



**THE EFFECT OF KNOWLEDGE SHARING IN
EMPLOYEES INNOVATIVE BEHAVIOUR**

**2021
MASTER'S THESIS
DEPARTMENT OF BUSINESS
ADMINISTRATION**

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BEHAVIOUR**

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Prepared as
Master's Thesis**

**KARABUK
Eylül 2021**

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THESIS APPROVAL PAGE

I certify that in my opinion the thesis submitted by Osama ABU SHWIEMEH titled “THE EFFECT OF KNOWLEDGE SHARING IN EMPLOYEES INNOVATIVE BEHAVIOUR” is fully adequate in scope and in quality as a thesis for the degree of Master’s Thesis.

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The degree of Master’s Thesis by the thesis submitted is approved by the Administrative Board of the Institute of Graduate Programs, Karabuk University.

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DECLARATION

I hereby declare that this thesis is the result of my own work and all information included has been obtained and expounded in accordance with the academic rules and ethical policy specified by the institute. Besides, I declare that all the statements, results, materials, not original to this thesis have been cited and referenced literally.

Without being bound by a particular time, I accept all moral and legal consequences of any detection contrary to the aforementioned statement.

Osama ABU SHWIEMEH

Signature :

FOREWORD

This thesis is written as completion to the master social science, at the Karabuk. The master program focuses on international crimes such as genocide, crimes against humanity and war crimes. The subject of this thesis, the effectiveness of knowledge sharing in employees innovative behaviour, falls within the scope of the master's field because it cannot survive and continue if it is not based on a clear knowledge base, and therefore it can be said that knowledge is the basis and essence of creative thinking and behavior. I have chosen to determine if innovative behaviour could be affected by knowledge sharing, in line with the research field of the master.

It gives me great pleasure to express my sincere appreciation to my supervisor, Dr. Canan Yıldırım, for her invaluable advice and meticulous guidance through every step of this Master process. She is an inspiration and a source of encouragement when things got tough. With her guidance and assistance, it was possible for me to finish writing this dissertation and all my other achievements in this master programme.

Also to other doctors and friends at Karabuk University who were there when I needed advice and guidance and were unstinting in their time.

Special thanks to my family for their endless support. Thank you for all your care and support throughout the year.

ABSTRACT

This research aimed to identify the knowledge sharing of the pharmaceutical sector in Jordan. In addition, to clarify the concept of innovative behaviour of employees at MS Pharma Company in Amman, and the impact of the knowledge sharing on employee's innovative behaviour. A survey method was chosen to collect data, and an innovative behaviour scale consisting of 9 statements and an knowledge sharing scale consisting of 10 statements were used. The research was conducted on a sample of (206) employees, distributed to MS Pharma Company located in the Amman. The collected data were tested using the Statistical Package for Social Sciences. The hypotheses formed within the scope of the research were tested with Descriptive analysis, Pearson Correlation Analysis, Regression method, and One-Way ANOVA.

The application of the research was limited to studying the impact of knowledge sharing on the employee's innovative behaviour. The time limits were limited to the period between 2020 and 2021. And the spatial boundaries were restricted to the pharmaceutical firms in the governorates (Amman) in Jordan.

The most important results of the research; the degree of workers exercising knowledge sharing and the level of the innovative behaviour of workers in the pharmaceutical sector is greater than the average level. There is a relatively strong positive correlation with statistical significance (>0.5) between the knowledge sharing and innovative behaviour. There is a positive impact with a statistically significant role of knowledge sharing in innovative behaviour in the pharmaceutical sector. There are differences between the categories of (level of education-work experiences-age) in perceiving the variables of knowledge sharing. There are no differences between the categories of (gender) in perceiving the variables of knowledge sharing. There are differences between the categories of (gender-work experiences-age) in perceiving the variables of innovative behaviour. But There are no differences between the categories of level of education in perceiving the variables of innovative behaviour.

Based on these results, the first hypothesis of the study is that the idea that there is impact with a statistically significant role of knowledge sharing in innovative behaviour is statistically proven. The idea that there are fundamental differences between the categories of (level of education-work experiences-age) in perceiving the

variables of knowledge sharing and innovative behaviour, was also proved statistically, except for the level of education in perceiving the variables of innovative behaviour and the gender in perceiving the knowledge sharing.

Based on these results we recommend the managers at pharmaceutical sector to:

- Encourage worker when they have learned something new to share it with their colleagues in their department.
- Try to enhance the relationship and the collaboration between different departments at the company. In addition to relying on the teamwork method as a method for performing the tasks inside and outside the organization. Also working to attract creative people when recruiting new employees.
- The necessity of sharing knowledge among employees through brainstorming sessions, which ensure that workers in the organization obtain knowledge from their colleagues.
- Motivating workers to accomplish their work in new, creative ways that ensure effectiveness.
- Encouraging workers to help each other when facing any problem.

Keywords: Knowledge Sharing, Innovative Behaviour, Management.

ÖZ

Bu araştırmanın amacı, bilgi paylaşımının yenilikçi davranışta etkinliğini tespit etmektir. Bu amaç doğrultusunda ise Ürdün'deki MS Pharma Company'de çalışanların bilgi paylaşımlarının yenilikçi davranışlarında etkisini belirlemek oluşturmaktadır.

Veri toplamak için anket yöntemi seçilmiş olup 9 ifadeden oluşan yenilikçi davranış ölçeği ile 10 ifadeden oluşan bilgi paylaşımı ölçeği kullanılmıştır. Araştırma, MS Pharma Company'de çalışan 206 katılımcı üzerinde gerçekleştirilmiştir. Toplanan veriler İstatistik Paket Programı kullanılarak test edilmiştir. Araştırmanın amacı kapsamında oluşturulan hipotezler Betimsel, Pearson Korelasyon, Regresyon ve Tek Yönlü ANOVA analizleriyle test edilmiştir.

Araştırma, bilgi paylaşımının çalışanların yenilikçi davranış üzerindeki etkisini incelemekle, 2020 ve 2021 dönemleriyle ve Ürdün'deki (Amman) ilaç firması ile sınırlı bulunmaktadır.

Araştırmanın sonucunda, ilaç sektöründe çalışan katılımcıların bilgi paylaşımını gerçekleştirme derecesi ve yenilikçi davranış düzeyi ortalamanın üzerinde tespit edilmiştir. Yenilikçi davranış ve bilgi paylaşımı arasında istatistiksel olarak anlamlılık (>0.5) ile nispeten güçlü bir pozitif korelasyon bulunmaktadır. İlaç sektöründe yenilikçi davranışta bilgi paylaşımının etkinliğinin önemli bir rolü olduğu ve istatistiksel olarak olumlu bir etkisi olduğu söylenebilir. Bilgi paylaşımı ile demografik (eğitim seviyesi-iş deneyim süresi-yaş) değişkenler arasında anlamlı farklılık bulunmakta olup, (cinsiyet) değişkeni arasında farklılık bulunmamaktadır. Yenilikçi davranış ile demografik (cinsiyet-iş deneyim süresi-yaş) değişkenler arasında anlamlı farklılık bulunmakta olup, (eğitim seviyesi) değişkeni arasında farklılık bulunmamaktadır.

Bu sonuçlara dayalı olarak çalışmanın ilk hipotezi, yenilikçi davranışta bilgi paylaşımının önemli bir rolünün ve etkisinin olduğu istatistiksel olarak tespit edilmiştir. Bilgi paylaşımı ile demografik değişkenler arasında kurulan hipotezlerden H_{2a} hipotezi reddedilmiş olup diğer hipotezler kabul edilmiştir. Yenilikçi davranış ve demografik özellikler arasında kurulan hipotezlerden ise sadece H_{3b} hipotezi reddedilmiş olup, diğer hipotezler kabul edilmiştir.

Bu bulgular dođrultusunda Őu öneriler tavsiye edilebilir;

- Herhangi bir alıŐanın yeni bir Őey öđrendiđinde bu yeniliđi departmanındaki meslektaŐlarıyla paylaŐması teŐvik edilebilir.
- Örgüt iinde bulunan departmanlar arasında iliŐki ve iŐ birliđi geliŐtirilebilir.
- Takım alıŐması teŐvik edilmeli ve takımlara güvenilmelidir.
- İŐe alımlarda üretken insanların seilmesine özen gösterilmelidir.
- alıŐanlar arasında beyin fırtınasına önem verilmeli ve bilgi paylaŐımının gerekliliđi belirtilmelidir.
- alıŐanların etkililiđi artıracak yeni yöntemler bulmaları iin motive edilmeleri gerekebilir.
- alıŐanlar arasında herhangi bir sorun ile karŐılaŐıldığında birbirlerine yardım etmeleri konusunda teŐvik edilebilirler.

Anahtar Kelimeler: Bilgi PaylaŐımı, Yeniliki DavranıŐ, Yönetim.

ARCHIVE RECORD INFORMATION

Title of the Thesis	The Effect of Knowledge Sharing in Employees Innovative Behaviour
Author of the Thesis	Osama Abu Shwiemeh
Supervisor of the Thesis	Assist. Prof. Dr. Canan Yıldırım
Status of the Thesis	Master's
Date of the Thesis	13/09/2021
Field of the Thesis	Business
Place of the Thesis	KBU/LEE
Total Page Number	95
Keywords	Knowledge Sharing, Innovative Behaviour, Management

ARŞİV KAYIT BİLGİLERİ

Tezin Adı	Bilgi Paylaşımının Çalışanların Yenilikçi Davranışına Etkisi
Tezin Yazarı	Osama Abu Shwiemeh
Tezin Danışmanı	Dr. Öğr. Üyesi Canan Yıldırım
Tezin Derecesi	Yüksek Lisans
Tezin Tarihi	13/09/2021
Tezin Alanı	İşletme
Tezin Yeri	KBU/LEE
Tezin Sayfa Sayısı	95
Anahtar Kelimeler	Bilgi Paylaşımı, Yenilikçi Davranış, Yönetim

ABBREVIATIONS

KS: Knowledge Sharing

IB: Innovative Behaviour

SUBJECT OF THE RESEARCH

This study is trying to achieve the following objectives:

- Measuring the degree of knowledge sharing and employee's innovative behaviour in the studied population.
- Determine if all study measures are characterized by the internal stability of their terms.
- Recognize if the phrases are internally consistent with the variables and essential in its measurement.
- Determine if the metrics used to measure the dimensions of the independent variable represented by the knowledge sharing and the dependent variable represented by innovative behaviour all have aggregate validity.
- Determining the strength and the nature of the relationship between knowledge sharing and employee's innovative behaviour at studied population.
- Recognizing if the knowledge sharing differs according to demographic characteristics.
- Determining if the innovative behaviour differs according to demographic characteristics.

PURPOSE AND IMPORTANCE OF THE RESEARCH

This study aimed at creating awareness and assessing knowledge sharing in improving innovative behaviour. Therefore, the study is expected to be of much value to the number of people as follows:

Members of organization will be informed on importance of knowledge sharing in increasing innovative behaviour. Also; it will help decision makers to formulate different strategies, which will help the implementation of knowledge sharing.

The researchers will be benefited by identifying variable areas for further research, and will be used as an additional reference to researchers on knowledge sharing.

It will also add knowledge to the academic community and stimulate further research in the field time management.

METHOD OF THE RESEARCH

In order to test the research hypotheses, and achieve the research objectives, the study should follow many steps, data collection, data analysis that contains arithmetic means analysis and correlation analysis. Finally, the study will test of hypotheses of this research. For that the research adopted the descriptive and analytical approach in conducting the research.

The research attempts to highlight the role of knowledge sharing towards innovative behaviour. Pharmaceutical firms from the manufacturing sector will be selected as knowledge-intensive and innovation-oriented businesses. Because in the pharma firm's knowledge sharing is an essential for their work. While the study will consist of the employees of Q gaizall MS Pharma Company. The data will be collected throughout a questionnaire focuses on the situation of knowledge sharing, and employee's innovative behaviour to determine if there are any barriers for innovative behaviour.

HYPOTHESIS OF THE RESEARCH / RESEARCH PROBLEM

To be successful in the competitive business environment of today depends largely on the ability of organization to leverage knowledge. New and existing knowledge is used to develop competitive capabilities to aid in developing new services, products and strategies to outperform those of rivals and ultimately to the competitive advantage of the organization.

In an organizational context, teams are established for a variety of reasons. The performance of the team is dependent on the availability of knowledge and the efficient use of that knowledge, often in the form of skills, competencies and expertise. As corporations expand their operations and supply chains via overseas subsidiaries and partnerships, cross-border knowledge sharing becomes mandatory. As the creation of value from knowledge sharing and innovation is of key interest to management. This thesis seeks to explore the behavior of employees in sharing their knowledge and in employee's innovative behaviour.

Moreover, the study tries to understand how the community context can alter and moderate the influence of knowledge-sharing enablers on the extent of knowledge sharing and innovation capability. To do this, we need to look at the effectiveness of knowledge sharing in employee's innovative behaviour; this study offers a holistic view of how these variables interact and influence one another. The problem outlined above invites question-needing answers through empirical investigation. To accomplish this, the main research question was developed:

Question: What is the impact of knowledge sharing in employee's innovative behaviour?

Based on the objectives of the study the main hypotheses are:

H₁: Knowledge sharing has an impact on innovative behaviour.

H₂: Knowledge sharing differs according to demographic characteristics.

H_{2a}: Knowledge sharing differs according to gender.

H_{2b}: Knowledge sharing differs according to level of education.

H_{2c}: Knowledge sharing differs according to age.

H_{2d}: Knowledge sharing differs according to work experiences.

H₃: Innovative behaviour differs according to demographic characteristics.

H_{3a}: Innovative behaviour differs according to gender.

H_{3b}: Innovative behaviour differs according to level of education.

H_{3c}: Innovative behaviour differs according to age.

H_{3d}: Innovative behaviour differs according to work experiences.

POPULATION AND SAMPLE (IF AVAILABLE)

The population of this study will consist of the employees of MS Pharma Company. Because in pharma firms knowledge sharing is an essential for their work.

The required data collected throughout questionnaire consist of two parts, a part one of knowledge sharing, and a part two of innovative behaviour and questions involving demographic characteristics. MS Pharma Company has 241 employees. Where (230) questionnaire were distributed to employees, and (206) valid forms for statistical analysis were retrieved at a rate of (89.5%).

