competition, and generate new possibilities on a regular basis. Through this approach, firms

may enhance their performance, become more dynamic, and create a sustained competitive edge, all while enhancing their innovative skills (Kamya et al., 2011).

### 3. Research Model and Hypothesis

The hypotheses developed in the study are given as follows:

- H1: Organizational learning has a positive effect on innovation performance.
- H2: Knowledge management has a positive effect on innovation performance.
- H3: For Gender there is a significant difference in the relationship between organizational learning and innovation performance.
- H4: For Gender there is a significant difference in the relationship between Knowledge management and innovation performance.
- H5: For Age there is a significant difference in the relationship between organizational learning and innovation performance.
- H6: For Age there is a significant difference in the relationship between Knowledge management and innovation performance.
- H7: For Education there is a significant difference in the relationship between organizational learning and innovation performance.
- H8: For Education there is a significant difference in the relationship between Knowledge management and innovation performance.

In the light of this information, the model of the study is given in Figure 1.

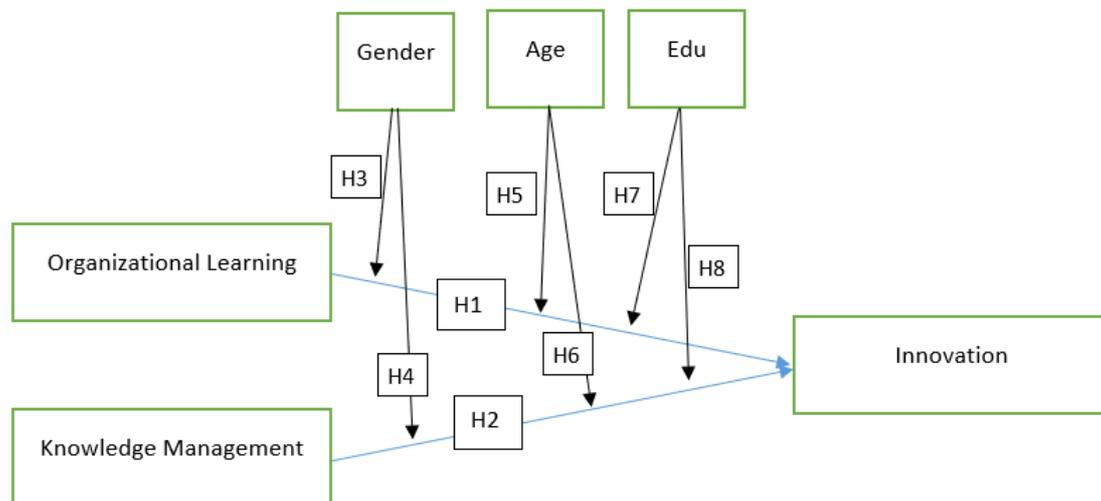


Figure 1: Research Model

### 4. Research Method

A survey will be conducted for the employees of the companies in the sample selected for the purpose of the study. Employees involved in the study directed to an online survey site through different channels, and survey data collected through the site. Most of the data obtained through e-mail referrals to the site. There is a list of “companies” operating in that region on the web pages of the organized industrial zones. The e-mail addresses in the contact information of those who have access to the websites of the companies in these lists collected.

The questionnaires are constituted of 4 questions as the demographic questions, and the 37 questions with 5-Likert Scale will be used in the questionnaire. It corresponds to (1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree) on the scale. The Organizational Learning scale developed by Calantone, Cavusgil

and Zhao (2002) consists of 17 statements. The Knowledge Management Scale consists of one dimension and 6 statements. This scale is taken from Choi's (2000). The Innovation scale developed by Hu et al. (2009) with 14 expressions in one dimension.

Appropriate criteria will be specified in the content of the e-mail, those who did not comply will be asked to direct them to the companies that meet the criteria and they are in contact with. In this way, approximately 200 enterprises reached individually. Alternatively, two announcements made to the groups with the relevant companies on LinkedIn.

## 5. Results and Findings

Table 1 clearly shows that the confidence criterion was the percentage values that were defined and expected at the completion of all four tests. Given the high dependability scores, it was inferred that the sample results were consistent and dependable. The results would be reflective of actual values, the applied questionnaire was successful, and the reliability criteria all above 70%. The questionnaire was also found to be self-consistent.

Table 1: Reliability Results of the Survey

<b>Cronbach Alpha</b>	<b>0.969</b>
<b>Split</b>	0.965-0.967
<b>Parallel</b>	0.969
<b>Strict</b>	0.967

At this stage of the study, demographic information for the participants asked in the first part of the questionnaire and percentage and descriptive information about the answers to the scale studied were presented.

