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Unlocking the Secret to Business Success: Analysing the Impact of Personnel Knowledge through Structural Equation Model

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Abstract
This study investigated the perceptions of business managers in the furniture sector regarding the relationship between personnel knowledge and business success. A quantitative research approach was used to collect data from business managers working in different furniture sectors in District Chiniot, Lahore, and Gujrat. The study utilized a Likert scale to measure the responses and Structural Equation Model (SEM) to analyse the data. The findings revealed that certain management practices, including safety, laws, motivation of personnel, total quality management, product certification, and competitive positioning, had a significant impact on both personnel knowledge and business success. Furthermore, the study found that factors such as new product development, sales abilities, competitive positioning, and product pricing were highly associated with changes in business success. The study recommends that businesses focus on training their owners first to enhance their employees' skills, which will ultimately lead to increased productivity and highlight the importance of skill development.

Keywords: Business managers, furniture sector, personnel knowledge, structural equation model, management practices, skill development, training services

JEL Classification: M10, M19, M21, M53, M54, C3

1. Introduction

Furniture is an essential part of home decor that adds beauty to living spaces. It also serves as a source of income for individuals and contributes significantly to the domestic economy. In the past decade, the demand for wooden furniture has increased in almost all major markets, with consumers seeking new designs and styles. However, the furniture industry has not seen significant growth in terms of large-scale production or automation of manufacturing processes. Most furniture companies, especially in major players like America, European Union, Germany, Italy, Japan, and China, continue to operate as Small and Medium-Sized Enterprises (SMEs) (Carle et al., 2009; Kuwayama, 2001 and Chen, 2006). In Pakistan, the furniture industry produces basic living, dining, and kitchen room furniture, as well as corner tables, magazine tables, standing small shelves, pedestal tables, small chairs, and home bars, among others. The main consumer markets are liberal in the ethnic and mixing, with antique furniture playing a significant role in Pakistani furniture industries due to its good price value under the consumer average purchasing power. Pakistani industries produce modern, Mughlai, and antique designs and styles as per customer requirements, with most wooden furniture being handmade using solid wood components. The industry relies on Sheesham (rosewood) and local hardwoods and competes with other countries such as China, India, Vietnam, and Malaysia (EU and TRTA, 2007).

The furniture industry in Pakistan is an important part of the country's economy. It creates jobs for over 100,000 people and contributes overall about $160 million to the economy. However, the amount of money earned from exporting furniture has decreased significantly in recent years, from $18 million in 2007 to just $6 million in 2016. This is a worrying trend because exports are an important source of revenue for many industries and countries (PSDF, 2015 and Manzoor, 2016). Compared to its competitors, Pakistan's furniture industry is still made up of small workshops and traditional operations. This means that the industry is not as efficient or effective as it could be. To reach its goal of exporting $850 million worth of furniture each year, the industry needs to modernize and become more competitive. Exporting more furniture can bring many benefits to Pakistan. It can decrease the trade deficit, which is the difference between what a country exports and what it imports. A trade deficit can be a problem because it means a country is spending more money on imports than it is earning from exports. Exporting more furniture can also create more jobs and bring in foreign revenue, which can help boost the country's overall economic growth (Imran et al., 2020).

To stay ahead, companies need to adapt to changes in consumer demand and technology. They do this by conducting scientific and technological research to create new products and manufacturing processes. By doing this, they can maintain their businesses over the long term and gain an advantage in the market (Khunsoonthornkit and Panjakajornsak, 2018). Pakistan needs to focus on developing its furniture industry by conducting scientific and technological research. The industry should modernize and become more competitive to keep up with other countries. This can be achieved by introducing new products, manufacturing processes, and adapting to changing consumer demands. By doing this, Pakistan can secure its position in the market and increase its exports, which can contribute to the country's economic growth. In Pakistan, there is a limited study have been conducted to determine, the connection between management practices and the success of the furniture industry. This includes factors such as safety, laws, personnel motivation, total quality management, product certification, and competitive positioning. It is unclear that these factors have any significant impact on personnel knowledge and the overall success of businesses in the furniture industry.