SCOPE AND LIMITATIONS / DIFFICULTIES

This study is based in the Jordan organizational context targeting the role of communities of practice in innovation capability. The research attempts to highlight the role of knowledge sharing towards innovative behaviour. Pharmaceutical firms from the manufacturing sector will be selected as knowledge-intensive and innovation-oriented businesses. Top-level managers and middle-level managers and workers from each organization will be selected as targeted respondents.

This research is based on knowing the effect of knowledge sharing in the employee's innovative behaviour at the pharmaceutical firms. Therefore, the results of this research cannot be used by generalization to different organizations due to the difference in their characteristics, and the fact that the selected sample is accessible.

The application of the research was limited to studying the impact of knowledge sharing on the employee's innovative behaviour.

The time limits were limited to the period between 2020 and 2021.

The spatial boundaries were restricted to the pharmaceutical firms in the governorates (Amman) in Jordan.

There were some difficulties experienced due to the covid while collecting data.

1. CHAPTER

KNOWLEDGE SHARING

Knowledge management is an old and modern process at the same time, as philosophers have written on this topic for thousands of years. There were also many societies that practiced knowledge management in one way or another, without calling their practices this term. Currently, knowledge management is applied in most successful organizations, and academics have given it a wealth of study and research. The process of sharing knowledge is the most important process in knowledge management, and in this topic, we will try to provide a deep explanation of this process.

1.1. The Concept of Knowledge

Before dealing with the concept of sharing knowledge, the concept of knowledge and its management should be briefly discussed first.

1.1.1. Knowledge and Knowledge Management Concept

The best way to understand knowledge is to distinguish between the concept of data, information and knowledge, as data represents a reality without context, and if this data is organized, analyzed and translated into meaning then it becomes information, and the information will become knowledge if it is placed in a logical and conceptual context, which can be remembered and verified through experience (Boateng, et. al., 2009: 454).

Management literature has emphasized the complexity of the concept of knowledge and the lack of agreement about its definition. Knowledge is defined as a true justified belief (Akamavi & Kimble, 2005: 3) and it is information whose validity has been justified (Lin, et. al., 2003: 319).

It can also be characterized as a combination of expertise, values, information, and expert insight that serves as a theoretical framework for analyzing and developing new experiences and data (Sharman & Edward, 2007: 2) and well-organized knowledge aids in the improvement of service quality, the development of new products, the diversification of service delivery patterns, the expansion of internal efficiency, and the improvement of client relationships (Assefa, 2010: 1).

Most managers in organizations today do not clearly know what kind of knowledge the employees have in the organization, and this reminds us of the saying of the businessman Hewlett-Packard in 1980, “If we know what we know, we can open the world” (Sanchez, 2005: 4).

Therefore, we must understand the types of knowledge, and in what follows we present the most important of these types’ knowledge can be divided into:

- Primary knowledge, which is recognized by physical inference, and is done by the senses.
- Rational knowledge, which depicts things in a mental way known to those with bright minds and scientific knowledge, which is knowledge that focuses on the mind and experience and takes the scientific path (Farkas, 2003: 3).

Knowledge has two main dimensions; epistemology and ontology. Whereas the epistemological dimension differentiates between patterns of knowledge representation, such as the apparent knowledge and the implicit knowledge (values, relationships, and attitudes), while the ontological dimension refers to organizational knowledge and knowledge of individuals present in the organization, where individual knowledge includes knowledge and experiences present in the individual’s thought, while organizational knowledge represents the rules and procedures in the organization, in addition to the knowledge translated into the organization’s products and services, and in the relationship between members of the organization, so that if an individual leaves the organization the individual knowledge is lost, but the organizational knowledge remains (Assefa, 2010: 5).

Explicit knowledge and tacit knowledge are the most important divisions of knowledge, as Polan referred to this division 1966, the Explicit knowledge can be coded and can be translated in the form of words and numbers, as it is defined as formal, systematic knowledge that can be coded and stored in databases (Jain, et. al., 2007: 23). While tacit knowledge is related to the individual's behavior and experience, as well as his principles, values, and emotions, it is more than what the individual can say to others (Jyrama, et. al., 2009: 2) it is informal knowledge, embedded in the minds of individuals, and is acquired through experience and work practice (Jain, et. al., 2007: 23).

Tacit knowledge is divided into knowledge embedded in practices; the degree reflects learning by doing business, and knowledge embedded in context; the degree of

their inclusion reflects the historical, social, or cultural context of the organization (Zhang, et. al., 2006: 4).

Knowledge management concept, among the most important definitions of knowledge management are the following:

- An administrative process that has inputs and outputs and operates within a specific external environment that affects its interactions, and is divided into multiple successive and interrelated steps, such as creating knowledge, collecting, storing, distributing and using knowledge, and the goal is to share knowledge in the most efficient way, to obtain the greatest value for the organization (Farkas, 2003: 2).

- The outcome of the interaction between the individual and the organization on the one hand, and the integration between explicit knowledge and tacit knowledge on the other hand. (Nonaka, et. al., 2000: 7).

- The organized process of searching for, selecting, organizing and presenting information in a way that improves the understanding of employees, and the optimal use of the assets of business organizations (Farkas, 2003: 3).

- The process of efficiently collecting and creating knowledge, managing the knowledge base, and facilitating participation in it, in order to apply it effectively in the organization, discovery, development, use, receipt and assimilation of knowledge from within or outside the organization, through an appropriate administrative process to achieve current and future needs (Akamavi & Kimble, 2005: 3).

- The process of attracting, storing, sharing and using knowledge (Lin, et. al., 2003: 319).

- It is concerned with managing the organization's knowledge through a systematic process for the purpose of acquiring tacit knowledge and explicit knowledge, organizing it, maintaining it, achieving it, applying it, sharing it, and renewing it for employees with the purpose of improving organizational performance and creating value (Levitt, et. al., 2011: 6). The researchers have divided knowledge management into organizational knowledge management and personal knowledge management. We explain this in the following (Sanchez, 2005: 3).

1.1.2. Personal and Organizational Knowledge Management Curriculum

The origin of personal knowledge management can be traced back as far as 1968, when Drucker (1968) used the term mentioning the dynamics of “knowledge work” and

“knowledge workers”. Drucker (2001) again used the phrases “knowledge worker” and “advanced knowledge workers” in 1974 to ask knowledge professionals and also mentioned “personnel management”. However, the term “personal knowledge” was first used by Polanyi (1958) and the term “personal knowledge management” (PKM) as such appeared for the first time in a working paper by Frand & Hixon (1999).

“It’s been in the background since the early days of knowledge management, but the connection between personal and organisational effectiveness has so far been ignored” (Associates, 2004). However, in the past two years people have begun to recognise the importance of PKM and there are several activities around PKM: blogs, workshops, conferences, e-book and online surveys. All of these are indications of growing awareness and recognition of PKM. The PKM has multidisciplinary roots. One of the more apparent antecedents of PKM is Personal Information Management (PIM), which comes from research in library and knowledge management also as personal productivity tools and softwares (Jones & Teevan, 2007). The modern PKM focuses on how individuals can become productive knowledge workers.

Personal knowledge management curriculum:

- Personal knowledge is in people’s minds and it is difficult for others to extract it.
- Knowledge must be transformed by motivating individuals within and between organizations.
- Learning can only be encouraged by gathering the right people together under the right conditions.

Organizational knowledge management curriculum:

- Visible knowledge, which may be categorized and organized to create organizational knowledge that can disseminate knowledge (using information technology) in the form of records, drawings, forms ... etc.
- Learning processes can be designed to address knowledge deficits, by structuring and managing scientific processes.

The following is presented the experience of Toyota and Motorola in managing personal knowledge and managing organizational knowledge (Sanchez, 2005: 4-6):

- Toyota provided an example of an approach to transferring personal knowledge within the global organization, when the company established a new factory and wanted to transfer knowledge of its production system to the new employees in the factory.

Toyota usually selects a group of 200 to 300 employees and sends them to do a training course for a few months, work on one assembly line from existing Toyota factories, and after months have passed teaching the production system, and work alongside Toyota's expert personnel, trained workers. They return to the new factory to become a major production team, made up of completely new employees. When the new employees return to the new factory, the company brings about 200 or more employees with them with higher experience to work with them side by side and to make sure that the knowledge related to the production processes is fully shared by each of the employees in the new factory.

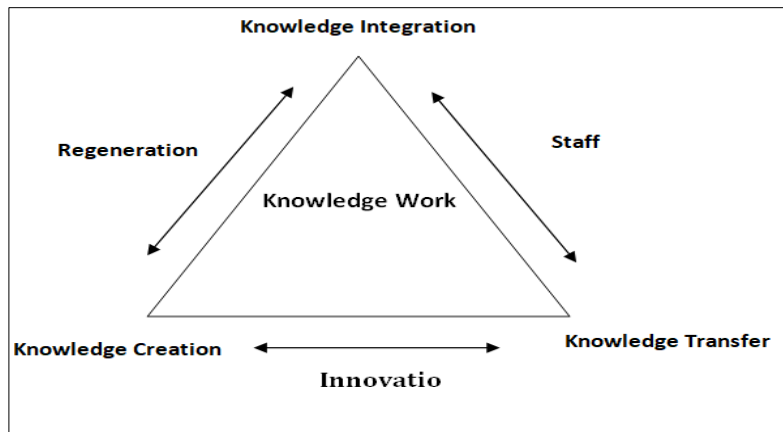
- Toyota used the quality rings to illustrate the knowledge creation model within the Personal Knowledge Model; at the end of each week, a group of Toyota production workers analyzes the performance of the production system for an hour or two, to identify existing and potential problems in quality, productivity, employee safety, etc. They then take corrective action by comparing it with the results of the previous quality cycle. Knowledge management that is repeated every week is an essential part of Toyota production system.

- With regard to organizational knowledge, the processes of collecting, developing, classifying and systematically reconciling knowledge are usually discussed in a systematic manner. An example of an organizational knowledge management approach in 1990 was the Motorola, which has been the global leader in the pager market, and to maintain its leadership position the company introduces new generations it designs every 12 to 15 months, as each new generation of devices offers customers advanced options compared to the previous generation of the device. To meet the demand for devices quickly, the company Motorola with new factory design and construction with fast production capacity and flexible assembly lines. To maintain this rate of production, Motorola has formed a production team and factory designers to help develop new generations of machines. At the start of each project, each new design team receives techniques and manual development methods from the design team that developed the previous generation of devices. The new development team, in turn, delivers three reports at the end of their project; designing a new, more advanced generation; more efficient and more flexible design of assembly line in the factory that will produce the new generation of machines; design a sophisticated guide, which expands future ways to be delivered to the team in the form of a guide, and this guide

introduces the next development team and so on. With this, Motorola tried to spread the visible knowledge developed by the engineers while they were undertaking the project.

Farkas (2003) presented in Figure (1) an explanation of how knowledge is produced, where knowledge is produced through the transfer of knowledge between work teams, and the creation of new knowledge through the processes of knowledge transfer and renewal by updating innovative knowledge by integrating with existing knowledge.

Figure 1. An Explanation of How Knowledge Is Produced



Ref.: Farkas, 2003.

1.2. The Concept of Knowledge Sharing

Knowledge sharing has been recognized because the most vital think about the success of KM. Knowledge sharing means the exchange of employees' knowledge, skills, and experiences. It ensures that the knowledge within a corporation is out there for workers whenever they have it, and its benefits include retaining intellectual assets and improving productivity. Previous studies have identified three elements that have a critical impact on knowledge sharing: a knowledge-sharing culture, information technology (IT), and employee motivation (Nazim, et. al., 2016).

1.2.1. Concepts Related to Knowledge Sharing

The Concept of knowledge sharing; with different perspectives, situations, and needs, researchers provided various definitions for sharing knowledge, and one of the most differences between researchers is that some of them considered the process of knowledge sharing aimed at gaining new experiences and knowledge, and thus it is a

process of knowledge transfer. While others see that knowledge transfer is only a stage of knowledge sharing, as knowledge sharing also includes gaining new knowledge, through the learning process and applying this knowledge by the knowledge recipient. Knowledge sharing means creating information about tasks, knowing how to help others, cooperating with them to solve their problems, applying policies and developing new ideas (Aliakbar, et. al., 2012: 209).

Knowledge sharing takes place through a dynamic learning process through continuous interaction between the organization, customers, and suppliers for innovative (Cuammings, 2003: 3).

Aliakbar, et. al. (2012: 209) has indicated that among the reasons for the difficulty of finding a standard definition for the term knowledge sharing is that this concept is related to several elements, the most important of which are two:

- Objectives; refer to the sort of knowledge shared and how it was shared; face to face, conferences, knowledge networks, or through organizational learning.
- Level of participation; this includes individuals, teams, and organizations.

There are two trends that dealt with the concept of sharing knowledge, they are represented in the perceptual orientation and the constructive orientation of knowledge in general, while the first approach relates to the apparent knowledge that can be easily exchanged from one person to another.

While the owners of the second (constructivist) orientation see that knowledge is of a social structure, and depends on experience, and it is usually repeated its creation through social interactions (Jyrama, et. al., 2009: 2).

Researchers also view sharing of knowledge as either a process or a behavior. The following is a presentation of some definitions according to this division: Knowledge sharing is a learning process through the exchange of ideas, knowledge, experiences, and information, and it is related to the ability of the individual to transfer his apparent and implicit knowledge to others, and knowledge sharing is an appropriate mechanism for mastery (elaborate) knowledge management (Manaf & Marzuki, 2009: 7) and knowledge sharing is the process of exchanging knowledge from one individual to another, and it is one of the knowledge management processes (Chen, et. al., 2009: 134).

Also defines knowledge sharing as the process of bringing knowledge and transferring it from someone who is a source of it to a recipient (Jain, et. al., 2007: 23).

Knowledge sharing is a communicative process in which knowledge is discussed and exchanged through direct interaction, and via the Internet, with the aim of raising the value of existing knowledge. Also, knowledge sharing is a means for absorbing knowledge through experience and regular research, managing and storing information and knowledge for easy access, transfer and dissemination (Yeh, et. al., 2011: 2466).

Another definition, knowledge sharing is a communicative process in which knowledge is discussed and exchanged through direct interaction, and via the Internet, with the aim of raising the value of existing knowledge. Also, knowledge sharing is a means for absorbing knowledge through experience and regular research, managing and storing information and knowledge for easy access, transfer and dissemination (Tjakraatmadja & Martini, 2011: 363).

