



**THE IMPACT OF SERVANT LEADERSHIP
DETERMINANTS ON INNOVATION: A CASE
STUDY OF TELECOMMUNICATION
COMPANIES IN KIRKUK CITY**

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THESIS APPROVAL PAGE

I certify that, in my opinion, the thesis submitted by Dalshad Abdullah SAEED titled "THE IMPACT OF SERVANT LEADERSHIP DETERMINANTS ON INNOVATION: A CASE STUDY OF TELETELECOMMUNICATION COMPANIES IN KIRKUK CITY" is fully adequate in scope and in quality as a thesis for the degree of Master of Arts.

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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 of Graduate Programs, Karabuk University. Besides, I declare that all the statements, results, and material not original to this thesis have been cited and referenced literally.

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

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Signature :

FOREWORD

First of all, I would like to thank and praise Allah for the blessings He has given me during my life, especially during my higher education and successful completion of my master's degree.

I am proud to express my sincere gratitude to Assist. Prof. Dr. Essia Ries Ahmed ABU RIES for his kindness and efforts in supervising this study and for his scientific guidance and comments, which played a significant role in completing this study.

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ABSTRACT

The current study's main aim is to examine servant leadership determinants' impact on innovation: a case study of telecommunication companies in Kirkuk city. The study used a quantitative method, and the survey was also used as the primary data collection instrument. The survey participants included 252 employees and managers randomly selected from telecommunication companies in Kirkuk city, Iraq, to answer the survey questions. The empirical data were analyzed using SPSS v-26. The results showed that servant leadership determinants would improve innovation within telecommunications companies in Iraq. The regression analysis showed that leaders' humility is the most effective practice of servant leaders that positively influences achieving innovation within the telecommunications companies in Iraq. Serving others by the leaders will motivate the employees and, thus, positively influences achieving innovation within the telecommunications companies in Iraq. Results also demonstrated that empowerment and development of employees positively influence achieving innovation. In addition, the results of the effect analysis demonstrated that guiding employees by the leaders positively influences achieving innovation within the telecommunications companies in Iraq. Results revealed that leaders' reliability positively influences achieving innovation within the telecommunications companies in Iraq. Furthermore, results clearly showed that interpersonal acceptance of others positively influences achieving innovation within the telecommunications companies in Iraq; however, the impact is weak compared to other servant leadership determinants. This study has significant contributions in theoretical and practical fields while providing unique and new information to managers of telecommunication companies that leadership has a vital role in influencing human resources and encouraging them to reach innovation in intellectual capital.

Keywords: Servant Leadership, Innovation, Telecommunication Companies, Iraq.

ÖZ

Mevcut çalışmanın ana amacı, hizmetkar liderlik belirleyicilerinin yenilik üzerindeki etkisini incelemektir: Kerkük şehrindeki telekomünikasyon şirketlerinin bir vaka çalışması. Araştırma nicel bir yöntem kullanmış olup, anket aynı zamanda birincil veri toplama aracı olarak kullanılmıştır. Anket katılımcıları, Irak'ın Kerkük şehrinde bulunan telekomünikasyon şirketlerinden anket sorularını yanıtlamak üzere rastgele seçilen 252 çalışan ve yöneticiden oluşmaktadır. Ampirik veriler SPSS v-26 kullanılarak analiz edildi. Sonuçlar, hizmetkar liderlik belirleyicilerinin Irak'taki telekomünikasyon şirketlerinde yeniliği artıracaklarını gösterdi. Regresyon analizi, liderlerin alçakgönüllülüğünün, Irak'taki telekomünikasyon şirketlerinde yenilik elde etmeyi olumlu yönde etkileyen hizmetkar liderlerin en etkili uygulaması olduğunu gösterdi. Liderlerin başkalarına hizmet etmesi, çalışanları motive edecek ve böylece Irak'taki telekomünikasyon şirketlerinde yenilik elde etmeyi olumlu yönde etkileyecektir. Sonuçlar ayrıca, çalışanların güçlendirilmesinin ve geliştirilmesinin inovasyonu başarmayı olumlu yönde etkilediğini göstermiştir. Ayrıca, etki analizi sonuçları, çalışanların liderler tarafından yönlendirilmesinin, Irak'taki telekomünikasyon şirketlerinde yenilikçiliğe ulaşmayı olumlu yönde etkilediğini göstermiştir. Sonuçlar, liderlerin güvenilirliğinin Irak'taki telekomünikasyon şirketlerinde yenilik elde etmeyi olumlu yönde etkilediğini ortaya koydu. Ayrıca, sonuçlar açıkça göstermiştir ki, diğerlerinin kişilerarası kabulü, Irak'taki telekomünikasyon şirketlerinde yeniliğe ulaşmayı olumlu yönde etkilemektedir; ancak etki, diğer hizmetkar liderlik belirleyicilerine kıyasla zayıftır. Bu çalışma, telekomünikasyon şirketlerinin yöneticilerine, liderliğin insan kaynaklarını etkilemede ve entelektüel sermayede inovasyona ulaşmada hayati bir role sahip olduğuna dair özgün ve yeni bilgiler sunarken, teorik ve pratik alanlarda önemli katkılar sağlamaktadır.

Anahtar Kelimeler: Hizmetkar Liderlik, İnovasyon, Telekomünikasyon Şirketleri Irak.

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Tezin Adı	Hizmetkar Liderlik Belirleyicilerinin İnovasyon Üzerindeki Etkisi: Kerkük Şehrindeki Telekomünikasyon Şirketleri Üzerine Bir Vaka Çalışması.
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ABBREVIATIONS

ACC	: Acceptance
CEO	: Chief Executive Officer
ED	: Empowerment and Development
HRM	: Human Resources Management
HR	: Human Resources
HUM	: Humility of Leaders
INNOV	: Innovation
KMO	: Kaiser-Meyer-Olkin
REL	: Reliability
PCA	: Principal Component Analysis
PG	: Provide Guidance
SL	: Servant Leadership
SO	: Serving Others

Symbols

β_0	: Constant Value
β_1	: Standardized Beta Coefficients
R	: Correlation
R²	: R Square

SUBJECT OF THE RESEARCH

The current research subjects are participants within Kirkuk City's telecommunication companies, namely Zain Iraq, Asiacell, and Korek Telecom. Telecommunication companies have been chosen since the development of countries has become mainly linked to the development of the telecommunication and technology sector, as recent inventions in the technical field have invaded the world. All countries of the world are competing in the area of technological progress, which made each country unique in its particular nature of development processes in the telecommunications sector because invisible telecommunication services, including mobile services and the internet provided by telecom companies, have become one of the basics of life, and nothing succeeds without relying on them.

In this regard, Iraq has tried to lay the foundation stone for many telecommunications and Internet companies to distinguish them from other companies in unique ways. This is to provide the best mobile telecommunication and internet services to the Iraqi population. Therefore, this study highlights service innovation in telecommunication companies in Iraq due to the determinants of servant leadership. While this leadership style is a set of behaviors and characteristics that focus on satisfying the needs and desires of followers, achieving their goals, and helping them gain their loyalty and increase their independence and love for their profession, this creates a good environment in companies.

PURPOSE AND IMPORTANCE OF THE RESEARCH

The importance of servant leadership, representing a decentralized structure focused on empowering employees and encouraging innovation, is that top management and employees share the decision-making process and allow employees to work on the front line, i.e., those dealing directly with customers to participate in decision-making and policy development. Servant leadership is also a source for making the confidence of employees in their leadership, and this confidence is one of the ruling factors in the success of organizations.

In addition, servant leadership increases the efficiency of interactions between leaders and employees, increases customer satisfaction, supports companies and

organizations, reduces uncertainty and risks associated with the exchange of relationships, and supports the competitive advantage of organizations. Thus, the current study explored servant leadership and its role in achieving innovation from the perceptions of managers and employees working in telecommunication companies in Kirkuk City. Since the role played by servant leadership in organizations is positively developing human capital, it was necessary to conduct this study in telecommunication companies in Kirkuk City, mainly Asiaccell, Zain, and Korek. In addition, servant leadership is one of the styles capable of motivating employees, motivating them, and enhancing innovation in human resources.

The significance of the current study is embodied in the topic that it deals with, which is servant leadership and its role in enhancing innovation in companies, particularly telecommunication companies. The findings and endorsements may change the reality of the surveyed companies by providing them with unique information regarding servant leadership's significant role in companies. It is a support point for suggestions for future researchers interested in this field. First, today's leaders must stand out in ways their predecessors did not.

One of the characteristics of that era is that leaders in the 21st century must be able to analyze and innovate in their thinking because they effectively implement the concept of leadership. In this context, servant leaders are excellent team builders because they rely on the strengths of their followers, which improves the organization's ability to achieve innovation in processes. Such a leader does not lead by command or dictate but leads by letting everyone do what they do well. In that sense, they might be a bit like a ringleader in a circus - directing people to their correct positions, then coming out from under the lights and letting them shine (Marques, 2015). Regarding innovation, the leader's abilities to visualize far and near results and invent solutions emerge. A servant leader can take risks in implementing new plans and solutions that differ from the traditional method.

METHOD OF THE RESEARCH

The method of descriptive analysis was applied to achieve the study's objective. The study design is based on a positive link between the model constructs, which helps

to examine the study hypotheses by analyzing the data collected through survey forms, and obtained data were tested using SPSS regression analysis.

HYPOTHESIS OF THE RESEARCH / RESEARCH PROBLEM

For many telecommunication companies, more progress and innovation mean more competition to win customer satisfaction, especially in light of their high expectations. In context, companies have always had to encourage customers to share their experiences with their friends and families, which is expected to continue to develop rapidly in the digital age. Telecommunication companies and business organizations, in general, need to be led distinctively and innovatively since the relations between the leader and organization members have become the most necessary factor in achieving innovation, especially telecommunication companies have become more need to enhance the organizational commitment of employees due to what modern. Innovation technology imposes renewed challenges in the work environment.

There is also an essential need in telecommunication companies today for servant leaders with technical and intellectual skills that can convince their vision, encourage innovation, and the ability to work with others by using and promoting human relations principles to create an atmosphere where human values and principles are developed which encourage innovation effectively. The primary study hypotheses were tested in the study:

Main Hypothesis: Servant leadership determinants positively influence innovation in the telecommunications companies in Kirkuk city Iraq.

Hypothesis (H1): There is a positive influence of empowerment and development on innovation.

Hypothesis (H2): There is a positive influence of leaders' humility on innovation.

Hypothesis (H3): There is a positive influence of reliability on innovation.

Hypothesis (H4): There is a positive influence of acceptance on innovation.

Hypothesis (H5): There is a positive influence of providing guidance on innovation.

Hypothesis (H6): There is a positive influence of serving others on innovation.

POPULATION AND SAMPLE

The study population in the current study are managers and employees working within telecommunication companies in Kirkuk city, Iraq. These companies are Korek Telecom, Asiacell, and Zain Iraq, so the population is about 350 possible respondents to the survey forms. Regarding the sample, the random sampling method was used, and in the final step of obtaining sampling, 252 forms were obtained for analysis to test the study hypotheses.

Identifying telecommunication companies in Iraq to obtain data and test the role of servant leaders in achieving innovation is due to the importance of the services provided by companies and their need for constant innovation. In this area, servant leaders are motivated and appreciate the achievements of employees, which will motivate them more. This loyal and friendly behavior in leadership makes employees comfortable to open up, express their feelings about all aspects of the organization and offer innovative ideas while trying to solve problems. Even though servant leaders respect everyone's opinion, even if someone criticizes how the organization works. Thus, servant leaders' learning to understand and discover things from the other's perspective is critical to building trusting relationships and further ensuring career success.

The integration of the uses of digital technology within telecommunication companies has become essential to improve customer experience in the telecommunications sector, especially those seeking innovation, and this is what led all companies towards digital transformation in the business field to achieve the best customer experience during their commercial and marketing dealings, through the use of phone applications and other latest and most complex technological technologies, such as artificial intelligence, machine learning, cloud, and as-a-service software.

SCOPE AND LIMITATIONS / DIFFICULTIES

The results of the current study are projected to have theoretical and managerial implications, primarily for understanding servant leadership determinants in improving corporate processes and achieving innovation. This study also provides essential and unique information to managers in telecommunication companies so that employees can

be encouraged to use all their talents for innovation in providing telecommunication services through effective leadership.

Despite the implications of the current study, it may not be limited, as the study was conducted only in telecommunication companies in Kirkuk, which could have been more generalized if more critical data had been obtained. On that basis, the researcher suggests that future research adopt more extensive samples or survey data that may be more comprehensive. Furthermore, future studies with more comprehensive data sets may yield different results.



1. INTRODUCTION

This chapter aims to discuss the introduction of the study as a general overview of the study; therefore, it begins with a discuss the background of the research by reviewing some of the researchers' efforts in this field, which are related to servant leadership and innovation; This chapter also includes the statement of the problem, its objectives, and the rationale for the study, and the importance of studying. In addition, the organization of the study is presented at the end of the chapter.

1.1. Background of the Study

Telecommunications companies are among the most critical business companies, constantly trying to innovate to provide the best telecommunications services to their clients. Consequently, any achievement or success in their performance will increase the country's economic sectors activities and have a positive impact. In this context, servant leadership aims to improve working conditions within telecommunication companies and business organizations and significantly impact the functional and personal relationships between the members working in telecommunication companies. This is a supportive organizational climate to reach innovation (Lemoine & Blum, 2019; Canavesi & Minelli, 2021). Since innovation in organizational work, service, and solving organizational problems effectively is a knowledgeable human process that combines new ideas and innovative actions, deals with reality, and strives for the best, innovation is the result of the interaction of subjective, objective, personal or behaviors comes with the effective leadership and particularly servant leadership (Stangrecka, 2018).

Servant leadership has been an important research topic in recent years due to its positive impact on organizational outcomes in general and productivity improvement in particular, mainly due to its holistic approach, broad focus compared to other situations, and critical role in influencing telecommunication companies and organizational outcomes in general. The performance development of employees at individual and collective levels, such as enhanced organizational citizenship behavior and organizational commitment, also have a positive role in improving job performance and improving employee job satisfaction (Canavesi & Minelli, 2021)

Despite the effectiveness of servant leadership in motivating employees and positively impacting them, this type of leadership based on respect for human beings is an ethical relationship because leaders put the needs of followers, i.e., customers, employees, and other stakeholders, first, not their personal needs. Although this thought is not new in academia and practice, it has received increased attention in the past decade, which can positively impact individual and organizational performance, such as job satisfaction and organizational commitment (Ruiz-Palomino et al., 2022). Servant leadership is a method of organizational task management and guidance in which individuals gain power by interacting with others to motivate further and enhance their abilities. Therefore, service leadership encourages employees, promotes innovation, develops leadership qualities, and drives employee-management interaction toward a synergistic relationship that strengthens the organization and gives it a competitive differentiation (Kenton, 2021).

According to Van Dierendonck and Rook (2010), leadership and, in particular, servant leadership, is one of the most critical elements of human behavior, as it represents one of the pillars assisting in the formation of functional relationships between members, as it provides them with the appropriate environment to work towards achieving the objectives of the firms including innovation. Thus, for adequate progress, or transformation in the organization, the basis of leadership is working with the group for its benefit and assistance so that its members cooperate to achieve the common goals they agree upon. Leadership is the central axis of the innovative process. It is not limited to issuing orders only but also motivating enthusiasm, raising the workers' morale, and establishing bridges of telecommunication and mutual human relations between the workers in the organization (Lemoine & Blum, 2019).

In this context, servant leadership is considered one of the preferred and most acceptable leadership methods because it enables organizations to try, continue, succeed, and ability to compete and is the most interactive (Canavesi & Minelli, 2021). However, the main focus on reaching organizational goals is based on serving employees confidently in achieving those goals. Consequently, servant leadership is vital in all organizations because it helps them transform from the traditional approach to the learned one that prioritizes serving and developing human capital to reach innovation in processes (Sarwar, Cavaliere, Ammar, & Afzal, 2021).