This study is important for analysing the furniture industry in Pakistan because it can provide valuable insights into the relationship between management practices and the success of businesses in this industry. Understanding this relationship can help companies make informed decisions about how to improve their operations and become more competitive. It can also help policymakers develop strategies to support the growth and development of the furniture industry, which can contribute to the country's overall economic growth. The study findings of this research will contribute to the development of the furniture industry, particularly to the economic development in Pakistan. The study provides an in-depth analysis of the various factors that influence business success in the manufacturing society and validates existing information. Policymakers can use these findings to identify appropriate areas that may require policy formulation to strengthen business development. This research provides a foundation for further studies in the field of furniture manufacturing and will help encourage workers to become economically empowered, thereby benefiting the community and the business sector.

The objective of this study is threefold. Firstly, it aims to evaluate the success of companies operating in the furniture sector, as well as the technical knowledge possessed by their personnel. This study will provide insights into the overall performance and competence of the companies within the industry. Secondly, the study seeks to identify the key factors that significantly contribute to the success of these companies and the technical knowledge of their personnel. By identifying these factors, it will be possible to understand the critical elements necessary for achieving success and enhancing the expertise of individuals working in the furniture sector. Lastly, the study aims to explore the correlation between management and technical subjects in the furniture sector. By analysing this relationship, it will be possible to gain a deeper understanding of how management practices and technical knowledge interact and influence the overall performance of companies in the industry.

2. Review of Literature

The literature mentioned in this section have contributed their insights on various aspects of performance measurement and employee training. Carneiro and Heckman (2003) explain the significance of evaluating the life cycle dynamics involved in learning and skill acquisition to formulate efficient policies regarding human capital. The authors contend that human capital is a valuable asset, and schooling is merely one part of a comprehensive process of accumulating skills throughout a lifetime. Hansson (2007) investigated the impact of training on company performance and found that the occurrence and degree of training are mostly determined by factors specific to the organization, such as human resource management practices. The turnover of staff doesn't appear to be a significant factor in clarifying the provision of training, but investing in training is crucial for firms to preserve their employees and reduce turnover. Khan and Shah (2011) argue that understanding performance measurement through literature is crucial, and it has gained significant importance and development in the last two decades. They suggest that solely measuring business routine is not enough, and long-term goals should be kept in mind. Khan (2012) emphasizes the importance of training and motivation in enhancing the productivity and efficiency of employees. According to him, training is the most significant aspect that contributes to employee performance when compared to other factors like working environment and management behaviour.

Gonchkar (2012) conducted a survey-based study and found that training and development programs have a significant impact on employee skills, knowledge, attitudes, and productivity. He argues that creating a favourable work atmosphere for workers to attend training programs is essential for improving employee performance. However, he also notes that training and development programs take time to deliver results. The paper conducted by Ling, Qing and Shen in 2014, the relationship between training and organizational commitment, and analyses the role of employability and expectation value in this relationship. A sample of 405 Chinese employees is used to test these hypotheses, with results showing that training is positively related to organizational commitment and employability. Employability partially mediates the relationship between training and organizational commitment, and expectation value moderates the relationship between employability and organizational commitment. Limitations include the cross-sectional design and data collection relying on self-report, but the study provides practical implications for organizations aiming to train and retain employees.

Khunsoonthornkit and Panjakajornsak (2018) conducted study focused on how learning organization and commitment affect the performance of research and development organizations in Thailand. The study found that learning organization positively influenced both organizational commitment and performance, but commitment did not directly impact performance. The results suggest that implementing learning organization practices can improve organizational commitment and performance in research organizations. The study used a confirmatory factor analysis technique to analyse the model fit. Overall, this study provides insights into how research organizations can benefit from implementing learning organization practices. Yoon et al. (2018) conducted research at how informal learning affects an individual's organizational commitment, and whether self-efficacy plays a mediating role in this relationship. The study analysed data from 317 Korean workers and used structural equation model to examine the relationship between informal learning, self-efficacy, and organizational commitment. The analysis found that informal learning increases self-efficacy, which in turn influences organizational commitment. The study has some limitations in terms of methodology, such as the reliance on a single source of data and the cross-sectional study design. However, the research highlights the importance of informal learning in the workplace and its potential to improve employee performance and organizational commitment.

In summary, the authors discussed in this text provide valuable insights into performance measurement, employee training, human capital policies, and statistical analysis. Their findings emphasize the importance of training and development programs for improving employee performance and the significance of human capital in developing effective policies. Additionally, the authors discuss the use of statistical tools such as structural equation modelling and path diagrams for analysing data in behavioural and social sciences. The researchers suggested that data normality, goodness of fit, and variance analysis are the important for SEM analysis.