Knowledge sharing is a complex process, requiring a contribution of knowledge on the part of the organization and individuals as (Shaqrah, et. al., 2011: 2) refers that the knowledge-sharing strategy means transferring the customer's current knowledge to the organization, the employee, and to the customers. This definition is based on the external structure theory (Sveiby, 2001), which indicates that the knowledge of the customer is transferred and exchanged from the customer to the customer, from the customer to the employee, and from the customer to the organization, depending on the experience accumulated by the customer as a result of the use of products and services. On the other hand, knowledge sharing is considered a behavior in which individuals' knowledge of their acquired knowledge is disseminated to others in the organization (Aliakbar, et. al., 2012: 209).

Sharing knowledge also means using experiences and information to help others solve problems, develop new ideas, or implement new policies and procedures (Amayah & Nelson, 2010: 2) and sharing knowledge also means collecting existing knowledge in a different way, which enables the creation of new knowledge and the preservation of existing knowledge (Christensen, 2003: 1).

Contrary to what many studies have confirmed (Jain, et. al., 2007: 24) believes that the process of sharing knowledge is an automatic process, as it occurs without planning, and does not require the individual to prepare for it. Concepts related to knowledge sharing:

- The difference between knowledge-based economics, knowledge management, and knowledge sharing can be found by addressing three concepts related to

knowledge; the pillars of knowledge, knowledge processes, and knowledge outputs.

- Pillars of knowledge; they mean the inputs, such as human capabilities (quality of human resources), infrastructure (technology) and the environment (policies related to knowledge management). These pillars are the basic inputs for developing a knowledge-based economy.
- Knowledge processes; it refers to the administrative aspect of knowledge, and is related to the processes of knowledge generation, acquisition, sharing, and use of knowledge, which are the main components of knowledge management.
- Knowledge outputs; they are the final results of knowledge management efforts in the organization, among these outputs: improving performance (maximizing profits, productivity, sales, etc.) developing new innovations and improving existing processes (Jain, et. al., 2007: 24).
- The difference between knowledge sharing and information sharing is that the end result of the knowledge-sharing process is the acquisition of new knowledge by the recipients of the knowledge (Assefa, 2010: 4).
- A distinction can be made between knowledge transfer (more focused on apparent knowledge, following the perceptual view of knowledge), and knowledge sharing (more focused on tacit knowledge, following the constructivist view of knowledge), (Jyrama, et. al., 2009: 3). Others argue that knowledge transfer is the process of transferring knowledge between different units, departments, or organizations, while knowledge sharing is concerned with transferring knowledge between individuals, as it is the best way to create new knowledge (Aliakbar, et. al., 2012: 209).

1.2.2. The Importance and Requirements of Sharing Knowledge

The importance of sharing knowledge, the following is presented what the researchers mentioned about the importance of sharing knowledge:

- Knowledge sharing helps front-line employees improve their decision-making ability (Marzuki & Manaf, 2009: 11).
- Sharing knowledge contributes to raising efficiency, productivity, quality, and innovation, thus improving the organization's performance, improving decision-making, and improving operations (Mehrabani & Mohamad, 2011: 174).

- Knowledge sharing achieves and maintains an organization's competitive advantage (Özbebek & Toplu, 2011: 70).
- The application of knowledge sharing leads to the activation of innovation, production processes, organizational design, and product quality (Jain, et. al., 2007: 24).
- The organization uses the results of knowledge sharing as an educational tool, through which it seeks to improve employee efficiency (Purwanti, et. al., 2008: 499).
- Sharing knowledge has become important at the strategic management level, as knowledge has become the strategic resource for the organization and a source of value creation (Cuammings, 2003: 5).
- Sharing knowledge at the individual level is of great importance for the organization, because the individual is a source of organizational knowledge, he is the one who performs daily activities, and he is responsible for creating new knowledge (Assefa, 2010: 5).
- Sharing knowledge lowers training costs (Yeh, et. al., 2011: 2466).
- Sharing knowledge contributes to improving an individual's organizational skills (Mehrabani & Mohamad, 2011: 174).
- Knowledge sharing contributes to reducing production costs and increasing the organization's sales of products/services (Aliakbar, et. al., 2012: 208).
- The process of sharing knowledge helps individuals achieve their goals, reduce mistakes and invest time, by enabling them to perform the same tasks with greater educational capabilities, and thus in less time (Assefa, 2010: 5).

The most important factors that increased the importance of sharing knowledge, represented in (Gurteen, 1999: 1) mentioned:

- Intangible products such as ideas, processes, and information have taken a large share in global trade.
- The continuity of the competitive advantage will not be achieved unless there is continuous innovation, that is, the application of new knowledge.
- High rates of work turnover, employees are no longer content to stay in the same job for life, and losing an employee means losing their knowledge and experience.

- The organization no longer knows what knowledge it possesses, and therefore cannot know its true capabilities, and exploits these capabilities, due to the accumulation of knowledge among certain people, and its lack of spread in the organization.
- Rapid change in technology, business, and even the social aspect necessitates the constant acquisition of new knowledge.

1.2.3. Forms and Dimensions of Knowledge Sharing

Dimensions of knowledge sharing; the dimensions used by the researchers in measuring knowledge sharing were numerous, and in the following we list the most important of these dimensions.

The five strategic dimensions of knowledge-sharing are; leadership, cognitive culture, trust and care, and the role of the of ergonomics (Shaqrah, et. al., 2011: 2-4):

- *Leadership*; where the organization tries-and in an innovative way - to compete for the ability of leaders to collect new and valuable ideas, to become renewable basic skills, and knowledge sharing is a team process, defined as an exchange of ideas, information and suggestions among the members of the work team, so the sharing of knowledge does not happen automatically in the teamwork, but the leader has an important role in creating this sharing.
- *Trust*; trust is a concept that is multi-dimensional in nature, as a distinction has been made between two dimensions of trust: trust based on perception and trust on the basis of influence, and trust is on the basis of perception. A rational view of trust, which is related to competencies, ability, responsibility, safety, and reliability. While trust is based on influence, it is more related to emotion, as it includes several factors such as: care, concern, benevolence, altruism, commitment, and mutual respect. A distinction has also been made between calculated confidence and non-calculated confidence, as the first is related to the idea of return and cost, while the second is related to the attitudes and values of individuals. Trust is an intangible factor that encourages the process of sharing knowledge, and care-which goes beyond trust, as it is voluntary assistance and voluntary giving-is necessary in sharing knowledge, especially the implicit ones.
- *Knowledge culture*; the knowledge culture is included in the core values of the organization, its policies, mission, basic behaviors and the way it deals with

employees. There are several dimensions of the values and beliefs that make up the organizational cognitive culture, namely: cooperation, commitment, competence, assistance, creativity, motivation, participation, teamwork, honesty and innovation. This culture reflects the possibility of sharing knowledge, and facilitates the flow of tacit knowledge, as the individual within this culture becomes more able to interact and learn quickly through observation, as (Harvey, et. al., 1998) indicates that sharing knowledge is more a cultural issue than it is technique.

- The ergonomics of the organization has several responsibilities, providing a background for an understanding of the organization that supports productivity and profitability.

It is the ergonomics that determines whether there is pressure in the work environment, such as excessive use of force, a high rate of repetition of tasks, difficult situations, which are an obstacle to achieving the instructions of the ergonomics, as the use of the human formula increases quality, productivity, and knowledge sharing, as the employee or customer applies what is called the role of the ergonomics, which translates into the application of instructions for the flow of knowledge contributing to the activation of the work environment and the transfer of knowledge (Shaqrah, et. al., 2011: 3).

On the other hand, and to measure knowledge-sharing behavior, Yi (2009) introduced a Measurement Scale (KSBS) in which it identified four dimensions of knowledge-sharing behavior; written contributions, organizational communication, interpersonal interactions, and group practice (Özbebek & Toplu, 2011: 72).

- *Written contributions*; it includes the behaviors of individuals translated in their presentation of ideas, information, and experience, through written documents instead of dialogue, which are usually stored in the organization's database (person-documents).
- *Organizational communication*; it includes the behaviors of sharing knowledge through formal interactions between team members, or at the unit or department level in the organization (person-group).
- *Interpersonal interactions*; behaviors include knowledge sharing through informal interaction with individuals, for example through chatting during lunch or helping colleagues (person-to-person).

- *Practice group*; this includes knowledge-sharing behaviors within a group representing a group of volunteer employees, talking about a topic that combines their interests in a non-routine and impersonal way, which is an informal social interaction (person-group).

Researchers have several dimensions of measuring knowledge sharing, as there is no agreement on specific models for measuring knowledge sharing.

Knowledge-Sharing requirements; knowledge sharing is a valuable strategic activity that is difficult to imitate, as it is difficult for an organization to create valuable knowledge if it does not define what it means to share knowledge, what is the purpose of knowledge sharing, and how the process of sharing knowledge can be evaluated and improved (Christensen, 2003: 6). Knowledge-sharing behavior is also influenced by several other factors such as: team intentions, work flow issues, collaborative practices, and the nature of knowledge (Lin, et. al., 2003: 320).

Among the individual's motivations for a knowledge-sharing behavior are his desire and pleasure in helping others, his confidence that he has sufficient capabilities to present knowledge to others, and the extent of the individual's interest in the knowledge in question. (Alhady, et. al., 2011: 138).

Foss, et. al., believes that work design contributes to improving employee experiences and independence at work, which is considered an essential catalyst for the practice of knowledge sharing. Also, the feedback in the organization, such as recognition and performance evaluation, are considered factors motivating the behavior of sharing knowledge, moreover, instilling a sense of value in the individual within his social milieu makes him more willing for the individual to make additional efforts, such as sharing knowledge in order to confirm his position in the organization (Foss, et. al., 2009: 875-878).

Presented a set of conditions that must be met for the success of the knowledge-sharing process (Camacho, 2007: 26):

- The more knowledge is shared, the more developed the knowledge is.
- Knowledge cannot be transformed, rather it is shared.
- Everyone in the group should have valuable knowledge and experience on the topic discussed.
- Respect for diversity and differences in opinions and experiences.

- As long as each participant possesses knowledge of the topic under discussion, the contribution of all participants has the same limitation.
- Within the group there is no individual who does not have any experience on the subject, or who has all the expertise.
- Participants' contributions incorporate both individual and collective knowledge.
- The time devoted to sharing knowledge is important, and everyone should respect it.

Forms of sharing knowledge; Marquardt (2002) indicated that knowledge is shared within organizations either intentionally or unintentionally:

- Intended form; it means that the process of knowledge sharing takes place intentionally within the organization, through individual programmed communications between individuals, or through written methods such as: notes, reports, periodicals, and various types of internal publications. In addition, knowledge is intentionally shared through the use of video, audio tapes, internal conferences and seminars, training programs, transfers and business rotation among the members.
- Unintended form; it means sharing knowledge unintentionally within the organization through informal networks, stories and myths.

1.2.4. Mechanism and Barriers of Knowledge Sharing

Knowledge-sharing mechanisms, the knowledge-sharing mechanism represents the method, procedure, or process that helps to share knowledge within the organization. Knowledge sharing can be spoken of in the form: formal, informal, personal, and impersonal. The formal approach to knowledge sharing relates to unprogrammed meetings in the organization, informal conferences = and conversations during breaks. While the formal mechanisms relate to periodic training, procedures, rules, and formal processes. The personal mechanism includes the personal transfer of knowledge (face to face). Whereas, the impersonal mechanism is the repositories of knowledge (Manaf & Marzuki, 2009: 10).

Refers to four mechanisms for sharing knowledge at the individual level (Tjakraatmadja & Martini, 2011: 363):

- Contribute to the organization's databases.

- Sharing knowledge through formal interaction within or between work teams or business units.
- Sharing knowledge informally.
- Sharing of knowledge between groups of practice.

And among the most important knowledge-sharing mechanisms are: mutual understanding, learning climate, training, and the rate of work cycles in addition to writing, dialogue, meetings, or performing tasks from the perspective of the knowledge owner, observing others, learning from work, reading what is written, and accessing stored knowledge. In databases from the point of view of the recipient of knowledge (Hong & Via, 2008: 29). As seen by (Purwanti, et. al., 2008: 501) the implementation of a performance management system -which includes both employee performance appraisal and competency assessment- can be one of the mechanisms for knowledge-sharing behavior among employees.

Mentioned three ways to share knowledge within an organization (Albena & Elissaveta, 2005: 3):

- Retrieval of knowledge; sharing knowledge of the organization to individuals in order to retrieve the existing organizational knowledge.
- Knowledge exchange; the sharing of knowledge from one individual to other individuals with the aim of exchanging knowledge possessed by individuals.
- Knowledge creation; the sharing of knowledge between individuals with the aim of creating new knowledge as a result of new contributions to individuals' existing, shared knowledge and organizational knowledge.

Barriers to knowledge sharing, below we summarize the most important thing that the researchers mentioned regarding barriers to knowledge sharing:

- Difficulty showing tacit knowledge, lack of sharing of identity (as individuals from different groups have difficulty understanding each other), lack of relationship between sender and recipient; There must be ways to meet them face-to-face or via the Internet), and no knowledge without knowledge (as all parties must have sufficient knowledge to share it) (Christensen, 2003: 6).
- Believes that there are three types of barriers to knowledge sharing among employees: social, physical, and situational barriers (temporal) (Akashah, et. al., 2011: 76).

