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THE IMPACTS OF STRATEGIC HRM PRACTICES AND
ORGANIZATIONAL LEARNING ABILITY ON ORGANIZATIONAL
INNOVATION

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THE IMPACTS OF STRATEGIC HRM PRACTICES AND
ORGANIZATIONAL LEARNING ABILITY ON
ORGANIZATIONAL INNOVATION

A Thesis Submitted to
Nanjing Tech University

For the Academic Degree of Master of
Business Management

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BY

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Under the supervision of
Prof. Erpeng Wang

June 2024

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Abstract:

In modern realities, organizations and companies need to constantly strive for the opportunities to outperform their competitors and to gain a competitive advantage. Thus, businesses are expected to perceive their qualified employees as a crucial strategic asset and make necessary investments into the implementation of successful strategies to support their workers. Furthermore, businesses need to constantly learn to adapt to the fast-changing business environment and add innovation to their business. In this respect, the organization's ability to learn and its capacity to develop innovation are associated with knowledge workers. Therefore, organizations are expected to use strategic HRM practices to improve employees' abilities and motivation, and to also provide opportunities for high performance, and ultimately to increase organizational innovation.

The main purpose of this research was to prove a positive effect of strategic human resource practices on organizational innovation and study the relationships between these two components. The other goal of this research was to demonstrate a positive influence of organizational learning ability on organizational innovation. Moreover, other goal of the research was to empirically demonstrate the role of organizational learning ability affecting the relationships between strategic human resource management practices and organizational innovation, and also the direct influence of it on organizational innovation itself. Finally, the difference between the enterprises which successfully implemented strategic HRM practices and the enterprises performing them at low levels was presented. The research was conducted under the quantitative descriptive survey research method. The data was collected from 197 enterprises operating in the manufacturing sector in Kazakhstan. The method of sampling was simple random sampling. Correlation analysis, regression analysis, structural equation modeling (SEM), path analysis and ANOVA test were used to test the research hypotheses.

The findings of the study revealed that strategic human resource practices have a positive impact on organizational innovation. Collaboration, organizational culture and teamwork among the employees are significantly improved within an implementation of strategic HRM practices. The study further revealed that organizational learning ability has a positive effect on organizational innovation. Knowledge, distribution of information and increased learning capability play a vital role in enhancing the business structure in regards to the efficiency and effectiveness of the labor force. Moreover, the research also confirmed that organizational learning ability affects the relationship between strategic human resource practices and organizational innovation. When the capability for learning and transferring knowledge is increased, it plays a complementary role affecting and enhancing the connection between strategic HRM practices and organizational innovation. The research finally proved that there is a gap in organizational innovation between the enterprises which successfully implement strategic HRM practices and the enterprises executing them poorly. The study concluded that companies need to develop new and effective practices which increase employee engagement, business output, and which can bring and transmit knowledge among the workforce in order to achieve competitive advantage.

Key words: organizational innovation, competitive advantage, knowledge, strategic HRM practices, organizational learning ability

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CHAPTER 1: INTRODUCTION

1.1 Research Background

It can be a serious challenge for many enterprises to undergo changes and move towards organizational innovation. Uncertainty, possible failures and simply a difficult implementation of it might bring hesitation to many companies as it certainly requires a good strategic realization. Organizational innovation plays a critical role for the success of a business as it allows companies to improve productivity and efficiency, stay competitive, increase employee engagement and become more adaptable and flexible to change. Properly implementing organizational innovation within the company can result in several benefits which can certainly contribute to the success of an overall business shape. Organizational innovation brings lots of benefits when accompanied by proper strategic policies in regard to the labor force. Those advantages include improvements in culture, creativity, motivation, collaboration, learning and many other beneficial components. Out of these advantages the one worth specifically mentioning is learning. As the organizational learning capability grants advantages such as increased employee job satisfaction, increased productivity and efficiency, leadership development, lower turnover rates and enhanced adaptability throughout the whole organization. That's why the influence of it on the organizational innovation can be easily considered gigantic as it brings knowledge.

Organizations must continuously innovate, adapt, and stay ahead – from new digital devices to innovations within the market in today's evolving and dynamic business landscape. The current situation demands a fundamental shift in how companies operate their development and learning strategy – a shift to become a more flexible learning organization. A learning organization is an entity which encourages a culture of knowledge creation and continuous learning at all possible levels. It is an entity which recognizes the importance of obtaining new knowledge, adapting to change, and utilizing ideas to achieve strategic objectives and enhance performance. In a learning organizations, learning becomes an embedded aspect of the organizational processes and its culture and is not only limited to official training schemes or individual activities. In such organization, acquiring, sharing, and implementing knowledge with an aim on collaboration, flexibility and innovation are supported. Learning organization can promote experimentation, open communication and encouragement of learning capacity and collective intelligence within the workforce (*Disha Gupta, 2022*).

Successful human resource strategies are crucial for connecting talented professionals within an organization's goals. Well-implemented HRM ensures that an organization meets the needs of customers and stays relevant in a rapidly changing market. A strategic management plan also opens up avenues to evaluate HR practices of an organization. Evaluating HR processes is essential for continuous growth and progress. Strategic human resource management helps a company to connect the needs of an organization with company culture, talent management, and consumer needs. This might enhance the efficiency and daily operations of an HR department, contributing to the success and overall culture of the workplace (*Indeed Editorial Team, 2023*).

The contribution from the research is that it defines the impact of strategic HRM practices on organizational innovation. The effect of was expected to be positive as more efforts are put into the implementation of strategic human resource management practices, the more organizational innovation it would bring. If an organization is able to continuously create knowledge, share it among employees and integrate it within organizational goals, it would surely contribute into the organizational innovation. That's why organizational learning ability was predicted to positively affect the organizational innovation. Moreover, it was also proved that organizational learning ability affects the relationship between strategic HRM practices and organizational innovation. In other words, higher organizational learning ability, fewer efforts needed to be put into strategic HRM practices which lead to organizational innovation. Finally, it was confirmed that enterprises performing strategic HRM practices at high levels have a higher organizational innovation average compared to enterprises that execute the same practices at low levels. There are few studies in the literature that show the positive impact of both organizational learning ability and strategic human resource management practices on the organizational innovation. The expected outcome of this research was predicted to not conflict with the results of the previous studies described in the literature review section of the paper. Hence, creating a suitable environment and certain strategic systems for employees to continuously be in shape to meet the long-term goals of an organization would surely improve the business performance. Moreover, appropriate and helpful suggestions, conclusions and discussions were also developed and presented.

1.2 Objectives of the study

- (i) To analyze the relationship between strategic human resource management practices and organizational innovation,
- (ii) To investigate the relationship between the organizational learning ability and organizational innovation,
- (iii) To prove the organizational learning ability can act as a mediator between strategic human resource management practices and organizational innovation,
- (iv) To examine the difference between enterprises that carry out strategic human resource management practices at high levels and enterprises that implement them at low levels.

1.3 Research questions

- (i) What is the relationship between strategic human resource management practices and organizational innovation?
- (ii) What is the relationship between organizational learning ability and organizational innovation?
- (iii) Does organizational learning ability affect the relationships between strategic human resource management practices and organizational innovation?

- (iv) Is there a difference in organizational innovation between enterprises that perform strategic human resource management practices at high levels and enterprises that execute strategic HRM practices at low levels? If yes, to what extent?

1.4 Proposed research variables

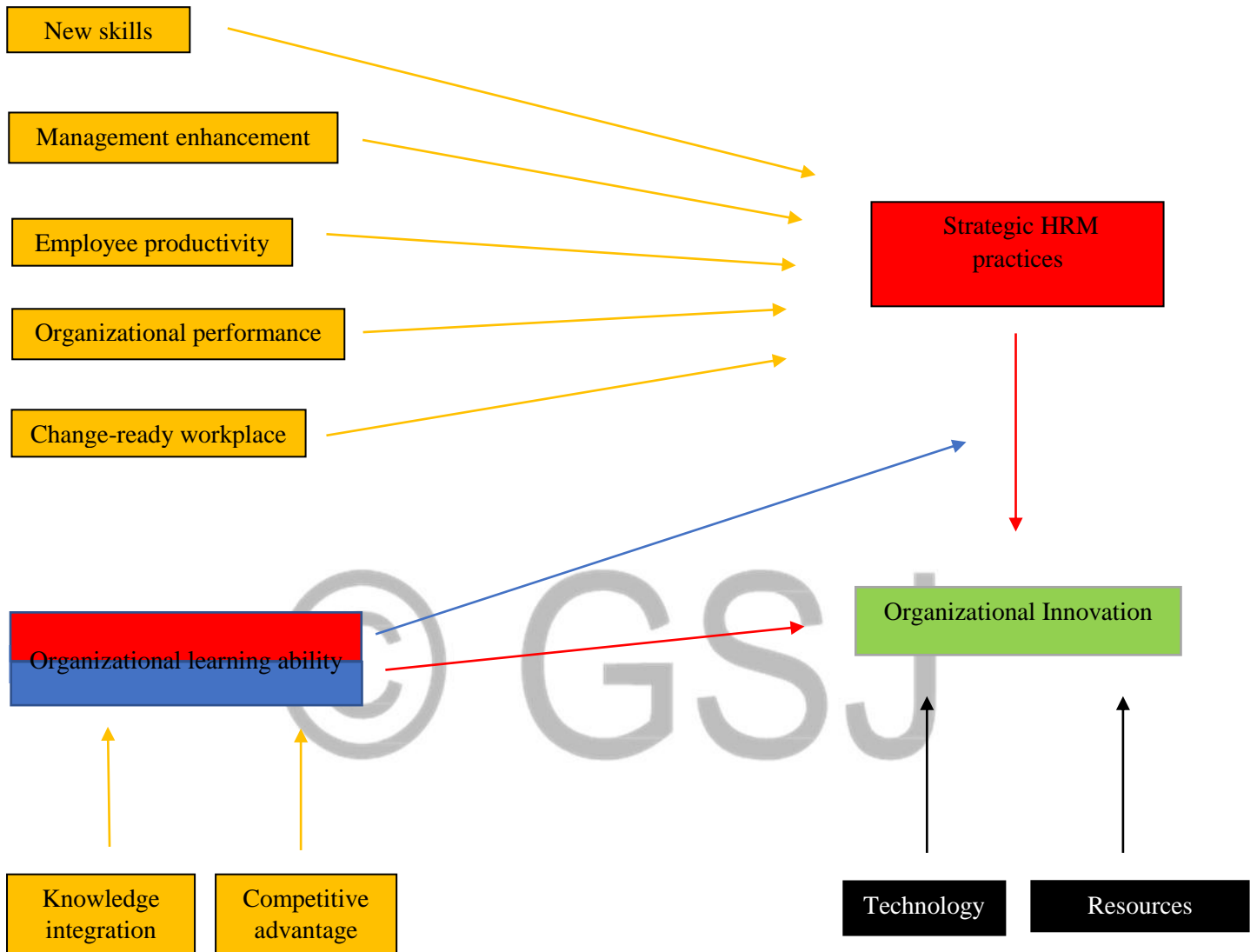
Three variables were closely examined and the relationships between them were tested. Organizational innovation had a role of a dependent variable and organizational learning ability with strategic human resource management practices were brought to the research as independent variables. Moreover, there were mediator, moderator and control variables that were illustrated in the conceptual framework. All of them were taken from the literature review section. They had a supplementary role and were presented to help understand the general concept and relationship of the three main variables between each other which were organizational innovation, organizational learning ability and strategic human resource management practices.