Whorton (2014) indicates that servant leadership is essential in management literature. Servant leadership has also emphasized the importance of improving staff performance and working to meet their needs as much as possible. Servant leadership is, therefore, one of the strong motivations for individuals to do their utmost to achieve organizational goals and enjoy the kind of leadership qualities that are not available in other leadership patterns, which may enable them to create an innovative organizational climate. Innovation is vital for companies, including telecommunication companies, which compete in worldwide markets that face market dynamics and are designed to stay at the top of the competition. In such companies, employees must construct original, innovative products and services (Duan, Liu, & Che, 2018).

With its significant impact, servant leadership appears to have achieved the most promising results in recent years, especially in business organizations, while being distinguished mainly by its comprehensive approach and widely adopted focus compared to other philosophies. It precedes human needs and their vital role in influencing individual and collective outcomes, such as institutional commitment, high employee and organizational performance, organizational citizenship, and job satisfaction despite incentives to achieve innovation (Canavesi & Minelli, 2021).

In this regard, Chi et al. (2020) point out that because of the positive way of managing the organization and making an impact within the organization, servant leaders always praise and recognize the achievements of employees to respect their efforts, encourage them to realize their potential, and present innovative ideas. This honest and friendly behavior makes it easier for workers to open up and express their feelings toward all aspects of the organization. Because they respect everyone's opinion, even if someone violates the organization's policy, it is vital to learn to understand and discover things from the perspective of others.

Abduljalil (2022) analyzed the link between servant leadership and performance. The researcher argued that the success of organizations is linked to leaders who can practice new patterns, enabling leadership behavior to do so. Moreover, the ability to meet the challenges, complexities, and encounters that characterize the business environment of the present era and move away from traditional leadership patterns. The research was conducted on the employees' perceptions of (196) from the Egypt directorate of agriculture in Assiut. The findings showed servant leadership's significant

impact on employee performance. Results also showed a positive link between some elements of servant leadership and job performance.

Despite these aspects, servant leadership has emerged as a different way of encouraging and directing employees to consider different abilities. It does not control employees but instead brings out all their abilities or creates a work environment that fosters innovation (Bao, Li, & Zhao, 2018). In addition, servant leadership believes that employees need the freedom to achieve their goals and contribute to achieving organizational aims since the purpose of servant leadership is to improve employees' lives and then upgrade their organizations by achieving innovation and excellence (Spears, 2005; Williams et al., 2017).

1.2. Problem Statement

Telecommunication companies and business organizations, in general, need to be led distinctively and innovatively since the relations between the leader and organization members have become the most necessary factor in achieving innovation, especially telecommunication companies have become more need to enhance the organizational commitment of employees due to what modern.

Innovation technology poses renewed challenges in the work environment. There is also an urgent need in today's telecom companies for servant leaders with many characteristics, features, and technical skills who can convince their point of view and have the ability to work with others by using and promoting the principles of human relations to create a work atmosphere in which humanitarian values and principles flourish (Abduljalil, 2022). Thus, the growth of enterprises and continuity, as well as the realization of innovative services in telecommunication companies, mainly depend on the leader's leadership style and modern methods. Moreover, servant leadership is among contemporary leadership theories, and its importance is determined by the positive and tangible results it brings to the organization and the individual (Sarwar et al., 2021).

Since servant leadership performs a significant role in the success or failure of organizations in general and financial institutions in particular, identifying the leadership styles practiced by telecommunication companies has become critical. Consequently, the loss of telecommunication companies and business institutions to achieve their aims

due to the inefficiency of their leadership; as the progress societies, the development of their organizations and their continuity depends mainly on the leadership that motivates employees, draws their plans, draws their plans and policies, especially the servant commander's style (Allam, 2020; Chenwei et al., 2021).

In the same context, Yang, Zhang, Ho, and Chen (2018) indicated that since servant leadership is one of the essential managerial functions, which undertakes various efforts towards directing the actions of the human element to achieve specific goals, whether at the level of the employees or the organization. The internal and external challenges of the leader affect the work of the organization; servant leadership is a critical component in the success of organizations because the leader plays an essential role in influencing the behavior of employees in the current business environment.

1.3. The Purposes of the Study

Given the importance of servant leadership, which represents a decentralized structure focused on empowering workers and encouraging innovation, it is essential that senior management and employees participate in the decision-making process, as well as allow frontline employees, i.e., those who deal directly with customers, to participate in decision-making and policy development. Servant leadership is also a source of making employees trust in their leadership, and this trust is one of the governing factors in the success of organizations. In addition, servant leadership increases the efficiency of interactions between leaders and employees, increases customer satisfaction, supports companies and organizations, reduces uncertainty and risks associated with the exchange of relationships, and supports the competitive advantage of organizations (Allam, 2020).

Thus, the current thesis explores servant leadership and its role in achieving innovation from the perceptions of managers and employees working in telecommunication companies in Kirkuk City. Since the role played by servant leadership in organizations is positively developing human capital, it was necessary to conduct this study in telecommunication companies in Kirkuk City, mainly Asiacell, Zain, and Korek. Servant leadership is one of the styles capable of motivating employees, motivating them, and enhancing innovation in human resources. Based on the problem reiterated above, the study has the following aims:

To investigate the effect of determinants of servant leadership on innovation in telecommunication companies in Kirkuk City.

1. Identify the impact of empowerment and development on innovation in telecommunication companies in Kirkuk City.
2. Identify the impact of the Humility of Leaders on innovation in telecommunication companies in Kirkuk City.
3. Identify the influence of reliability on innovation in telecommunication companies in Kirkuk City.
4. Identify the influence of acceptance on innovation in telecommunication companies in Kirkuk City.
5. Identify the guide's influence on innovation in Kirkuk City telecommunication companies.
6. Identify the influence of serving others on innovation in telecommunication companies in Kirkuk City.

1.4. Questions of the Study

The study questions will be as the following:

What is the impact of determinants of servant leadership on innovation in telecommunication companies in Kirkuk City?

1. How do empowerment and development impact innovation in telecommunication companies in Kirkuk City?
2. What is the impact of the humility of leaders on innovation in telecommunication companies in Kirkuk City?
3. What is reliability's influence on innovation in Kirkuk City telecommunication companies?
4. What is acceptance's influence on innovation in Kirkuk City telecommunication companies?
5. What is the influence of providing guidance on innovation in telecommunication companies in Kirkuk City?
6. What is the influence of serving others on innovation in telecommunication companies in Kirkuk City?

1.5. The Motivation of the Study

The present study includes several motivations, primarily as it tests the effect of effective leadership type on improving innovation in business organizations, especially delivery companies. Part of the motivation applies to the concept of servant leadership as a management variable because the concept of servant leadership is different from traditional leadership. In contrast, a servant leader cares about the needs of organization members, especially their team members accomplishing their work, achieving goals, and involving them in decision-making when necessary. This approach increases participation, trust, and access to innovation in the organization (Bao & Zhao, 2018), while traditional leadership or other leadership styles often focus on achieving the organizational goal through exercising power. In this regard, service leaders prioritize organization members and social concerns and care about and develop their followers. In addition, service leaders positively influence the business, its external environment, and the wider community (Lemoine & Blum, 2019).

A current review stated a wide range of literature that links servant leadership to positive results and the nature of its society, particularly in its favor of care and generating favorable results, even contrasted to other ethical forms of leadership (Lemoine, Hartnell, & Leroy, 2019). Thus, the role of servant leaders depends on their sincere desire to serve the organization, and employees, in addition, to providing care to them to satisfy their desires (Canavesi & Minelli, 2021; Lemoine & Blum, 2021).

According to Ruiz-Palomino, Yanez-Araque, Jimenez-Estevéz, and Gutierrez-Broncano,(2022), servant leaders value employees' accomplishments and appreciate their efforts to achieve goals. This cordial and friendly behavior makes employees comfortable to open up and express their feelings about all aspects of the organization, and they respect everyone's opinion, even if someone challenges governing procedure. As a result, servant leaders learning to understand things and refer to them from others' perspectives is critical to building trusting relationships and business success.

Moreover, analyzing servant leadership and innovation is essential, given the accumulated evidence of cultural transformations to the positive leadership behaviors toward employees and motivate them to innovate. Moreover, since the organization members prefer leaders who appreciate morals and interactions, employees work more

effectively with these leaders. Leadership is necessary to build sustainable organizations and more vital societies (Lemoine & Blum, 2019; Nohria & Khurana, 2010).

1.6. The Significance of the Study

The significance of the current study is embodied in the topic that it deals with, which is servant leadership and its role in enhancing innovation in companies, particularly telecommunication companies. The findings and endorsements may change the reality of the surveyed companies by providing them with unique information regarding servant leadership's significant role in companies. It is a support point for suggestions for future researchers interested in this field.

First, its leaders today must emerge in a way that their predecessors did not in terms of leadership tone, influence, and employee motivation because 21st-century leaders must be able to analyze and innovate in their thinking. After all, through it, they can effectively implement the concept of leadership and innovate in the tasks and activities of the organization. Finally, servant leaders are excellent team builders because they rely on the strengths of their followers to motivate and find innovation in human resource capabilities.

Such a leader does not lead by orders or dictates but leads by letting everyone do what they do well. In this sense, they may be like a circus gang leader – guiding people to their suitable positions, then coming out from under the lights and letting them shine (Marques, 2015). The leader's ability to visualize distant and near results and devise solutions is demonstrated in innovation. The servant leader can take risks in implementing new suggestions and solutions that differ from the traditional method.

1.7. Organization of the Study

This master's thesis is arranged into five chapters; the first chapter begins the investigation and therefore is focused as an introduction and comprised the background of the study, which is associated with servant leadership and innovation; the chapter also involves the statement of the problem, its purposes, and the reasons for the study. It also dealt with the significance of the study. Moreover, the study organization is presented at the end of the chapter.

The second chapter dealt with literature on servant leadership and innovation in some sections. The first section involves a theoretical aspect of servant leadership by reviewing the modern leadership theory, which links the concept of servant leadership and addresses the definitions of servant leadership—in addition to reviewing some of the previous studies on servant leadership. The second section dealt with a theoretical aspect of innovation by addressing its concept, definitions, and previous studies on innovation.

The third chapter contained the methods and materials used in this thesis to investigate servant leadership and its role in getting innovation within telecom companies in Kirkuk. This is done by analyzing the empirical data or the responses of the research participants who answered the questions. The chapter also covers study methodology and design, population and sampling, collection of data procedures, instruments, measures, and data analysis tools.

The fourth chapter analyzed the empirical data and showed findings that present the link between servant leadership determinants and innovation. For this purpose, this chapter is divided into some parts. The first section deals with the findings of demographic variables, followed by descriptive data analysis of the study variables; reliability and validity are also established—the second part discusses the data distribution's normality. Ultimately, section three presents the correlation, and regression analysis, which illustrates the strength of the link between the variables. Finally, the study concludes with chapter five, which presents conclusions and recommendations.

1.8. The Chapter Conclusion

In this chapter, the study introduction is addressed by dealing with the study background, which shows that vast author believes that servant leadership through ethical-based leadership improves working conditions within companies and, thus, significantly affects functional and personal relationships among working members of the organization, which called organizational climate that supports access to innovation. With all of the above, servant leadership is an effective way of managing and giving direction as influential leaders gain authority by interacting with others; In this perspective, servant leaders aim to motivate employees in a conducive work

environment that promotes innovation, develops leadership qualities, and shifts interaction between employees and management towards cooperative relationships to achieve organizational goals. The chapter also formed the statement of the problem, its objectives, and the reasons for the study, discussing its importance.



2. LITERATURE REVIEW

This chapter provides theoretical aspects and related literature on servant leadership and innovation within business organizations in some sections. The first section involves a theoretical aspect of servant leadership by reviewing the modern leadership theory, which links the concept of servant leadership and addresses the definitions of servant leadership—in addition to reviewing some of the previous studies on servant leadership. The second section dealt with a theoretical aspect of innovation by addressing its concept, definitions, and previous studies on innovation.

2.1. Theoretical Aspect of Servant Leadership

Servant leadership is a modern theory that determines its significance through the positive and tangible results it achieves for employees and the organization (Chan & Mak, 2014). Greenleaf proposed the servant leadership concept in the seventies of the twentieth century, showing that leaders' fundamental responsibility is to serve their followers. The organization's welfare and employees' service by following a leadership method concerned with follow-up and building strong and safe employee relationships (Abduljalil, 2022; Kauppila et al., 2018).

Servant leadership has emerged as a different way of thinking and motivating because it does not control employees but enhances their abilities and empowers them to work cross-functionally with their business partners, which can lead to innovation because human resource development enhances their capabilities which eventually falls back into the service of the organization. Servant leadership also works to help employees grow, be unique and creative, and increase their store of knowledge, questions, and ideas. They need deliverance to achieve their goals and contribute to the organization's goals since servant leadership pursues to develop employees' lives and enhance their level of organization (Lee et al., 2019; Spears, 2005).

Servant leadership is a clear shift in traditional leadership concepts, transforming the concept of leadership from the great leader to the servant leader. The servant, the servant followers, and the servant organization are considered the source of the strength and success of the organization, the followers, and the leaders, and they benefit and succeed in the work of the organization (Karatepe, Ozturk & Kim, 2019).

Therefore, the subject of servant leadership is stimulating in the management literature, where leadership has become the criterion that determines the success of any organization, often due to the success or failure of the organization to achieve its goals due to the efficiency or inefficiency of its leadership (Abduljalil, 2022). In addition, servant leaders constantly approve of employees, encourage them, and understand their achievements. This friendly attitude makes it easier for employees to open up and share their feelings toward every aspect of the organization (Chi et al., 2020).

In addition, theories on servant leadership clarified that this kind of leadership is a modern perception and a set of leadership determinants that serve the needs of others or followers, train them, provide support to develop, and facilitate their success in achieving the goals of the organization, based on that it is considered as a significant factor for reaching innovation in human elements (Kaltainen & Hakanen, 2022).

The principle of servant leadership includes the person's ability to influence, motivate and inspire followers. Servant leadership, therefore, has forming positive and regular relationships with others (Zohiry, 2021); it urges leaders to prioritize serving their followers and, at the same time, encourages followers to invest in situational opportunities to exercise leadership (Kashyap & Rangnekar, 2014).

Hill (2008) indicated that the servant leadership theory could be applied as an institutional philosophy practiced by leaders in organizations to achieve their goals, whether they are for-profit or non-profit organizations. Moreover, among these companies that constitute an essential source of telecommunication between people and their necessity in daily life are telecommunication companies. So, assume leadership is acceptably applied to the maid. In that case, this will be reflected in the employees in it, which leads to providing the service to its recipients in a comfortable and valuable way, and this is reflected in achieving the company's goals by increasing customers, and thus increasing profits and controlling the company that provides servant leadership over the competition of other companies.

Based on that, organizations, regardless of their nature and activity, need influential leaders who are primarily responsible for achieving goals and accomplishing work efficiently and effectively (Kenton, 2021). The servant leader who has behavioral features that have been reported, such as sympathy, consideration, and humanity - not only builds a mental and emotional well employee but also instills a sense of cohesion,

teamwork, and supportable relationships between followers by considerate their feelings, emotions and addressing them (Jit et al., 2017). Finally, following the servant leadership model, the leader plans to serve the employees first; according to the management expert Greenleaf (2015), many successful leaders are not recognized. This leadership model keeps the leader behind the team out of the limelight, thus allowing the team to achieve appreciation. In contrast, this approach achieves high levels of morale for the followers, but this is not suitable for cases related to making quick decisions, such as avoiding a natural disaster or in cases of lack of time, in addition to the fact that the servant leadership model offers many advantages, including enhancing team building, achievement, favorable modification, and job satisfaction.

2.1.1. Definitions of Servant Leadership

Literature related to leadership, and especially servant leadership, has conceptualized such leadership as an efficient mode that prepares to take advantage of opportunities to serve employees or followers whenever there is a real need, the person being served, regardless of the nature of the service, the person being served, or the character of the servant leader to develop human resource capabilities as the primary source of achieving organizational goals and achieving high performance (Abduljalil, 2022; Lemoine & Blum, 2019). From this perspective, servant leadership is based on exploring the needs and interests of the leaders' employees, which as an essential factor enables them to work better and encouraging and serving to influence them to achieve common goals, including innovation in organizational processes (Bao et al ., 2018).