- One of the challenges of sharing knowledge in the public sector is the lack of expertise, skills and knowledge in the organization (Manaf & Marzuki, 2009: 11).
- The process of reducing the number of employees (downsizing) creates a kind of imbalance within the work teams, in which a new partial culture appears that hinders the process of sharing knowledge as a result of the tension that appeared in the team, and the isolation of its members from others, and the process of reducing the number of employees leads to the loss of a group Knowledge, which in turn negatively affects the knowledge-sharing process (Sharman & Edward, 2007: 1).
- The costs of time and effort are the most important factors hindering knowledge-sharing behavior, in addition to the individual's belief that this behavior may reduce his strength and position in the organization. Also, there is a type of individuals who enjoy obtaining cash payments (profits) without making additional effort, and this is known as the social dilemma, as it is a contradiction in the individual, and this reduces the behavior of sharing knowledge (Levitt, et. al., 2011: 7).
- Among the reasons for the failure of the knowledge-sharing process at the organizational level, organizations seek to change their culture to suit the knowledge-sharing strategies appropriate to their organizational culture, in addition to other obstacles that the organization may not be interested in encouraging knowledge sharing as a result of losing its confidence in the viability of this process. One of the reasons for the failure of the knowledge-sharing process at the individual level is a lack of communication skills, cultural difference, lack of time, and weak trust (Jain, et. al., 2007: 24).
- The organization may not have sufficient resources and infrastructure for the knowledge-sharing process, especially small organizations, and the information technology systems may not be good enough to be relied upon in the knowledge-sharing process, loss of awareness of knowledge management and the absence and clear vision of it (Jain, et. al., 2007: 24).
- The knowledge-sharing process on temporary projects faces two types of problems; The first type relates to the fact that these projects will end after a certain period, which leads to the loss of the ability to learn, while the second

type is related to the fact that communication between employees in temporary projects is difficult, as a result of cultural difference and insufficient time to merge with each other and exchange trust (Ruuska & Vartianen, 2005: 374).

Also indicate that there are four main factors to overcome barriers to knowledge sharing based on practice groups (Albena & Elissaveta, 2005: 2):

- Awareness, making both knowledge seekers and those who source it aware of special knowledge.
- Access, giving sufficient space and time for both those seeking knowledge and those who are a source of it to share their knowledge.
- Application, creating an environment that encourages knowledge-sharing behaviors between those who seek it and those who are the source.
- Perception, ensuring that both knowledge seekers and those who are the source of it have adequate understanding and the customary context for sharing their views.

1.3. Literature Review on Knowledge Sharing

The impact of knowledge sharing on desire to transfer training: a case study in the Malaysian communal sector. This thesis investigates whether a trainee's incentive to pass on his knowledge is influenced by his knowledge-sharing behavior (Baharim, 2008). Using a study structure established by combining two main human resource development models (Holton, 1996; Holton, et. al., 2000) and the philosophy of intended behavior (Ajzen, 1991). This thesis investigates the idea that a range of secondary impact variables, expected benefit variables, changing climate variables, enabling variables, and ability variables, as well as variables connected with participation behavior, influence trainees' desire to transfer training. The thesis developed an empirical database to examine the training transfer phenomena by administering a survey to 437 government workers joining training programs at the National Institution of Public Administration, Malaysia's leading training agency for government employees. On two levels, the conclusions of this thesis have an impact on HRD positions in the Malaysian public sector; pre-training and post-training. The thesis adds to HRD practice by describing HRD types of activities that will improve training transfer, as well as theory by introducing a new paradigm (Wang & Noe, 2010).

Sharing of knowledge; a review and recommendations for upcoming research the effectiveness of knowledge management programs is dependent on knowledge exchange. This study examines both qualitative and quantitative studies of individual knowledge share. We created a framework for comprehending knowledge sharing research based on a literature review. Organizational environment, interpersonal and team characteristics, cultural features, individual characteristics, and motivational variables are the five areas on which knowledge-sharing research should be focused. The article examines the theoretical frameworks employed and presents the actual study findings for each focal area. The article wraps up with a discussion of future research areas, current challenges, and practical consequences of knowledge sharing research (Wang & Wang, 2012).

Knowledge participation, innovation and corporate performance; Based on a literature analysis, we build a research model that implies knowledge sharing not only has a positive connection with performance, but also drives innovation, which adds to corporate success. Data from 89 high-tech industries in Jiangsu Province, China, was used to exam this concept empirically. Both explicit and implicit knowledge sharing methods have been proven to promote creativity and performance. Clear knowledge sharing has a greater impact on innovation pace and profitability, but tacit knowledge sharing has a greater impact on innovation quality and operational performance (Ashtian, 2014).

The main objective of this study, from a social capital viewpoint, is to analyze the influence of social capital of communities of practice on information sharing and innovation practices across knowledge-intensive Iranian businesses, such as the banking and pharmaceutical industries. Many earlier researches focused on the resource-based theory of the company, also known as the knowledge-based perspective of the business and identified organizational variables that might serve as facilitators or disincentives for knowledge exchange and, as a result, organizational innovation. Nonetheless, these studies ignore the potential mediating role of social center in the aforementioned link, and this study seeks to fill that cavity by analyzing the mediating impact of social center. The integrative model presented here investigates the part of social center as a mediator in the role of structural characteristics such as information technology, innovation beliefs, organizational structure, reward system, administration support for knowledge sharing, and the partnership's size for innovation. Data was collected from 167

knowledge-intensive Iranian businesses in a quantitative analysis. In this work, structural equation modeling and PLS-SEM software were used to evaluate and corroborate the integrated model. The findings showed that organizational facilitators had a direct influence on knowledge sharing across a variety of demographic variables, such as respondent age and industry population. The mediation role of social capital has been validated in two ways; the first is the major coefficient (t-value) of its interaction with organizational structure and managing support in economic firms, as well as with common language in the entire sample, and the second is significant changes in R2 in knowledge sharing and innovation ability with interaction effects in the entire sample (Chomley, 2014).

A behavioral approach to the link between knowledge sharing and workplace creativity in a global business. There is a scarcity of research on the link between information sharing and workplace innovation in the context of a knowledge-intensive multinational company. This is especially true when considering things from a behavioral perspective. As a result, the primary issue driving this thesis is, from a behavioral viewpoint, what is the link between information sharing and creativity in the workplace in the setting of a multinational corporation? In seven geographic operational entities (Africa, Asia, Australasia, Canada, Europe, South America, and the United States), a study of 2723 (2695 random + 28 non-random corporate) worldwide company workers was directed (across all geographies). There was a total of 853 studies completed. The data was analyzed using correlation and regression models, as well as a structural equation. The findings show that employees' individual knowledge-sharing behavior is influenced by six factors: subjective norm, attitude, intention, conduct, self-worth, perceived behavioral control, and knowledge-sharing activity. While organizational features like knowledge carrying capacity and citizenship behavior affect knowledge sharing behavior in teams and workgroups, they also have a direct impact on workplace innovation. Overall, knowledge-sharing behavior has been discovered to be an important precursor to workplace innovation (Chomley, 2014).

This thesis contributes to the literature in four ways. To begin with, the characteristics picked appear to be closely related to knowledge-sharing behavior. Second, this argument shows that knowledge-sharing behavior affects workplace creativity directly. Finally, a model based on planned behavior theory is supported.

Finally, a new statistic called Innovative Knowledge Sharing Behavior has been developed to help future research in this important area (Castaneda, 2020).

Knowledge sharing's impact on organizational learning and effectiveness the goal of this study is to see how knowledge sharing and organizational learning impact organizational success in the real world. Employees at all levels of the organizational hierarchy of international tourist hotels in Taiwan were sampled for the study. A total of 1,200 people received questionnaires from nine foreign tourist hotels in Taiwan. These hotels are maintained or franchised by international hotel and resort organizations all around the world. The findings of the 499 useable surveys show that knowledge sharing would assist the translation of joint individual knowledge into organizational knowledge without the existence of orphan knowledge and knowledge consumption. Furthermore, it will promote organizational learning and, as a result, improve organizational performance (Yang, 2007).

2. CHAPTER

EMPLOYEE INNOVATIVE BEHAVIOUR

The idea that humans have the ability to solve complex problems has been supported by many psychological research, and that when these creative behaviors can be harnessed among a group of people with different perspectives and skills, a big achievements can be achieved.

2.1. The Concept of Employee Innovative Behaviour

Employee creativity in the place of work might be the bedrock of any high-performance business (Hülshager, et. al., 2009; Korzilius, et. al., 2017; Oldham & Cummings, 1996). This is frequently obvious since the foundation of a knowledge economy is intangible assets, which are commodities that play an increasingly important role inside organizations, such as the ability to reinforce competitiveness by “doing more with less” (Carmeli & Gretchen, 2009; Crossan & Apaydin, 2010).

2.1.1. Employee Innovative Behaviour Construct and Basic Assumptions

Business has many aspects however, there is a recurring motif that business is involved with inventing and exploiting lucratively possibility (Shane and Venkatarman, 2000).

As indicated by Schumpeter (1934), an entrepreneur is someone who is prone to splintering the balance by presenting the beginning within the framework that looks like new elements, new business sectors, or new techniques for production. Employee innovative behaviour is known as the conduct of an employee in the direction of evolving a modern component, establishing unprecedented market, or enhancing agendas in the organization in which he works (Vance, 2006).

The drive can be inspired by a market interest request or a technical puzzle. Besides, disposition might be a reaction to an administration requesting corporate business or might be a totally independent innovative drive (Berger, 1963).

Moreover, the behavior may be cherished through senior executives and could become ambiguous to the presidents of the organization (Vaughan, 2004).

Due to conditions of the current situation, whole motives of the employees in connection with the expansion of a fresh process, fresh merchandises, a fresh market or such collections or new measures to reduce expenditures are considered innovative behaviour (Durkheim, 1984).

The inventive conduct of an employee is unaffected by the location where the initiative has taken root. A construct like this could be handy, as it could be difficult for a fundamentalist to decide if an employee's innovative behaviour is a response to the company's entrepreneurial strategy or if similar activity is the result of employee motivation alone (Covin, et. al., 1998).

An investigation of innovative employee behavior aims to shed light on the doers' ostensibly sensible actions, with the assumption that some independent variables influence the dependent variable. Action is the dependent variable in studies of innovative employee behavior, and employee innovative behaviour is the dependent variable in studies of innovative employee behavior (Hornsby, et. al., 1999).

The employee who supports the execution of a modern conception in the firm is the innovation procedure under investigation in the employee innovative behaviour study (Borins, 2002).

A new business division, a new product, a new market, or new cost-cutting strategies are all examples of employee innovative behaviour. It is necessary for an idea to be novel if it is novel to the business unit in which it is introduced (Ceylan, 2013).

Employees' own behavior, anticipations, or confidences that influence their work are independent variables (Bysted & Jespersen, 2014).

Blaug (1992) depicts popperian precept of systematic individuality as a declaration that the elucidation concerning gregarious, governmental, or economic occurrences only possible to be considered appropriate if the elucidation relates to individuals' tenets, stances, and decisions.

This appears differently through respect to the methodological faculty. According to what all social society is supposed to have distinct aims or duties that cannot be diminished according to the tenets, stances and actions of the persons concerned (Damanpour & Schneider, 2009).

Studies in the field of employee innovative behaviour are systematic in the individual/volunteer situation. This, in terms of notions relating to a single person (employee attributes or employee observations of the surroundings) explain (or

describe) a social occurrence (employee innovative behaviour) (De Jong & Den Hartog, 2007).

One uses deliberate clarification, and the employee acts as he or she did, in order to get this and that.

The employee is believed to act according to his perception of the situation, and not on the basis of an objective fact (De Vries, et. al., 2016).

This follows the hermetical custom of research. In the habits of interpretive research, a person's perception of the actual situation, which the individual himself believes to be the origin of the act under scrutiny, must be explored (Andersen, 1994).

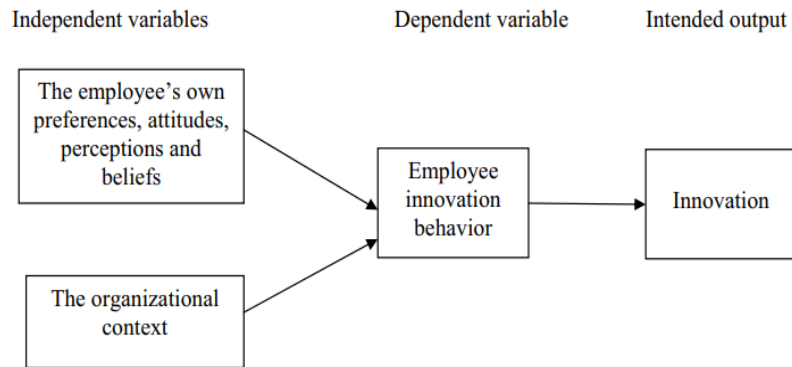
The situation that the potential innovative employee considers is the manifestation of the individual's own potentially innovative abilities (Ajzen, 1991); his conception acceptability in society to do entrepreneurial work (Kanter, 1984); his proactively (Crant, 1996); his organizational innovation history (Pinchot & Pellman, 1999), the individual's potential gain from engaging in innovative behavior (Carrier, 1996), and the individual's own perception of the chance of success (Morrison & Phelps, 1999).

It is additionally permissible for an individual who exhibits potentially creative conduct to consider the corporate setting. According to Wilson (1992: 84), "unfortunately for the student of change... it is not the interaction between individual behavior, perception, and organizational structure that must be considered". The organization's influence is also influenced by the larger context in which it operates.

Employee innovative behaviour is changing. Assume employees are viewed as self-responsible individuals who define and develop their individual experiences and are expected to contribute to the growth of the firm for which they work. However, the employee's behavior is governed by the agreement reached between the employee and the employer (Sundbo, 1999). The organization needs the employee to be adaptable as well as participating in innovation activities and to participate in these innovation activities. The employee likewise makes his requests in reply to these work tasks. It is widely assumed that a potential innovator employee suffers an expense/value assessment in which the employee is aware of his choices and the probability of all conceivable outcomes is known. The purpose is to shed light on human behavior, and performers are expected to make sound decisions. However, as Harrè and Gillett (1994: 120) put it, "a person is endowed with the inclination to respond to specific conditions

in certain ways but is not causally forced to do so”. This explanation of the elements influencing employee innovative behaviour is depicted in the figure.

Figure 1. This Debate of Factors Affect Employee Innovative Behaviour



The core in studies of employee innovation behavior.

Ref.: Singh & Shukla, 2009.

When it comes to the employee innovative behaviour, both corporate and individual entrepreneurship share (Fernandez & Moldogaziev, 2012).

They all share the same core beliefs about how a masterful challenge may provide intrinsic value to employees. Entrepreneurship stands alone in the belief that the demand for this sensation is great, and that if an employee is not permitted to be inventive in his or her current firm, he or she will quit for one that is more receptive to entrepreneurial conduct (Richards & Duxbury, 2014). Relationship between innovation and creativity; according to Koestler (1965), creativity can be described as a “dissociative process” that connects any two historical matrices of thought to usher in a replacement idea or creation. Other scientists have described it as a tool for resolving organizational issues (Newell & Shaw, 1962). Some individuals consider creativity and innovation as two separate things, with creativity serving as an inspiration and innovation serving as a tool. Some, on the other hand, believe they are inextricably linked. Without the creative aspect, innovation is an artistic process that is incomplete (Singh & Shukla, 2009).