- (i) Organizational innovation – Dependent variable
- (ii) Organizational learning ability – Independent variable
- (iii) Strategic human resource management practices – Independent variable

1.5 Significance of the study

Despite the fact that the relations between the organizational learning capability, organizational innovation and strategic human resource practices have been studied before, the information about the conditions and proper implementations of strategic human resource practices in Kazakhstan to promote organizational innovation has not been fully defined and analyzed. Therefore, this study also aimed to fill the gap mentioned above and provide information about it and impact as a possible navigation towards increased innovation activity. This study provided detailed information about the strategic HRM and organizational innovation from different angles. In addition, the study gave clues about the relationships between strategic HRM practices, organizational learning ability and organizational innovation. In the current literature, there are a number of studies that strategic HRM practices positively impact on the organizational innovation. Moreover, there are also studies proving that the organizational learning ability also affects organizational innovation in a positive way. Hence, it can be stated that the organizational innovation is often related to the capability to create knowledge from the internal and external environment, share it among employees, interpret it and integrate within the organizational processes for future use. Furthermore, the appropriate recommendations which can help the enterprises to undergo the changes involving the strategic HRM practices were introduced.

1.6 Conceptual Framework



Colors scheme

- Green = Dependent variable
- Red = Independent variable
- Orange = Mediator variable
- Blue = Moderator variable
- Black = Control variable

Dependent variable – Organizational Innovation

Independent variable ₁ – Strategic HRM practices

Independent variable ₂ – Organizational learning ability

Mediator variables ₁ – New skills, Management enhancement, Employee productivity, Organizational performance, Change-ready workplace

Mediator variables ₂ – Knowledge integration, Competitive advantage

Moderator variables – Organizational learning ability

Control variables – Technology, Resources

1.7 Dissertation structure

The structure of the dissertation follows the common dissertation structure scheme in the sciences and social sciences. That would include an introduction to the topic, research background, a literature review, provision and explanation of the methodology, findings, an overview of the results of the research, a discussion of the results and their implications, and finally a conclusion that shows what the research has contributed. The dissertation consists of 5 chapters – Introduction; Literature Review; Research Design and Methodology; Results and Analyses; Conclusions, Interpretations, Limitations and Recommendations. The overall structure had this scheme:

Abstract

Introduction of the topic, purpose of the study and ideas within the scope of the topic

Chapter 1 Introduction

It contained a more detailed explanation of the research background, significance of the topic and research, research statements, aims and objectives, conceptual framework, research variables, research structure and main results.

Chapter 2 Literature Review

It included the secondary research studies and opinions of different authors regarding the research area in general and their findings.

Chapter 3 Research Design and Methodology

It included all the necessary information about the ways in which the research was conducted. It contained research method, the overall approach and type of research, the methods of collecting data, methods of analyzing data, materials and tools used, sampling aspects of the research and questionnaire. Research statements were added in this chapter as well. Moreover, it contained presentation and discussions of the primary data collected through questionnaire. The sampling procedures, data collection and other relevant information were presented and assisted by tables.

Chapter 4 Results and Analyses

It contained the gathered data analyses, tests, calculations, outcomes from different analyses, detailed interpretation of the results, the list of performed analyses and used programs and other aspects were added in this chapter.

Chapter 5 Conclusions, Interpretations, Limitations and Recommendations

This chapter concluded the whole research and concisely answered the research questions. Limitations of the research, recommendations, interpretations, scope for future studies and discussion of contributions of the research were provided in this chapter.

CHAPTER 2: LITERATURE REVIEW

2.1 Organizational Innovation

Damanpour and Schneider (2006) claimed that the concept of innovation has been studied in many disciplinary areas and defined in different forms according to different perspectives. Innovation is a concept explored in psychology mainly at the individual level, while in economics and management at the industrial and business levels, respectively. Innovation derives from the Latin word “innovatus” and means the introduction of new methods or ideas in the social, cultural and administrative environment. In the Webster dictionary, it is described as a transition to new things and methods. According to *OECD (2005)*, an organizational innovation is the implementation of a new organizational method in the workplace organization, firm’s business practices or external relations. Innovations in the workplace organization include the implementation of new methods for decision-making and distributing responsibilities among workers for the division of job within and between firm activities (*and organizational units*), as well as the new concepts for the structuring of processes such as the integration of business activities.

According to *MBA Knowledge Base (2021)*, Organizational innovation is a process of obtaining and utilizing new ideas to meet the stakeholders’ expectations within the organization. It is also known as the transition of new knowledge into new services and goods. It is about increasing efficiency and creating value, and therefore leading to a prosperous business. Without innovation, new services and new products, or even new ways of doing business would never emerge and organizations would be stuck doing the same outdated way of conducting a business.

Organizational innovation can be explained as the introduction of new ideas, practices, and processes that result in improvements in business operations. There are many beneficial factors in implementing organizational innovation as it highly contributes to the success of a business (*Aparajita Mohanty, 2023*). Organizational innovation emphasizes processes or ideas that are knowledge-based, and behavior, which are transformative. In this way, innovation looks at how new behaviors or ideas are defined in a given organization and they thrive to positively affect the organization (*Lam, A., 2006*). In a comprehensive literature review study that focuses on organizational innovation as a whole, *Crossan, M.M. and Apaydin, M., (2009)* depict multiple definitions of organizational innovation and try to connect points from each definition to bring up an increasingly comprehensive description of the term. The multivariate definition of organizational innovation refers; to either the production or the adoption; the increase or renewal of the services, products or markets; the assimilation and use of any given novelty in economic or social spheres; the facilitation of alternative techniques for production; and ultimately installation of emergent system for management.

CEOpedia (2019) explained organizational innovation as the implementation of a new organizational method in the regulations of management adopted by the organization including the knowledge management, organization of the relations in the workplace and its environment, which has not been applied in a given enterprise so far. These innovations must be the outcome of the strategic decisions made by the management force. Innovation can be as well understood as:

- Introduction of a fresh product, which consumers are not aware of yet, or some new brand of it
- Introduction of a new method for production which was not used before
- Introduction of a new market
- Retrieving a new source for raw materials
- Being a new organization

The phenomena of innovation if understood in many ways, is the exploitation of new ideas. The ideas are to result in economic benefits, multiple technological improvements, or better methods to manage something. Because of the fact that this concept can be interpreted in various ways, the innovations should be divided into two categories. The first category distinguishes the technological innovations that are associated to the product or concern the production process. The second category involves non-technological innovations that refer to organizational or marketing innovations (*CEOpedia, 2019*).

The world's most innovative companies have largely built structures that remove structural barriers via organizational innovation. They have improved their innovation capability and also managed to establish an innovation culture. This has led to the promotion of incremental innovation, disruptive innovation, digitalization, and also to the process improvement. They have aligned their structures in such a way that innovations and ideas can constantly prosper instead of the attempts to promote ideas and innovations through traditional structures (*Innolytics.ag, 2020*).

According to *Jovana (2019)*, despite the fact that organizational innovation is often neglected in scientific studies, companies are starting to notice the importance of organizational innovations such as the adoption of artificial intelligence, automated processes, open office workplace, cloud solutions and many others. The study of MIT published in the late 1980s about the automobile industry in Germany, Japan and the USA, was first to attract managers' and scientists' attention towards the organizational innovation as the driving factor to achieve competitiveness and better performance. Organizational innovation is aimed at enhancing the company's performance by reducing transaction, administrative or even supply costs, and also improving the workplace satisfaction which therefore leads to employee's productivity. The implementation of an organizational method that was not used previously within the company is the main difference between organizational innovation and organizational change. The research carried out by *Marisa Smith, Marco Busi, Peter Ball & Robert van der Meer (2008)* has brought attention to the factors influencing on organization's ability to manage innovation. According to their findings, technology and resources were among the 9 key factors that impact on organization's capability to control innovation.

There are four main types of innovations in Kazakhstan (*process, product, marketing and organizational*). As for the marketing and organizational innovations, there are no serious developments in this area within the country. Therefore, it is still not easy for the country to offer marketing and organizational innovations to the world market (*Zh. Abylkassimova, G. Orynbekova, O. Osadchaya & M. Alibayeva, 2020*).