Table 2: Demographic Variables

<b>(n=370)</b>	<b>Frequency (F)</b>	<b>Percent (%)</b>
<b>Gender</b>		
<b>Male</b>	218	58.92
<b>Female</b>	152	41.08
<b>Age</b>		
<b>26-33 Years</b>	128	34.59
<b>34-41 Years</b>	113	30.54
<b>42 Years and Above</b>	129	34.86
<b>Education level</b>		
<b>Associate's degree</b>	43	11.62
<b>Undergraduate</b>	278	75.14
<b>Graduate</b>	49	13.24

41.08% of the survey participants are female and 58.92% are male. 34.59% of the people are in the age group of 26-33, 30.54% are in the age group of 34-41 and 34.86% are in the age group of 42 and over. In addition, the average age of the people is 38.24. The education level of 11.62% of the individuals is associate degree, 75.14% of them undergraduate and 13.24% of them postgraduate.

### 5.1. Explanatory Factor Analysis

By combining  $p$  connected variables, factor analysis, a type of multivariate statistics, seeks to identify and uncover a limited number of new, theoretically significant variables (dimensions, factors). The data's eligibility for factor analysis was initially examined as part of the scales' explanatory factor analysis process.

Consequently, the data set's Kaiser-Meyer-Olkin (KMO) sample adequacy was determined to be 0.938, which is higher than the good threshold of 0.70. The results of the Bartlett sphericity test, which assesses the reliability of the items and variables under consideration, were shown to be statistically significant ( $\chi^2= 5138.67$  and  $p=.000$ ). The tests confirmed that the sample size was adequate for the explanatory factor analysis and that the factor analysis method was suitable.

Table 3: Explanatory Factor Analysis Results

	Variance Explained	Cronbach alpha (CA)
<b>Factor 1: Commitment to Learning</b>	15.32	0.932
<b>Factor 2: Shared Vision</b>	14.03	0.934
<b>Factor 3: Open-Minded</b>	13.56	0.920
<b>Factor 4: Information Sharing within the Organization</b>	12.09	0.945
<b>Factor 5: Knowledge Management</b>	9.34	0.934
<b>Factor 6: Innovation</b>	6.21	0.947

In order to uncover the factor structure, the "Varimax" rotation method and the "Principal Components Analysis" method were utilized as factor retention techniques after the tests indicated that the data set was suitable. The factor analysis led to the determination of an 8-component structure, which accounted for 81.56% of the overall variation. For multi-factor designs to be deemed adequate in social science studies, the variance explained must fall between 40% and 60%. Excluding questions with an Extraction column value below 0.20 from the analysis is recommended, as they do not significantly impact the change in variance, as mentioned in the study by Costello and Osborne (2005). Due to the fact that all survey questions were utilized and no question had a significance level  $< 0.20$  for 8 components, no inference was drawn in this study.

## 5.2. Normality Tests Analysis

In order to decide which methods are appropriate to use in the analyses, normality tests for the dimensions were applied. If normal distribution is provided, parametric methods will be used, otherwise non-parametric methods will be used.

Table 4: Normality test results

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistics	Std. sapma	p	Statistics	Std. sapma	p
<b>Commitment to Learning dimension</b>	.189	370	.000	.918	370	.000
<b>Shared Vision dimension</b>	.153	370	.000	.929	370	.000
<b>Open-Minded dimension</b>	.212	370	.000	.876	370	.000
<b>Intra-Organizational Information Sharing Dimension</b>	.187	370	.000	.904	370	.000
<b>Information Management dimension</b>	.199	370	.000	.894	370	.000
<b>Innovation dimension</b>	.205	370	.000	.925	370	.000

The result of both normality tests being less than 0.05 allows us to accept the H1 hypothesis that states that the normal distribution is not provided. Here, group difference analysis will make use of non-parametric techniques. Two groups were analyzed using the Mann-Whitney-U test, whereas three or more groups were subjected to the Kruskal Wallis test. To identify the cause of the discrepancy, we looked at the average rank values.