This leadership approach engages and motivates organizational members by delivering the assistance and support they need for constant development within the organization. Servant leaders focus on people as they decide how to build ethical relationships with others rather than results, achieving goals effectively in the organization's service and for the benefit of all. Thus, servant leaders push others to excel and innovate, support them to reach their best performance, and try to bridge the gap between potential and performance because their first desire is for others to succeed (Sarwar, Cavaliere, Ammar, & Afzal, 2021).

Servant leadership is defined as the social influence whereby the individual can recruit others or followers to provide support to achieve a joint mission (Kenton, 2021). Servant leadership is based on the clear idea that when leaders lead individuals effectively, they serve them, and as a result, those individuals are more willing to help others. Moreover, it complements this idea that individuals who are motivated to be ready or tend to serve first, i.e., they are eager to help others and be inspired and encouraged to act (Jaiswal & Dhar, 2017). As Spears (2010) mentioned, servant leadership refers to listening, sympathy, praise, awareness, persuasion, and many other aspects related to forming vision, insight, and commitment to supporting workers.

Northouse (2019: 227) defined servant leadership as a distinctive and compelling leadership approach characterized by dedication and ethics whose primary goal is to influence, motivate and empower human resources, which requires leaders to pay attention to and understand the needs of their employees, while ensuring that they become more knowledgeable and independently mobile, to achieve goals better and become a source of competitiveness in the organization. In the same context, Allam (2020: 79) defined servant leadership as serving and helping followers and influencing them by providing a business environment based on trust and motivation and urging workers to work to achieve the aims of the organization, which are common goals between the servant leader and the employees.

In order to become an effective servant leader, the leader must develop a relationship with employees through effective telecommunication because of its impact on the employee. The leader should also listen to the employees, determine their needs, aspirations, and capabilities, and use the information collected to serve them better, increasing organizational commitment and employee confidence and loyalty. Finally, the leader's consent, where the employees are satisfied with the leaders who are seen as being interested in their needs and well-being, is fundamental for servant leadership (Bambale, 2014).

Based on that, servant leaders differ from traditional leaders, characterized by personalities that distinguish them from the rest of the traditional and modern leaders; Schulkers (2017) discussed in their study satisfaction and self-motivation to provide service; otherwise, it will be an insult, and humility makes the followers carry out the leader's orders without getting bored. In addition to sincerity and perseverance: sincerity

means an intellect of concern about the organization, perseverance is the attempt in various ways to solve problems and complete the work promptly, and knowledge is knowing the goals, policies, and laws of work and that prevent them from making mistakes, and insight is finding alternatives and creativity in solving problems. The previous characteristics are considered among the essential features of servant leadership that make the organization succeed with the desire of its employees and leaders because of the love that servant leadership carries and building bridges of trust, desire, and mutual loyalty between the elements of servant leadership.

2.1.2. Previous Studies on Servant Leadership

In this section, some previous studies related to servant leadership and its impacts within organizations are addressed; in this context, Chan and Mak (2014) investigated the influence of servant leadership on the member of staff's positive attitudes, represented in job satisfaction. The mediating development of each of the organizational trust and length of service. The research applied to 218 Chinese workers in the service sector in Chinese organizations. The results revealed that faith in the leader facilitates the link between servant leadership and worker job satisfaction, and it has been proven that servant leadership significantly impacts organizational confidence and job satisfaction as the length of service increases.

Since servant leadership is an essential topic in business organizations, Kashyap and Rangnekar (2014) investigated servant leadership's impact on employee turnover by determining the mediating effect of the business public's perception of the employer and the trust of employees in the Indian leader, the results showed that servant leadership decreases turnover, mediated by the business public's perception of the employer and confidence in the leader.

According to Whorton (2014), the servant leadership style is the most effective regarding employee participation, as the primary focus for achieving organizational goals is on serving subordinates entrusted with achieving these goals. Servant leadership encourages subordinates to develop wisely, be innovative, and self-manage and serve people. In the workplace, it improves productivity, increases customer satisfaction, reduces work turnover, improves public safety and security, increases organizational

loyalty, and increases employee engagement. In addition, organizational outputs increase the operational performance of the organization.

In their research, Burton et al. (2017) analyzed the impact of servant leadership on ethical climate perceptions from the perspective of research participants in sporting institutions. They also investigated how organizational justice and perceptions of justice directly affect the relationship between server leadership and ethical climate perceptions to enhance the capacity of sports organizations and develop their sports performance. Results showed that servant leadership is directly related to trust in leadership and climate perceptions. Trust in the leader and procedural fairness indirectly affected the link between servant leadership and ethical organizational climate, consequently enhancing the performance of sports organizations because servant leadership focuses on creating an ethical environment.

Jaiswal and Dhar (2017) studied the effect of servant leadership and trust in the leader on worker innovation. The study was conducted among participants in 48 work teams in 26 organizations in India. The results showed a positive relationship between servant leadership and trust in the leader. This affected employee innovation because servant leaders prioritize human resource needs and consider their human-behavioral aspects, which is essential in increasing trust in leadership. Releasing organizational capacity results from this trust, and attention to labor and human resources needs employee innovation enhanced.

Chi et al. (2020) tested the influence of establishing servant leadership on organizational mockery and citizenship. Therefore, the researchers' main goal was to determine whether the university president could exercise the theory of service leadership and whether it is correct and effective in decreasing the organizational irony of employees, promoting creative behavior, and encouraging corporate citizenship. The results indicate a relationship between the leader and employees, and the problems of non -citizenship are closely related to servant leadership in the leader's vision terms, philosophy, positions, behaviors, and administrative policies in the areas of personal support to build society, equality, and moral integrity.

Hasanuddin et al. (2021) investigated the servant leadership impact on job satisfaction by considering the characteristics of individuals (gender, age, educational level) as a moderator variable. The research employed a quantitative approach with

multilinear regression analysis by testing empirical data obtained from 72 Bureau of Industry and Commerce employees. The outcomes demonstrated that servant leadership positively and significantly affects job satisfaction. The results also showed that the characteristics of individuals (gender, age, educational level) mitigate the impact of servant leadership.

Zohiry (2021) examined servant leadership's effect on the employees' psychological well-being; the role of mediating trust in the leader. The researcher obtained empirical data from 350 employees of public sector banks in Egypt. The research showed a significant influence of servant leadership on trust in the leader and a particular effect on the dimensions of confidence in the leader and the psychological well-being of employees.

Aboramadan et al. (2021), in this research, researchers investigated servant leadership and its role in job satisfaction in academic outcomes in higher education. According to the researchers, the main goals of the research were to determine the influence of servant leadership on work engagement, affective commitment, and job satisfaction as mediating tools in the Palestinian higher education sector. In addition, structural equation modeling has been used to test the hypotheses, and the study's results established a positive link between servant leadership and affective commitment.

Canavesi and Minelli (2021) in this paper, the concept of servant leadership is analyzed in terms of motivation and effectiveness as a different model of leadership. As indicated by researchers, this leadership approach is a form of supervision based on moral principles in which leaders concentrate on meeting the needs of their followers, i.e., customers, employees in the organization, and other stakeholders, rather than satisfying their private needs and needs and empowerment. The concept is not new in academia and practice. However, servant leadership has attracted increasing research attention in the past decade because it can positively impact individual and organizational outcomes through its positive effects, such as job satisfaction, commitment, and innovation in the conduct of activities. In particular, the latest trends in the literature focus on identifying antecedents, mediators, and moderating mechanisms based on this relationship and developing a standardized scale to measure the construct across diverse cultural and economic contexts. Finally, the dynamic method called systematic literature network analysis is used, and the outcomes show the

servant leadership influence on employees' organizational outcomes, including improving work performance.

Kaltiainen and Hakanen (2022) study analyzed the link between servant leadership, employee duties, and job performance and the mediating role of job engagement and burnout in this relationship. The researchers obtained empirical data from 34 organizations and modeled the latent change score as an analytical method, which aligns with the study's objective. Finally, the results showed that servant leadership impacted increased employee engagement, reduced fatigue, and increased employee engagement, while the implementation of this style of leadership is also associated with increased task performance. Finally, the results showed that servant leadership enhances employees' tasks, significantly enhancing employees' work engagement.

2.2. Theoretical Aspect of Innovation

Because of the importance of innovation as a management variable and an interesting concept, several studies conducted in different fields have provided various meanings and classifications for innovation, especially in management and business. While today's research as a significant part of innovation plays a decisive role, especially in promoting and solving management and business problems, several types of innovation have emerged. Innovation within firms is one crucial element of staying stable, which enhances the firm's sustainable competitiveness (Jaiswal & Dhar, 2017).

Innovation is the ability to achieve goals and results for the receivers' interests based on the rational use of available resources, overcoming problems, and using advanced methods (Williams et al., 2017). At the same time, the company's ability to innovate in human capital is one of the most critical components of organizational excellence performance, where the role of the servant leaders is crucial to encourage human resources and achieve innovation in their capabilities (Canavesi & Minelli, 2021).

As indicated by Kozioł-Nadolna (2019), according to the most recent theories, innovations are affected by many complex reactions between human capital, organizations, and work environments. The advancement of innovation theories and

operations shows more development of these phenomena. Along with all companies in today's economy, this will lead to more complicated and realistic innovation models. Thus, by reviewing the literature related to innovation, it is clear that there are broad areas of innovation within companies, whether in building strategies or plans, innovative methods and systems, organizing skills and innovation in the capabilities of human capital, or updated responses to environmental needs about goods and services (Bao et al., 2018).

In this regard, servant leaders are more likely to invent new ways to apply management theory and achieve reliable results since they give priority to paying attention to the needs of employees and ensuring appropriate working conditions. A servant leader's ability to formulate an appropriate solution to an existing problem, properly implement a practical solution and achieve a better organizational position is also innovative (Duan et al., 2018). Consequently, when firms fail to set innovation as a higher goal, their goals decline; Therefore, servant leaders must incorporate innovation into their organizational behavior (Whorton, 2014). Innovation in organizational work, especially in the service sector, is also a complex process; therefore, leaders dealing with innovation, especially in organizational work processes, should be aware of the difficulty and that the procedure lacks clarity and arrangement among innovation managers on strategies and procedures to ensure organizational capability to increase organizational innovation (Karakaş et al., 2017).

2.3. Definitions of Innovation

Innovation in human resources is the ability to direct oneself, a sense of uniqueness, self-esteem, and openness to experience to achieve telecommunication between the inventor and the surrounding environment (Chi et al., 2020). Innovation stems from the general concept of improvement, which is related to effective leadership and new management, project development, team leadership, improving the performance of employees and the organization, and all known management functions (Bucciarelli, 2015).

Innovation is also a process that involves a set of decisions, activities, and measures to turn an idea into commercial value. This process can be applied to all product, process, or service ideas. For example, innovation management focuses on

providing a set of measures and instruments to make it easier for inventors to respond to the challenges of the entire cycle of innovation and turn their opinion into successful innovations (Karakaş et al., 2017).

Innovation can be defined as the ability of the company and the institution to constantly search for ideas, concepts, and practical inventions to serve the company. In addition, innovation involves the progress and development of production processes and operational technologies also utilized in services, innovative solutions in management, progress in the organization's development, and most importantly, the ability to access information (Kozioł-Nadolna, 2020).

Innovation is the ability to develop new ideas, human resources efforts, designs, methods, or anything else in a better, easier, and more helpful way. Accordingly, innovation is necessary for all organizations, especially services companies, to create a sustainable competitive value and a changing environment. Companies with more innovation and response to changing environments and new capabilities will be more successful, allowing them to do better. Innovation is vital to understanding the growing and changing markets for the future of the organization (Duan et al., 2018).

A successful innovation is an entirely new approach that achieves an improved result, and these innovations can be small, large, or completely new (Smith et al., 2010:435). Thus, the ability to innovate has always been one of the success factors of the company. Companies that have adequate resources, a strong incentive to innovate, and climate of organizational climate that allows for and encourages creative ideas are the ones that innovate quickly and successfully. Thus, the ability to innovate represents the ability to continue to innovate in science, and ideas are complex and multidimensional because several elements interact to make this process possible (Das et al., 2018).

Innovation in human resource capabilities depends on the intellectual ability to understand what others are not thinking to develop innovative ideas and participate in problem-solving. Consequently, creativity and innovation are similar, but they differ from one person to another; eventually, it is a complete creative act that distinguishes the owner from the others and whose wisdom leads to the point of creativity and innovation. This interpretation of creation is your imagination, takes away all the things that lead to the hereafter, and does not stop in the way of any opportunities that arise in

the way of your creation and your work. With creativity and innovation, people can move from ignorance to progress and knowledge (Yang et al., 2019).

The importance of an innovative idea is not only represented in the ability to accomplish complex tasks effectively but also in the need for it to be an intellectual approach that drives all operations within the scope of the services companies. This type of mental process is also included in the issues of required change, as telecommunication companies should keep pace with organizational developments. Thus, a staff assistant to the director who enjoys innovative and constructive thinking is necessary to facilitate the process of transformation and change and to ensure the achievement of the desired goals (Dasgupta et al., 2011).

2.3.1. Previous Studies on Innovation

Dasgupta et al. (2011) tested the relationship between organizational creativity, innovation, and entrepreneurial strategy in this paper. The research has sought to highlight the importance of innovation and strategic research through the increasing value of innovation and summarize the strategy that directs the acquisition and deployment of technological resources for competitive growth as a fundamental topic in business and a mechanism for developing innovation. The literature highlights the importance of organizational elements underpinning innovation and strategy. Finally, the study showed a positive and statistically significant link between organizational factors and technological innovation and strategy.

Enayati et al. (2014) examined the concept of innovation and its forms, thus, critically exploring the formation of companies and organizations, their effects, and future innovation trends, and stated that companies must pay enough attention to such a critical issue to stay in the competitive market today. If companies have access to a permanent response within the institution, they can generate new products and provide services that provide a strong payment force for the institution.

Bucciarelli (2015) explored the relationship between innovation and change. The research evaluated the most prominent theories of innovation and change management and compared some of the most influential management theories that focus on soft individuals. However, the research applied the qualitative approach, specializing in

human interaction and the power of stakeholders to change. As a result, she emphasized that innovation management is vital in the change process. Khoussa (2015) examined the effect of knowledge on organizational innovation and showed a correlation between the dimensions of organizational knowledge and innovation indicators, such as management, technical, and additional innovation.

Kour and Gakhar (2015) analyzed innovation based on HR in Indian banks. The researchers indicated that their research calls for innovative research related to human resources practices in banks to enhance employee productivity. It also provides insight into these innovations associated with HRM through a preliminary study based on the opinions of HR managers in eight different Indian banks. This innovative HR was integrated under seven other heads of HR appointed employee recruitment, selection, training, and development of the employee, performance management, compensation, career development, motivation, and employee security. They are also referred to as some previous studies to draw these conclusions.

In their research, Jackson et al. (2016) analyzed the environmental design and the impact of innovation on the firm outcome. They mentioned that today's organizations face unprecedented challenges in light of industrial and technological advancements and increasing challenges. These organizations are the mainstay of society building, making them need to innovate and find unconventional solutions to tackle problems and remain effectively active. The results showed that organizational innovation is the decisive driving force in achieving high organizational performance.

2.4. The Gap in the Literature

The literature on servant leadership in service organizations is vague and therefore lacks conceptualization (Eva, Robin, Sendjaya, Dierendonck, & Liden 2019) and has not received enough practical investigations (Song Park & Kang 2015), particularly in developing countries like Iraq. The nature of the services of telecommunication companies, which Iraqis have widely used over the past ten years, has changed due to significant, sustainable, and rapid innovation. Innovation has become a core interest in organizational and human resources over the past few decades.