2.2 Organizational Learning ability

As specified by *Cespedes-Lorente, Jerez-Gomez, & Valle-Cabrera (2005)*, organizational learning ability can be characterized as the capability of an organization to process knowledge, i.e., the ability to gain, create, transfer and integrate knowledge. It can also be defined as the capability to modify the behavior to reflect the new cognitive situation, within the goal to improve organizational performance. *Goh & Richards (1997)* claimed that the organizational learning ability acts as a facilitator for the organizational learning process. It is understood as the organization's tangible and intangible resource, as skills that act as a way of contributing to a competitive advantage. On the contrary, *Hsu and Fang (2009)* defined the ability of organizational learning as the ability to absorb and transform new knowledge and apply that knowledge to the development of new products with competitive advantage. *Karatas-Özkan & Murphy (2010)* argued that organizational learning as a discipline is the study of recognizing processes of and within organizations. According to *Friedman, Lipshitz & Popper (2005)*, during the past 30 years, especially during the past two decades, the organizational learning has emerged as a fundamental concept in the organizational theory and a vital subject for organizations, professionals and managers. Despite the exponential growth in the literature, the organizational learning yet remains vague concept for both practitioners and researchers. It leads to the lack of evidence-based guidelines for professionals and managers who strive to successfully implement the organizational learning.

According to the research study performed by *Giancarlo Gomes & Rafaele Matte Wojahn in 2017*, the organizational learning ability influences the innovative performance of SMEs in a positive way. Specifically, the study provides evidence for a significant and positive impact of organizational learning ability on the innovative performance of small and medium-sized textile enterprises. The research was conducted with the quantitative approach under a cross-sectional survey and the sample was composed of 92 enterprises operating in the textile industry. The authors conclude that managers need to pay attention to the factors that possibly facilitate organizational learning as they have a direct effect on innovation and indirect one on the organizational performance.

Friedman, Lipshitz, and Popper (2005) claimed that there is confusion in understanding the concept of the organizational learning and both academic and popular literature contributed to it by continuously providing new definitions for it, anthropomorphizing its concept, splitting the field between skeptics and visionaries and by the reification of its terminology.

A meta-analysis provided by *Bapuji & Crossan (2004)* reviewed the literature regarding the field of organizational learning during the period 1990-2002. The meta-analysis revealed that there is an increasing consensus in the literature that learning can be cognitive and behavioral, endogenous and exogenous, radical and incremental, and can actually occur at multiple levels in an organization. The study is useful for evidence-based application of organizational learning, as it brings a systematic framework emerging from the consensus in academic regarding the concepts such as:

- **External learning** (*vicarious, congenital, and Inter-organizational learning*)
- **Internal learning** (*organization's own cumulative experience*)
- **Learning perspective** (*which links the performance with learning*)
- **Learning traps** (*which interfere organization's success*)

- **Learning facilitators** (*structure, strategy, culture, environment, organizational life stage and availability of resources*)
- **Premature learning** (*which can result in organizations with unsatisfactory experience leading to inappropriate generalizations to future operations, and spatial and temporal barriers to learning*)

Goh & Richards (1997) established a 21-item survey to measure the learning ability of organizations using a *7-point Likert scale from 1 which is strongly disagree to 7 which is strongly agree*. This organizational learning survey enables organizations to diagnose the extent to which they accept the principles of organizational learning. The authors identified five underlying categories that contribute to organizational learning in order to measure the learning ability. These five interdependent jointly supportive categories are:

- **Clarity of mission and purpose** - the extent to which workers support the mission and purpose of the organization and understand how they can contribute to its success.
- **Leadership empowerment and commitment** - the roles of the managers in encouraging workers to embrace behaviors which are supportive in experimenting and changing culture.
- **Experimentation** - the freedom workers enjoy in the tendency of new ways of doing processes and taking risks.
- **Transfer of knowledge** - the systems that are available to workers to learn from other organizations and individuals.
- **Teamwork and group problem-solving** - the teamwork in resolving issues and generating innovative ideas.

Despite the explosive growth in the literature and other studies, before the year of 1996, there was no empirical work that evaluated the learning ability and the relationship between performance and organizational learning. Since then, there has been an increasing trend of empirical research. But the first literature was non-conclusive regarding the statement of whether there is a positive relationship between financial performance and learning ability. Furthermore, there appeared to be no consensus on a compatible measure of organizational performance as it is related to learning ability since a plethora of measures were contained in the studies ranging from:

- objective financial measures such as return on assets (*ROA*) and return on investment (*ROI*)
- perceptual measures such as productivity, profitability, competitiveness, flexibility/adaptability and innovation
- a mix of both financial and non-financial measures in some cases (**Panayides, 2007**).

Goh, Elliott & Quon (2012) established a meta-analysis of these studies to identify whether there is a significant empirical evidence of a connection between organizational performance and learning ability, both financial and non-financial. The results of this meta-analysis have significant practical applications as they provide professionals and managers with a concrete approach to developing a learning ability by:

- helping them create a stronger case for investing the resources into enhancing the organizational learning ability as these findings clearly confirm that learning leads to benefits.

- developing diagnostic instruments they can utilize to assess an organization's learning ability, enabling them to benchmark their organizations and recognizing practices and resources that are necessary to build a stronger learning ability.

Lien Thi Pham, Ha Viet Hoang (2019) conducted the research study which explores relationship between organizational learning capability and the business performance of the firms in Vietnam. The data collected from a survey of 160 MBA students working in different Vietnamese firms were used and analyzed to test the relationship. According to the results, it was confirmed that the organizational learning ability positively affects the business performance. Moreover, *Cheng Ling Tan and A.M. Nasurdin (2011)* performed the study in which the role of knowledge management effectiveness impacting the relationship between human resource management practices and organizational innovation is examined. The results of the study showed that knowledge management effectiveness fully impacts on the relationship between HRM practices and organizational innovation.

Kjellstrand, Indira; Vince, Russ (2017) carried out the study concerning the organizational learning in Kazakhstan. According to the study, organizations in Kazakhstan might tend to experience anxiety about making mistakes which leads to more mistakes and more fear of mistakes. The research approach was interpretative and a large empirical data set was collected at five organizations in Kazakhstan. 52 semi-structured face-to-face interviews were taken to generate a data set.

2.3 Strategic Human Resource Management

Strategic human resource management provides a framework which links people management and development procedures to long-term business goals. It concentrates on long-term resourcing problems within the context of an organization's goals and the evolving pattern of work. It also informs other human resource strategies, such as reward or performance, defining how they are being integrated into the common business strategy. Furthermore, strategic HRM practices focus on longer-term people issues and concerns about quality, culture, structure, values and commitment (*CIPD, 2021*). In 2002, *Armstrong and Baron* explained in details the various definitions and approaches to human resource management in their book. They state that strategic HRM is a complex process that is being constantly evolved and still considered as a topic of ongoing discussion among academics and other commentators. The definition of it and its relationships with other aspects of business strategy and planning are not complete and opinions vary.

According to Dessler (2003), strategic human resource management can be defined as linking the strategic goals and objectives with the human resource management in order to develop organizational cultures and improve business performance that encourages innovation. *Boxall and Purcell (2011)* described strategic HRM as being concerned within the influence on the organizational performance. It can include several individual HR strategies: "delivering fair and equitable reward", "improving employee performance", "streamlining organizational structure". However, these strategies are not strategic HRM. Rather, strategic HRM is the overall framework that defines the shape and the delivery of the individual strategies, linking people with organizations in a systematic way by integrating HRM strategies into organizational strategies to achieve organizational success.

According to *Kathy Hoan (2023)*, the goal of strategic human resource management is to create programs and policies which align with the company's business strategy. The primary difference between regular human resources and strategic human resources is that regular human resources concentrate on the day-to-day management of workers, while strategic human resources concentrate on how workers can achieve the company's goals overall. This can mean that strategic human resource management must first know the company's business goals and create programs based on them and policies that support those goals. Some common examples strategic HRM policies and programs can include:

- **Performance management** - establishing systems to monitor and improve employee performance.
- **Training and development** - finding employees' development needs and providing resources and training to help them improve.
- **Compensation and benefits** - designing benefits and compensation policies that attract and retain workers.
- **Employee relations** - managing employee relations to establish a positive environment in the workplace.

According to *Emeritus (2023)*, strategic human resource management has become important for every business regardless of the field or industry. Strategic HRM primarily concentrates on resolving matters such as organizational culture, effectiveness of processes, hierarchy structure, performance challenges, and resource-role matching. Ideally, there might be five primary objectives of strategic human resource management approaches:

- **Resource-based Strategy** - concentrates on improving the strategic abilities of the company
- **High Commitment Management** - creating better commitment between managers and their workers
- **Achieving Strategic Fit** - integration of workforce and needed resources through a streamlined and high oriented operation model
- **High Involvement Management** - empowering and treating workers as stakeholders
- **High-Performance Management** - improving company performance through growth, superior productivity, and profitability rate of the workforce

According to *Wright & Ulrich (2017)*, strategic HRM is a relatively new concept in the field of human resource management. It emerged at the end of the twentieth century and has been developing for the last three decades. It is crucial to align human resource activities with business goals, and many scholars identified such necessity in the late 1970s, which gave rise to the development of strategic human resource management and the beginning of studies in this field. Breakthrough in the area of strategic human resource management occurred when scholars found the connection between HR practices and company performance. It resulted in a growing number of empirical studies confirming that high-performance human resource practices led to the better financial performance of companies.