Table 5: Results of Mann-Whitney U test in terms of gender

Dimensions	Group	N	Average rank	Mann-Whitney U	p
Commitment to Learning dimension	Male	218	293.51	40635.5	0.629
	Female	152	286.79		
Shared Vision dimension	Male	218	286.17	40215.5	0.488
	Female	152	295.83		
Open-Minded dimension	Male	218	283.69	39422	0.275
	Female	152	298.88		
Intra-Organizational Information Sharing Dimension	Male	218	288.20	40865.5	0.713
	Female	152	293.33		
Knowledge Management dimension	Male	218	289.15	41169	0.829
	Female	152	292.16		
Innovation dimension	Male	218	293.78	40552	0.600
	Female	152	286.47		

Across all dimensions, there was no discernible gender difference. All dimensions were answered under the same perspective. Considering the average of answers, women and men gave positive (agree) answers to the dimensions. The sub-hypothesis was not provided for any dimension.

Table 6: Kruskal-Wallis test results in terms of age

Dimensions	Group	N	Average rank	Chi-squared value	p
Dimension of Commitment to Learning	26-33 years	128	263.85	<b>9.352</b>	<b>0.009*</b>
	<b>34-41 years</b>	113	<b>317.38</b>		
	42 years and older	129	292.76		
Shared Vision dimension	26-33 years	128	284.01	1.307	0.520
	34-41 years	113	302.64		
	42 years and older	129	286.66		
Open-Minded dimension	26-33 years	128	284.44	3.010	0.221
	34-41 years	113	308.96		
	42 years and older	129	281.33		
Intra-Organizational Information Sharing Dimension	26-33 years	128	296.73	0.969	0.615
	34-41 years	113	294.69		

	42 years and older	129	281.76		
<b>Knowledge Management Scale dimension</b>	26-33 years	128	284.33	0.892	0.639
	34-41 years	113	300.33		
	42 years and older	129	288.19		
<b>Innovation dimension</b>	26-33 years	128	277.16	1.824	0.401
	34-41 years	113	298.22		
	42 years and older	129	296.13		

\*Significant difference for 0.05

The dimension of commitment to learning shows a significant difference in terms of age. Looking at the mean rank values for the source of the difference, it was determined that the 34-41 age group had the highest value (317,38) and gave more positive answers to the questions of this dimension. Only this dimension is provided for the sub-hypothesis. There was no significant difference for age in the dimensions of shared vision, open-mindedness, information sharing within the organization, knowledge management and innovation. Participants of all ages responded to these dimensions from the same perspective.

Table 7: Kruskal-Wallis test results in terms of education level

Dimensions	Group	N	Average rank	Chi-squared value	p
<b>Dimension of Commitment to Learning</b>	Associate's Degree	43	273,97	1,578	0,454
	Undergraduate	278	290,65		
	Graduate	49	304,00		
<b>Shared Vision dimension</b>	Associate's Degree	43	295,57	0,158	0,923
	Undergraduate	278	288,60		
	Graduate	49	293,09		
<b>Open-Minded dimension</b>	Associate's Degree	43	288,37	1,561	0,458
	Undergraduate	278	285,97		
	Graduate	49	308,70		
<b>Intra-Organizational Information Sharing Dimension</b>	Associate's Degree	43	303,11	1,244	0,536
	Undergraduate	278	291,36		
	Graduate	49	276,70		
<b>Knowledge Management Scale dimension</b>	Associate's Degree	43	265,53	2,599	0,272
	Undergraduate	278	293,21		
	Graduate	49	301,87		
<b>Innovation dimension</b>	Associate's Degree	43	247,14	7,831	<b>0,019*</b>
	Undergraduate	278	295,20		
	<b>Graduate</b>	<b>49</b>	<b>310,29</b>		

\*Significant difference for 0.05

A significant difference was determined in the innovation dimension in terms of education level. When the average rank values for the source of the difference are examined, the participants with a graduate level of education gave more positive answers to this dimension. Only this dimension is provided for the sub-hypothesis. The level of

education does not show a significant difference in terms of commitment to learning, shared vision, open-mindedness, information sharing within the organization, knowledge management and dimensions. These dimensions were answered under the same point of view.

5.3. Confirmatory Factor Analysis Results and Goodness of Fit

By utilizing a set of observable variables as a measuring instrument, measurement models seek to uncover the extent to which the components, which are latent variables, are explained. Using the AMOS 23.0 program, we first built a first-level CFA model, and then we built a second-level model with latent components and investigated their interdependent effects.