Stages of innovation include augmentation innovation, which consists of little changes or alterations to a product, a minimal amount of expenditure, and a very low risk (Miner, 2010). The first stage is something that happens on a regular or ongoing

foundation in an organization or service manufacturing, and it is nothing more than a formal research and development activity, with the outcomes of innovation or invention being directly tied to the manufacturing process (Coccia, 2006). This also takes into account daily “new and improved” advancements, such as new flavors becoming all-natural components, just-in-time supply chain optimization, larger or smaller sizing, and packaging enhancements, among other things (Terwilliger, 2015). These improvements benefit products that have been around for a long time and need to be improved but cannot be changed due to sentimental significance. Such a product must be amended, like when the American Coca-Cola corporation changed its packaging and appearance multiple times over the years, appearing with Coke Zero, Vanilla Coke, Diet Coke, and so on, despite the fact that the recipe remained the same (Mayureshnikam & Patil, 2018; Miner, 2010).

The second stage of radical innovation is considered a significant development because it goes beyond the new and enhanced. For a limited time, this type of innovation provides a considerable competitive edge (Terwilliger, 2015). It has a medium level of risk and investment, such as automotive firms that start with a basic model and then develop a luxury version of a similar car (Miner, 2010). Because it has such a large impact on the industry or area in which it is acquired, such innovation necessitates a significant lead time (Freeman, et. al., 1982). This form of innovation is ideally served by a dedicated R&D team, as it necessitates substantial market knowledge and resources. At the third stage of transformative innovation, innovations have a role in changing how people live their lives. It is regarded as the pinnacle of innovation. This innovation in the product or service was not even considered by customers, and they were unaware that they desired such a thing (Hempel, 2007). This penetration has a considerable impact on the cost structure of inputs as well as the way people manufacture or distribute goods or services in practically every sector of the economy (Freeman, et. al., 1982). The essential concern at this stage, nonetheless, is whether the organizations willing and able to carry forward with this innovation’s research and development.

2.1.2. Contributing to Employees Innovative Behaviour

Pinchot and Pellman (1999) claiming that those who do not have a strong enough need to pursue their innovation idea no matter the cost cannot be considered true

entrepreneurs. Building employee innovation assumes fully rational people who respond to certain motivational factors (Martin, et. al., 2013).

This assumption is shared by the notional standpoints of entrepreneurship plus entrepreneurship. Entrepreneurship examination uses neoclassical assumptions; ontology is individuality, people are sensible (as sensible as a human should remain), people enhance their worth by exchanging goods and services (time and sharing for intrinsic and extrinsic value), and people have the ability to predict the result of an action (act as though it were the case). The type of motivating elements that genuinely predict entrepreneurial action or entrepreneurship is discussed in part of this kernel (Latham & Pinder, 2005).

Building employee innovative behaviour does not imply that the employee operates independently of the company's plan or that management has complete control over the employee's inventive behavior (Goffin & Mitchell, 2005).

According to Mintzberg and Quinn (1996), a "adhocracy" organization is one in which strategy creation concentrates upon focusing its strategy and revising its strategy in response to new circumstances. The actual strategy formulation process is a mix of top-down and bottom-up approaches. Sundbo is a type of shrub (1999), it claims that the arrangement in which people explore their innovative ideas and engage in development work in addition to their normal functions is the ideal approach to structure innovation and development activities within a SME. This is due to the fact that small and medium-sized businesses are typically unable to establish substantial development departments.

Employees' innovative behaviour is aided by management expressing and acting on their willingness to contribute to the organization's progress in this way (Lendel & Varmus, 2013).

Employees decide whether or not it is suitable to provide the organization with innovative conduct. Some say that innovative employee behavior encourages organizational activation since it is gradual and does not bring the organization's purpose and direction into question (Baden-Fuller & Volberda, 1997). Others, such as Sundbo (1999), believe that innovation is a balancing act. Management exercises its power to control the innovation process on the one hand, and then delegate authority to the employee on the other (Nadler & Nadler, 1989).

Employees are encouraged to think and devote time and effort to the development of new ideas. Employees that have this influence decide on the course of

innovation. The introduction of new behavior that helps the organization is a crucial aspect in employee creativity. Management has a vital role in fostering innovative employee behavior and directing individuals on ideas that are qualified from the organization's perspective. The employee, on the other hand, has control over the innovation process by his innovative conduct (Parvan, 2007).

2.1.3. Analysis Unit and System Production of The Innovative Behaviour of Employee

Employee innovation activity has two outcomes. The subsequent change process for the organization as a result of the employee's innovative conduct may be modest or have a significant direct impact on the organization (Pinder, 2008).

The end outcome could be a spin-off organization, a new product, a new market, new cost-cutting measures, or a complete letdown (Senichev, 2013).

From the employee's perspective, innovative employee behavior is frequently the outcome of new procedures, new goods, a new market, or combinations of these things, or newly implemented cost-cutting methods. Employees should benefit from innovative conduct in some way. They may seek to be rewarded for his efforts; incentives may include, among other things, recognition, monetary compensation, or the opportunity to exercise or expand their abilities (Parvan, 2007).

Because individual characteristics and environmental factors as perceived by the individual can influence innovative employee behavior, there are many useful research approaches, the majority of which include the employee's perception of his/her own characteristics and the employee's perception of the environment influencing employee behavior (Senichev, 2013).

This creates some questions for study on innovative employee behavior, as it is suggested that cognition can only be reached through unreliable self-reports (Bandura, 1977). In employee innovation research, this is a problem that must be addressed.

2.1.4. Limitation on Innovative Behaviour Practices and Structures of Employee

Establishing innovative employee behaviour contributes to some of the limitations of the entrepreneurial viewpoint and the entrepreneurial viewpoint. Construction assumes that rational actors pursue a personal goal. This personal goal is not related to financial reward as in the entrepreneurial perspective, but there is still an

assumption of a positive expected outcome for the innovative employee. The assumption that corporate strategy refers to employee behavior is shared with the company's entrepreneurial perspective (Mintzberg, 1994). Nevertheless, in the context of corporate entrepreneurship, the relationship between corporate strategy and idea generation and presentation is stronger.

The notion of creative employee behavior assumes that the employee's understanding of the organization's strategy effects the link between the company's entrepreneurial strategy and the employee's inventive behavior. Developing innovative employee behavior requires that the employee consider the appropriateness of responding to the request. Furthermore, it is assumed that employee attributes influence an employee's decision to participate in innovation activities. The perspective of entrepreneurship in businesses does not presuppose such a link (Shalley, 2004).

The entrepreneurial standpoint is related to particular characteristics of employees with innovative behaviour. The employee innovative behaviour study also looks at the link between personal qualities and innovative behaviour. Furthermore, the entrepreneurial viewpoint suggests that several motivating elements influence an employee's decision to innovate. A study on entrepreneurship looked into a variety of motivators, with financial motivation being the most important. Employee innovative behaviour is the focus of a study on the intrinsic causes of innovative behaviour, which suggests that employees want fascinating work that challenges them to grow their skills and competencies (Sundbo, 1999). A handful of the aspects that influence an organization's innovation process are listed below. They are put together in such a way that they demonstrate the interconnection and how one impacts the other, thus limiting the innovation process (Gu & Peng, 2010).

Process of innovation, personnel, management style, and leadership; an innovation process includes processes such as concept generation, idea development, and implementation, and it involves influencing an organization's innovation because of its operational process (Knight, 1987). Employees of the organization are primarily responsible for implementing this process. Individuals are perceived to work more creatively when they are empowered and self-sufficient; this independence helps them to develop in their own work environment (Thamhain, 1990). Yet, this is viewed as a major limiting factor in the business, as the degree of independence will have a significant impact on the employee; they may require help rather than individual

freedom and loneliness (Knight, 1987; Tang, 1998). In a huge organization supervising each employee is nonexistent or incomplete as matched to a minor organization. Large corporations have the means and the flexibility to take risks in order to provide their employees with independence and independent space, but this is not achievable in a small firm. When small firms aim to save costs as much as possible, they end up monitoring every action and process and providing help and guidance on a regular basis. As a result, management must provide direction, support, and leadership to ensure that the operational process is fruitful, and that people integrate the innovation process (Vandermerwe, 1987). An accurate application of decent directing system will be beneficial in avoiding a limiting factor of innovation of the organization.

Organizational structure and organizational principles. The extent of functionality and formality of an organization depends largely on its structure. The type of organizational structure effects work, thinking, and operational channels. The type and nature of the position are usually determined by the organization's structure (Koberg, et. al., 1996). It is obvious that each individual working alone can only contribute a limited amount to the organization's innovation, whereas a team of employees working together can manage the entire organization's innovation process (Anderson & West, 1998; Lemon & Sahota, 2004). When referring to organizational structure in terms of innovation, it refers to those components of the organizational structure that affect or influence the organization's innovation; it extends beyond simple business forms, as demonstrated by Mintzberg (1992). The work of these teams is heavily influenced by the organization's culture and management style, which may limit the organization's ability to innovate. Organizational culture is the process by which a company's desire for innovation and creativity is influenced. (Smith, et. al., 2008). As a result, the organizational structure and culture of a mega corporation are so inventive that tasks and projects are carried out in large groups and teams. Big corporations split their staff because to their large pool of resources, as contrast to smaller organizations that only have one team at a time. Fewer firms tend to conduct smaller projects centered on a single project due to a limited set of resources and workers, but larger organizations carry out various activities that are constantly controlled, discussed, and organized by teams. To overcome such a constraint, the organization can foster a culture of involvement and teamwork in order to prevent slowing down the innovation process.

Technological limits and knowledge management; through knowledge management, technology has an indirect impact on workers (Sorensen & Stuart, 2000), Therefore, information and technology (ICT) can be observed as the overall means of data transmission, and technology is well-known to help in accumulating knowledge and creating a repository, thus allowing or preventing employees from accessing it (Jantunen, 2005). Access to these resources or technologies determines whether or not innovation is encouraged. The absence of adequate technological equipment, lack of knowledge, and other factors all have a significant impact on the creative process. Large firms' IT departments have a lot of help, which results in a lot of data and resources, but small and medium-sized businesses have limited resources and attempt to make the most of what they have. Technology resources inside large enterprises aid in the innovation process by separating, managing, and concentrating technological resources. Teamwork software and artificial intelligence in computer games have a significant impact on business innovation (Klein & Dologite, 2000). As a result, good availability, management, and technological understanding aid in preventing delays in the construction process. Environmental barriers; environmental barriers, both external and internal, are another significant impediment in any sort of organization. Feedback from the organization's external environment and good modes of communication aid in the innovation process because negativity and negative connections drain the energy of the manager and the interaction of the organization, making it difficult for them to focus on creative ideas (Pourkiani, et. al., 2013). There are various barriers to innovation, such as political institutions, government laws, suppliers, and so on (Claudino, et. al., 2016).

Big organizations remain significantly affected by outward aspects as compared to minor and average sized organizations. In a large business, there are several compliances and limits that must be adhered to at all times so the speed of the innovation process goes down. Huge organizations are too busy complying with external factors to be able to focus internally on the unimportant intuition of creativity and creative thinking. In a company with fewer than 500 employees, there is more room for creative thinking. However, in a company as large as Apple, there is more room for creativity and innovative ideas due to huge revenue structures, employee support embedded within themselves, and coordinated systems that allow them the freedom to work on creativity and innovative ideas. As a result, businesses must have an integrated structure in which the creative process is unaffected by the organization's structures.

2.2. Literature Review on Employee Innovative Behaviour

HRM and innovative work behavior, a systematic literature review, the purpose of this paper is to determine the best HRM practices for boosting IWB, to understand the theoretical reasons for this, and to discover mediators and moderators in the relationship between HRM practices and IWB (Bos-Nehles, et.al., 2017). Based on a systematic review of the literature, the authors carried out a content analysis on 27 peer-reviewed journal articles. A framework is presented that aggregates the findings and clarifies which HRM practices influence IWB and how these relationships can be explained (Åmo, 2005).

Measuring employee innovation, reviewing existing metrics and developing innovative behavior and stocks of innovation support across cultures, the purpose of this paper is to develop a model of innovative employee behavior that depicts it as distinct from innovation output and as a multifaceted behavior rather than just a number of “innovative actions” by employees. Understands innovative behaviors of employees as an entrepreneurial micro-enterprise embedded in and influenced by contextual factors such as managerial, organizational and cultural support for innovation. Based on a review of existing employee innovative behavior measures and theoretical considerations, the authors develop and validate the Innovative Behavior Inventory (IBI) and the Innovation Support Stock (ISI) (Lukes & Stephan, 2017).

The impact of employee well-being on innovation performance: Evidence from manufacturing companies in China, this study examines whether and how employee well-being affects corporate innovation performance. We find that manufacturers with higher employee welfare have better innovation performance, measured in three categories of patent applications. This positive relationship is mainly reflected in the level of innovation quality but not in the quantity. Then, various robustness assays show that our results are not biased by proxy measures of innovation performance or employee well-being by the different regression methods. In addition, channel tests show that the positive effects of employee well-being on innovation performance in Chinese industrial companies are mainly achieved by retaining outstanding employees, attracting positive media reports and increasing the efficiency of inventors (R&D). Finally, we test the validity of three influence channels using a median effect analysis and further confirm our conclusions (Wei, et. al., 2020).

Creative and innovative behaviors of corporate directors: an elusive role of task-related conflicts, the aim of the present work is to examine corporate directors' boardroom interactions associated with conflicts as well as creativity and innovation phenomena. Drawing on survey data from 423 company managers, we tested putative relationships by means of a structural equation modeling technique. The findings provide evidence that task-related conflicts between corporate managers appear to be equally harmful to the psychological workgroup climate as they are beneficial for initiating creative and innovative work behaviours. By fusing the literature on workplace collective conflict and creativity and innovation with the corporate governance writings, this study provides new insight into the performance of corporate managers. The findings presented have clear implications for future board research and management practices (Derdowski, et. al., 2018).