Therefore, this study explores the link between telecommunication company managers who adopt servant leadership and innovation within their companies. This study is also necessary because it provides new and unique information about servant leadership in Iraqi telecom companies and their effort to enhance the innovation process relating to the organization and innovation in human resources. In addition, awareness of the relationship between servant leadership and innovation can benefit business organizations, particularly Iraqi telecommunication companies, and their employees, create a more positive work environment, and integrate it into the culture of innovation, improving telecommunication services performance (Raoush, 2022).

2.5. The Relationship Between Leadership and Innovation

As indicated by Daft (2010: 357), innovation, in essence, is change, and change is a vital requirement for many companies and institutions. In an environment of rapid events and much change, there is a need for innovation and creativity that enables the companies to continue and compete and present what is new; in this context, leadership plays a significant role in motivating staff to try their best to reach innovation.

According to Ilsever and Joe (2016), leadership positively correlated with innovation since creative managers can create and establish an innovative work environment by changing interaction methods with the work team. Neglecting interaction with the team loses many new ideas to employees, where inventiveness flourishes if employees enjoy our work and an ample space of freedom without anxiety among members. The work team and the manager are responsible for the work.

The issue of innovation in corporate processes is a significant feature of organizational success in the 21st-century workplace, where there is fierce competition among companies, and the company that innovates will succeed in the competition (Nakano & Wechsler, 2018). Because of the vital role of innovation in corporate activities, researchers have tried to distinguish the aspects that encourage and continue innovation in businesses (Han et al., 2016). Leadership is the most critical factor affecting innovation (Mittal & Dhar, 2015). Regarding the impact of leadership on innovation, Wei et al. (2020: 279) indicated that top organizational management could significantly impact innovation. Through implementing key organizational innovations, companies also can review their management routines and then become familiar with

these revised routines, including focusing on human resources and developing their skills to provide a healthy working environment. The result of management innovation changes routine organizational systems.

Ahmad and Easa (2020) tested the role of knowledge in the link between leadership and innovation. The researchers used a quantitative analysis based on Structural Equations Modeling (SEM) with AMOS 24. The results showed that the behavior of leaders strengthened the culture of sharing knowledge that strengthened the generation of new ideas, products, and innovation processes.

Chi et al. (2020) explored the effect of servant leadership innovation on organizational cynicism and citizenship. Therefore, the researchers' main aim was to determine whether the rector could exercise the theory of service leadership and whether it was correct and effective in decreasing organizational cynicism of employees, enhancing innovative behavior, and encouraging organizational citizenship. The outcomes displayed that there was an association among the leader and employees, and the problems of non -citizenship are closely correlated to servant leadership in terms of the leader's vision, behaviors, attitudes, philosophy, and administrative policies in the areas of personal support to build society, equality, and moral integrity. Based on the empirical findings addressed above, the researcher hypothesized that:

Main Hypothesis: Servant leadership determinants positively influence innovation in the communications companies in Iraq.

Hypothesis (H1): There is a positive impact of empowerment and development on innovation.

Hypothesis (H2): There is a positive impact of leaders' humility on innovation.

Hypothesis (H3): There is a positive impact of leaders' reliability on innovation.

Hypothesis (H4): There is a positive impact of acceptance on innovation.

Hypothesis (H5): There is a positive impact of providing guidance on innovation.

Hypothesis (H6): There is a positive impact of serving others on innovation.

2.6. Research Framework

The theoretical study framework in the current study is the underlying structure of the dependent variable, represented innovation, including innovation policy, innovative ideas, rules and procedures, and new executive systems, and measures an innovative approach, establishing research, development, and innovation processes. The independent variable, servant leadership, included Empowerment and Development (ED), Humility of Leaders (HUM), Reliability (REL), Acceptance (ACC), Provide Guidance (PG), and Serving Others (SO). Figure 1.1 below shows the projected framework for this study, which is based on the theories of leadership and innovation and the hypotheses addressed above.

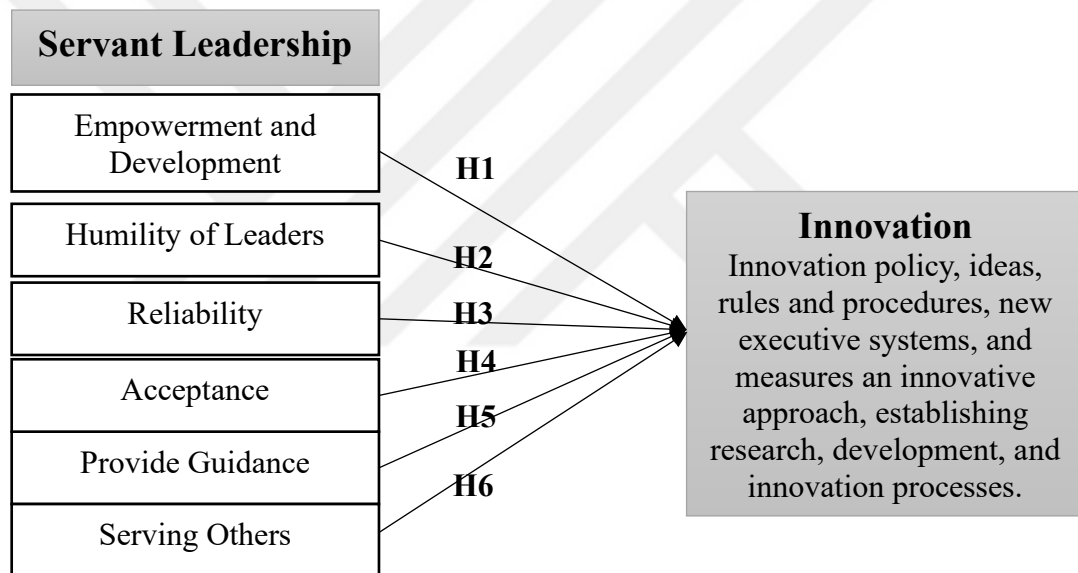


Figure 1. Schematic Diagram of Research Framework

3. METHODOLOGY

This chapter contained the methods and materials used in this thesis to investigate servant leadership and its role in getting innovation within telecom companies in Kirkuk. This is done by analyzing the empirical data or the responses of the research participants who answered the questions. This chapter also covers study methodology and design, population and sampling, data collection procedures, instruments, measures, and data analysis tools.

3.1. The Study Method and Design

To achieve the main objectives of the research, the quantitative method was used, which is appropriate and complementary to the methods used for data collection and research design. Consequently, it includes quantitative methods and statistical techniques that help to simplify the relationships of the study variables, to follow them, and shed light on them. Moreover, the structures of the measurement model can be understood as a process that recognizes the statistical and calculated consequences that recognize the practical application of the efforts made to measure the study's goal. In addition, the design of the study is more convenient because it allowed the respondents to provide related information about the leadership of the server and innovation within the telecommunication companies through a questionnaire model using a seven-point scale more common to collect data.

3.2. Study Population and Samples

In this study, the research population comprises all employees and managers at all management levels, including general managers, CEOs, branch managers, and administrative staff working for telecommunication companies in Kirkuk; these companies are Zain Iraq, Asiacell, and Korek Telecom. Moreover, the population size of the study is about 350 managers and employees. The reason for selecting telecommunication companies in Kirkuk is that managers of these firms can provide data related to their leaders' practices and innovative approaches through a questionnaire form. In addition, these companies have a good size target population.

Asiacell is the leading provider of high-quality mobile telecommunications services in Iraq, with more than 12 million contributors. Asiacell is the first network in Iraq as the first mobile provider service in Iraq and has achieved coverage of all its parts. In addition, the firm provided services in all eighteen Iraqi provinces, including Baghdad and major Iraqi cities. In addition, the Asiacell network covers 99.09% of Iraq's population, making it the broadest coverage among mobile operators in Iraq.

Asiacell cellular telecommunications were established in 1999 by an Iraqi businessman to be the first Iraqi cellular telecommunications firm in Iraq. In 2012, the French marketing research company Altay announced that Asiacell is the number one brand in Iraq, not only in mobile telecommunications but in all sectors, reflecting the strong presence of the Asiacell brand. At the beginning of 2015, Asiacell obtained a license to operate 3G services within its network range in Iraq, through which it provides high-quality voice and video telecommunications and data speed.

Korek Telecom is also a fast-growing cell phone operator in Iraq. The company's most expensive and reliable cellular network covers the entire country, and with advanced technology, the company guarantees the best network with best-in-class services. Korek also covers all 18 govern-orates in Iraq and offers a comprehensive range of wireless telecommunication services that give subscribers, government, and institutional users the freedom to move using the latest technology.

The most important thing that distinguishes Korek is to provide a network and services with the best quality and value. The company is a limited liability firm registered in Iraq to operate and provide wireless telecommunication services. Korek started working in the telecommunication sector in Iraq in 2000, specifically in the northern regions of Iraq, and is, therefore, the eldest Iraqi telecommunication company. On August 17, 2007, Korek obtained a national operating license for a mobile network across Iraq, and since then, Korek has been providing its services throughout Iraq and to the entire population.

Zain Iraq is one of Zain Group's leading innovative data services mobile telecommunications companies in the Middle East and Africa. Zain Iraq's strategy is based on understanding the consumer's desire and focusing on any idea or service to provide subscribers with the best and most advanced services to achieve their aspirations. Zain Iraq is working to provide the best and latest wireless

telecommunication services to the Iraqi user and provide exclusive and innovative offers to its subscribers, specifically after the launch of 4G + 4.5G services as the first telecommunication company in all governorates of Iraq, which came in cooperation with its partners from global technology suppliers approved for the latest technologies and telecommunications solutions worldwide.

The company's vision for 2022 is to partner with the younger generation and provide them with services and products that help them connect with the world. Zain Iraq's Youth Empowerment Program is a specialized platform to invest in young minds and establish a new era led by these youth, to build a better future for Iraq. It aims to provide a comprehensive general framework for all youth projects and access to resources that allow them to grow, succeed, prosper, and keep pace with the rapidly changing world.

The awareness about the brand among Iraqis reaches 97%, which makes the subscriber the most crucial reason for our success and the motivation to provide the best technologies in the information and telecommunications sector. According to the company, it is an integral part of the local Iraqi community, which makes partnerships with it in general and youth, in particular, a strategic direction for every employee in the company. The company also claimed that it is always looking for social, economic, and cultural projects that fall through the social responsibility program and positively affect the lives of the partner community.

To obtain the necessary data, a survey form was distributed among the managers and employees of the branches of the three telecommunication companies in Kirkuk city to obtain as much data as possible. However, due to incomplete filling, eight forms were removed after the data entry process. Therefore, the complete, valid forms are (252), which launches the study sample.

3.3. Variables Measurement

3.3.1. Conceptualization of Dependent Variable (Innovation)

Innovation is the improvements companies make to their products, procedures, or services. Based on that, innovation is essential in effectively managing companies, especially telecom companies (Karakaş et al., 2017). Therefore, to ensure their survival

and continuity, solid and practical, successful companies must not stop at the efficiency limits. They are not only convinced to do their job correctly with honesty and sincerity, but their ambition must exceed that. Innovation, and effective change, where necessary, are the hallmarks of performance and services (Jabbar & Patir, 2022). Companies can practice innovation by hiring a group of expert employees, identifying a specific department for it, or practicing open innovation across all their employees (Kour & Gakhar, 2015). Or at the level of its customers, suppliers, or even all segments of society. Each of these practices has its appropriate conditions and environments. Some companies fit into open innovation and practice closed innovation as a mechanism for innovation (Smith et al., 2010).

Best practices that telecom companies leaders can do to retain their clients include; personalizing client experiences and loyalty programs, taking advantage of modern technology and innovation techniques to provide a unique experience for clients, comprehensive services, chatbot services, and social networking sites. In telecommunication companies, innovative loyalty programs are essential in improving client experience (Muller et al., 2018). It is a marketing strategy that rewards loyal clients who purchase and interact with the brand more frequently. These rewards can include discounts or points redeemed for products and services, free products, or even exclusive access to new developments (Nakano & Wechsler, 2018). Therefore, client loyalty or rewards programs are designed to motivate future purchases to continue dealing with brands. Accordingly, innovation is a key element the achieving competitive advantage, success of organizations, and achieving a strong economy at the level of community. As a result, all enterprises today face a dynamic environment characterized by rapid changes in technology, short product life cycles, and globalization. As a result, organizations need to be more creative and innovative to survive, grow, compete, and lead (Karakaş et al., 2017).

Innovation is a productive mental process. This does not happen suddenly, but it must go through several stages until the individual reaches innovative ideas or solutions (Bucciarelli, 2015). The innovative mind is the mind that can reach new and innovative solutions to problems that no one has ever, meaning that it is the mind that can produce unique and original. According to this approach, innovation is a process of sensitivity to problems, awareness of them, weaknesses, gaps, inconsistencies, and shortcomings, formulating new assumptions, reaching new relationships, using available information,

seeking solutions, modifying assumptions, re-examining when necessary, and communicate results (Kozioł-Nadolna, 2019; Soylu & Öztürk, 2010).

The theoretical literature on innovation shows that companies and their leaders who target the market continue to respond to the recognized needs of their customers. As a result, some opportunities to develop new services and products may have failed due to customers being unable to describe their unique desires. Accordingly, these companies need to create an entrepreneurial way to ensure active and intensive attention to the needs of emerging and unlimited customers (Schindehutte et al., 2008).

3.3.2. Operational Definition of Innovation

Studies conducted in different areas of innovation have provided operational classifications and definitions of innovation. While today the study plays an essential role as an important part of innovation, many innovation forms have emerged. For example, systems courses include integrating new processes and technologies with other areas, including new business processes, business models, new business processes, and approaches (Sorati, 2008). As Das et al. (2018), innovation indicates that it leads companies to invent new tools, methods, technologies, and ideas to deal with problems. The process of merging two or more ideas (independent of each other) into a new concept that was not before. Innovative ideas are comprehensive and complicated because they include interlocking knowledge and emotional and moral elements that constitute a unique mental state.

Damanpour (2014: 1266) asserts that contrary to the view that only innovation is associated with the invention, innovative technology, and new products/services, the provision of new instruments, techniques, and practices is necessary to facilitate organizational change, increase competitiveness, innovation, and organizational effectiveness. Today, because technological and product-oriented innovations are imitated in a short period and have a short shelf life, organizations and their leaders need a long-term understanding of innovation that is not easy to imitate, which becomes a fundamental competitive factor (Soylu & Öztürk, 2010: 115). Innovation measures innovation policy, ideas, rules and procedures, and new executive systems, and measures an innovative approach, establishing research, development, and innovation processes (Goyal and Pitt, 2007; Zhang et al., 2019).

The following indicators measure the innovation within the branches of the three telecommunication companies in Kirkuk city, Iraq. The survey applied the following measuring scale: 1=Completely Disagree, 2=Mostly Disagree, 3=Somewhat Disagree, 4=Neither Agree nor Disagree, 5=Somewhat Agree, 6=Mostly Agree, and finally, 7=Completely Agree.

Table 1. Survey Statements for the Innovation Diagnosis Indicators of Survey Data

Innovation	1. The company has a particular innovation policy that affects all its managers and employees.
	2. The company leadership can implement innovative ideas to improve work effortlessly.
	3. The company leadership often makes modifications to tasks and functions.
	4. Rules and procedures within our company are regularly renewed.
	5. The company is applying new executive systems.
	6. The company has internal and outsourced teams with the same innovative approach.
	7. The leadership enthusiastically pursues establishing research and development units to improve employee and organizational performance.
	8. There is much scope for the innovation process within our company.
	9. The innovation process in our company is increasing from year to year.
	10. The company's primary goal should be innovation in fundamental business functions.
	11. The company staff, suppliers, and partnerships are selected for their capacity to establish an innovative approach.

3.3.3. Conceptualization of Independent Variable (Servant Leadership)

The concept of servant leadership is characterized by the fact that it carries various meanings, and it has practical implications that support leaders who want to serve people to lead them as groups (Allam, 2020). So, one of the main components of management is leadership. The effect of leadership in organizations has been widely investigated as an important factor affecting the organization, including reaching innovation. Also, the organization's success in achieving pre-determined goals, the number of employees' efforts for the organization's success, and the leader's impact on employees depend on the leaders' behaviors and methods (Canavesi & Minelli, 2021).