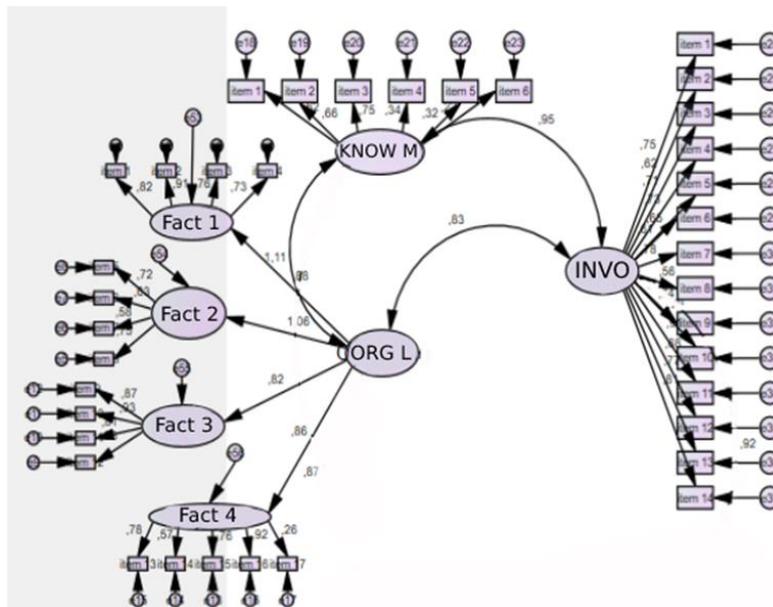


Figure 2: Confirmatory Factor Analysis Result

Table 8 provides the CFA findings; to assess their appropriateness, one must go to Table for the model's fit statistics criteria and outcomes.

Table 8: DFA model Fit Indices

Measurement (Fit Statistics)	Good Fit	Acceptable Fit	Research Model Value	Compliance Status
<b>General Model Fit</b>				
<b>X<sup>2</sup> /sd</b>	≤ 3	≤ 4-5	2.19	Good Fit
<b>Comparative Fit Statistics</b>				
<b>NFI</b>	≥ 0.95	0.94-0.90	0.935	Acceptable
<b>TLI (NNFI)</b>	≥ 0.95	0.94-0.90	0.963	Good Fit
<b>IFI</b>	≥ 0.95	0.94-0.90	0.987	Good Fit
<b>CFI</b>	≥ 0.97	≥ 0.95	0.961	Acceptable
<b>RMSEA</b>	≤ 0.05	0.06-0.08	0.037	Good Fit
<b>Absolute Fit Indices</b>				
<b>GFI</b>	≥ 0.90	0.89-0.85	0.930	Good Fit
<b>AGFI</b>	≥ 0.90	0.89-0.85	0.924	Good Fit
<b>Residual Compliance Index</b>				

<b>RMR</b>	$\geq 0.05$	0.06-0.08	0.036	Good Fit
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It was determined that the model did not require any improvements after reviewing the modification index. It has been determined that the goodness of model fit for the first level is positive. The considered goodness-of-fit criteria have been selected from among the most widely used in the literature. As a result of CFA, mostly good fit was determined for the criteria and acceptable fit was determined for only 2 of them. The factor structure was verified, and the validity of the studied scale was also demonstrated. From this point of view, SEM analysis will be started to test the hypotheses.

5.4. Structural Equation Model (SEM)

Both the structural and measurement models come together to form structural equation models. In order to summarize the relationships between the latent variables, the structural model incorporates structural equations. All of the model's structural equations specify the interactions between structural components.