2.3. The Effects of Knowledge Sharing in Employee Innovative Behaviour

Many studies on knowledge management and organizational performance have supported the idea that knowledge sharing (often interpreted as knowledge transfer and previously known as knowledge-sharing) leads to improved organizational performance, such as innovation capacity, absorptive capacity, and innovation (e.g. Liao, Fei & Chen, 2007; Liu & Phillips, 2011; Hau, Kim, Lee & Kim, 2013; Yeşil & Dereli, 2013). Innovation is presented as “a process through which economic or social value is extracted from knowledge—through the creation, diffusion and transformation of data to supply new or significantly improved products or processes that are put to use by society” (Raykov, 2014). Thus, innovation is a key competitive strategy and an advantage for the survival of any company and maintaining its distinction. Moreover, it attracts more customers due to the fact that new things are always attractive. The service industry in particular needs constant innovation to maintain its customer base. It is also clear that those employees with higher education and knowledge directly influence the organizational capacity to implement innovation (Raykov, 2014). However, modern organizations have attempted to sustain their competitive edge in the marketplace by increasing the most innovative insider human capital. Finally, research raises a concern about the need for human capital and a knowledge workforce to address organizational challenges related to productivity and innovation. Knowledge sharing has been shown to be crucial to increasing organizational performance in numerous studies (e.g. Perez-

Arostegui et. al., 2012; Kuo, Kuo & Ho, 2014) as well as the knowledge sharing and innovativeness (Lin, 2007; Hu et al, 2009; Kuo, Kuo & Ho, 2014).

Knowledge, in addition to other aspects, is the most essential organizational resource, allowing for original organizational outcomes that include innovation (Kamasak & Bulutlar, 2010). Furthermore, knowledge sharing has been shown to assist people in rapidly expanding their individual knowledge range, problem-solving skills, and productivity (Hu et al., 2009). Knowledge is regarded as the most important component of the innovation process. However, aside from a few studies on knowledge and innovation, the driving elements that motivate individuals to engage in innovative work behavior are still being researched in the literature. Studies, on the other hand, show a correlation between information sharing and creativity (Alhady, et. al., 2011). It is worth noting that a company that encourages its people to exchange knowledge (inside groups and organizations) is expected to generate new and better ideas and foster new business prospects, hence enabling organizational innovation. Kuo, et. al., (2014) claim that, exploring the linkages between workplace friendship, job satisfaction, knowledge sharing, and service innovation through data collection from electronic information engineers in scientific segments in Hsinchu, Taipei, and Tainan. They discover that workplace friendship and job contentment have a considerable impact on service innovation, and that knowledge sharing greatly mitigates the effects of workplace friendship and job satisfaction on service innovation.

Choi, Lee, and Yoo (2010) discovered knowledge sharing among team members to be a crucial component in maintaining high levels of team and organizational productivity in another study (Mura, et. al., 2013). He only referred to knowledge sharing as “best practices sharing” and innovative work behavior as “idea generating”. Their initial mission was to promote knowledge sharing as a positive contributor to innovative workplace behavior. Knowledge sharing, on the other hand, allows employees to not only pass on their knowledge to other employees, but also for others to obtain useful knowledge (Kuo, et. al., 2014). Lu, Lin, and Leung (2012) evaluated the influence of learning goal orientation on individual inventive work performance with knowledge sharing as a mediator and found that learning goal orientation had a significant beneficial effect and that data sharing played a major mediating function.

In addition to, Lu, Lin, and Leung (2012), they tested the effects of learning goal orientation on individual inventive performance in China, as well as the mediating

processes that were incorporated during this process. They discovered that learning goal orientation is positively associated to innovative employee performance, and that knowledge sharing mediates this association. Kamasak and Bulutlar (2010) investigate the effects of data sharing on innovation while considering knowledge donation and knowledge sharing. They discovered a favorable and significant influence of data collecting on all types of innovation using multiple correlation analysis. Donating knowledge, on the other hand, had no effect on exploratory innovation. Akhavan, Hosseini, Abbasi, and Manteghi (2015) investigate the impact of social, psychological, technological, and cultural enablers on knowledge-sharing behaviors and their increasing impact on innovative work behavior. Knowledge sharing, on the other hand, is defined as “knowledge sharing intention” rather than “knowledge donation” or “knowledge collection”. While knowledge sharing is defined as a system by which knowledge is transferred between individuals and, as a result, individuals obtain new advantages to facilitate new actions, it is also defined as a mechanism by which knowledge is shared between individuals. Hence, Knowledge sharing increases the value of existing knowledge inside a corporation and promotes creativity. Finally, the literature revealed that more empirical research on the topic of innovation and skills is required (Raykov, 2014). This research focuses on these two critical aspects of knowledge sharing in relation to innovative work behavior, which have previously received less attention from scholars. Knowledge-oriented employment, rather than focusing just on repetitive tasks and activities, necessitates the effective sharing and use of knowledge (Kuo et al., 2014). Innovation may be the result of such knowledge exchange that takes place among the employees. Knowledge sharing generates key information that facilitates and ultimately predicts organizational innovation (O’Cass, et. al., 2013; Kuo, et. al., 2014).

As they share their knowledge with their co-workers, individuals not only provide them with information but also integrate, detail and translate it into a transparent and convenient form (Hansen, Mors & Lovas, 2005). In the same way, when an individual collects knowledge from others, he improves his ability to innovate (Radaelli, et. al., 2014).

Therefore, it is often suggested that knowledge donation and knowledge gathering positively influence the innovative work behavior of individuals in the organization. Hence, this study hypothesized that knowledge is important for innovation

and thus, knowledge sharing plays a positive role in generating innovative work behavior in organizational employees.

3. CHAPTER METHODOLOGY

In order to test the research hypotheses, and achieve the research objectives, the study should follow many steps, data collection, data analysis (that contains arithmetic means analysis, correlation analysis, and regression analysis), and finally test of hypotheses.

3.1. Method of Research

The research will adopt the descriptive and analytical approach in conducting the research due to the suitability of this approach with the nature and objectives of the research, with the aim of describing the phenomenon in question, analyzing its data, and showing the relationship between its components, by relying on two basic aspects:

Secondary data; by using the researches and textbooks that discussed the knowledge sharing and employee's innovative behaviour when constructing the plan and the theoretical framework of this study.

Primary data; Throughout a survey and direct observations, concentrate on the situation of employee's innovative behaviour and knowledge sharing, in order to determine if there are any barriers for innovative behaviour.

3.1.1. Research Subject

The main subject of the research is to measure the degree of knowledge sharing employee's innovative behaviour at studied population (MS pharma Jordan Company). In addition to determine, the strength and the nature of the relationship between knowledge sharing and employees innovative behaviour at studied population.

3.1.2. The Purpose and Importance of the Research

This study was conducted in the Jordanian organizational context to determine the impact of communities of practice on the ability to innovate. The research tries to highlight the impact of knowledge sharing in innovative behaviour. Pharmaceutical companies have been selected from the Production sector as innovation-oriented and

knowledge-intensive. Managers from Top-level and mid-level managers, and workers from the identified organization will be selected as target responders.

The interest of organizations in the past decades has increased in topics such as knowledge management, knowledge assets, information society, knowledge capital, thinking organizations, learning organizations, organizational innovation, which form part of these important and contemporary variables in management literature, and we believe that research will contribute to enhancing their role in knowledge organizations. Also, knowing the dimensions of knowledge management and the extent of its impact on creativity, which constitutes a wide field for improving knowledge in the researched organization in a way that enhances the possibility of improving performance in this organization when applying the final research results.

Scientific importance; the scientific importance of this study comes from the vital and decisive influence of knowledge sharing in achieving and developing administrative creativity in light of the great accumulation of knowledge, which contributes to achieving the goals of the organizations.

Practical importance; this study to present statistical results that clarify the role of knowledge sharing in achieving administrative creativity, in addition to submitting proposals and recommendations that help the research sample to achieve and develop administrative creativity in them.

3.1.3. Questions and Hypotheses of the Research

In today's competitive business world, an organization's ability to utilize knowledge is critical to success. Existing and new knowledge is utilized to generate competitive capabilities that aid in the development of new products, services, and strategies to outperform competitors and, in general, to increase the organization's competitive advantage.

Teams are formed in an organizational context for a variety of reasons. The efficiency of a team is determined by the availability of knowledge and the efficient application of that knowledge, which is frequently in the form of skills, competencies, and experience. International knowledge sharing is becoming increasingly important as firms expand their operations and supply chains through abroad subsidiaries and partnerships. Because management is concerned with creating value through knowledge sharing and innovation. According to Sveiby & Simons, the greater readiness to share

expertise is responsible for the more than doubling of innovation in new Buckman Labs Company goods from 14 percent of sales to 34 percent (Sveiby & Simons 2002).

The purpose of this thesis is to investigate employee behavior in terms of knowledge exchange and employee innovation.

The study seeks to understand the way the community context can change and mitigate the influence of factors that facilitate knowledge sharing on the extent of knowledge sharing and innovation opportunities. To do this, we need to look at the effectiveness of knowledge exchange in the innovative behavior of employees; a holistic view of how these variables interact and affect each other is offered in this study.

The above problem requires answers to questions through empirical research. For this, the main research question was developed:

Question: What is the impact of knowledge sharing in employee's innovative behaviour?

Based on the objectives of the study the main hypothesis is:

H₁: Knowledge sharing has an impact on innovative behaviour.

H₂: Knowledge sharing differs according to demographic characteristics.

H_{2a}: Knowledge sharing differs according to gender.

H_{2b}: Knowledge sharing differs according to level of education.

H_{2c}: Knowledge sharing differs according to age.

H_{2d}: Knowledge sharing differs according to work experiences.

H₃: Innovative behaviour differs according to demographic characteristics.

H_{3a}: Innovative behaviour differs according to gender.

H_{3b}: Innovative behaviour differs according to level of education.

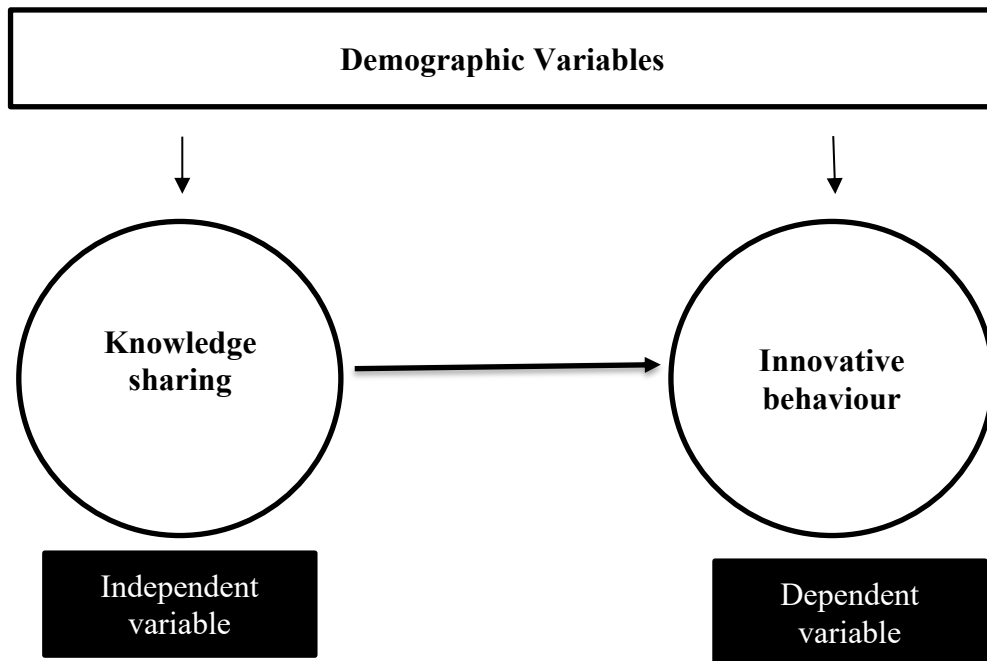
H_{3c}: Innovative behaviour differs according to age.

H_{3d}: Innovative behaviour differs according to work experiences.

3.1.4. Research Model

In order to test the research hypotheses, and achieve the research objectives, in this study would follow many steps, data collection, data analysis (that contains arithmetic means analysis, correlation analysis, and regression analysis), and finally test of hypotheses.

Figure 3. Research Model



3.1.5. Research Population and Sample

MS Pharma company is a healthcare solutions provider and leading pharmaceutical and preferred partner that manufactures and markets generic drugs through its leading subsidiaries in several strategic markets in the Middle East and North Africa region.

MS Pharma is headquartered in Jordan and brings together EL KENDI in Algeria, UPM in Jordan, MS Pharma Injectables and MS Pharma Turkey.

The company is also one of the pioneers in the next generation of biotechnology and biosimilars, in which the company has gained significant experience and know-how across the region.

The company is committed to offering high quality value-added generic drugs, building on new technologies and state-of-the-art equipment deployed throughout the Middle East and North Africa region.

MS Pharma aims to become the leading generic pharmaceutical and healthcare company in the MENA region, focusing on strategic therapeutic classes and formulations with higher entry barriers.

Today, they employ 2140 employee and are present in 20 countries, while in Jordan has about 241 employees.

3.1.6. Data Collection Method

In preparing our study, we relied on the questionnaire, one of the frequently tools used to collect data, and what confirms the importance of this tool is that most data collection tools (personal interviews, observation) are usually used as complementary tools to the questionnaire process in practical application. Therefore, we used in our study is a questionnaire.

The questionnaire aims to: measuring workers' opinions about the knowledge sharing. Knowing the extent of innovative behavior with the pharmaceutical sector.

A questionnaire was designed for the purpose of collecting data from employees in pharmaceutical firms with different career grades for them, as they are useful scientific research tools to survey the opinions of the respondents about the impact of the various variables upon which the we study. About 206 questionnaires were distributed to individuals, were valid for scientific research. The survey form shown in Appendix No. 1 was distributed to the research samples in the pharmaceutical firms.

3.1.7. Research Scales

The required data collected throughout questionnaire consist of two parts, a part one of knowledge sharing, and apart two of innovative behaviour, both part of questionnaires was distributed to (206) employees.

3.1.7.1. Knowledge Sharing Scale

The researchers created the sentences that were used to test the Knowledge Sharing variable; van den Hooff, B., and De Ridder, J. A. (2004b). Each phrase of the first part of the questionnaires measured by using Likert scale for rating questionnaire response. The fifth degrees are from (1) to (5) degrees, strongly disagree (1), disagree (2), neither (3), agree (4), and strongly agree (5). This part consists of 10 phrases. The source of this part is shown in Table 1 below.