3. Data and Methodology

3.1 Data

In this study, the researcher utilized secondary data that was collected from the Furniture Sector Skill study, in April 2015, the Innovative Development Strategies conducted research on behalf of the Punjab Skills Development Fund. The research aimed to determine the current supply and demand of skill requirements in the furniture industry and evaluate any gaps that may exist. A survey was conducted among 274 formal and 176 informal furniture establishments, carefully selected to represent a comprehensive sample of the furniture sector in Punjab, Pakistan, to gather the required data. The data obtained from this survey was then analysed and utilized to draw conclusions and make recommendations about the furniture sector in the region.

3.2 Method

The SEM is a statistical methodology that is widely used by researchers in social, educational, and medical fields. This is because SEM provides a comprehensive approach to testing fundamental theories and measuring the measurement error in latent variables. SEM is a statistical tool that encompasses several techniques, including path analysis, confirmatory factor analysis, causal models with latent variables, as well as analysis of variance and multiple linear regression. These methods are used in behavioural and social sciences to examine and explain causal relationships among various variables. Factor analysis is used to analyse basic constructs that influence the response to a number of measured variables. Arain, Hameed & Farooq (2012) suggested that to evaluate the consistency and validity of the scale used, confirmatory factor analysis (CFA) is employed in SEM. The results of SEM are reported using various types of fit indices. Schreiber et al. (2006) suggested four crucial fit indices, including CMIN/DF < 3, comparative fit indices (CFI) > 0.90, tucker-lewis index (TLI) > 0.90, and root-mean square error of approximation (RMSEA) < 0.08.

To check for common method variance, the study employed the Harman Single factor test and common latent factor. The researchers utilized SEM for confirmatory factor analysis and hypothesis testing, addressing measurement errors within the model. Despite minor multivariate normality issues, the maximum likelihood method was effective in estimating data that deviates slightly from normality, improving the accuracy and reliability of statistical analyses compared to traditional techniques like multiple regressions.

This method produces corrected statistics that are more accurate. Therefore, the study used the robust maximum likelihood method to estimate the confirmatory factor analysis. The factor analysis of the testing model was comprised of both structural and measurement models. The structural model was divided into two parts: management and technical subjects. The management subject was further categorized into company success (CS) and personnel knowledge (PK). Similarly, the technical subject was divided into company success (CS2) and personnel knowledge (PK2) with different items.

The measurement model consisted of items (F1, F2……F70) and measurement errors (e1, e2……e49). To begin the analysis, the researchers first estimated the measurement model, which involves measuring the relationships between the observed indicators and the underlying latent constructs. Once the measurement model was estimated, the researchers used the correlations or covariance matrix between

the factors or constructs as input to estimate the structural coefficients between the latent variables or constructs. These structural coefficients provide insights into the causal relationships between the latent variables and allow for the testing of hypotheses about these relationships. The estimation of both the measurement and structural models is essential for accurate statistical analysis using SEM. Figure 1 depicts the different components of the model.