Tim Vaughan (2019) stated that there are many important aspects of strategic human resource management. For instance, it connects employees with organizational goals. It might sound like a simple objective, however growing a business has become ever more difficult in light of different emerging trends such as competitive labor market, social change and digital disruption. As the Gartner survey revealed, 47% of HR managers said their organization experiences struggles in developing effective leaders, 45% reported that their leadership bench

lacked diversity and moreover 45% said that their succession management processes didn't yield right leaders at the right time. *Hayati & Nurani (2021)* explained that if the organization gains a competitive advantage, then setting training will provide required skills for development. Organizations should consider training more widely as a way to create intellectual capital. That might consist of necessary skills (*i.e., skills required to perform work*), or more advanced skills (*for instance: how to share information or use technology*), or the ability to understand behaviors of consumers, or enhance creativity and strengthen collaboration among the workers.

According to the authors, *Brassey & Christensen & van Dam (2016)* stated that during the past decade, the constant shift of the workforce globally has continued due to many factors. The increasing complexity, the increasingly competitive business landscape, and the digital revolution require increasingly diverse employees. On the contrary, the demographics of a multigenerational workforce, the increasing uncertainty faced by the businesses, the shorter age of knowledge stored in humans make reskilling, and upskilling processes become important needs. The current shift in the knowledge-based and digital economy can show the need for a workforce which has an ability to do both. The authors concluded that more and more organizations realize that strategic human resource management is the most valuable asset. These organizations adopt various practices such as building teamwork, developing competencies, changing the mindset of the workers, building competency based performance systems, and developing employees.

2.4 Previous studies related to the research topic

Susan Boostani and Ali Sabbaghian (2018) performed the research study which investigates the effect of strategic HRM on organizational innovation and knowledge management capacity. The research method was descriptive-survey. Data analysis was carried out by using a structural equation modeling method. The results of the research showed that HRM has an impact on the components of knowledge management capacity such as knowledge sharing, exploration, exploitation, knowledge acquisition and knowledge software. Moreover, the findings of the research showed that strategic human resource activities of organizations affect organizational innovation in a positive manner. Lastly, they stated that organizational HRM has a positive influence on the organizational knowledge management capacity. The main hypothesis of the research stating that strategic human resource activities have a positive effect on the organizational innovation was proved. Based on this study, it was said that strategic HRM is one of the most important mechanisms that develops innovation. There are implications such as proportionality, commitment, participation and flexibility which lead to a competitive advantage.

According to the research performed by *Cemal Zehir, Ahmet Uzmez & Hacer Yildiz (2016)*, strategic HRM practices had a positive impact on Innovation performance. Moreover, the mediator effect of global capabilities on the relationship between innovation performance and strategic HRM applications was also examined. The data was collected through a questionnaire involving the managers of four Islamic banks operating in Turkey. The analysis procedure was performed by using SPSS statistics program and AMOS program. According to the results, the influence of SHRM practices was positive on innovation performance and moreover global capabilities had a mediator effect on this relationship. According to the authors, global capabilities are the combination of the effective coordination of the operation and connection within the organization and resources which lead to a competitive advantage in global scale.

Global capabilities systematically make it possible to be adapted according to the competition conditions and strategic conditions of the related country as in each country, the conditions of competitions are different.

Buyung Sarita, La Hatani, Dan Jopang & Bakti (2022) performed the study which aimed to analyze the influence of human resource practice on knowledge management and analyze the influence of human resource practice on organizational innovation. The population of the study was the active managers of Village-Owned Enterprises in Southeast Sulawesi Province and South Buton Regency located in Indonesia, totaling 60 institutions with 157 employees. The data collection was through questionnaires. The research data was analyzed by using Smart PLS using structural equation modeling. According to the results of the study, the effect of human resource practice on knowledge management was positive and significant. Secondly, the effect of human resource practice on organizational innovation was also significant and positive. The authors suggested that it is important for the Regional Government to provide opportunities for the community who will recruit the village-owned enterprises. These opportunities were as follows: level of education, work experience and providing training and technical education to managers so that they have the desire to develop knowledge and successfully implement it to improve organizational innovation.

Zainurrafiqi & Gazali & Nuzulul & Nurul (2020) performed the study which proved the positive effect of organization learning capability and organizational innovation on competitive advantage and business performance. The studied variables of the research were measured on a *Likert scale within a range from 1 to 7 where 1 = strongly disagree, and 7 = highly agree*. The variables studied consisted of endogenous and exogenous variables. Models for measurement were performed by using the Confirmatory Factor Analysis (CFA) method. This study used the Structural Equation Modeling for hypothesis testing. In conclusion, the authors emphasized the importance of organizational learning ability, competitive advantage and organizational innovation to foster business performance. The authors also suggested that the role of organizational learning capability, competitive advantage and organizational innovation on business performance can change over time. Hence, further researches should be carried out, with larger sample size.

Mouaz & Abdul (2017) carried out the research study which identified the impact of Organizational learning on Innovativeness. The dependent variable in this study was Innovativeness. This variable was measured using a scale which contained 21 items five dimensions: **risk taking, creativity, openness to change, proactiveness, and future orientation**. The scale of occurrence ranged from 1= not at all, to 5= frequently. On the other hand, the independent variable in this research was Organizational learning. This variable was measured using a scale which contained 16 items in four different dimensions: **system perspective, openness and experimentation, managerial commitment, knowledge transfer and integration**. The analysis indicated that there is a significant and positive relationship between the Organizational learning and Innovativeness. In fact, the authors argued that he organizational learning results in inducing a new idea or knowledge, increasing the ability of understanding and being able to apply them. The organizational learning can bring benefits in an organization's overall progress by determining its mission, capacities, and strategies. The results of regression analysis indicated that knowledge transfer and integration, openness and experimentation, and system perspective are considered to be the most crucial ones.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Research methodology

The research was carried out using a *survey method*, under a *quantitative descriptive* approach. It helped to identify the status of the variables being studied and give a systematic information about them. Moreover, *correlational research method* was used as a sub-method in order to interpret relationships between strategic HRM practices, organizational innovation and organizational learning ability. These would have helped in testing the proposed hypotheses, getting specific results and building appropriate conclusions based on them. Additionally, throughout the entire research, lots of articles and journals both in domestic and foreign language were reviewed deeper by an author concerning the topic. The research survey contained questions about the dimensions of talent management, leadership aspects, perception of innovation performance levels, organizational management systems, questions about career satisfaction and other questions. The questions were structured properly for the successful implementation of the measurements between the studied variables which are organizational innovation, strategic HRM practices and organizational learning ability. They were carefully analyzed and the needed data was collected from the enterprises in Kazakhstan operating in the manufacturing sector in the cities of Almaty and Astana.

3.2 Test scheme and feasibility analysis

The obtained data was tested using the *SPSS statistics* program. The survey method was used to address participants' perception of the research variables. In order to carry out the study, the *questionnaire* was prepared with *Likert* scale which would help to measure the variables within the research. The expected data was collected from different enterprises operating in the manufacturing sector in Kazakhstan, in the cities Almaty and Astana. The enterprises registered by the National Chamber of Entrepreneurs of the Republic of Kazakhstan "*Atameken*" helped to establish a sampling framework. The method of sampling was *simple random sampling* as it is highly reliable and unbiased. Enterprises' fields of activity included food and beverage, textiles and clothing, iron and steel products, chemical products, electronics and other fields of activity within the manufacturing industry. *The correlation analysis* was applied to test the relationships between the variables and to determine the direction and degree of the relationship between the variables. The used program for the correlation analysis was SPSS software. *The regression analysis* was used through EViews software to determine the impact of independent variables on dependent variable. Moreover, the *structural equation modeling (SEM)* was used to test the impact of independent variables on the dependent variable. In order to test if organizational learning ability has an effect onto the relationship between strategic HRM practices and organizational learning, *path analysis* was applied through the *AMOS program*. Finally, *ANOVA test* was put to use to test whether there is a difference in organizational innovation between the enterprises that implement strategic HRM practices at high levels and enterprises that do the same at low levels.

3.3 Measurement of variables

3.3.1 Measurement of strategic HRM practices

The survey method was mainly used in studies on strategic HRM practices. However, since these studies took place at the organizational level, the data was answered by managers, especially HR managers. As can be seen in the current literature, it is based on AMO theory to reveal the applications that make up the strategic HRM system.

Therefore, the strategic HRM system consists of HRM practices that develop talent, provide motivation and opportunity. In this study, a one-dimensional scale consisting of 23 items was used to measure HRM applications. The reliability level of the scale in question ($Alpha = 0.89$) is above the lowest level accepted for the Social Sciences ($Alpha = 0.70$). The Likert 7 scale was used to determine the level at which human resources managers implemented strategic HRM practices to manage their workers (*white collar*) in their businesses. These are formed as “1 = fully disagree, 2 = disagree, 3 = partially disagree, 4 = neutral, 5 = partially agree, 6 = agree, 7 = fully agree”.

3.3.2 Measurement of organizational innovation

Seeck and Diehl (2017) examined 35 studies on innovation with HRM applications between 1990 and 2015. According to the authors, three dimensions of innovation (*product, process and administrative innovations*) have been discussed when examining the relationship between HRM and organizational innovation in previous studies. In addition, perceptual scales answered mainly by senior managers were used to measure organizational innovation in these studies. However, these studies were carried out mainly (86%) on businesses (*cross-sectional*) operating in different sectors. The main reason for this is that it is not easy to develop a common measurement (*evidence-based measurement*) for different businesses.

In order to determine the organizational innovation variable, the Likert 7 scale was used to identify organizational innovation activities. These are formed as “1 = fully disagree, 2 = disagree, 3 = partially disagree, 4 = neutral, 5 = partially agree, 6 = agree, 7 = fully agree”. This scale was answered by senior managers.