The principles of servant leadership consolidate the idea that leadership and work are one body. Leadership means achievement, work, fulfilling the roles required of the leader, and supporting the internal view of subordinates, where the main key is to serve

the organization and its interest by listening to views and not imposing personal views on workers (Schulkers (2017). The servant leadership principles depend mainly on the leader's ability to make a work environment like a beehive. Everyone works in the competence field, even the leader himself. Thus, people are distinguished by their ability to provide institutional support works services to others and succeed as a team while preserving the leader's powers. When the organization is a leader, the organization's success means the leader's success (Chi et al., 2020).

Server leadership inspires individuals to do their best to achieve desired outcomes, including process innovations. Server leadership is also about guiding individuals in getting their commitment right direction and motivating them to achieve their goals and objectives (Bao et al., 2018). Server leadership is based on a bright idea when leadership leads and serves individuals first so that they are more prepared; therefore, they move on to serve others and give their best to desired goals and outcomes (Aboramadan et al., 2021).

The server leadership theory focuses on a successful leader as a leader who serves first and has a natural feeling that he/she is in the service of followers; Meeting their needs and aspirations has a maximum priority that is presented first until they become wise, improving, more independent, and ready to serve others, then leads quickly and smoothly by influencing followers, helping them and enabling them to demand their satisfaction (Burton et al., 2017; Schulkers, 2017).

Servant leadership is defined as a process of developing ideas and vision by the leader and coexistence with the values that support those ideas and which influence others to embrace them in their behavior; in other words, they are leaders they can create a vision, develop strategies, motivate and inspire followers, and build confidence and courage (Chi et al., 2020). Servant leadership is the entrance in which the leader's main task is to help and empower people in their demands to meet their needs and aspirations and fulfill their interests. The workers are the leaders who provide a high value to serve others at the expense of their interests (Duan et al., 2018; Muller et al., 2018). Servant leadership is also the social influence whereby the individual can recruit others to help and support to achieve a common task. That idea complements the individuals who are used or motivated to be willing or have tendencies to serve first (Spears, 2010).

3.3.4. Operationalization of Servant Leadership

Servant leadership is a style of leadership that focuses primarily on the growth and well-being of individuals. As Eva et al. (2019) indicate that a servant leader is a person who has a tremendous and powerful motivation to serve others by possessing a set of characteristics such as wisdom, listening to others, empathizing with their plans to persuade others, and organizational trust. Jaiswal and Dhar (2017) described servant leadership as an inspiring leadership style to serve first collaboration and teamwork among employees through the ability of the leading server to enhance the capabilities of followers, not only for the benefit of the organization but also to develop and develop followers to gain their loyalty and increase their love for work.

Some studies show that servant leadership's positive effects on performance are manifested through mechanisms such as good relationships that are socially explained and a spirit of cooperation and attention to needs that includes exchange and learning. Also, employees perform well in their active care, concern for the organization, and positive stakeholder encouragement (Lemoine & Blum, 2021; Liden et al., 2014).

The independent variable Servant Leadership (SL) is operationally measured by Empowerment and Development (ED), Humility (HUM), Reliability (REL), Acceptance (ACC), Provide Guidance (PG) and Serving Others (SO). According to Abdulla (2018), servant leaders provide information when they need to do the job well; they encourage employees to use their talents at work and always help employees develop themselves. Servant leaders also motivate employees to develop new methods and ideas, enabling them to solve problems independently. In addition, this type of leadership considers employees' personal opinions and develops their leadership abilities, giving them the strength to make decisions and confidence in themselves. This dimension also represents the character and courage of the leader to express a good and right opinion that can be defended and convince others of it and not surrender to reality or failure, thus increasing confidence and persistence in achieving the service of others.

Empowerment and development is a term that indicates a kind of organizational arrangement that increases independence, decision-making authority, and the responsibility of decision-making for subordinates. This means that ideas are provided with sufficient freedom and necessary information so that they do what they want to achieve the goals of the organization successfully instead of forcing them to do what

others want. It also refers to encouraging individuals to participate in decision-making that affects their actions, which means that assistance is presented to them to create new ideas and turn them into actions (Begzadeh & Nedaei, 2017).

Table 2. Statements for the Empowerment and Development (ED) Diagnosis Indicators of Survey Data

Empowerment and Development	1. The leader provides the information when they need to do the job well.
	2. The leader encourages staff to use their talents while at work.
	3. The leader always helps staff to develop themselves.
	4. The leader motivates staff to innovate new methods and ideas.
	5. The leader makes staff able to solve problems by themselves.
	6. The leader considers the personal opinion of the staff.
	7. The leader develops the leadership capabilities of the staff.
	8. The leader gives staff the personal strength to make decisions and confidence in themselves.

Servant leadership is a group of behaviors that focus specifically on satisfying the needs and desires of the followers and achieving their goals, helping them obtain their loyalty and increase their belonging and love career to work. At the same time, Hasanuddin et al. (2021) defined servant leadership as a perspective involving the leader's perception that he/she is the one who serves first and to what extent he/she can serve. Participatory and humility are essential principles adopted by servant leadership by giving the workers their role in the decisions related to the work of the organization, which provides them with job satisfaction as they are partners in the decision. Work requirements, considering them a primary priority, and behaving according to the principle of ethics openly, reasonably, and somewhat with others.

Humility refers to a servant leader's ability to put others' accomplishments and talents into perspective. That is, the servant leader must have the courage to admit that they can benefit from the expertise and experiences of others, take into consideration all their observations, and accept constructive criticism from others. Humility appears to an extent when the servant leader puts the interests of others first, facilitates their performance, provides them with essential support, calls them to love, affection, and equality between them, and eliminates envy, hatred, and hatred among them (Abduljalil, 2022).

Humility is when the leader consults the staff for new information. Servant leaders dare to admit that they can benefit from the expertise and experience of others and represent a servant-leader model in cooperation with the staff. Finally, the leader accepts constructive criticism from staff while considering all comments addressed to him/her by staff (Eva et al., 2019).

Table 3. Statements for the Leaders' Humility Diagnosis Indicators of Survey Data

Humility	9. The leader consults the staff for new information.
	10. The leader dares to admit that they can benefit from the expertise and experience of others.
	11. The leader represents a servant leader model in cooperation with the staff.
	12. The leader accepts constructive criticism from staff.
	13. The leader considers all comments addressed to him/her by staff.
	14. The leader admits his/her mistakes to subordinates.

Reliability theory describes the ability of a leader or a system to complete the task for which it is assigned in a given time. It is one of the pillars that help improve the work and reduce the chances of their failure. This dimension of servant leadership focuses on having a clear idea about the nature of organizational work and its strategies and directing it toward the market according to a vision that focuses on achieving the goals of the organization and identifying the characteristics of the surrounding environment and familiarity with the details of work and what is the idea of the requirements of servant leadership, which is the presence of the individual who exercises the leadership process. So a leader possesses a set of tools and personal skills that enable a high level of influence on individuals based on a specific goal that the leader and followers seek (Abdulla, 2018).

As mentioned by Ahmad and Easa (2020), servant leaders express themselves in ways compatible with honest thoughts and inner feelings; one of the dimensions of servant leadership is for the leader to be committed to the perceived ethical code, fair and consistent with others with good intentions. Servant leader reliability can be

demonstrated in organizations from different angles, such as doing what he promised, seeing within the organization, honesty, and his dealings and actions with the followers (Allam, 2020).

The reliability of leadership also measures the servant leadership independent variable, which expresses methods that suit interior ideas and feelings in front of employees (Das et al., 2018). In addition, the leader encourages employees to gain control of procedural and field scientific research skills. In addition, the leaders of the servants are ready to express feelings despite the unwanted consequences, and the leaders of the servants are committed to connecting to what it promises to others (Abdulla, 2018).

Table 4. Statements for the Leaders' Reliability Diagnosis Indicators of Survey Data

Reliability (REL)	15. The leader expresses her or himself in ways that fit inner thoughts and feelings in front of the employees.
	16. The leader encourages the staff to master the skills of procedural and field scientific research.
	17. The leader is willing to express feelings despite undesirable consequences.
	18. The leader is committed to delivering on what he/ she promises to others.

Moral affection and acceptance of others are the basic needs of every human being, not leaders. Since we socialize, belonging to a group where we feel valued is crucial to our psychological well-being. Acceptance of others is at the third level. Before that, only physical requirements appear, such as food or sleep, and the search for security and stability. Moral affection is considered one of the practices and behavior that the leader must have in a way that is reflected in the development of the organization and the workers to build the teams properly. Thus, the achievement results will be high at the level of the individual and the organization, which drives the process of change and gives an outcome of a high level of satisfaction to all parties' organizational processes in the organization (Abdulla, 2018).

Acceptance by others is the ability to understand, receive and win the feelings and attitudes of others, to avoid offensive behaviors and violations, and not to possess hatred from others towards others. To increase the leaders' acceptance by others, they must be empathetic, understand the emotional points of view of others, and take charge

of a sense of enthusiasm, compassion, and tolerance in front of others. Finally, servant leaders must create an organizational climate characterized by the trust that they feel accepted by others (Bambale, 2014; Begzadeh & Nedaei, 2017).

Acceptance of others is necessary for human well-being; pursuing approval from others can cause some people to act in unhelpful or harmful ways. Based on that, acceptance refers to the leader understanding, receiving, and gaining the feelings and attitudes of others (Bucciarelli, 2015). Further, the leaders take the reins with enthusiasm, compassion, and tolerance to those who criticize them. The leader does not seek to possess hatred and dislike from other situations and situations towards others (Eva et al., 2019).

Table 5. Statements for the Leaders' Acceptance Diagnosis Indicators of Survey Data

Acceptance	19. The leader understands, receives, and gains the feelings and attitudes of others.
	20. The leader takes the reins with enthusiasm, compassion, and tolerance to those who criticize him.
	21. The leader does not seek to possess hatred and dislike from other situations and situations towards others.

Providing guidance is a significant component of servant leadership. Guidance is a process that assists those who need help in understanding tasks and adapting to their environment and how to solve problems and make decisions. It is a conscious, continuous, constructive, and planned process. The importance of counseling lies in the fact that it is one of the necessities of modern life and one of the repercussions of renewed human life. The guidance supports the individual to behave effectively and rationally, become more independent, and bring about a positive change in his behavior through self-understanding (Abdulla, 2018). Moreover, the leader provides instructions and directions on what is required to perform the tasks and encourages the employees to cooperate among themselves. In addition, servant leader motivates staff to perform tasks with high-quality performance and maximum potential. Similarly, the administration holds staff responsible for handling the job (Bucciarelli, 2015).

Servant leaders must provide directions and instructions to the subordinates to define what is required of them and what is beneficial for both employees and the

organization, as well as make the tasks move dynamically towards achieving the organization's goals. In this direction, providing directives means providing the right degree of accountability through which the servant leaders can push followers to work with high-quality performance and their maximum potential in a framework that satisfies their needs and desires and achieves their personal goals (Chi et al., 2020).

As mentioned by Das et al. (2018), servant leadership is based on activating the role of workers and leaders in it, developing their capabilities, and making them unleash the energies they possess and possess new skills and energies, in addition to making the work environment accustomed to cooperation, love, and respect between workers and the appreciation of one side for their energies by the organization on the other.

Smith et al. (2010) indicated the role of servant leadership that is concerned with shifting from the traditional leadership style, which relies on domination, to servant leadership, which relies on inspiration in teamwork. Servant leadership helps the leader and subordinates understand their strengths and weaknesses, which makes them feel job satisfaction and loyalty. In addition, servant leaders make their team active people with creative roles and contributions to others.

Table 6. Statements for the Leaders' Providing Guidance Diagnosis Indicators of Survey Data

Providing Guidance	22. The leader provides instructions and directions on what is required to perform the tasks.
	23. The leader encourages the employees to cooperate among themselves
	24. The leader motivates staff to perform the tasks with high-quality performance and maximum potential.
	25. The administration holds staff fully responsible for handling the job.

Servant leadership begins after the leader assumes the server's position in dealing with followers. Authentic leadership does not arise from the exercise of power or the implementation of the actions of the self-interest but from the basic desire to help others. Greenleaf pointed out that this fact is the basis of the leader's greatness, as the primary motive for the servant leader is to urge the followers to be innovative, which in turn leads to organizational success (Hasanuddin et al., 2021). Servant leadership is identified as leadership in which leaders serve with a significant focus on their subordinates, so

they become the first goal, and the affairs and issues of the organization are the second requirements (Patterson, 2003). In addition, servant leadership is a leadership style that integrates dedicated and ethical service to followers and enables followers to participate in their growth and development as individuals and group members (Muller et al., 2018).

Servant leadership is the skill of influencing people to work enthusiastically to achieve specific goals as achieving the interest common public, with a straight moral personality that inspires confidence. Based on this, the servant leader believes that serving the staff is a human responsibility and must be adhered to because serving and encouraging them will further encourage them to put their best efforts into the company's service. The leader also emphasizes the importance of focusing on the right things to achieve remarkable results and innovation in the company's processes. In addition, management and leaders seek to serve and care for others rather than control for their benefit (Aboramadan et al., 2021). Management and leaders emphasize the pursuit of social responsibility in our work because individuals in the company carry social characteristics. Understanding these characteristics further encourages them to use their abilities to serve their work.

Table 7. Statements for the Leaders' Serving Others Diagnosis Indicators of Survey Data

Serving Others	26. The servant leader believes that serving staff to motivate them further is a human responsibility, so the leader must adhere to it.
	27. The leader stresses the importance of focusing on the right things.
	28. The company management and leaders pursue serving and caring for others rather than controlling for self-interest.
	29. The company management and leaders emphasize following social responsibility in our work.

3.4. The Survey Scales

As explained above, the survey questionnaire is divided into three sections. The first is the demographic features of survey participants, namely gender, age group, level of education, management position, and overall job experience. The second section of the survey comprises two parts. The outcome variable is Innovation (INNOV) measures innovation policy, innovative ideas, rules and procedures, and new executive systems,

and measures an innovative approach, establishing research, development, and innovation processes, adopted from (Zhang et al., 2019) and (Goyal and Pitt, 2007). The independent variable, which is Servant Leadership (SL), included Empowerment and Development (ED), Humility (HUM), Reliability (REL), Acceptance (ACC), Provide Guidance (PG), and Serving Others (SO) adopted from (Abdulla, 2018), where all measuring scale: 1=Completely Disagree, 2=Mostly Disagree, 3=Somewhat Disagree, 4=Neither Agree nor Disagree, 5=Somewhat Agree, 6=Mostly Agree, and finally, 7=Completely Agree.

3.5. Data Analysis Method

Data analysis is one of the most critical steps of empirical study. The analysis depends on the data type, study hypotheses, and the study objectives. In this study, the data were collected through a survey form, i.e., the respondents' opinions about service leadership and innovation. The Cronbach alpha coefficient is used to measure the reliability of the survey tool, which was used to obtain experimental data. Proving reliability is among the most critical issues of interest to researchers regarding its impact on the relevance of study findings and their ability to disseminate the results. Reliability is also related to the instruments used in the study and their ability to accurately measure readings from these tools (Hairr et al., 2014).

Alpha Cronbach is a suitable test used to estimate reliability through internal consistency when it means significant reliability (for example, consistency) that the results achieve similar findings when the survey is repeated in the same conditions. However, Alpha Cronbach has some restrictions, so the results affect a small number of elements associated with a decrease in reliability. In addition, the sample size also affects reliability results (Grice, 2001).

For the measurement model, factor analysis is used as a statistical method to investigate the impact of complex phenomena (factors) to extract and reveal the factors that affect a phenomenon and the relationship between the variables; in other words, factor analysis is an analytical approach that starts with a detailed view of the phenomenon and reaches conclusions (Steven, 2008). The basic idea in factor analysis is that one or more factors directly cause a relationship in the phenomenon under investigation. Principal component analysis (PCA) is the process of calculating

components and using them to make changes to the database, and sometimes, only a few principal components are used with the most impact, while others are ignored (Hörmann et al., 2015).