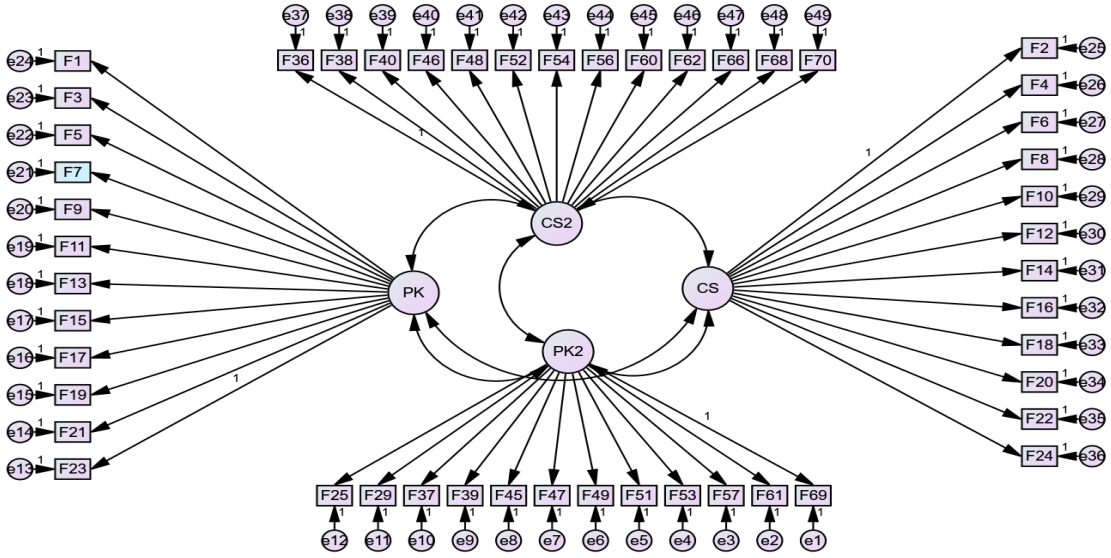

Figure 1: Study Model with Components

4. Results and Discussions

The study utilized the Analysis of Moment Structures (AMOS) software to estimate confirmatory factor analysis, which models' relationships between observed and latent variables. AMOS, a widely used statistical package, employs techniques like maximum likelihood estimation and SEM to uncover underlying relationships. Its use enabled a better understanding of complex variable relationships and more accurate estimates. Overall, leveraging AMOS and similar tools enhances the robustness and reliability of research findings.

4.1 Descriptive Analysis

4.1.1. Firm Size

The data presented in Table 1 indicates that the firms operating in the furniture sector generally had a small workforce. According to the study, the furniture sector mainly consists of small businesses. The median firm size in the sector was found to be very small, with only four employees. This indicates that a large proportion of businesses in the sector are small, with only a few employees. In fact, the study reports that more than 90% of the sampled firms employed fewer than ten individuals, which further highlights the prevalence of small businesses in this sector. Moreover, the study reveals that a significant proportion of the firms in the sector are small-sized, with limited workforce. The 54% of the sampled firms were found to have less than five employees, indicating the prevalence of micro-enterprises in the furniture sector. The trend was further pronounced in certain districts, such as Chiniot, Lahore, and Gujrat, where the percentage of firms employing less than five individuals was even higher, with figures of 49.3%, 46.0%, and 66.7% respectively. In contrast, Lahore was the only district where a substantial number of employees were found to be working in the furniture sector.

Table 1: Number of Employees in Furniture Establishments

Number of Employees	Chiniot	Lahore	Gujrat	Overall	
	%	%	%	N	%
Less than 5	49.3	46.0	66.7	**243**	**54.0**
5 to 9	42.0	44.7	22.7	**164**	**36.4**
10 to 19	7.3	8.0	2.7	**27**	**6.0**
20 to 29	0.7	0.0	3.3	**6**	**1.3**
30 to 39	0.0	0.0	1.3	**2**	**0.4**
40 to 49	0.0	0.7	1.3	**3**	**0.7**
50 to 100	0.7	0.0	2.0	**4**	**0.9**
100 or more	0.0	0.7	0.0	**1**	**0.2**
Total	100	100	100	**450**	**100**

4.1.2. Education Status

In Figure 2, there is a comparison made between the number of educated and uneducated workers in the most common jobs in the furniture sector. It was found that in the case of bed-frame makers, the number of educated workers was much higher than the number of uneducated workers. Similarly, among cabinet makers, assemblers, and to some extent carving machine operators, the number of educated workers was also higher than the number of uneducated workers. However, in all other trades, workers were found to have an equal likelihood of having some education or not having any education.

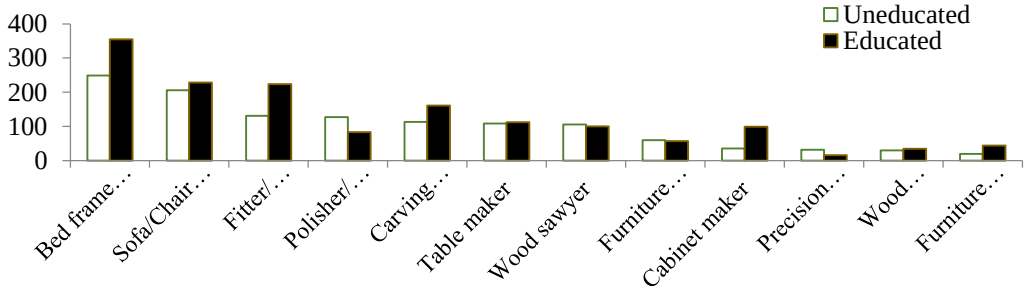

Figure 2: Number of Educated vs. Uneducated Workers in the Most Frequently Occurring Jobs

Source: (PSDF, 2016)