3.3.3 Measurement of organizational learning ability

There are two types of measurement classification related to organizational learning ability in the current literature. Researchers in the first classification try to measure employee perceptions of the concept in question to determine the organization's ability to learn. Other researchers, on the other hand, have introduced a scale answered by managers to determine organizational learning ability (*Pilar Jerez-Gómez, Jose Cespedes-Lorente & Ramon Valle, 2005*). This scale consists of four dimensions and a total of 16 expressions. These dimensions are managerial affiliation, system perspective, openness and experimentation, and knowledge transfer and integration. The reliability coefficient of each dimension of this scale is greater than

the level accepted in the Social Sciences ($\alpha=.70$). In other words, the alpha coefficient of managerial connectedness, system perspective, openness and experimentation, and information transfer and integration are 0.82, 0.78, 0.73, and 0.80, respectively. Because this research is at the organizational level, the scale of organizational learning ability has been filled by HR managers.

In this study, 7 *Likert scale* was used to determine the level of organizational learning ability of enterprises. These are formed as “1 = fully disagree, 2 = disagree, 3 = partially disagree, 4 = neutral, 5 = partially agree, 6 = agree, 7 = fully agree”.

3.4 Population and sample of the research

This study measured participants' perception of the research variables in question. For this purpose, the survey method was used to determine the mediating role of organizational learning ability in the relationship between Strategic Human Resource Management Practices and organizational innovation. The sampling framework of this study was established by enterprises registered by the Atameken. Therefore, data was collected from different enterprises operating in the production sector in Kazakhstan, especially from two regions (*Almaty and Astana*) where manufacturing facilities are more located. There are a total of 630 registered manufacturing enterprises in the two mentioned regions. According to the computational technique put forward by *Cochran (1977)*, which is widely used in calculating sample size in social science research, the number of samples will be 239 enterprises. In social science research, 95% trust level and 5% fault tolerance are generally accepted. However, out of 255 surveys sent to businesses, there were 201 returns. The number of samples used dropped to 197 after discarding the four surveys that were missing from them. In other words, the survey return rate is 77.2%. As shown in the following sectors especially leather and footwear, food and beverage, textiles and clothing, iron and steel products, personal care products, chemical products, electronics, electrical and telecom, pharmaceuticals and other fields of activity. The method of sampling according to groups was used to determine the enterprises included in the study. Accordingly, businesses in each sub-sector were represented at the same rate in the sample. However, samples were selected from each group by simple random methods. During the sample, different official organizations were used to choose between businesses that work better in the production sector.

3.5 Data Collection

Data related to the research was collected from 197 enterprises operating in various fields in the production sector in Kazakhstan. General information about participating businesses is included in Table 3.1. Of the 197 businesses surveyed, half (99 businesses and 50.3%) were domestic businesses, while a third (66 businesses or 33.5%) were foreign businesses and a quarter (32 businesses or 16.2%) were businesses founded by domestic and foreign investors. Three-quarters of these businesses (145 businesses or 73.6%) are private companies, while the remaining businesses (52 businesses or 26.4%) are joint ventures. According to the ownership of the businesses, 130 businesses (66%) are independent companies, while 67 businesses (34%) are subsidiaries of a large company. According to the distribution of the age group of enterprises, 53

enterprises (5-10 years), 52 enterprises 20 years and so on, 40 enterprises 1-5 years, 24 enterprises 10-15 years, 23 enterprises 15-20 years and 5 enterprises 1 year and lower were included.

Considering the subclass of the manufacturing sector, most of the enterprises are active in the production of iron and steel (32 enterprises), food and drink (31 enterprises), textiles and clothing (30 enterprises), leather and footwear (28 enterprises). Electrical, electronics and telecom (20) personal care products (business 20), chemical products (17 business), pharmacy (10 business) and other businesses (furniture, cars, etc) (9 business), in relatively small numbers in this study were represented. In terms of research and development related activities, 106 businesses (53.8%) are understood to be engaged in such activities. Of these enterprises, 48 enterprises (45.3%) carry out their R&D activities by the R&D unit of the parent organization to which they are affiliated, while 34 enterprises (32.1%) carry out their own R&D unit. Of these, the remaining 23 enterprises (21.7%) apply to external resources to carry out R&D studies and 1 organization (0.94%) is together with its own and other R&D organizations.. The arithmetic mean, minimum, and maximum values of the number of full-time employees used to measure business size are 389.96, 100, and 4670, respectively.

Table 1: Descriptives

No	Classification	Amount	Percentage
1	Business ownership format		
	<input type="checkbox"/> Local	99	50.3
	<input type="checkbox"/> Foreign	66	33.5
	<input type="checkbox"/> Joint venture	32	16.2
	Total	197	100
2	Company type		
	<input type="checkbox"/> Sole enterprise	145	73.6
	<input type="checkbox"/> Limited company	52	26.4
	Total	197	100.0
3	Nature of the business		
	<input type="checkbox"/> Subsidiary	67	34.0
	<input type="checkbox"/> Headquarter	130	66.0
	Total	197	100.0
4	Company age		
	<input type="checkbox"/> 1 year or less	5	2.5
	<input type="checkbox"/> 1 – 5 years	40	20.3
	<input type="checkbox"/> 5 – 10 years	53	26.9
	<input type="checkbox"/> 10 – 15 years	24	12.2
	<input type="checkbox"/> 15 – 20 years	23	11.7
	<input type="checkbox"/> 20 years and more	52	26.4
	Total	197	100.0
5	Sectors		
	<input type="checkbox"/> Footwear and Leather Products Sector	28	14.2
	<input type="checkbox"/> Food and Drink Sector	31	15.7

	<input type="checkbox"/> Textile and Apparel Sector	30	15.2
	<input type="checkbox"/> Iron and Steel Sector	32	16.2
	<input type="checkbox"/> Personal care products sector	20	10.2
	<input type="checkbox"/> Chemical Products Sector	17	8.6
	<input type="checkbox"/> Electronics, electricity and Telecom Sector	20	10.2
	<input type="checkbox"/> Pharmaceuticals	10	5.1
	<input type="checkbox"/> Other (furniture, automobiles, etc.)	9	4.6
	Total	197	100.0
6	R & D unit		
	<input type="checkbox"/> Own R&D unit	34	32.1
	<input type="checkbox"/> R&D unit of parent organization	48	45.3
	<input type="checkbox"/> Using external sources	23	21.7
	<input type="checkbox"/> together with its own and other R&D organizations	1	0.9
	Total	106	100.0
7	Company size/ number of employees		
	<input type="checkbox"/> Average	389.96	
	<input type="checkbox"/> Minimum	100	
	<input type="checkbox"/> Maximum	4670	

3.6 Analysis Methods Used Within Research

Data collected from businesses was processed through the the *SPSS statistics* program. In order to test if organizational learning ability has an effect onto the relationship between strategic HRM practices and organizational learning, *path analysis* was applied through the *AMOS program*. *ANOVA test* was put to use to test whether there is a difference in organizational innovation between enterprises that implement strategic HRM practices at high levels and enterprises that do the same at low levels. *Correlation analysis* was applied to test the relationships between the variables and to determine the direction and degree of the relationship between the variables. *Regression analysis* was used to test the relationship between the three variables of interest. Moreover, the *structural equation modeling (SEM)* was used to test the impact of independent variables on the dependent variable. By this method, the impact of strategic human resource management practices on organizational innovation and the impact of organizational learning ability on organizational innovation were tested. Reliability analysis (*Cronbach Alpha*) was performed to determine the internal consistency of the substances used to measure each variable.

3.7 Hypotheses of the study

H1: Strategic human resource management practices positively affect organizational innovation.

H2: organizational learning ability has a positive effect on organizational innovation.

H3: organizational learning ability affects the relationship between strategic human resource management practices and organizational innovation

H4: there is a difference in organizational innovation between enterprises that implement strategic human resource management practices at high levels and enterprises that carry out strategic HRM practices at low levels (*from moderate to huge*)

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CHAPTER 4: RESULTS AND ANALYSES

4.1. Reliability and Factor Analyses

4.1.1 Reliability Analysis

Validity and reliability of a scale are issues related to the absence of errors in the design, analysis and evaluation stages of research. Standard scales developed in the design of research can be used, as well as the researcher can prepare their own survey questions. In this case, validity and reliability issues arise. Validity refers to whether the designed measuring tool measures what it wants to measure. Reliability is consistent with the measurement work and it is about whether balanced results will occur. A reliable scale gives similar results when re-applied under similar conditions. The fact that a scale is reliable indicates that the data obtained from that scale is also reliable (*Haradhan Kumar Mohajan, 2017*).

As part of the analysis of scale reliability, Cronbach Alpha (α), commonly used in Social Science Research, was calculated according to the expressions given by participants in scale expressions. The reliability coefficient of the scale was calculated as 81.7% in the test. In this case, the reliability level of the scale appears to be “reliable”.

Table 2: Reliability Analysis

Cronbach Alpha	Number Of Items
0,817	19

The calculated Cronbach Alpha value (α) = 0.817

4.1.2 Factor Analysis

Factor analysis has started to be used in order to interpret a large number of variables with the increase in the number of variables in research studies conducted in the Social Sciences. For this reason, factor analysis is used to analyze the structure of the relationship between a large number of variables. In factor analysis, the individual conducting the research can determine what are the main factors that form the basis of the set of variables used in the research, and the degree to which they explain each of these factors (*Altunışık et al., 2010*).

Factor analysis is considered an important analysis of the quality and validity of the measurement tool. In the framework of factor analysis, the mean and standard deviation values of thirty substances included in the scale is calculated first. The test of factor analysis applicability to the data set in the study is measured by the KMO (*Kaiser-Meyer-Olkin*) test and

the Bartlett test. The Bartlett test and the null hypothesis (*null hypothesis*) are tested. The KMO test is used in research studies to determine whether factor analysis is appropriate. In order for factor analysis to be evaluated appropriately, the KMO value must be greater than 0.5.