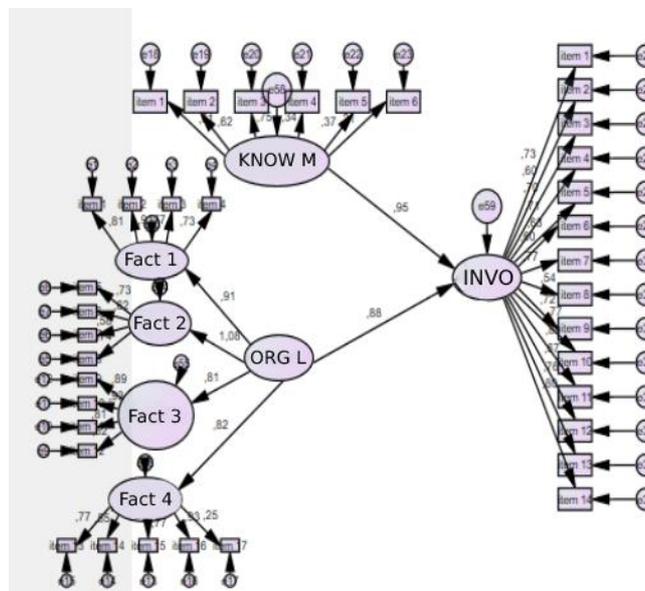


Figure 3: SEM Estimates for Testing Hypotheses

Table 9: SEM estimated Fit Indices

Measurement (Fit Statistics)	Good Fit	Acceptable Fit	Research Model Value	Compliance Status
<b>General Model Fit</b>				
<b>X<sup>2</sup> /sd</b>	$\leq 3$	$\leq 4-5$	2.15	Good Fit
<b>Comparative Fit Statistics</b>				
<b>NFI</b>	$\geq 0.95$	0.94-0.90	0.982	Good Fit
<b>TLI (NNFI)</b>	$\geq 0.95$	0.94-0.90	0.975	Good Fit
<b>IFI</b>	$\geq 0.95$	0.94-0.90	0.980	Good Fit
<b>CFI</b>	$\geq 0.97$	$\geq 0.95$	0.956	Acceptable
<b>RMSEA</b>	$\leq 0.05$	0.06-0.08	0.014	Good Fit
<b>Absolute Fit Indices</b>				
<b>GFI</b>	$\geq 0.90$	0.89-0.85	0.923	Good Fit
<b>AGFI</b>	0.90	0.89-0.85	0.925	Good Fit
<b>Residual Compliance Index</b>				
<b>RMR</b>	$\leq 0.05$	0.06-0.08	0.026	Good Fit

Although the SEM estimates only met one of the fit criteria, the model met all of the others, indicating a good fit and making it suitable for interpretation. Table displays the outcomes that were obtained using the model.

Table 9: SEM model results for hypothesis testing

Structural Relationship	Direction	Estimated coefficient	Std. Error	t statistic	p	Result
Organizational Learning → Innovation	+	0.949	0.085	11.164	0.000	Significant
Knowledge Management → Innovation	+	0.878	0.064	13.718	0.000	Significant

H1: Organizational learning has a positive effect on innovation.

H2: Knowledge management has a positive effect on innovation.

As can be seen from the model outputs; organizational learning has a 94.9% positive (positive) effect on innovation. Knowledge management has a positive (positive) effect of 87.8% on innovation. H1 and H2, which constitute the main hypothesis of the model, were confirmed.

## 5. Conclusion

The learning organization climate positively affects the success and gaining an important place in the society in terms of employment, environmental awareness and services offered. It can be said that the foundations of such gains are already formed in an organization where employees are in constant learning and improvement, they constantly question the accuracy of their knowledge and practices, and the shared goals are understood by all employees.

Considering that business managers have a share of innovations in the market and products of the business, it is recommended that they use their management tools for a successful personnel regime to create a service-oriented and highly dynamic organizational environment with goals in this sense. By giving importance to the effect of innovation in creating quality service on the performance of employees, they should see the importance of their role in regulating free competition in the market and encourage innovation in businesses in this sense. With this approach, a balanced competitive environment will be created and innovation will be seen as an important competitive tool for businesses.

Based on the assumption that collective learning awareness in learning organizations and the idea of being open to learning have positive effects on employee performance, it is recommended that candidate employees who are looking for a job prefer organizations where learning has priority in choosing a workplace.

It is recommended that business administrations, which care about increasing service quality and reputation management, adopt an organizational philosophy based on learning, give importance to knowledge management and bring it to their businesses. Learning organizations, which have a management approach that includes critical approaches, actually provide a basis for making quality and accurate decisions with their open information sharing feature within the system. Considering that the learning organization may have some negative effects while gaining positive aspects, this issue should be handled by the top management bodies as it requires sensitive decisions and should be implemented by considering employee performance.

Knowledge management should be kept under control in enterprises. Regular information that protects the social reputation of the enterprise without damaging the learning environment and philosophy should be carried out under the responsibility of business managers. Regular and uninterrupted sharing of information within the business system is of vital importance in many sectors and interacts with organizational performance.

**Author Contributions:** The following statements should be used "Conceptualization, N.A. and T.A.; Methodology, N.A.; Software, N.A.; Validation, N.A.; Formal Analysis, N.A.; Investigation, N.A.; Resources, N.A.; Data Curation, N.A.; Writing – Original Draft Preparation, N.A.; Writing – Review & Editing, N.A. and T.A.; Visualization, N.A.; Supervision, T.A.; Project Administration, T.A.; Funding Acquisition, N.A."

**Funding:** This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest.

**Informed Consent Statement/Ethics approval:** All participants were fully informed that the anonymity is assured, why the research is being conducted, how their data will be used and if there are any risks associated.

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