4.1.3. Training status

Table 2: Formal and Informal Training between the Workforces

	Chiniot		Lahore		Gujrat		Overall	
	N	%	N	%	N	%	**N**	**%**
Formal training	15	1.7	24	2.3	17	1.8	**56**	**2.0**
From private TSPs	2	0.2	1	0.1	0	0.0	**3**	**0.1**
From Tevta/Govt. TSPs	1	0.1	0	0.0	0	0.0	**1**	**0.0**
From NGOs	2	0.2	0	0.0	0	0.0	**2**	**0.1**
Other formal training	10	1.1	23	2.2	17	1.8	**50**	**1.7**
Informal training	523	59.8	532	51.9	186	19.3	**1241**	**43.4**
On-the-job training	259	29.6	497	48.4	120	12.5	**876**	**30.6**
Help from supervisor	245	28.0	23	2.2	62	6.4	**330**	**11.5**
Other informal training	19	2.2	12	1.2	4	0.4	**35**	**1.2**
No training	336	38.4	470	45.8	759	78.9	**1565**	**54.7**
Total	874	100.0	1026	100.0	962	100.0	**2862**	**100.0**

Source: (PSDF, 2016)

Table 2 presents data on the formal and informal training received by workers in the furniture manufacturing sector. The majority of workers in this sector had no formal training, as reported by 54% of the respondents. Only a small fraction, 2% of the workers, reported receiving formal training from private, government, or non-profit organizations. On the other hand, informal training was reported by 43% of the workers, either in the form of on-the-job training or through guidance from supervisors. This suggests that a significant proportion of the workers may not have the necessary skills and knowledge required for efficient performance in their job roles.

4.2. Inferential Analysis

4.2.1. Regression Coefficients

Table 3 presents the results of the analysis of the relationship between management subjects and their impact on personnel knowledge and company success. The table shows that certain management subjects have a significant influence on personnel knowledge and company success. Safety regulation, regulation laws, motivation of personnel, total quality management, product certification, and competitive positioning are the management subjects that have a high percentage of impact on personnel knowledge. On the other hand, new product development, sales abilities, total quality management, competitive positioning, and product pricing are the management subjects that have a high percentage of impact on company success. These findings suggest that the management of furniture manufacturing firms should focus on these specific areas to improve their personnel knowledge and company success.

Table 3: Standardized Regression Coefficients

Management Subjects					
	Personnel Knowledge			**Company Success**	
F1	Safety regulations	0.26	F2	Safety regulations	0.12
F3	New product development	0.16	F4	New product development	0.53
F5	Sales abilities	0.09	F6	Sales abilities	0.50
F7	Regulation laws	0.48	F8	Regulation laws	0.40
F9	Motivation of personnel	0.32	F10	Motivation of personnel	0.25
F11	Cost reduction	0.25	F12	Cost reduction	0.21
F13	Total quality management	0.31	F14	Total quality management	0.52
F15	Product certification	0.49	F16	Product certification	0.40
F17	Plant management and finance	0.40	F18	Plant management and finance	0.38
F19	Competitive positioning	0.39	F20	Competitive positioning	0.56
F21	Product pricing	0.32	F22	Product pricing	0.52
F23	Finding market information	0.03	F24	Finding market information	0.36
Technical Subjects					
F25	Effect of moisture on wood	0.17	F26	Effect of moisture on wood	.
F27	Drying	.	F28	Drying	.
F29	Lumber grading	0.18	F30	Lumber grading	.
F31	Basic wood properties	.	F32	Basic wood properties	.
F33	Inventory control/ Production scheduling	.	F34	Inventory control/ Production scheduling	.
F35	Wood gluing	.	F36	Wood gluing	0.02
F37	Wood machining processes	.	F38	Wood machining processes	0.05
F39	Wood identification	.	F40	Wood identification	-0.06
F41	Exporting economics	.	F42	Exporting economics	.
F43	Computer education (CAC/CNC/CAM/CAD)	.	F44	Computer education (CAC/CNC/CAM/CAD)	.
F45	Product improvement	0.17	F46	Product improvement	0.36
F47	Wood finishing	0.32	F48	Wood finishing	0.05
F49	Gluing/Jointing	0.59	F50	Gluing/Jointing	.
F51	Sawing/cutting technology	0.77	F52	Sawing/cutting technology	0.05