In the study, KMO (*Kaiser-Meyer-Olkin*) test was applied within the framework of factor analysis. The KMO test is a test related to the suitability of the sample size and the sample adequacy (*sampling calculated under the KMO test adequacy*) coefficient is evaluated within the following ranges (*Altunışık et al., 2010:266*);

- ✓ 0.8 and above coefficient is high
- ✓ Coefficient between 0.7-0.8 is good
- ✓ Coefficient between 0.6-0.7 medium
- ✓ The coefficient must be at least 0.5, and 0.5 is weak
- ✓ If the coefficient is less than 0.5, more data should be collected

According to the results of the factor analysis, the fact that the KMO value is 0.936 indicates that the data set is suitable for factor analysis. Out of a total of items used to measure strategic HRM practices, organizational innovation and organizational learning ability, some of the expressions were excluded from the analysis because the common variance and factor loads were < 0.50, and the remaining 19 items were analyzed. As can be seen in Table 3.3, the factor loads of substances are between 0.698 and 0.864. However, the fact that the reliability (*Alpha*) coefficient of the strategic HRM scale is 0.82 indicates that the scale is reliable.

Table 3: Factor loads of determinants

No	Determinants	Factors
1	white-collar workers can constantly change the way they do business	.700
2	white-collar employees can make decisions about work	.714
3	white-collar employees perform jobs consisting of various tasks	.698
4	attention is paid to the provision of versatile white-collar employees for recruitment and selection activities	.703
5	white-collar employees are hired according to the level of contribution they will provide to achieve the strategic goal of the business	.725
6	white-collar employees are hired based on their learning potential	.751
7	comprehensive training and development activities are carried out for our white-collar employees	.797

8	training and development activities for our white-collar employees are continuous	.759
9	training and development activities for our white-collar employees include more time and investment	.795
10	our training and development activities for our white-collar employees are aimed at developing a business-specific skilled workforce	.833
11	a multi-evaluation system is used to evaluate the performance of our white-collar employees, which includes multiple valuers (for example, syncs, subordinates, etc.)	.747
12	attention is paid to performance evaluation activities for white collar employees to learn	.794
13	performance evaluation activities focus on the contribution of white-collar employees to achieving the organization's strategic goals	.848
14	performance evaluation activities for our white-collar employees include development-based feedback	.809
15	Incentive reward packages are available for our white-collar employees	.789
16	incentive pay is used to encourage efforts by white-collar employees to develop new ideas	.864
17	our company attaches more importance to teamwork than to individual work	.823
18	our company constantly evaluates the ideas of employees using methods such as surveys	.829
19	our company has established an open communication and information sharing system with white collar employees	.834

Organizational learning ability consists of four dimensions: managerial commitment, system perspective, openness and experimentation, and knowledge transfer and integration (*Gomez, et al., 2005*). As a result of the confirmatory Factor Analysis, 10 items used to measure organizational learning ability were collected under the relevant 4 components (*managerial commitment, system perspective, openness and experimentation, as well as knowledge transfer and integration*). Thus, it was supported by our current dataset that organizational learning ability is a four-dimensional concept.

The items examined under the 4 components mentioned above were also tested through reliability analysis. According to it, the results can be considered as reliable. The alpha coefficients of managerial commitment, system perspective, openness and experimentation and knowledge transfer and integration were 0.856, 0.824, 0.792 and 0.794, respectively. The fact that each dimension has a Cronbach Alpha coefficient greater than 0.70 indicates that the scale is reliable.

Table 4: Reliability analysis of the 4 components

Components	Cronbach Alpha
Managerial commitment	0.856

System perspective	0.824
Openness and experimentation	0.792
Knowledge transfer and integration	0.794

4.2 Correlation Analysis

Correlation analysis is a statistical tool that can be used to determine the relationship between any datasets or variables, and how strong that relationship might be. In this way, a positive correlation means that studied variables increase in relationship to each other, and a negative correlation means that when one variables decreases, the other increases (*Emily James, 2021*).

Correlation analysis was performed to determine the direction and degree of the relationship between the variables. The arithmetic mean of strategic HRM practices, organizational learning ability and organizational innovation was 3,318, 4,153 and 4,019, respectively.

Looking at the correlation results, a positive relationship ($r = 0.749, p < 0.05$) was determined between Strategic HRM practices and organizational innovation. As can be seen from this, it is possible to express that as strategic HRM practices increase, all 3 dimensions of the innovation such as product innovation, process innovation and administrative innovation will also increase (*Seeck and Diehl, 2017*).

Table 5: Correlation coefficient between SHRM and OI

	SHRM	OI
SHRM Pearson Correlation	1	,749**
Sig. (2-tailed)		,000
N	197	197
OI Pearson Correlation	,749**	1
Sig. (2-tailed)	,000	
N	197	197

*Correlation coefficient at $r = 0.749$, p -value less than 0.05 meaning the result is significant

It has been found that there is a positive relationship between organizational learning ability and organizational innovation ($r = 0.624, p < 0.05$). It can be said that the organizational innovation will increase if the organizational learning ability increases. In general, as can be seen from the above explanations, it has been found that there is a positive and statistically significant relationship between Strategic HRM practices, organizational learning ability and organizational innovation.

Table 6: Correlation coefficient between OLA and OI

		OLA	OI
OLA	Pearson Correlation	1	,624**
	Sig. (2-tailed)		,000
	N	197	197
OI	Pearson Correlation	,624**	1
	Sig. (2-tailed)	,000	
	N	197	197

*Correlation coefficient at $r = 0.624$, p -value less than 0.05 meaning the result is significant

4.3 Regression Analysis

Regression analysis is a statistical method used in finance, investing and other areas that measures the strength and character of the relationship between one or more independent variables and one dependent variable. It is a powerful method for discovering the associations between different variables observed and is used in several contexts in economics, finance, and business. For example, it can help investors to value assets and understand the relationships between different factors such as prices of commodity and the stocks of businesses operating within those commodities (*Brian Beers, 2024*). There are many types of regression analyses, and most of them examine the impact of one or more independent variables on a dependent variable (*Alchemer, 2021*).

The Regression analysis has been used to examine the relationship between the three variables of interest. The regression analysis was needed to estimate the impact of some explanatory variables on the dependent variable. In my case, there were two independent variables ($X_1 = \text{strategic HRM practices}$; $X_2 = \text{organizational learning ability}$) and one dependent variable ($Y = \text{organizational innovation}$). The analysis was performed through EViews software using the regression model: $Y = b + mx_1 + mx_2$. Included observations (n) were equal to 197 and selected method was *ordinary least squares*.

Table 7: Regression output

Dependent Variable: Y
 Method: Least Squares
 Date: 11/02/23 Time: 22:19
 Sample: 1 197
 Included observations: 197

Variable	Coefficient	Std. Error	t-Statistic	Prob.
----------	-------------	------------	-------------	-------

C	0.523235	0.259992	2.012503	0.0455
X1	0.376727	0.050580	7.448177	0.0000
X2	0.523753	0.049458	10.58985	0.0000
R-squared	0.583160	Mean dependent var	4.619289	
Adjusted R-squared	0.578863	S.D. dependent var	1.641998	
S.E. of regression	1.065576	Akaike info criterion	2.980020	
Sum squared resid	220.2778	Schwarz criterion	3.030018	
Log likelihood	-290.5319	Hannan-Quinn criter.	3.000259	
F-statistic	135.7031	Durbin-Watson stat	1.878784	
Prob(F-statistic)	0.000000			

Estimated equation using ordinary least squares:

$$Y = 0.523235 + 0.376727X1 + 0.523753X2$$

- Interpretations:

(i) *R-squared and Adjusted R-squared*: 0.583160 and 0.578863, respectively. R-squared and Adjusted R-squared are considered statistically significant with these values and a significant portion of the variance in the dependent variable is explained by independent variables. It means the variables are positively correlated and the values have a good correlation. The higher the values of R-squared and Adjusted R-squared, the better the regression model is.

(ii) *t-value*: 7.448177 and 10.58985 > 1.96. These t-values are considered to be statistically significant as a t-value greater than 1.96 at alpha level 0.05, means that it has a statistical significance.

(iii) *F-value*: 135.7031 > 2.5. The F-value is also statistically significant. The F-test is used in regression analysis to test the hypothesis that all model parameters are equal to zero. A general rule that is often used within a regression analysis is that if F-value is greater than 2.5, we can reject the null hypothesis and confirm that there is at least one parameter value that does not equal to zero. Thus, the F-value of 135.7031 is also statistically significant, the higher the F-statistic, the better the model is.

(iv) *Prob (F-statistic) or p-value*: the probability value that determines the statistical significance of the F-value. The p-value of 0.000000 is less than 0.05 meaning the result is statistically significant.

- Durbin-Watson test:

The Durbin Watson (DW) statistic is used to test autocorrelation in the residuals of a statistical regression analysis. If autocorrelation exists, it may cause the researcher to believe that predictors are significant when in reality they are not as it undervalues the standard error. In this case, $n=197$, $k=2$, at 5% significance level, Durbin-Watson stat is **1.878784**. *dL lower bound is 1.748 and dU upper bound is 1.789 at k=2 and 5% significance level*. Durbin-Watson stat at 1.879 is greater than dU upper bound of 1.789 meaning that we accept the null hypothesis of zero autocorrelation and conclude that there is no autocorrelation.

- Serial correlation test:

Serial correlation occurs when residuals from adjacent measurements in a time series are dependent of one another. It is a significant problem as nearly all statistical techniques argue that any random errors are independent. When serial correlation is present, each residual is dependent on the previous residual. In this way, the residuals are largely redundant meaning they are not independent of one another. Serial correlation test is used to determine if a serial correlation exists within the regression and fix such correlation if it takes place. In this case, Breusch-Godfrey Serial Correlation LM test was used to determine if a serial correlation exists within the model.

Table 8: Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.622261	Prob. F(2,192)	0.5378
Obs*R-squared	1.268707	Prob. Chi-Square(2)	0.5303

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 11/02/23 Time: 23:32

Sample: 1 197

Included observations: 197

Presample missing value lagged residuals set to zero.