Descriptive statistics is applied as a brief description of a large set of data or a set of methods utilized to facilitate the description of the main features of the data quantitatively by using tables and charts to make it easier to understand, for example, the means provide information about the respondents' perceptions regarding servant leadership and innovation, and reflects the content of the large data that contains the scores for each item to be understood by reader without the need to know the extensive data set.

Correlation analysis is also used, which is considered a significant step because it consists of columns and rows, so the columns represent the study variables. In contrast, the rows represent the developed units. The relationship is called a direct relationship if it is in the same direction of increase or decrease, but if it is not in the same direction, it is called an inverse relationship. The strength of the relationship will be excellent, moderate, or weak. The result of the correlation equation must be between (1) and (1-). However, close to the result is (1), whether with (+) or (-), it means that the correlation is strong) is considered (Moore, 2003). As the final step of data analysis, regression analysis is also used to test the model hypotheses, and the results are shown in Tables and Figures.

4. RESULTS AND FINDINGS

The fourth chapter analyzes the empirical data and shows findings that present the relationship between servant leadership determinants and innovation. For this purpose, this chapter is divided into some parts. The first section deals with the findings of demographic variables, followed by descriptive data analysis of the study variables; reliability and validity are also established—the second part discusses the data distribution's normality. Finally, section three presents the correlation, and regression analysis, which illustrates the strength of the relationship between the variables.

4.1. Demographic Statistics

In this section, the study presents the survey respondents' unique features to understand better the characteristics and differences of the survey participants, who were asked to answer questions about servant leadership and innovation within Iraqi telecommunication companies. These unique features are related to the sample gender, age groups, education level, management position, and overall career experience. Results have shown that the managers and employees from Iraqi telecommunication companies in Kirkuk city who participated in the survey were primarily male at 55.2% (n=139) and females at 44.8 % (n= 113). These results revealed that telecommunication companies in Kirkuk city chose more male individuals as managers than females (see Table 8).

Table 8. Findings of Demographic Variables

Profile	Description	Frequency	Percentage	Total
Gender	Male	139	55.2	252
	Female	113	44.8	
Age Groups	Less than 30 years	23	9.1	252
	30-39 years	77	30.6	
	40-49 years	93	36.9	
	50-59 years	57	22.6	
	60 and above	2	0.8	
Level of Education	Ph.D.	1	0.4	252
	Master	23	9.1	
	Bachelor Degree	171	67.9	
	Diploma Degree	57	22.6	
Management Position	General Manager	14	5.6	252
	CEO	34	13.5	
	Branch Manager	113	44.8	

	Administrative Staff	91	36.1	
Overall Career Experience	Less than five years	39	15.5	
	6-10 years	53	21.0	
	11-15 years	65	25.8	252
	16-20 years	57	22.6	
	21 years and more	38	15.1	

Regarding age group, results showed that 36.9% (n= 93) were aged fall in group 40-49 years old. This was followed by 30.6% (n= 77) of 30-39 years, demonstrating that Iraqi telecommunication companies in Kirkuk city appointed experienced individuals and youth. In addition, 22.6% (n= 57) were 40-49 years old. Moreover, 9.1% (n= 23) belong to the group less than 30 years. Completely, 0.8% (n= 2) dropped in group 60 and above; see Figure 2 below.

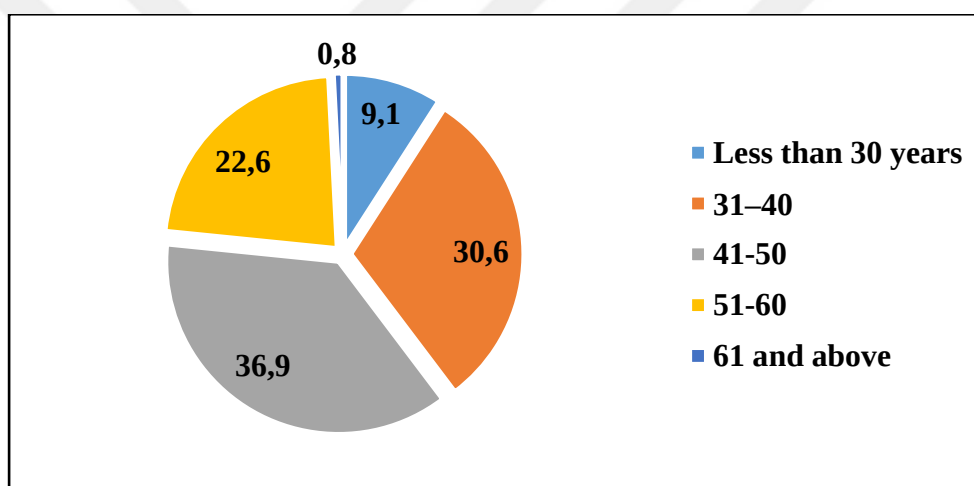


Figure 2. Distribution of the Survey Samples According to Age Groups

Outcomes linked to the level of education of the participants who contributed to the survey showed that respondents with bachelor's degrees reached 67.9% (n= 171)—followed by diploma degree holders reaching 22.6% (n=57). In addition, respondents who hold master's degrees came at 9.1% (n= 23); additionally, Ph.D. degrees came at last place at 0.4% (n=1) individual of the total survey sample. These findings show that most of the survey participants hold a high level of education.

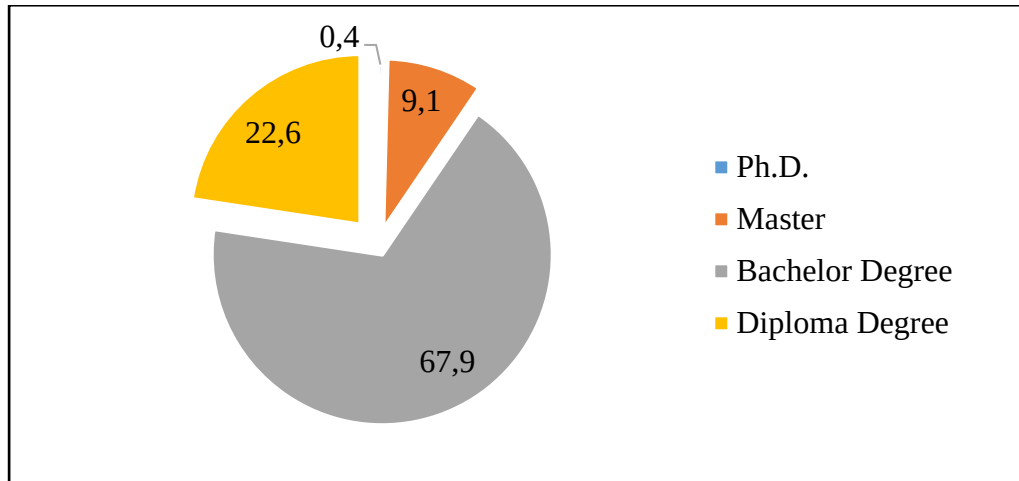


Figure 3. Distribution of the Survey Samples According to Level of Education

Results related to the management position of the survey respondents showed that 44.8% (n= 113) of individuals who participated in the survey were branch managers. This was followed by 36.1% (n=91) of individuals holding administrative staff positions. In addition, individuals holding CEO reached 13.5% (n= 34); finally, 5.6% (n= 14) held general manager of telecommunication companies, see Figure 4 below.

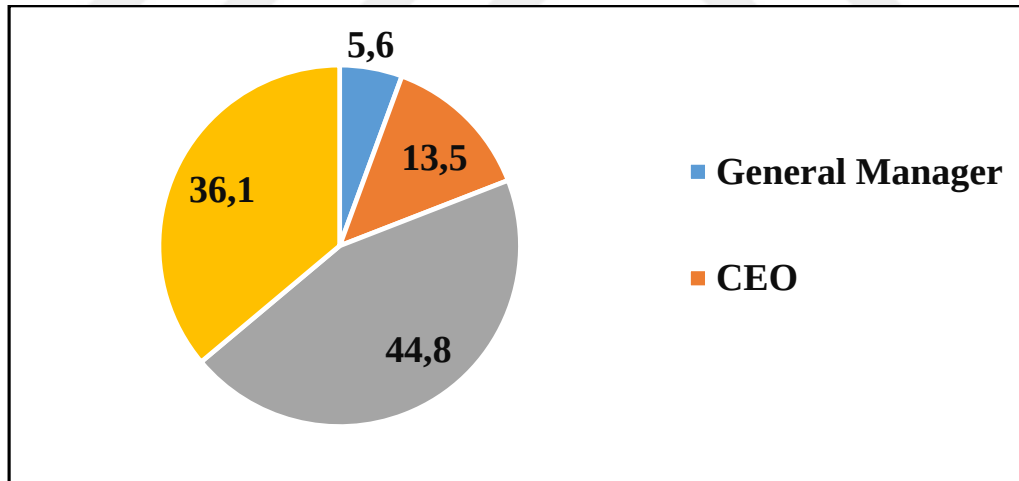


Figure 4. Distribution of the Survey Samples According to Management Position

As shown in Figure 5, 25.8% (n= 65) of the survey participants within telecommunication companies in Kirkuk city experience went to the group 11-15 years. This was followed by a group that experienced 16-20 years, reaching 22.6% (n= 57). In addition, 21% (n=53) of individuals experienced falls in a group of 6-10 years. Outcomes also demonstrated that those experiences reached less than five years

contributed to the survey by 15.5% (n= 49) individuals of the overall samples— furthermore, 15.1% (n= 48) experienced 21 years and more.

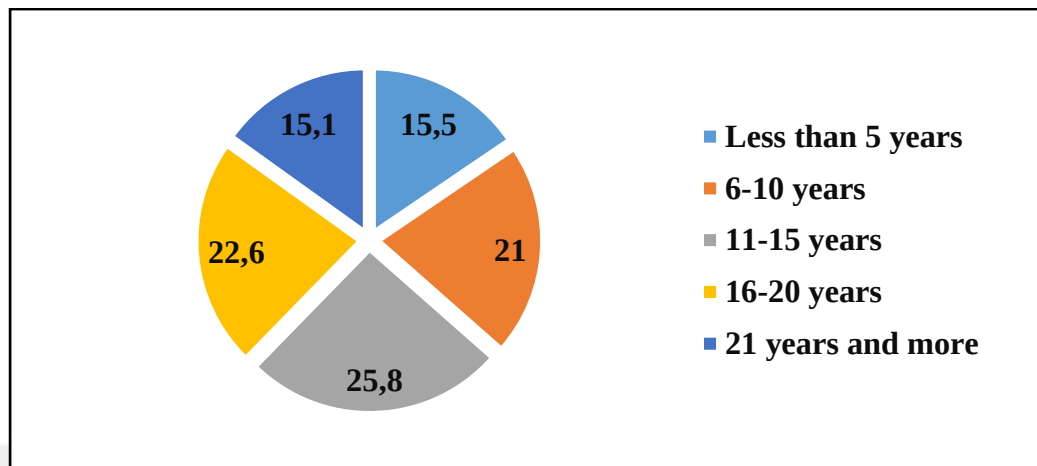


Figure 5. Distribution of the Survey Samples According to the Respondent's Overall Experience

4.2. Descriptive Statistics

This part aims to describe and diagnose the study variables to identify the differences in the respondents' opinions and to give a comprehensive view of the nature of the study variables, which are servant leadership and innovation, based on descriptive statistical tools in analyzing the variables through statistical testing mean, standard deviations and percentages of agreement of the respondents.

The mean is the most well-known and widely used average. It is perhaps one of the most important statistical measures due to its advantages and its inclusion in the calculation of many other statistical measures. The basic idea in calculating the mean of a set of values is that it is equal to the division of the sum of the values by their number. In this context, statistical means are used to shorten large data to determine an average of that data set. The standard deviation is a type of average of the deviations from the mean (Grice, 2001). At the same time, the weight of the agreement is used to measure the significant proportion (agree or disagree) of each component of the survey sample responses representing general managers, CEOs, branch managers, and administrative staff within Iraqi telecommunications companies in Kirkuk.

4.2.1. Results of Servant Leadership Determinants

Outcomes in the Table 9 showed that servant leadership determinants gained higher scores of mean and lower standard deviations (5.69 and 0.660), respectively, and the agreement weight is reached (81.28%); this outcome shows that respondents in telecommunication companies in Kirkuk city agreed that the determinants of servant leadership are significant to motivate staff. However, when we look at the results, it also appears that the survey participants in the telecommunication companies in Kirkuk agreed that innovation is critical, especially in the field of delivery services, because telecommunication services today play an influential role in providing most other services they are available via the Internet.

Where the scores of mean and lower standard deviations (5.82 and 0.450), respectively, and the agreement weight is reached (83.14%); this indicates that telecommunication companies in Kirkuk reached their primary goal by obtaining innovation in their services, in this regard, servant leaders play a significant role. The main task of servant leaders is to serve others, and the organization, since they emphasize achieving the goals and needs of staff for a greater purpose, reaching the organization's mission and justification for its existence. It also encourages participation, generating ideas, innovation, and commitment.

Table 9. Descriptive Statistics Results of all Study Constructs

Constructs	N	Minim	Maxim	Mean	Std. Deviation	Weight of Agreement
SL	252	2.86	6.66	5.69	0.660	81.28%
ED	252	1.00	7.00	5.81	0.831	83%
HUM	252	2.17	7.00	5.76	0.848	82.28%
REL	252	2.25	7.00	5.58	0.941	79.71%
ACC	252	2.00	7.00	5.58	0.907	79.72%
PG	252	2.50	7.00	5.58	0.871	79.71%
SO	252	3.00	6.75	5.63	0.802	80.42%
INNOV	252	4.09	6.73	5.82	0.458	83.14%

Note: SL= Servant Leadership, ED= Empowerment and Development, HUM= Humility, REL= Reliability, ACC= Acceptance, PG= Provide Guidance, SO= Serving Others (SO), and INNOV= Innovation.

When we look at the results, we can see that all components or determinants of servant leadership, namely empowerment and development, humility, reliability, acceptance, providing guidance, and serving others, reached higher values of the mean

(5.81, 5.76, 5.58, 5.58, 5.58, and 5.63). While the scores of standard deviations for all practices are at lower rates (0.831, 0.848, 0.941, 0.907, 0.871, and 0.802), respectively, and the agreement weights are reached (83%, 82.28%, 79.71%, 79.72%, and 79.71% and 80.42); these results explain that empowerment and development of staff by servant leaders is the most critical practice of servant leadership followed by humility and serving others. The above result also showed that servant leaders focus heavily on serving their followers before the organization's interest, thus respecting individuals and raising their values and growth. It is concerned with building group spirit, sharing power and status with staff, and practicing authenticity, all for the common interest of the entire organization and each individual within it and for those whom the organization serves.

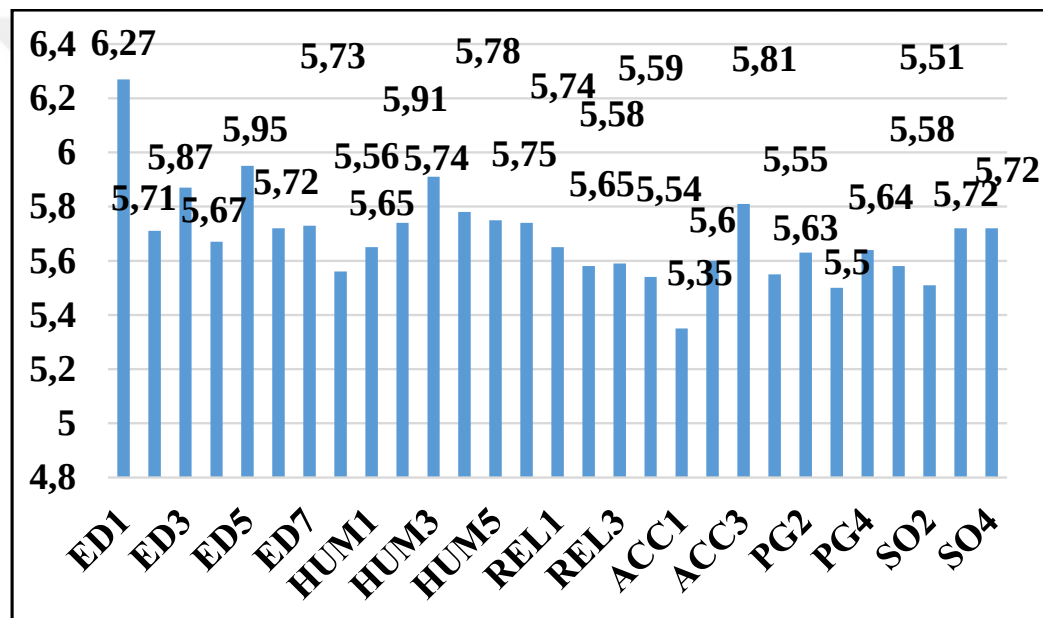


Figure 6. The Means Values of Servant Leadership Determinants

Figure 6 shows the mean values of servant leadership determinants based on respondents' points of view regarding empowerment and development, humility, reliability, acceptance, providing guidance, and serving others, where all values are, which means that the employees and managers in telecommunication companies who participated in the study agreed on the significance of servant leadership determinants.