F53	Finishing and coating	0.46	F54	Finishing and coating	0.17
F55	Basic problem solving skills	.	F56	Basic problem solving skills	0.29
F57	Sanding/abrasives	0.5	F58	Sanding/abrasives	.
F59	Product distribution	.	F60	Product distribution	0.53
F61	Quality and Process control	0.08	F62	Quality and Process control	0.64
F63	Dealing with changing raw materials	.	F64	Dealing changing raw materials	.
F65	Developing business plans	.	F66	Developing business plans	0.66
F67	Utilizing composite products	.	F68	Utilizing composite products	0.3
F69	Plant maintenance	0.19	F70	Plant maintenance	0.39

The table indicates that there are certain technical factors that are closely related to personnel knowledge, including the effect of moisture on wood, lumber grading, wood finishing, gluing/jointing, sawing/cutting technology, and finishing and coating. On the other hand, quality control, developing business plans, and plant maintenance are factors that contribute to company success from a technical perspective. These findings suggest that a strong focus on these technical factors can have a significant impact on the success of a furniture manufacturing company.

4.2.2. Correlation

The Table 4 displays the correlation coefficients between different variables in the furniture market sector. The correlation coefficient is a statistical measure used to determine the strength and direction of the relationship between two variables. It is typically denoted as "r" and can range from -1 to +1. A correlation coefficient of 0 indicates no relationship between the two variables. A value of -1 indicates a perfect negative correlation, meaning that as one variable increases, the other decreases, and a value of +1 indicates a perfect positive correlation, meaning that as one variable increases, the other also increases. The strength of the correlation is determined by the absolute value of the correlation coefficient, with a value closer to 1 indicating a stronger relationship. According to the table, the management subject's personnel knowledge and your company relation have a positive correlation, indicating that the better the personnel knowledge, the higher the chances of success for the company. However, from a technical perspective, personnel knowledge and company association have a negative correlation, which suggests that the furniture market sector is lacking in technical knowledge.

Theoretically, technical subject is positively related to company success and personnel knowledge. However, cross-correlation analysis reveals that personnel knowledge and your company success have negative correlations in both management and technical subjects. This may indicate that there are some factors other than technical knowledge that affect company success and personnel knowledge. Interestingly, there is a positive association between your company success and personnel knowledge in one-to-one correlations, such as the company's success to company success and personnel knowledge to personnel knowledge, in both management and technical subjects.

Table 4: Correlation Coefficient

Management subjects			
PK	<-->	CS	0.328
Technical subjects			
CS1	<-->	PK1	-0.208
Cross correlation			
PK	<-->	CS1	-0.047
PK	<-->	PK1	0.476
CS	<-->	CS1	0.676
CS	<-->	PK1	-0.022
CS1	<-->	PK1	-0.208

4.2.3. Model specification

The SEM analysis can be prone to uncertainty, especially when working with cross-sectional data that were not collected under controlled conditions or do not adhere to normality assumptions. In order to address this issue, the current study implemented a model specification that accounted for measurement error by removing certain factor items. Specifically, variables such as drying, basic wood properties, wood gluing, wood identification, and wood machining processes were eliminated from the model in order to improve its specification and increase the reliability of the results.

Model Goodness of Fit

Upon analysing the consistency index results of the structural equation model, it is observed that there is a very high degree of goodness of fit between the model and the data. The results are shown in Table 3, which reveals that the chi-square value is 1.8 and has an insignificant probability value of 0.00. It should be noted that the chi-square value is sensitive to sample size, and for large sample sizes, it is divided by the degree of freedom. As a rule of thumb, a value less than 5 is considered acceptable.

Reliability fit indices

The previous statement emphasizes the importance of having other goodness of fit indices aside from the chi-square value to properly evaluate the model. There are other indices such as the goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA) that can aid in evaluating the model. Table 5 shows that all these indices have high values, indicating that the model is a good fit for the data and is reliable.

Table 5: Goodness of Fit Indices

Fit Indices	Rule of Thumb	Model Values
GFI	Close to 1	0.84
AGFI	Close to 1	0.82
CFI	Close to 1	0.64
RMSEA	Less than 0.06	0.04
Chi-Square	Less than 5	1.8

4.3. Discussion

The study highlights the challenges faced by the furniture sector in Pakistan, which are primarily attributed to the low education levels and limited exposure to formal skill development among firm owners. This finding is consistent with previous research that has emphasized the importance of education and skill development for the growth and success of businesses (Kamal, 2005). The study highlights that while many firm owners rely on on-the-job training and learning-by-doing approaches, this perception is likely due to their limited exposure and low levels of education, leading to a general disregard for efficiency and productivity. This finding is consistent with the research conducted by Boscolo (2018), which emphasized the importance of formal training and its positive impact on the productivity of firms.