Prob. Chi-Square at 0.5303 is greater than 0.05 meaning there is no serial correlation within the model.

- Heteroskedasticity Test:

Heteroskedasticity explains the variance of the errors as not constant across observations. The presence of heteroskedasticity is a major problem in regression analysis as it invalidates the outcome of statistical tests of significance that assume that the modeling errors all have the same variance. In this regard, heteroskedasticity test is used to determine if heteroskedasticity takes place in the regression analysis and correct it afterwards if it appears. In this case, Breusch-Pagan-Godfrey Heteroskedasticity test was used to determine if heteroskedasticity exists within the model.

Table 9: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.368710	Prob. F(2,194)	0.6921
Obs*R-squared	0.745987	Prob. Chi-Square(2)	0.6887
Scaled explained	1.067271	Prob. Chi-Square(2)	0.5865

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 11/02/23 Time: 23:55

Sample: 1 197

Included observations: 197

Prob. Chi-Square at 0.6887 is greater than 0.05 meaning there is no heteroskedasticity within the model.

4.4 Hypotheses Analysis

The correlation analysis has been used to examine the relationship between strategic HRM practices, organizational learning ability, and organizational innovation. In addition, the Structural Equation Modeling (SEM) was used to assess the impact of strategic HRM and organizational learning ability on organizational innovation. Path analysis is a multivariate statistical analysis method in SEM that aims to measure implicit variables that are difficult to measure directly through measurable/observed variables. What distinguishes it from other multivariate statistical methods (*for example, multiple regression analysis*) is that it allows the researcher to examine both the factor structure of implicit variables and their relationship between these variables. The measurement model of the path analysis measures the connection between an implicit variable and the observed variable. In general, the assumptions followed to use linear regression analysis also apply to path analysis (*Mustafa Emre Civelek, 2018*). First, the data must show a normal distribution. Another assumption is that there must be a linear relationship between dependent and independent variables. Furthermore, the mean of error terms is assumed to be zero. In addition, the variance of error terms for arguments must be equal (*homoscedasticity*). Finally, the absence of a high correlation or multi-linearity connection problem between independent variables (*multicollinearity*) is required (*Poole and O'farrell, 1970*).

This study includes a total of four hypotheses. Analysis methods such as multiple correlation analysis, SEM path analysis, and ANOVA test were used to test the hypotheses. The data obtained from the research were processed with SPSS and AMOS program packages.

Path analysis was used to test the first hypothesis (**H1**), which is stated as “strategic human resource management practices positively affect organizational innovation”. According to the results of the analysis, Strategic HRM practices were found to have a statistically significant effect on organizational innovation ($\beta = 0.324, P < 0.05$). Thus, the first hypothesis was confirmed. Path coefficient must be at least 0.100 and at a significance level of less than 0.05 to be statistically significant.

Table 10: AMOS output, effect of SHRM on OI

	Estimate	S.E.	C.R.	P	Label
OI <--- SHRM	.324	.059	2.192	***	

**path coefficient at 0.324; t-score (2.192) ≥ 1.96, p-value < 0.05 meaning the result is significant*

The second hypothesis (**H2**) is expressed as “organizational learning ability has a positive effect on organizational innovation”. Path analysis was used to test the hypothesis in question. As a result of the analysis, it was found that organizational learning ability has a positive impact on organizational innovation ($\beta = 0.538, P < 0.05$). Thus, the second hypothesis was accepted.

Table 11: AMOS output, effect of OLA on OI

	Estimate	S.E.	C.R.	P	Label
OI <--- OLA	.538	.042	5.388	***	

**path coefficient at 0.538; t-score (5.388) ≥ 1.96, p-value < 0.05 meaning the result is significant*

The third hypothesis (**H3**) states that “organizational learning ability affects the relationship between strategic human resource management practices and organizational innovation”. According to the results of the path analysis obtained through the Amos program package, the role of organizational learning ability to affect the relationship between the Strategic HRM practices and organizational innovation has been proved. If we explain this step by step; at the first stage, strategic HRM applications, which is independent variable, had a statistically significant positive impact on organizational innovation, which is a dependent variable ($\beta = 0.324, P < 0.05$). In the second stage, organizational learning ability had also a positive impact on organizational innovation, which is the dependent variable ($\beta = 0.538, P < 0.05$). Final stage; the direct impact of strategic HRM practices on organizational innovation decreased from $\beta = 0.324 (P < 0.05)$ to $\beta = 0.082 (p = 0.313 > 0.05)$ when the intermediary variable of organizational learning ability was included within the model. Thus, organizational learning ability has a mediating role between Strategic HRM and organizational innovation. Therefore, the third hypothesis has also been accepted.

Table 12: AMOS output, effect of SHRM on OI after OLA was added to the model

	Estimate	S.E.	C.R.	P	Label
OI <--- SHRM	.082	.126	1.125	.313	

**path coefficient at 0.082; t-score (1.125) < 1.96, p-value (0.313) > 0.05*

The fourth hypothesis (**H4**), expressed as “there is a difference in organizational innovation between enterprises that implement strategic human resource management practices at high levels and enterprises that carry out strategic HRM practices at low levels” was tested with a one-way ANOVA test. Businesses are divided into two groups according to the levels of strategic HRM applications. These are called” high-level “and” low-level ” strategic HRM groups. The organizational innovation average ($x = 4,392$) of the “high-level strategic HRM group” is greater than the average ($x = 2,467$) of the “low-level strategic HRM group”. According to the results, the F-value and p-value are significant, thus the fourth hypothesis has been accepted. The results of the hypotheses tests are introduced in Table 14.

Table 13: ANOVA test

OI

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
<i>Between Groups</i>	63,474	1	63,474	3.323	.026
<i>Within Groups</i>	87,846	195	.289		
<i>Total</i>	151,320	196			

*F-value at 3.323 and p-value (0.026) < 0.05 meaning the result is significant, F-value has to be far from zero to be statistically significant

Table 14: Hypotheses within the research and the results obtained

	Hypotheses	Result
H1	Strategic human resource management practices positively affect organizational innovation.	Confirmed
H2	Organizational learning ability has a positive effect on organizational innovation.	Confirmed
H3	Organizational learning ability affects the relationship between strategic human resource management practices and organizational innovation	Confirmed
H4	There is a difference in organizational innovation between enterprises that implement strategic human resource management practices at high levels and enterprises that carry out strategic HRM practices at low levels.	Confirmed

CHAPTER 5: CONCLUSIONS, INTERPRETATIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 Conclusions

Business entities need to add innovation to their process, product and administrative practices in order to achieve sustainable competitive advantage in a fast-changing environment. Organizational innovation is defined as “developing or adapting processes, products and administrative practices that are new to the organization”. Therefore, organizational innovation covers new product, process and administrative activities. Innovation is mainly associated with knowledge workers with high learning potential and creative behavior. Due to the fact that the theoretical and analytical knowledge that information workers have is strategically valuable and unique, appropriate HRM activities are needed to manage them. However, businesses need to learn quickly and continuously to develop innovation.

The ability of the organization to gather new information, share this information among employees, interpret it, and integrate it with organizational processes is called organizational learning ability. The main objective of this study was to examine the relationships between Strategic HRM practices, Organizational learning ability and Organizational Innovation. Moreover, one of the other objective was to confirm that there is a difference in organizational innovation between enterprises that implement strategic human resource management practices at high levels and enterprises that carry out strategic HRM practices at low levels. It can be concluded that strategic HRM applications that improve employees' abilities, increase their motivation, and provide opportunities for them to reveal their knowledge improve the overall business performance. Strategic HRM practices mainly consist of interrelated HRM activities that improve the skills of information workers, increase their motivation and provide them with opportunities. Among the HRM applications used so that the business can have individuals equipped with the necessary knowledge, abilities and skills; selective recruitment, comprehensive training and development activities take the first place. Moreover, strategic HRM applications can improve the capabilities of employees and increase the capacity to develop creative solutions to organizational problems. In addition, HRM activities such as development-based performance evaluation activities, incentive wage systems, insider promotion opportunities and also job assurance encourage employees to come up with their creative ideas without hesitation and increase their motivation. In this way, employees are constantly helping to collect information from the internal and external environment, share this information among themselves, have a common vision and develop creative solutions to organizational problems. The aforementioned HRM applications provide an opportunity for employees to tap into their potential.

There are numerous studies in the literature showing that strategic HRM practices have a positive impact on organizational innovation. In addition, several different studies have also shown that organizational learning ability positively affects organizational innovation. Therefore, in this study, the relationship between strategic HRM practices, which is independent variable, organizational learning ability, which can act as intermediary variable, and organizational

innovation, which is the dependent variable was examined. The main purpose was to find ways to increase the level of the organizational innovation within the business entities by demonstrating the crucial role of the Strategic HRM practices in achieving it. Also, it can be considered that the impact of Strategic HRM applications on the dimensions of the innovation such as process, product and administrative innovation is also positive. For the above-mentioned purposes, the data was collected by survey method from 197 enterprises operating in the manufacturing sector in Kazakhstan.

5.2 Interpretations

According to the results of the research, it was found that strategic HRM practices have a significant and positive impact on organizational innovation, which is the dependent variable. It can be considered that Strategic HRM practices also have a positive impact on the dimensions of the innovation which are process, product and administrative innovations. In general, strategic HRM applications improve employees' knowledge, skills and abilities, increase motivation and provide opportunities for employees to develop new products, processes and administrative activities. It can be stated that this result is consistent with the results of the previous studies carried out regarding the same matter.

Secondly, the positive effect of the organizational learning ability on organizational innovation by using the path analysis method was also confirmed. It can be stated that increasing the ability of the enterprise to obtain new information, share this information among individuals, interpret it and integrate it with organizational processes increases its capacity to develop product, process and administrative innovation.