4.2.2. Results of Innovation

As demonstrated in Table 9 above, the employees and managers' answers indicated good agreements on innovation indicators. However, the results demonstrated

that most indicators of innovation reached over (80%) of the agreement percentage that innovation is the most concern of telecommunication companies in Iraq. Organizational innovation is a key element in the success of organizations, including telecom companies, achieving competitive advantage and a robust society-wide economy. As a result, all enterprises today face a dynamic environment characterized by rapid changes in technology, short product life cycles, and globalization. As a result, telecommunication need to be more innovative and creative than before to compete, survive, lead, and grow.

Table 10. Descriptive Statistics Results of Innovation Indicators

Constructs	N	Minim	Maxim	Mean	Std. Deviation	Weight of Agreement
<i>INNOV1</i>	252	4	7	5.92	0.851	84.57%
<i>INNOV2</i>	252	2	7	5.85	1.044	83.57%
<i>INNOV3</i>	252	1	7	5.87	0.959	83.85%
<i>INNOV4</i>	252	3	7	5.94	1.012	84.85%
<i>INNOV5</i>	252	1	7	5.84	0.974	83.42%
<i>INNOV6</i>	252	3	7	5.69	0.880	81.28%
<i>INNOV7</i>	252	1	7	5.78	1.166	82.57%
<i>INNOV8</i>	252	1	7	5.78	1.074	82.57%
<i>INNOV9</i>	252	1	7	5.77	1.064	82.42%
<i>INNOV10</i>	252	2	7	5.73	1.000	81.85%
<i>INNOV11</i>	252	1	7	5.91	0.990	84.42%

Note: INNOV= Innovation.

The results in Table 10 demonstrated that (INNOV4, INNOV1and INNOV11) reached higher percentages of the overall agreement by (84.85%, 84.57%, and 84.42%) which means that rules and procedures within surveyed telecommunication companies are regularly renewed. In addition, the surveyed companies have a particular innovation policy that affects all their managers and employees. Telecommunication companies' staff, suppliers, and partnerships are selected for their capacity to establish an innovative approach.

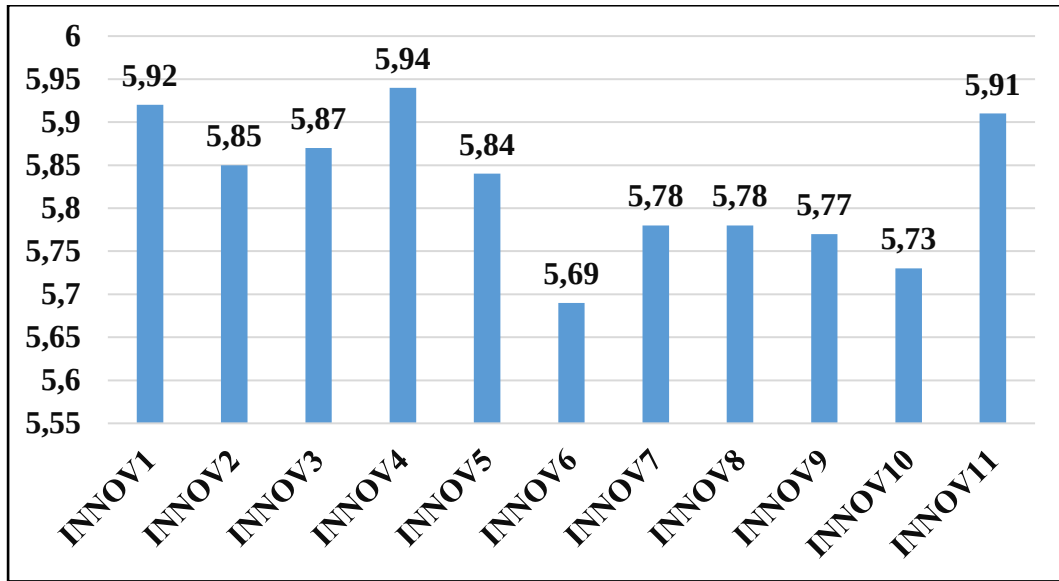


Figure 7. The Means Values of Innovation Indicators

Figure 7 demonstrates that all the innovation indicators reached high mean values, which means that leadership within surveyed companies can implement innovative ideas to improve work effortlessly. Survey participants also agreed that leadership often modifies tasks and functions by applying new executive systems. In addition, surveyed companies have internal and outsourced teams with the same innovative approach. The results also showed that leadership enthusiastically pursues establishing research and development units to improve employee and organizational performance. As a result, companies have much scope for the innovation process. However, the innovation process is increasing from year to year.

Because of the importance of innovation, many researchers have written about how to enhance and improve it. Researchers have explored the various factors that may cause innovation. Some factors are personal and related to the innovative individual, and some are organizational and contextual. For example, studies have found that an innovative personality is characterized by flexibility, independence, openness to others, self-confidence, activity, and motivation; in this context, servant leaders play a significant role as they motivate staff. Job satisfaction and the desire to remain in the organization also have an essential role in enhancing the individual's ability and desire to present innovative ideas for work.

4.3. Reliability and Validity

The survey's reliability was demonstrated using Cronbach's alpha, and the measurement model's validity was examined. Concepts like validity and reliability are used to assess a study's level of quality. Validity refers to the correctness of a scale, whereas reliability refers to the consistency of a scale. Together, they describe how effectively a method, methodology, or test assesses something. Therefore, it is crucial to consider reliability and validity when creating study designs, planning methods, and writing results, especially in the quantitative study (Sekaran & Bougie, 2016).

Table 11. Results of Reliability and Validity

Constructs		N	N of Items	Cronbach's α	%
Servant Leadership	SL	252	29	0.920	100.0
	ED	252	8	0.873	100.0
	HUM	252	6	0.894	100.0
	REL	252	4	0.798	100.0
	ACC	252	3	0.665	100.0
	PG	252	4	0.775	100.0
	SO	252	4	0.865	100.0
Innovation	INNOV	252	11	0.619	100.0

Note: SL= Servant Leadership, ED= Empowerment and Development, HUM= Humility, REL= Reliability, ACC= Acceptance, PG= Provide Guidance, SO= Serving Others (SO), and INNOV= Innovation.

According to Hörmann et al. (2015), reliability and validity are among the most central concepts utilized to assess the quality of the study findings, as they refer to the quality of the data collection methods and techniques of statistical analysis used in the study. Reliability and validity are closely related, but they refer to different purposes that agree with the primary goal, which is to assess the quality of the study, and measurement can be reliable without being valid. However, validity measurement is always reliable in general. Results in Table 11 demonstrated that all values loaded on Cronbach's alpha were higher than 0.6. The overall value loaded on Cronbach's alpha for servant leadership was (0.920), which was good value and reliable.

In this regard, the determinants of servant leadership, namely empowerment and development, humility, reliability, acceptance, providing guidance, and serving others, tested and reached (0.873, 0.894, 0.798, 0.665, 0.775, 0.865), respectively, that all greater than 0.6. In addition, Cronbach's alpha value of innovation was greater than 0.6, where it reached (0.619). These results indicate that the constructs used for measuring

servant leadership determinants, namely empowerment and development, humility, reliability, acceptance, providing guidance, serving others, and innovation, are reliable and valid (see Table 11).

4.3.1. Factor Analysis (Measurement Model)

When establishing a measurement model, the researchers must ensure data accuracy, especially in scientific studies (Steven, 2008). If the data is not specified, the conclusion will not be valid. In order to increase the accuracy of measurement, researchers use different methods. One is to increase the number of data so that the error will be reduced. In other words, this is known as increasing the sample size. Another method is to use standardized statistical tools with less error. The statistical tools used for the measurement are also of great importance. For measurement model testing, factor analysis is used as a statistical method to explain the variance between observed variables that are interrelated in terms of a few observable variables called factors. For instance, differences in various observed variables may reflect changes in two non-observable variables (Moore, 2003). In addition, factor analysis is an effective statistical method used to deal with many variables and factors with varying degrees of relationship that can be reviewed in independent groups. The factorial analysis method, therefore, represents a line of study that is unique from other statistical methods in the social sciences, as it relies on statistical hypotheses (Steven, 2008).

4.3.1.1. The KMO and Bartlett's Tests for Servant Leadership

The KMO and Bartlett's Tests are employed as the first step in factor analysis to clarify whether the model is suitable to measure and demonstrate the strength of partial relationships between variables. When KMO values closer to 1.0 are considered high and strong, values less than 0.5 are unacceptable. Recently, most scholars have indicated that a KMO of at least 0.80 is good enough to produce a factor analysis. KMO test also evaluates the observed coefficients to establish sample adequacy and is assessed according to the following equation:

$$KMO = \frac{\sum_i \sum_{j \neq i} r_{ij}^2}{\sum_i \sum_{j \neq i} r_{ij}^2 + \sum_i \sum_{j \neq i} a_{ij}^2}$$

Where:

r_{ij} = symbolizes the simple relationship coefficient among the variables i, j.

a_{ij} = symbolizes the partial relationship coefficient among the variables i, j.

As presented in Table 12, the KMO result is (0.858), which is high and indicates that the sampling adequacy for the independent variable, servant leadership, is ideal and significant at a p-value of 0.000, less than 0.05. Bartlett's test of sphericity (Approx. Chi-Square) is (3266.961) df (406). Based on that, factor analysis applied to servant leadership is appropriate.

Table 12. TEST of KMO and Bartlett's Test for Servant Leadership

TEST of KMO and Bartlett's		
		Servant Leadership
Measure of Sampling Adequacy (Kaiser-Meyer-Olkin).		0.858
Sphericity Bartlett's Test	Approx. Chi-Square	3266.961
	df	406
	Sig.	0.000
a. Based on correlations		

4.3.1.2. Rotated Component Matrix for Servant Leadership

As indicated by Smith (2002), this step is the method of calculating the value of the factors, which depends on the total correlation coefficients of each factor or variable because it indicates the percentage of variance, which is determined and explained by each factor gives, which itself is the value of the relationship between a variable and a factor extracted from the data. According to Grice (2001), if there are two or more factors, the pattern of factors can be explained by factor rotation. Various methods can be used to rotate the factors, and the lowest value stored falls at the end.

Table 13. Rotated Component of Servant Leadership

Indicators	Factors				
	1	2	3	4	5
<i>ED5</i>	0.879				
<i>ED1</i>	0.856				
<i>ED2</i>	0.807				
<i>ED6</i>	0.805				
<i>ED7</i>	0.710				
<i>ED8</i>	0.686				
<i>ED3</i>	0.657				
<i>ED4</i>	0.630				
<i>HUM5</i>		0.990			
<i>HUM3</i>		0.852			
<i>HUM6</i>		0.782			
<i>HUM2</i>		0.662			
<i>HUM1</i>		0.641			
<i>HUM4</i>		0.570			
<i>REL2</i>			0.895		
<i>REL3</i>			0.879		
<i>REL1</i>			0.790		
<i>REL4</i>			0.630		
<i>ACC3</i>				0.950	
<i>ACC2</i>				0.782	
<i>SO1</i>				0.602	
<i>SO2</i>				0.703	
<i>SO4</i>				0.701	
<i>SO3</i>				0.617	
<i>ACC1</i>				0.577	
<i>PG4</i>					0.880
<i>PG3</i>					0.744
<i>PG1</i>					0.729
<i>PG2</i>					0.622

Method of Extraction: Analysis of Principal Component.

Method of Rotation: Varimax with Kaiser Normalization. a

a. Rotation converged in 12 iterations.

The rotation component matrix tested for servant leadership as a second step since the factor analysis extracted more than two factors. The primary purpose of the component rotation is to know the essential factors related to constructing indicators. Component rotation also measures how the extracted factors differ from each other and provide component loads on any factor. Table 13 shows five main factors explaining 55.472% of the total phenomenon. First, each of these groups contributed differently. The key factors are named according to the selection of the highest value of a variable in each group and by assigning an appropriate name according to the type of variables.

The first factor, empowerment and development, is the most significant, with a high percentage.

4.3.1.3. Percentage of Eigenvalue and Variance Explanations for Servant Leadership

From Table 14, we can realize that the results of factor analysis, which produced five main factors and showed the eigenvalues starting with the first factor, which interprets the most important proportion of the total difference and ending with the last component, which has less percentage of the total difference between components. For example, the total percentage of specific values and different explanations of the factors of servant leadership are five factors that influence innovation (55.472%).

According to the results, the first factor is considered the most influential factor of servant leadership to enhance innovation, which shows the highest difference in the data set, with an analysis rate of (31.665%) for all (8) indicators of this factor. These results indicate that leaders in surveyed companies provide information to their employees when they need to do work well. Leaders also encourage staff to use their talents. They constantly help staff to develop themselves.

The results also showed that leaders motivate staff to innovate new methods and ideas. They enable staff to solve problems on their own and develop the staff's skills. Ultimately, leaders give staff personal power to make decisions and have confidence in themselves.

Table 14. Percentage of Eigenvalue and Variance Explanations for Servant Leadership

Component	Total Variance Explained								
	Initial Eigenvalues ^a			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	12.978	31.665	31.665	12.978	31.665	31.665	6.177	15.070	15.070
2	3.597	8.775	40.440	3.597	8.775	40.440	4.780	11.663	26.733
3	2.340	5.710	46.151	2.340	5.710	46.151	3.790	9.248	35.982
4	1.998	4.875	51.025	1.998	4.875	51.025	3.955	9.651	45.632
5	1.822	4.447	55.472	1.822	4.447	55.472	3.427	8.360	53.993
6	-	-	-						
28	-	-	-						
29	.221	.539	100.000						

Method of Extraction: Analysis of Principal Component.

a. When analyzing a covariance matrix, the initial eigenvalues are the same across the raw and rescaled solution.

4.3.1.4. The KMO and Bartlett's Tests for Innovation

Similar to the above steps, a KMO test was conducted to ensure the appropriateness of the factor analysis for the dependent variable, which is innovation. The results showed that the analysis was appropriate. As shown in Table 15, the KMO result is (0.767), which is high and indicates that the sampling adequacy for the dependent variable, innovation, is significant at a p-value of 0.000, less than 0.05. Bartlett's test of sphericity (Approx. Chi-Square) is (326.815) df (55). Therefore, factor analysis applied to innovation is appropriate based on that.

Table 15. Test of KMO and Bartlett's for Innovation

Test of KMO and Bartlett's		
		Innovation
Measure of Sampling Adequacy (Kaiser-Meyer-Olkin).		0.767
Sphericity Bartlett's Test	326.815	326.815
	55	55
	.000	0.000
a. Based on correlations		

4.3.1.5. Rotated Component Matrix for Innovation

Table 16 demonstrated that the factor analysis produced three main factors for innovation, which explained 48.100% of the total phenomenon. Initially, each of these factors contributed differently. The key factors are named according to the selection of the highest value of a variable in each group and by assigning an appropriate name according to the type of variables.