The study recommends initiatives to address the skills gap in the furniture sector, including increased awareness among firm owners regarding the importance of formal skill development programs. This recommendation is consistent with previous studies that have highlighted the importance of skill development programs for enhancing productivity and competitiveness (Brunello and Wruuck, 2021). Moreover, the study suggests that policymakers should provide training and educational opportunities to address the skills gap in the furniture sector. This recommendation is consistent with the literature on skills development policies, which has emphasized the importance of government intervention in providing training and education opportunities (Ramírez-Montoya et al., 2018).

On the job market, a worker's socioeconomic standing is positively impacted by their skill level. Formal training helps to raise earnings, and skilled workers are better positioned to demand greater pay. Additionally, socioeconomic score is influenced by work status, with regular employment being more lucrative than day wage labour. These elements emphasise the significance of skills and employment

position in affecting employees' socioeconomic results (Shahid, Xiang and Hameed, 2021). The study also highlights the correlation between personnel knowledge and company success, emphasizing the importance of technical and management skills for the growth and success of businesses. This finding is consistent with the research conducted by Singh et al. (2021), which emphasized the importance of managerial skills for the success of businesses. The study recommends initiating skill development programs for the furniture sector in Pakistan, which should be aimed at the owners of furniture firms. Principles like problem-solving, cooperation, partnership, solution-orientation, and a win-win or positive-sum approach are all part of integrating strategy. It places a strong emphasis on interdisciplinary cooperation, strategic alliances, pragmatic solutions, and win-win outcomes. Organisations and people may adopt a thorough and cooperative strategy to overcome difficult issues and achieve long-term success by incorporating these ideas. This recommendation is consistent with previous research that has emphasized the importance of targeting training programs to the specific needs of the industry (Dabic et al., 2020).

5. Conclusions and Policy Implications

The descriptive statistics reveal significant challenges in the furniture sector of Pakistan. Firm owners have low education levels and limited exposure to formal skill development, resulting in a lack of awareness regarding the importance of formal training. Many rely on on-the-job learning, underestimating the need for efficiency and productivity. The study emphasizes the necessity of increasing awareness among firm owners about the significance of formal skill development programs to bridge the skills gap. Policymakers should provide training and educational opportunities to address this gap, leading to improved productivity and industry growth. Additionally, the study highlights the correlation between management factors (safety regulations, laws, motivation, quality management, certification, and competitive positioning) and personnel knowledge and company success. On the other hand, from a technical point of view, the effect of moisture on wood, lumber grading, wood finishing, gluing/jointing, sawing/cutting technology, and finishing and coating have a strong relationship with personnel knowledge and company success.

The study highlights the need for skill development programs targeting furniture firm owners in Pakistan. The sector faces challenges due to low education levels and limited exposure to formal training. Owners rely on on-the-job learning, unaware of the value of formal training, hindering sector growth. To address this, awareness about formal training's benefits must be raised. Providing sector-specific training programs and making owner participation mandatory can help overcome these challenges. Emphasizing efficient and productive practices and the role of formal training is crucial for the sector's success. To address this challenge, the study recommends providing high-quality training services to firm owners. These programs should demonstrate the tangible productivity gains that can be achieved through skill development and highlight the value of such development to enhance the efficiency and productivity of the sector. The idea is that by demonstrating the value of skill development to the owners, they will be more likely to invest in training their workers, which will ultimately lead to greater productivity gains for the entire sector.

The study suggests that improving the skills of firm owners should be the starting point for any skill development initiative in the furniture sector of Pakistan. It is essential to provide high-quality training services to the owners, which can demonstrate the actual benefits of skill development in terms of productivity gains and increased efficiency. By educating and training the owners, they can become more aware of the value of skill development, and it may also help them in making better investment decisions. Moreover, by focusing on the owners, the initiative can have a multiplier effect, as owners can then invest in training their employees, which can further enhance productivity gains. Consequently, the sector can become more competitive, and the workers can also improve their skills and enhance their employment opportunities. Therefore, the study emphasizes that policymakers should prioritize initiatives that aim to develop the skills of firm owners, which can have long-term positive impacts on the entire furniture sector.

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Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Disclosure statement

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