Thirdly, the mediating role of the organizational learning ability within the relationship between the strategic HRM practices and organizational innovation was proved as well. By adding organizational learning ability to the model, the positive and direct impact of strategic HRM on organizational innovation has decreased. This result shows that organizational learning ability is fully mediated between Strategic HRM and organizational innovation. Therefore, in order for business entities to develop a new process, product or administrative application, they must first develop their learning capabilities with strategic HRM applications. For this purpose, it is recommended that they hire employees with a high learning potential, collect information from the external and internal environment of their employees and create a suitable environment in which they can share this information among themselves. In addition, it can be suggested that employees provide the necessary training to act with a common goal, ensure employee participation in the decision-making process, easily reveal employee ideas about the business, create a climate of openness to make suggestions, and reward employees' innovative behavior. Taking into account the different views of the workers, production, process, administrative activities, etc. identify deficiencies related, to resolve these shortcomings, quality circles, problem-solving and proposal development teams to create systems, and the use of attitude surveys ability to enhance organizational learning, organizational innovation and hence to enhance their benefits.

Lastly, it was confirmed that there is a clear difference between in organizational innovation between enterprises that implement strategic human resource management practices at high levels and enterprises that carry out strategic HRM practices at low levels. These results

can be said to be consistent with the results of the previous studies carried out. Variance analysis was performed to determine whether organizational innovation differs according to the level of strategic HRM activities. As a result of the analysis, it was found that enterprises that perform strategic HRM practices at a high level have a higher organizational innovation average ($x = 4,392$) than enterprises that implement these practices at a low level ($x = 2,467$). Therefore, it is important that employees improve their knowledge, increase their motivation and commitment to the business, and enable them to participate more actively in order for businesses to identify new products, processes and administrative practices.

5.3 Limitations

During the literature review, it was difficult to find information regarding the strategic HRM practices, organizational innovation and organizational learning ability in Kazakhstan. There were too few studies as well that would capture this research area within the country. It was hard to conceptualize organizational innovation as it is often considered as the part of the concept of innovation itself. The same can be said to the strategic HRM practices. So, differing these two, setting relevant definitions to them caused some difficulties. Developing approaches and plans to measure the variables and their relationships caused minor difficulties as they are difficult to be directly measured. Data for this study was collected from two regions (*Almaty and Nur-Sultan*) where manufacturing enterprises are concentrated in Kazakhstan. In terms of the scope of the research, businesses operating in the manufacturing sector are included in this research as they are more interested in innovation than businesses operating in other areas (*for example, service sector companies*). Therefore, this work is limited to two regions and enterprises operating in the manufacturing sector. It has been assumed that the survey method is appropriate to determine what level businesses are at in terms of strategic HRM, organizational innovation, and organizational learning ability. It was also assumed that participants understood the surveys well and answered the questions honestly. One limitation of this research is that the number of samples used to collect data is small ($n=197$). Another limitation of this research is that strategic HRM practices, organizational learning ability, and other factors affecting organizational innovation, other than some control variables, are not addressed.

5.4 Recommendations

As part of the results obtained from this study, a number of recommendations can be presented for practitioners and researchers. First, it may be suggested that managers pay attention to the strategic HRM activities, for example by using loyalty-based HRM practices that improve the organization's ability to collect new information from the internal and external environment, share this information among employees, interpret it, and integrate it with organizational processes. In this way, HR managers and knowledge workers are expected to use their knowledge, skills and abilities to direct the employees to Strategic HRM practices to develop the business activities and improve the overall business performance.

Hence, HR managers are expected to develop new processes to increase the potential for learning by using high selective recruitment within the fast-changing environment to hire adaptable, innovative and qualified employees. They will be capable to achieve the new idea

generation and creative problem-solution patterns. Moreover, the managers can increase the overall teamwork and educate employees on different topics. Different procedures can be implemented such as encouraging knowledge workers, based on the individual achievements (*e.g., bonuses, salary increases, etc.*) and team-based incentive fee (*profit sharing, gain sharing, etc.*). In addition, the company efficient in the production process to make the new process innovation in order to improve product quality and reduce production costs, improve production machines, software programs, quality control systems, production methods, techniques, routings and on topics related to training programs to prepare employees can be invited. Also, it is recommended to increase the administrative innovation by bringing the new organizational structure, business systems, communication channels. HR managers need to effectively manage all the activities of the organization, facilitate communication between units, make decisions based on knowledge. It may be recommended that employees to be trained in administrative practices (*for example, ERP or Enterprise Resource Planning*).

Since organizational learning ability has been found to have a positive impact on organizational innovation, it can be suggested that businesses should eliminate factors such as norms, rules, procedures, and policies that hinder their ability to learn. It can also be stated that enterprises must increase their ability to learn before developing innovation, as the role of organizational learning ability as a mediator arises in the relationship between Strategic HRM and organizational innovation.

It has been found that enterprises that perform high levels of strategic HRM practices have a higher organizational innovation average compared to enterprises that perform these practices at a low level. Therefore, it may be recommended that businesses implement the aforementioned HRM activities at a high level to develop more product, process and administrative innovation.

As organizational innovation is mainly a risky, costly, long-term activity that requires collaboration of different units, it is of great importance for top managers to maintain innovation. Accordingly, top managers need to prioritize innovation, create an organizational culture that encourages creativity, and invest in training to increase the ability of employees to solve problems in a creative way. As these practices encourage employees suggestion and development efforts, it is important that managers do not ignore these suggestions and provide a positive feedback. In addition, it will be useful for top managers to allocate the necessary budget for innovation projects and to use financial and non-financial reward systems to reinforce the innovative behavior of employees and set managers to improve organizational innovation.

Finally, a number of recommendations may be offered to researchers who want to conduct similar studies on the subject in the future. It may be suggested that researchers work on a larger sample that will allow comparison in terms of organizational innovation according to different sectors. However, it may be recommended to use measurements based on actual innovation outputs outside of survey applications to determine the level of organizational innovation of enterprises. In order to examine the relationship between strategic HRM, organizational learning ability and organizational innovation, it may be recommended to conduct studies that take into account factors such as organizational structure and organizational culture, in addition to the variables taken into account in this study.

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APPENDIX

Section A: Company's description

1. Please indicate your business ownership format

Local

Foreign

Joint venture

2. Please indicate your company type

Sole enterprise

Limited company

3. Please indicate your nature of business

Subsidiary

Headquarter

4. Please indicate your company age

1 year or less

1 – 5 years

5 – 10 years

10 – 15 years

15 – 20 years

20 years and more

5. Please indicate your sectors

Footwear and Leather Products sector

Food and Drink Sector

Textile and Apparel Sector

Iron and Steel Sector

Personal care products sector

Chemical Products Sector

Electronics, Electricity and Telecom Sector

Pharmaceuticals

Other (please specify, furniture, automobiles, etc.)

6. Please indicate your R&D unit

Own R&D unit

R&D unit of parent organization

Using external sources

Together with its own and other R&D organizations

Section B: Organizational Innovation

Based on your own experience and knowledge, please indicate the extent to which you agree or disagree on the following statements on a scale of 7-1.

Fully agree	Agree	Partially agree	Neutral	Partially disagree	Disagree	Fully disagree
(7)	(6)	(5)	(4)	(3)	(2)	(1)

1. White-collar workers can constantly change the way they do business.

Fully agree

Agree

Partially agree

Neutral

Partially disagree

Disagree

Fully disagree

2. White-collar employees can make decisions about work.

Fully agree

Agree

Partially agree

Neutral

Partially disagree

Disagree

Fully disagree

3. White-collar employees perform jobs consisting of various tasks.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

4. Attention is paid to the provision of versatile white-collar employees for recruitment and selection activities.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

5. White-collar employees are hired according to the level of contribution they will provide to achieve the strategic goal of the business.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

6. Incentive reward packages are available for our white-collar employees.

- Fully agree
- Agree



- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

7. Incentive pay is used to encourage efforts by white-collar employees to develop new ideas.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

8. Our company attaches more importance to teamwork than to individual work.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

Section C: Strategic human resource management practices

Based on your own experience and knowledge, please indicate the extent to which you agree or disagree on the following statements on a scale of 7-1.

Fully agree	Agree	Partially agree	Neutral	Partially disagree	Disagree	Fully disagree
(7)	(6)	(5)	(4)	(3)	(2)	(1)

1. Comprehensive training and development activities are carried out for our white-collar employees.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

2. Training and development activities for our white-collar employees are continuous.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

3. Training and development activities for our white-collar employees include more time and investment.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

4. Our training and development activities for our white-collar employees are aimed at developing a business-specific skilled workforce.

- Fully agree



- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

5. A multi-evaluation system is used to evaluate the performance of our white-collar employees, which includes multiple valuers (*for example, syncs, subordinates, etc.*).

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

6. Performance evaluation activities focus on the contribution of white-collar employees to achieving the organization's strategic goals.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

7. Performance evaluation activities for our white-collar employees include development-based feedback.

- Fully agree
- Agree
- Partially agree

Neutral

Partially disagree

Disagree

Fully disagree

8. Our company constantly evaluates the ideas of employees using methods such as surveys.

Fully agree

Agree

Partially agree

Neutral

Partially disagree

Disagree

Fully disagree

9. Our company has established an open communication and information sharing system with white collar employees.

Fully agree

Agree

Partially agree

Neutral

Partially disagree

Disagree

Fully disagree

Section D: Organizational learning ability

Based on your own experience and knowledge, please indicate the extent to which you agree or disagree on the following statements on a scale of 7-1.

Fully agree	Agree	Partially agree	Neutral	Partially disagree	Disagree	Fully disagree
(7)	(6)	(5)	(4)	(3)	(2)	(1)

1. White-collar employees are hired based on their learning potential.

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

2. Attention is paid to performance evaluation activities for white collar employees to learn

- Fully agree
- Agree
- Partially agree
- Neutral
- Partially disagree
- Disagree
- Fully disagree