Table 1. Knowledge Sharing Questions

			Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Knowledge Donating	1	When I've learned something new, I see to it that colleagues in my department can learn it as well.					
	2	I share the information I have with colleagues within my department.					
	3	I share my skills with colleagues within my department.					
	4	When I've learned something new, I see to it that colleagues outside of my department can learn it as well.					
	5	I share the information I have with colleagues outside of my department.					
	6	I share my skills with colleagues outside of my department.					
Knowledge Collecting	7	Colleagues within my department tell me what they know, when I ask them about it.					
	8	Colleagues within my department tell me what their skills are, when I ask them about it.					
	9	Colleagues outside of my department tell me what they know, when I ask them about it.					
	10	Colleagues outside of my department tell me what their skills are, when I ask them about it.					

3.1.7.2. Innovative Behaviour Scale

The phrases that were used to measure the Innovative Behavior variable belong to the researchers; Yu, Chien. Yu. Tasi Fang, Yu. Chin- Cheh (2013). Each phrase of the second part of the questionnaires measured by using Likert scale for rating questionnaire response. The fifth degrees are from (1) to (5) degrees, strongly disagree (1), disagree (2), neither (3), agree (4), and strongly agree (5). This part consists of 9 phrases. The source of this part is showed in the Table 2 below:

Table 2. Innovative Behaviour Questions

		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	Creating new ideas for difficult issues.					
2	Searching out new working methods, techniques, or instruments.					
3	Generating original solutions for problems.					
4	Mobilizing support for innovative ideas.					
5	Getting approval for innovative ideas.					
6	Making important organizational members enthusiastic about innovative ideas.					
7	Transforming innovative ideas into useful applications.					
8	Introducing innovative ideas into the work environment in a systematic way.					
9	Evaluating the utility of innovative ideas.					

It was confirmed that the questionnaire prepared for this study is suitable for measuring what was prepared for, and that the clarity of its paragraphs and vocabulary on the other hand, and it includes the elements to be included in the analysis on the one hand, and so that they are understandable to everyone who uses them.

3.1.8. Analysis Method of the Research

This chapter deals with data analysis by relying on the Statistical Package for Social Sciences, where a number of appropriate statistical methods were used, namely:

Reliability test; to ensure the internal consistency and consistency of the expressions used in measuring the research variables.

Descriptive analysis; frequency tables containing percentages were used. Arithmetic averages; and standard deviations. Research samples were characterized according to demographic variables. In addition to conducting a descriptive analysis of the data related to the complaint and a descriptive analysis of the search variables.

Multiple & Simple Regression method; to provide models for direct and indirect relationships between independent and dependent variables.

3.2. Findings

This chapter provides a discussion of the results and conclusions based on the analysis carried out throughout the study.

3.2.1. Findings Regarding Demographic Variables

Distribution of sample items according to demographic variables, the frequencies and percentages of the demographic variables in the survey form were calculated in terms of gender, educational qualification, age, experience. This is to find out the distribution of search data according to these variables.

Table 3. Distribution of Participants Regarding the Gender Variable

	Categories	N	%
Gender	Male	139	67
	Female	67	33
Total		206	100

Table 3. shows that, the number of males in the public sector sample reached (139) while the number of females reached (67), thus the male ratio to the total number of the total sample (67%) and the female percentage (33%).

It is noticeable that the proportions between males and females in the studied sample with a slight preference for males in pharmaceutical sectors are attributed to the nature of the society that gives better opportunities for males compared to females, which are inconsistent with the global trends where females monopolize the activities of the pharmaceutical sector.

Table 4. Distribution of Participants Regarding the Education Level Variable

	Categories	N	%
Education Level	Primary/Secondary School	8	4
	Diploma	20	10
	Bachelor	135	66
	Master	28	14
	PHD or equivalent degree	15	7
Total		206	100

Table 4. shows that, the number of respondents with secondary and less (8) by (4%) and those with a diploma (20) by (10%) of the total sample. And the number of respondents with a university degree was (135) at (66%) of the total the sample, and the number of respondents from the graduate studies campaign (28) master by 14% and (15) PhD by 7%.

It is clear from the comparison of the previous percentages that those obtaining a university degree occupied the first rank when classifying individuals according to the educational qualification, given that the university academic qualification represents the minimum required to work in the pharmaceutical sector, which was positively reflected on the absorption of many university graduates and for those who have On the secondary

and lower levels and those holding an institute, their percentage was very low, due to the relatively strict conditions of employment in the pharmaceutical sector compared to the other sector. While the percentage of graduate students is relatively low.

Table 5. Distribution of Participants Regarding the Age Variable

	Categories	N	%
Age	25 and under	49	24
	26-32	98	48
	33-40	39	19
	41-49	12	6
	50 and over	8	4
Total		206	100

Table 5. shows that, the number of respondents under the age of 25 years reached (49) respondents from both genders at a rate of (24%), and the number of respondents who were aged from 25 to less than 32 years (98) was (48%) of the total sample, and the number was the respondents who were aged from 33 to less than 40 years (39) were (19%) from the total sample, and the number of respondents aged 41 to 50 years (12) made up (6%) of the total sample, and the number of respondents aged 50 and older (8) made up (4%) the total sample.

We believe that the third age group (from 41 to less than 49) constitutes a bad percentage within the sample. And this group has experience and skill in work but is considered not suitable for the enthusiastic work required in pharmaceutical service work. While the largest percentage in the was for the age group (from 25to less than 32) and this category is the most vital for pharmaceutical work, and the lowest percentage was for the group (more than 50) this is due to the modernity of the pharmaceutical sector in Jordan and therefore the desire of the departments to contain young employees to train them and prepare them to continue working within the favor.

Table 6. Distribution of Participants Regarding the Experience Variable

	Categories	N	%
Experience	1 and less	40	19
	2-5	94	46
	6-10	49	24
	11-20	14	7
	20 and more	9	4
Total		206	100

Table 6. shows that, the number of those who have experience less than 1 years (40) of the total number of the total sample by (19%) while the number of those who have experience ranging from 1 to 5 years (94) by (46%) and from 6 to 10 years (49) by

(24%) and 11 years to 20 years (14) by (7%), while the number of those who have experience more than 20 (9) by 4%.

3.2.2. Reliability Analysis

In this field, the value of the alpha correlation coefficient must range between (0, 1) and for the scale to have stability, the minimum parameter value in this test should not be less than (0.65). In management studies, where the results shown in Table 7. indicated that the value of Alpha Cronbach for the variables is as follows:

Table 7. Alpha Cronbach Coefficients for The Study Variables

	Alpha Cronbach Coefficient	Number of Phrases
Knowledge Sharing	0.883	10
Innovative Behaviour	0.893	9

These values are considered acceptable because they are higher than the minimum admission levels, and accordingly we can say that all the measures used in the questionnaire have validity, and therefore all these statements can be adopted. Where he does not delete any of them because they are all characterized by the internal stability of their phrases.

3.2.3. Validity Analysis

Internal consistency is one of the types of consistency that measures the strength of a statement in representing the dimension that it measures, as well as the stability of dimensions in the total of the measures. Between (-1) and (+1), the positive sign indicates the direct correlation and the negative sign the reverse correlation, and the closer to one, the greater the correlation, whether in the positive or negative direction. When $r = 0.0 - 0.30$ is a negligible correlation, $r = 0.30$ to 0.50 is low correlation, $r = 0.50$ to 0.70 is moderate correlation, $r = 0.70$ to 0.90 is high correlation and $r = 0.90$ to 1.0 is very high correlation. (Mohammad, et. al., 2019).

The correlation of the phrase is considered significant and statistically significant if the significance of this statement is less or equal to (0.05), and if the significance of the statement is greater than that, this means that there is no correlation, and that the phrase is internally inconsistent with the dimension that it contributes to measuring and needs to be deleted from the tool. Table 8. below shows the internal consistency of the search metrics as mentioned in the clients' questionnaire.

Table 8. Correlation Between Phrases of Knowledge Sharing

		Value	Sig.
1	When I've learned something new, I see to it that colleagues in my department can learn it as well.	.593**	0.000
2	I share the information I have with colleagues within my department.	.717**	0.000
3	I share my skills with colleagues within my department.	.807**	0.000
4	When I've learned something new, I see to it that colleagues outside of my department can learn it as well.	.754**	0.000
5	I share the information I have with colleagues outside of my department.	.776**	0.000
6	I share my skills with colleagues outside of my department.	.574**	0.000
7	Colleagues within my department tell me what they know, when I ask them about it.	.602**	0.000
8	Colleagues within my department tell me what their skills are, when I ask them about it.	.668**	0.000
9	Colleagues outside of my department tell me what they know, when I ask them about it.	.760**	0.000
10	Colleagues outside of my department tell me what their skills are, when I ask them about it.	.716**	0.000

Table 9. Correlation Between Phrases of Innovative Behaviour

		Value	Sig.
1	Creating new ideas for difficult issues.	.736**	0.000
2	Searching out new working methods, techniques, or instruments.	.710**	0.000
3	Generating original solutions for problems	.770**	0.000
4	Mobilizing support for innovative ideas.	.833**	0.000
5	Getting approval for innovative ideas	.671**	0.000
6	Making important organizational members enthusiastic about innovative ideas.	.725**	0.000
7	Transforming innovative ideas into useful applications.	.736**	0.000
8	Introducing innovative ideas into the work environment in a systematic way.	.714**	0.000
9	Evaluating the utility of innovative ideas.	.734**	0.000

It cleared from the previous table that each of the research variables is directly related to all the expressions that measure it. And all the correlation coefficients are statistically significant at the 1% level of significance and indicate the relevance of the expressions to the variable that they measure. Which means that they are internally consistent with it and are essential in its measurement.

3.2.4. Descriptive Statistics

Table 10. shows descriptive statistics (averages, deviations) related to the terms related to employee knowledge sharing policy as one of the organizational excellence policies, which are (19) phrases that represent the first axis of the second section of the questionnaire.

Table 10. Descriptive Statistics (averages, deviations) Related to the Terms (knowledge sharing)

	Mean	Std. Deviation	Variance
Q1	3.8398	0.77054	0.594
Q2	3.7718	0.87868	0.772
Q3	3.8155	0.99509	0.990
Q4	3.2816	0.99675	0.994
Q5	3.1117	1.06481	1.134
Q6	3.3010	0.96611	0.933
Q7	3.3981	1.00088	1.002
Q8	3.4709	0.96607	0.933
Q9	3.3835	0.95943	0.921
Q10	3.3301	0.98167	0.964
KS	3.4704	0.67024	0.449

From the above Table 10, we can conclude the following:

The above statements (10 phrases) measure the knowledge sharing dimension as a policy of organizational excellence in the firm.

It is noted that the scale phrases are above average, which means that workers feel that the performance of their work contributes to achieving the goals of the company and they can deal with themselves with problems in an average way. In addition, we note that the highest arithmetic average was at the phrase number (Q3) which states: (I share my skills with colleagues within my department) where the value of the arithmetic average at it reached (3.83), and this reflects the importance of share skills between workers in this sector.

From the above table, the total arithmetic mean of knowledge sharing was (3.47) with a standard deviation (0.670). It is noted that the degree of availability of knowledge sharing at the company is good, which means that workers share the information skills and new things with their colleagues inside and outside their departments. However, the sharing is better inside department rather than outside the department.

Table 11. shows descriptive statistics (averages, standard deviations) related to the phrases related to the innovative behavior, which are (9) questions.

Table 11. Descriptive Statistics Related to The Innovative Behaviour

	Mean	Std. Deviation	Variance
Q1	3.7087	0.98408	0.968
Q2	3.7476	0.90762	0.824
Q3	3.5680	0.96411	0.930
Q4	3.6165	0.99438	0.989
Q5	3.5680	0.98414	0.969
Q6	3.5631	0.85163	0.725
Q7	3.4417	1.02838	1.058
Q8	3.5243	1.05779	1.119
Q9	3.6893	0.81485	0.664
IB	3.6030	0.70317	0.494

The above statements (9 phrases) measure the innovative behavior dimension in the company.

It is noted that the scale phrases are above average, which means that workers at the company have ability to create an innovation idea that could enhance the performance of their work and it could contribute to achieving the goals of the company. Moreover, we note that the highest arithmetic average was at the phrase number (Q2) which is: (Searching out new working methods, techniques, or instruments.) where the value of the arithmetic average at it reached (3.74), and this reflects the attempts of workers to find out new working methods, techniques, or instruments. That could help them in their work and improve the quality of their works.

From the above table, the total arithmetic mean of innovative behavior was (3.60) with a standard deviation (0.703). It is noted that the degree of availability of innovative behavior at the company is good, which means that workers have ability and willingness to innovate new working methods, techniques, or instruments.

3.2.5. Test of Hypotheses

After statistical analysis, we can test the three hypotheses, for hypotheses one we use simple regression analysis, for hypotheses two and three we use comparison between means, t-Test and Anova analysis.

H₁: Knowledge sharing has an impact on innovative behaviour.

From Table 12. we can access the validity of the model used in testing the influence relationship, where the value of F (247,693) reached a significant level (0.00) which is less than (.050) at the studied sample. Which means this model with its independent variables is valid for predicting the values of the dependent variable.

Table 12. Analysis of Variance for Independent and Dependent Variables

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.584	1	55.584	247.693	.000
	Residual	45.779	204	.224		
	Total	101.363	205			
a. Dependent Variable: IB						
b. Predictors: (Constant), KS						

Table 13. Residuals Statistics

Residuals Statistics					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.6838	4.7914	3.6030	.52071	206
Residual	-1.46066	.77415	.00000	.47256	206
Std. Predicted Value	-3.686	2.282	.000	1.000	206
Std. Residual	-3.083	1.634	.000	.998	206
a. Dependent Variable: IB					

Table 14. Determination Parameters

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.741a	.548	.546	.47372
a. Predictors: (Constant), KS				
b. Dependent Variable: IB				

Table 15. Regression Analysis Result

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.907	.174		5.198	.000
	KS	.777	.049	.741	15.738	.000
a. Dependent Variable: IB						

From the previous Table 14. the explanatory power of this model shows that the percentage of change in the dependent variable explained by the independent variables.

As shown in the previous tables, it was found that the values of the T-test for independent variables amounted to (15.738) for innovative behaviour with the knowledge sharing and (5.198) the value of the coefficient of determination. $R^2 = 0.548$ indicates that the independent variables explain 54.8% of the change in the value of innovative behaviour and the remaining 45.6% are explained by other factors that were not the subject of the study.

It was found in the company that there is a statistically significant effect of knowledge sharing with the pharmaceutical sector on innovative behaviour as a dependent variable and we can interpret these results as the greater the worker interest in sharing their ideas, information and knowledge with their colleagues within their department and outside department, the greater the possibility of creating new ideas, working methods, techniques, or instruments by the worker which could help in improving the company performance. In this case, the first hypothesis was accepted.

H₂: Knowledge sharing differs according to demographic characteristics.

H_{2a}: Knowledge sharing differs according to gender.

Table 16. Knowledge Sharing According to Gender

Gender	Mean	N	Std. Deviation
Male	3.3914	139	.72266
Female	3.6343	67	.51273
Total	3.4704	206	.67024

There are some simple differences between the averages, and in order to find out whether these differences between the averages are essential or not, according to gender, an independent T-Test must be conducted to find out the significance.

Table 17. Independent T-Test Table of Knowledge Sharing According to Gender

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	2.389	.124	-2.055	204	.041	-.20409	.09930	-.39987	-.00831
Equal variances not assumed			-2.319	173.322	.022	-.20409	.08799	-.37776	-.03042

According to the Independent T-Test Table 17. it showed that sig = 0.124 which is bigger than 0.05. which means there aren't differences between the categories of gender in perceiving the variables of knowledge sharing. In this case, H_{2a} hypothesis was rejected.

H_{2b} : Knowledge sharing differs according to level of education.

Table 18. Knowledge Sharing According to Level of Education

Education	Mean	N	Std. Deviation
Primary/Secondary School	2.8750	8	.76485
Bachelor	3.4889	135	.63700
Diploma	3.2700	20	.63171
Master	3.6286	28	.64570
PhD or Equivalent Degree	3.5933	15	.85228
Total	3.4704	206	.67024

There are some simple differences between the averages, and in order to find out whether these differences between the averages are essential or not, according to the academic qualification, a one-way ANOVA must be conducted to find out the significance.

Table 19. ANOVA Table of Knowledge Sharing According to Level of Education

		Sum of Squares	df	Mean Square	F	Sig.
KS*Education	Between Groups (Combined)	4.613	4	1.153	2.650	.034
	Within Groups	87.477	201	.435		
	Total	92.089	205			

According to the ANOVA Table 19. it showed that sig = 0.034 which is less than 0.05. which means There are differences between the categories of level of education in perceiving the variables of knowledge sharing. In this case, H_{2b} hypothesis was accepted.

H_{2c} : Knowledge sharing differs according to age.

Table 20. Knowledge Sharing According to Age

Age	Mean	N	Std. Deviation
25 and under	3.3633	49	.75019
26-32	3.4500	98	.63688
33-40	3.4308	39	.65259
41-49	3.9167	12	.62207
50 and above	3.900	8	.32950
Total	3.4704	206	.67024

There are some simple differences between the averages, and in order to find out whether these differences between the averages are essential or not, according to the academic qualification, a one-way ANOVA must be conducted to find out the significance.

Table 21. ANOVA Table of Knowledge Sharing According to Age

		Sum of Squares	df	Mean Square	F	Sig.
KS*Age	Between Groups (Combined)	4.531	4	1.133	2.600	.037
	Within Groups	87.559	201	.436		
	Total	92.089	205			

According to the ANOVA Table 21. it showed that sig = 0.037 which is less than 0.05. which means There are differences between the categories of age in perceiving the variables of knowledge sharing. In this case, H_{2c} hypothesis was accepted.

H_{2d} : Knowledge sharing differs according to work experiences.

Table 22. Knowledge Sharing According to Work Experiences

Work Experiences	Mean	N	Std. Deviation
Less than 1 year and 1 year	3.5750	40	.44477
2-5	3.3989	94	.68729
6-10	3.3367	49	.76830
11-20	3.8143	14	.47370
More than 21 years	3.9444	9	.68211
Total	3.4704	206	.67024

There are some simple differences between the averages, and in order to find out whether these differences between the averages are essential or not, according to the academic qualification, a one-way ANOVA must be conducted to find out the significance.

Table 23. ANOVA Table of Knowledge Sharing According to Work Experiences

		Sum of Squares	df	Mean Square	F	Sig.
KS*Work Experiences	Between Groups (Combined)	5.471	4	1.368	3.174	.015
	Within Groups	86.618	201	.431		
	Total	92.089	205			

According to the ANOVA Table 23. it showed that sig = 0.015 which is less than 0.05. which means There are differences between the categories of work experiences in perceiving the variables of knowledge sharing. In this case, H_{2d} hypothesis was accepted.

H_3 : Innovative behaviour differs according to demographic characteristics.

H_{3a} : Innovative behaviour differs according to gender.

Table 24. Innovative Behaviour According to Gender

Gender	Mean	N	Std. Deviation
Male	3.4772	139	.75814
Female	3.8640	67	.48115
Total	3.6030	206	.70317

There are some simple differences between the averages, and in order to find out whether these differences between the averages are essential or not, according to the gender, an independent T-Test must be conducted to find out the significance.

Table 25. Independent Samples Test Table of Innovative Behaviour According to Gender

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	9.151	.003	-3.458	204	.001	-.35375	.10229	-.55544	-.15206
Equal variances not assumed			-4.044	187.244	.000	-.35375	.08748	-.52632	-.18118

According to the Independent Samples Test Table 25. It showed that sig = 0.003 which is less than 0.05. which means there are differences between the categories gender in perceiving the variables of innovative behaviour. In this case, H_{3a} hypothesis was accepted.

H_{3b} : Innovative behaviour differs according to level of education.

Table 26. Innovative Behaviour According to Level of Education

Education	Mean	N	Std. Deviation
Primary/Secondary School	2.9167	8	1.24119
Bachelor	3.6444	135	.66816
Diploma	3.4944	20	.66907
Master	3.6468	28	.57620
PhD or Equivalent Degree	3.6593	15	.79954
Total	3.6030	206	.70317

There are some simple differences between the averages, and in order to find out whether these differences between the averages are essential or not, according to the academic qualification, a one-way ANOVA must be conducted to find out the significance.

Table 27. ANOVA Table of Innovative Behaviour According to Level of Education

		Sum of Squares	df	Mean Square	F	Sig.
IB*Education	Between Groups (Combined)	4.337	4	1.084	2.246	.065
	Within Groups	97.026	201	.483		
	Total	101.363	205			

According to the ANOVA Table 27. it showed that sig = 0.065 which is higher than 0.05. which means There are no differences between the categories of level of

education in perceiving the variables of Innovative behaviour. In this case, H_{3b} hypothesis was rejected.

H_{3c} : Innovative behaviour differs according to age.

Table 28. Innovative Behaviour According to Age

Age	Mean	N	Std. Deviation
25 and under	3.3764	49	.73627
26-32	3.5771	98	.73455
33-40	3.7664	39	.57611
41-49	4.1296	12	.51864
50 and above	3.7222	8	.23002
Total	3.6030	206	.70317

There are some simple differences between the averages, and in order to find out whether these differences between the averages are essential or not, according to the academic qualification, a one-way ANOVA must be conducted to find out the significance.

Table 29. ANOVA Table of Innovative Behaviour According to Age

		Sum of Squares	df	Mean Square	F	Sig.
IB*Age	Between Groups (Combined)	7.064	4	1.766	3.764	.006
	Within Groups	94.299	201	.469		
	Total	101.363	205			

According to the ANOVA Table 29 it showed that sig = 0.006 which is less than 0.05. which means There are differences between the categories of age in perceiving the variables of innovative behaviour. In this case, H_{3c} hypothesis was accepted.

H_{3d} : Innovative behaviour differs according to work experiences.

Table 30. Innovative Behaviour According to Work Experiences

Work Experiences	Mean	N	Std. Deviation
Less than 1 year and 1 year	3.6611	40	.49303
2-5	3.4752	94	.74105
6-10	3.5760	49	.77601
11-20	4.0000	14	.45081
More than 21 years	4.2099	9	.50444
Total	3.6030	206	.70317

There are some simple differences between the averages, and in order to find out whether these differences between the averages are essential or not, according to the academic qualification, a one-way ANOVA must be conducted to find out the significance.

Table 31. ANOVA Table of Innovative Behaviour According to Work Experiences

		Sum of Squares	df	Mean Square	F	Sig.
IB*Work Experiences	Between Groups (Combined)	7.228	4	1.807	3.858	.005
	Within Groups	94.135	201	.468		
	Total	101.363	205			

According to the ANOVA Table 31. it showed that sig = 0.005 which is less than 0.05. which means There are differences between the categories of work experiences in perceiving the variables of innovative behaviour. In this case, H_{3d} hypothesis was accepted.

CONCLUSION

All Alpha Cronbach values for all study variables are higher than (0.70), which means that all study measures are characterized by the internal stability of their terms.

All correlation coefficients for the study variables are statistically significant at the level of significance (0.05) and indicate the correlation of the expressions with the variable that you measure, which means that they are internally consistent with it and essential in its measurement.

The metrics used to measure the dimensions of the independent variable represented by the knowledge sharing and the dependent variable represented by innovative behaviour all have aggregate validity.

The proportion of males at the company is greater than that of females, and the university qualification category exceeds three quarters of the sample size. The third age group (from 25 to 32 years) in the company constitutes the largest proportion over a half of the sample size and it is noted that the third and fourth and fifth age groups represent a small percentage (20%) of the sample size. The 1-5 years of experience category represents the largest proportion of employees, followed by 6-10 years and less than 1 year, finally more than 20 years' experience category.

The study showed that all the variables of the independent study (knowledge sharing) and the dependent variable (innovative behaviour) achieved scores above the intermediate degree, so that the trends of the subjects' vocabulary were positive towards all the variables and dimensions of the study.

The degree of workers exercising knowledge sharing in the pharmaceutical sector is greater than the average level. The level of the innovative behaviour of workers in for the research sample exceeds the intermediate level. There is a relatively strong positive correlation with statistical significance between the knowledge sharing and innovative behaviour. There is positive impact with a statistically significant role of knowledge sharing in innovative behaviour as a dependent variable in the pharmaceutical sector.

There are no differences between the categories of gender in perceiving the variables of knowledge sharing. There are differences between the categories of level of education in perceiving the variables of knowledge sharing. There are differences

between the categories of work experiences in perceiving the variables of knowledge sharing. There are differences between the categories of age in perceiving the variables of knowledge sharing.

There are differences between the categories gender in perceiving the variables of innovative behaviour. There are no differences between the categories of level of education in perceiving the variables of innovative behaviour. There are differences between the categories of age in perceiving the variables of innovative behaviour. There are differences between the categories of work experiences in perceiving the variables of innovative behaviour.

In conclusion, this study offers an integrative model that combines knowledge models and social capital models to explore the relationship between innovative potential and knowledge sharing. The main objectives of the study are that the impact of knowledge sharing mechanisms in the context of communities of practice can be limited by the level of social capital of these communities of practice. Management's decision to support knowledge sharing can be modified to reflect the characteristics of the social capital of the organizations. Thus, the results confirm the moderate role of the social capital in knowledge-based Jordanian companies.

We recommend the managers at pharmaceutical sector to:

- Try to increase the employees' knowledge sharing and innovative behaviour in the pharmaceutical sector through.
- Encourage worker when they have learned something new to share it with their colleagues in their department.
- Try to enhance the relationship and the collaboration between different departments at the company. In order to achieve their goals and objective effectively.
- The need for workers in the pharmaceutical sector to maintain the information they obtain and share this information and skills with all workers in order to benefit from them while performing their work.
- Relying on the teamwork method as a method for performing the tasks inside and outside the organization to ensure the benefit from the individual expertise and knowledge of all team members.
- Working to attract creative people when recruiting new employees due to their effective influence on the effectiveness of performance

- The necessity of sharing knowledge among employees through brainstorming sessions, which ensure that workers in the organization obtain knowledge from their colleagues.
- Motivating workers to accomplish their work in new, creative ways that ensure effectiveness and ensure that employees do not feel bored of repeating the same routine procedures.
- Encouraging workers to help each other when facing any problem that may arise during work, which may generate creative solutions that contribute to solving these problems.

This study attempts to investigate only some of the important organizational factors that facilitate knowledge sharing from an organizational point of view. Jordanian knowledge-based companies need to consider other variables and test the regulatory role of social capital within this particular culture.

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LIST OF ATTACHMENTS (IF AVAILABLE)

Questionnaire Form

What is your gender?	Female
	Male
What is your age?	25 age and under
	26-32 age
	33-40 age
	41-49 age
	50 age and above
What is your highest level of education?	PhD or Equivalent Degree
	Master's Degree
	Bachelor's Degree
	Diploma
	Primary/Secondary School
How many years do you have work experiences?	1 year and under
	2-5 years
	6-10 years
	11-20 years
	21 years and above

Knowledge Sharing

			Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Knowledge Donating	1	When I've learned something new, I see to it that colleagues in my department can learn it as well.					
	2	I share the information I have with colleagues within my department.					
	3	I share my skills with colleagues within my department.					
	4	When I've learned something new, I see to it that colleagues outside of my department can learn it as well.					
	5	I share the information I have with colleagues outside of my department.					
	6	I share my skills with colleagues outside of my department.					
Knowledge Collecting	7	Colleagues within my department tell me what they know, when I ask them about it.					
	8	Colleagues within my department tell me what their skills are, when I ask them about it.					
	9	Colleagues outside of my department tell me what they know, when I ask them about it.					
	10	Colleagues outside of my department tell me what their skills are, when I ask them about it.					

Innovative Behaviour

		Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	Creating new ideas for difficult issues.					
2	Searching out new working methods, techniques, or instruments.					
3	Generating original solutions for problems.					
4	Mobilizing support for innovative ideas.					
5	Getting approval for innovative ideas.					
6	Making important organizational members enthusiastic about innovative ideas.					
7	Transforming innovative ideas into useful applications.					
8	Introducing innovative ideas into the work environment in a systematic way.					
9	Evaluating the utility of innovative ideas.					

CURRICULUM VITAE

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