Table 16. Rotated Component of Innovation

Indicators	Factors		
	1	2	3
<i>INNOV7</i>	0.826		
<i>INNOV6</i>	0.792		
<i>INNOV1</i>	0.765		
<i>INNOV8</i>	0.758		
<i>INNOV4</i>	0.609		
<i>INNOV5</i>	0.608		
<i>INNOV2</i>	0.604		
<i>INNOV3</i>	0.601		
<i>INNOV11</i>		0.695	
<i>INNOV9</i>			0.778
<i>INNOV10</i>			0.628

Method of Extraction: Analysis of Principal Component.

Method of Extraction: Analysis of Principal Component.

Method of Rotation: Varimax with Kaiser Normalization. a

a. Rotation converged in 3 iterations.

The first factor, innovation policy, ideas, and procedures, is the most significant factor, with a high percentage reaching 25.806%. This result showed that surveyed companies have a particular innovation policy that affects all their managers and employees. Thus, the leadership can implement innovative ideas to improve work effortlessly. Leadership also often makes modifications to tasks and functions.

In this regard, rules and procedures are regularly renewed, and new executive systems are applied. Factor analysis also shows that the surveyed companies have internal and external teams with the same innovative approach. While the leadership enthusiastically seeks to establish R&D units to improve employee and organizational performance, the companies in the survey have much scope for the innovation process.

The second factor is the innovative approach relating to the telecommunication companies' staff, suppliers, and partnerships selected for their capacity to establish an innovative approach. The third factor is the innovation process. Innovation within surveyed companies is increasing yearly, and the primary goal should be innovation in fundamental business functions.

4.3.1.6. Percentage of Eigenvalue and Variance Explanations for Innovation

As shown in Table 17, the results of the analysis of factors produced three main factors. First, they presented self-values starting from the first factor, which explains the most important percentage of the total difference, and finishing with the last component, which contains a lower percentage of the total difference between the components - the total percentage of the specific values and different interpretations of innovation factors (48.100%).

Table 17. Percentage of Eigenvalue and Variance Explanations for Innovation

Component	Total Variance Explained								
	Initial Eigenvalues ^a			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
Raw	1	2.866	25.806	25.806	2.866	25.806	25.806	2.865	25.794
	2	1.265	11.390	37.196	1.265	11.390	37.196	1.235	11.118
	3	1.211	10.904	48.100	1.211	10.904	48.100	1.242	11.187
	4	.991	8.922	57.022					
	5	.848	7.639	64.661					
	6	.819	7.377	72.038					
	7	.776	6.991	79.029					
	8	.737	6.640	85.669					
	9	.617	5.556	91.225					
	10	.523	4.710	95.935					
	11	.451	4.065	100.000					
Method of Extraction: Analysis Principal Component.									
a. When analyzing a covariance matrix, the initial eigenvalues are the same across the raw and rescaled solution.									

4.4. Model Assessment and Hypothesis Tests

In this section, the last part of the data analysis, we tested the study hypotheses based on the empirical data obtained from employees and managers working for telecommunication companies in Kirkuk city, Iraq. For this purpose, a relationship test between the model constructs is needed before testing the hypotheses because establishing correlations allows us to test servant leadership determinants' effects on achieving innovation.

4.4.1. Correlation Analysis

As an essential step before testing the model hypotheses, finding relationships between the variables is required since determining relationships is vital to testing regression analysis and ensuring the effect of servant leadership determinants on achieving innovation. As presented in Table 18, there was a significant correlation between servant leadership and innovation, as the value of the total correlation coefficient was (0.327**) with a p-value of (0.000), which is a significant value at the level of (0.01).

Table 18. Result of Correlations Analysis Between the Study Constructs

		SL	ED	HUM	REL	ACC	PG	SO	INNOV	
Spearman's rho	SL	Correlation-Coefficient	1.000							
		Sig- (2-tailed)	.							
		N	252							
	ED	Correlation-Coefficient	.660**	1.000						
		Sig- (2-tailed)	.000	.						
		N	252	252						
	HUM	Correlation-Coefficient	.748**	.472**	1.000					
		Sig- (2-tailed)	.000	.000	.					
		N	252	252	252					
	REL	Correlation - Coefficient	.711**	.450**	.530**	1.000				
		Sig- (2-tailed)	.000	.000	.000	.				
		N	252	252	252	252				
	ACC	Correlation - Coefficient	.740**	.337**	.422**	.519**	1.000			
		Sig- (2-tailed)	.000	.000	.000	.000	.			
		N	252	252	252	252	252			
	PG	Correlation-Coefficient	.712**	.299**	.413**	.385**	.517**	1.000		
		Sig- (2-tailed)	.000	.000	.000	.000	.000	.		
		N	252	252	252	252	252	252		
	SO	Correlation-Coefficient	.668**	.211**	.416**	.340**	.480**	.571**	1.000	
		Sig- (2-tailed)	.000	.001	.000	.000	.000	.000	.	
		N	252	252	252	252	252	252	252	
	INNOV	Correlation-Coefficient	.327**	.274**	.210**	.185**	.195**	.293**	.279*	1.000
		Sig- (2-tailed)	.000	.001	.001	.003	.002	.000	.000	.
		N	252	252	252	252	252	252	252	252
**. Correlation is significant at level 0.01 (2-tailed).										
Note: SL= Servant Leadership, ED= Empowerment and Development, HUM= Humility, REL= Reliability, ACC= Acceptance, PG= Provide Guidance, SO= Serving Others (SO), and INNOV= Innovation.										

The results also displayed that providing guidance, serving others, and empowerment and development, respectively, have significant and good relationships with innovation, compared with other determinants of servant leadership, where the values of r (0.293**, 0.279** and .274**) and relationships are significant at p-values (0.000, 0.000 and 0.001) which all less than (0.01). In addition, three servant leadership determinants, humility, reliability, and acceptance, respectively, have weak relationships with innovation, compared with other determinants, where the values of r (0.210**, 0.185**, and 0.195**) and relationships are significant at p-values (0.001, 0.002 and 0.003) which all less than (0.01).

4.4.2. Direct Impact Analysis

To directly test the impacts of servant leadership and its practices on achieving innovation within telecommunication companies in Kirkuk, the empirical data were analyzed using the SPSS v-26 statistical program through multiple and simple regression analysis. The regression analysis model is one of the most used statistical analysis tools, and regression is concerned with estimating the relationship between quantitative variables; the model can be formulated as follows.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \dots + \varepsilon$$

Where (Y) is the dependent variable, which is innovation; in addition, (X1, X2, X3, X4, X5, and X6) are the independent variables, servant leadership determinants, such as empowerment and development, humility, reliability, acceptance, providing guidance, and serving others and (ε) is the random error. At the same time, (β_0) is a constant value that expresses the value of (Y) when the values (X1, X2, X3, X4, X5, and X6) are equal to zero, and (β_1 , β_2 , β_3 , β_4 , β_5 , and β_6) represent the regression coefficients for the independent variables.

Table 19. Model Summary and F-test of Significance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	0.307 ^a	0.094	0.091	0.43709		
a. Predictors: (Constant), Servant Leadership						
F-test of Significance						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.963	1	4.963	25.979	.000 ^b
	Residual	47.762	250	.191		
	Total	52.725	251			
a. Dependent Variable: Innovation						
b. Predictors: (Constant), Servant Leadership						

The value of (R2) is the coefficient of determination of the change in innovation due to the change in servant leadership determinants. As shown in Table 19, the value of the determination coefficient was (R2 = 0.094), i.e. (9.4%), of the changes that occurred in innovation. The reason is that the independent variables are represented in servant leadership determinants. However, as shown in Table 19, the value of the F-test significance is equal to (25.979) with a p-value of significant (0.000), which is less than

(0.05), and this indicates that the regression model, in general, is a significant model, which shows that the data is ideal for discussing the results.

Table 20. Coefficients, Beta value, t-value, and p-value

Model		Unstandardized Coefficients		Standardized Coefficients	T-test	Sig. P-value
		B	Std. Error	Beta		
1	(Constant)	4.615	.239		19.282	0.000
	Servant Leadership	.213	.042	.307	5.097	0.000
a. Dependent Variable: Innovation						

The constant limit (β_0) is equal to (4.615), and this means that if servant leadership determinants are equal to zero, then the innovation is equal to (4.615). The t-test for the fixed limit (β_0) is equal to (19.282) with a significance of (0.000), which is less than (0.05), meaning that there is a significant effect of servant leadership on achieving innovation; however, the impact is not strong since there is an innovative approach within telecommunication companies in Iraq.

When we further look at the results in Table 20, we can see that the value of (β_1) is equal to (0.307), and the t-test value is (5.097) with a significance of (0.000), which is less than (0.05). Finally, the regression analysis mentioned above shows that the unit increase in servant leadership determinants will improve innovation by (0.307). Consequently, the main hypothesis is supported, stating that servant leadership determinants positively influence achieving innovation within telecommunications companies in Iraq.

As the results presented in Table 21, the impacts of servant leadership determinants such as empowerment and development, humility, reliability, interpersonal acceptance, guidance, and serving others by leaders on achieving innovation within the telecommunications companies in Iraq are tested. Results showed that empowerment and development of employees positively influence achieving innovation within the telecommunications companies in Iraq, with coefficients of impact up to (0.239) and a p-value is (0.000), which is less than (0.05). So, hypothesis (H1) is supported that empowerment and development of employees positively influence achieving innovation.

In addition, the outcome of regression analysis showed that leaders' humility positively influences achieving innovation within the telecommunications companies in Iraq, with coefficients of impact up to (0.283) and a p-value is (0.000), which is less than (0.05). Consequently, hypothesis (H2) is supported by the fact that leaders' humility positively influences achieving innovation.

Table 21. Coefficients, Beta value, t-value, and p-value

Model	Unstandardized Coefficients		Standardized Coefficients	t-test	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.062	0.199		25.482	0.000
ED	0.132	0.034	0.239	3.889	0.000
HUM	0.153	0.033	0.283	4.670	0.000
REL	0.100	0.030	0.206	3.335	0.001
ACC	0.070	0.032	0.138	2.205	0.028
PG	0.125	0.032	0.238	3.871	0.000
SO	0.153	0.035	0.269	4.410	0.000

a. Dependent Variable: Innovation

Note: SL= Servant Leadership, ED= Empowerment and Development, HUM= Humility, REL= Reliability, ACC= Acceptance, PG= Provide Guidance, SO= Serving Others (SO), and INNOV= Innovation.

Results also revealed that leaders' reliability positively impacts achieving innovation within the telecommunications companies in Iraq, with coefficients of impact up to (0.206) and a p-value is (0.001), which is less than (0.05). Accordingly, hypothesis (H3) is supported by the fact that leaders' reliability positively influences achieving innovation.

Meanwhile, in the continued testing of hypotheses, it became clear that leaders' acceptance of others positively impacts achieving innovation within the telecommunications companies in Iraq, with coefficients of impact up to (0.138) and a p-value is (0.028), which is less than (0.05). Hence, hypothesis (H4) is supported by the fact that leaders' interpersonal acceptance of others positively influences achieving innovation.

Furthermore, the results of the effect analysis demonstrated that guiding employees by the leaders positively impact achieving innovation within the telecommunications companies in Iraq with coefficients of impact up to (0.238) and a

p-value is (0.028), which is less than (0.05). Hence, hypothesis (H5) is supported by the fact that guiding employees by the leaders positively influences achieving innovation.

At the end of the hypothesis test, it turned out that serving others by the leaders will motivate the employees and, thus, positively impacts achieving innovation within the telecommunications companies in Iraq with coefficients of impact up to (0.269) and a p-value is (0.000), which is less than (0.05). Hence, hypothesis (H6) is supported that serving others by the leaders will motivate the employees and, thus, positively impact achieving innovation.

4.4.3. Supported and not Supporting the Hypotheses

First of all, it is essential to remind that before hypotheses testing, the reliability of the survey instrument is established by using Cronbach's alpha index, where all values are above 0.6. The measurement model was also tested to establish the model's validity by utilizing factor analysis, and all indicators loaded acceptable values. Additionally, as demonstrated in Table 22, the results supported all study hypotheses linked to the role played by servant leadership in achieving innovation.

Table 22. Results of the Hypotheses Testing

Hypotheses	Statements	Criteria	Supported and not Supporting the Hypotheses
Main Hypothesis	Servant leadership determinants positively influence on innovation in the communications companies in Iraq.	$\beta 1=0.307$, $t=5.097$, $p=0.000$	Supported
H1	There is a positive impact of empowerment and development on innovation.	$\beta 1=0.239$, $t=3.889$, $p=0.000$	Supported
H2	There is a positive impact of leaders' humility on innovation.	$\beta 1=0.283$, $t=4.670$, $p=0.000$	Supported
H3	There is a positive influence of leaders' reliability on innovation.	$\beta 1=0.206$, $t=3.335$, $p=0.001$	Supported
H4	There is a positive impact of acceptance on innovation.	$\beta 1=0.138$, $t=2.205$, $p=0.028$.	Supported
H5	There is a positive impact of providing guidance on innovation.	$\beta 1=0.238$, $t=3.871$, $p=0.000$.	Supported
H6	There is a positive impact of serving others on innovation.	$\beta 1=0.269$, $t=4.410$, $p=0.000$.	Supported

CONCLUSIONS AND DISCUSSIONS

This chapter presents the discussions of findings from statistical analysis, especially tested study hypotheses; accordingly, the subjects of this chapter are divided into several sections, which first show discussions of the results of the impact of servant leadership on innovation. Then discussed, the results of each servant leadership determinant's impact on innovation led to the conclusions. The study also provides several general recommendations for the benefit of telecommunication companies in Kirkuk and Iraq. Finally, the study's theoretical and managerial implications were addressed and ended, along with the study's limitations.

The Impact of Servant Leadership Determinants on Innovation

This section covered the discussions of servant leadership's impact on innovation and included its determinants, namely empowerment and development, leaders' humility, leaders' reliability, acceptance, providing guidance, and serving others. Based on the survey respondents in telecommunication companies in Kirkuk city- Iraq, the findings showed that servant leadership determinants are considerable in motivating staff to reach innovation in their work. The survey participants also agreed that innovation is critical, especially in the field of delivery services, because telecommunication services today play an influential role in providing services that are available via the internet. Thus, telecommunication companies in Kirkuk reached their primary goal by obtaining innovation in their services; in this context, servant leaders played a significant role. These findings align with Burton et al. (2017) showed that servant leaders serve others, mainly employees and the organization, since they emphasize achieving the goals and needs of staff for a greater purpose, reaching the organization's mission and justification for its existence. It also encourages participation, generating ideas, innovation, and commitment. In the same regard, Begzadeh and Nedaei (2017) showed that innovative ideas consistent with procedures and processes at work can be generated through the availability of contextual factors at the level of the organization; thus, leaders, in particular, servant leaders, play a significant role in motivating employees to do their best.

The Impact of Empowerment and Development on Innovation

Results explained that servant leaders' empowerment and staff development is the most critical servant leadership practice that impacts innovation. This aligns with Ahmad and Easa (2020) finding that leadership is a significant matter of innovation; when leaders empower and develop staff, they increase individuality, decision-making ability, and responsibility for decision-making. Empowering employees ensures that ideas are provided with complete freedom and enough information to do what they want to successfully achieve organizational goals instead of forcing them to do what others want, significantly impacting innovation in Human Resources(HR).

According to Begzadeh & Nedaei (2017), empowerment and development refer to encouraging individuals to participate in decision-making that affects their actions and innovative ideas, which means that assistance is provided to create new ideas and turn them into actions. This result suggests that employee capacity building and empowerment increase employee capacity and encourage them to use their abilities to serve the organization's goals through innovation and innovative performance.

The Impact of Leaders' Humility on Innovation

The study findings revealed that leaders' humility is vital in reaching innovation. This result indicates that a servant leader's humility and belief in employees' abilities are evident when willing to consult staff for new information and ideas. This places responsibility on employees and encourages them to have innovative ideas and improve the organization with their abilities (Chi et al., 2020). This result is also similar to the finding of (Gandolfi & Stone, 2018), who showed that the humility of leaders who follow the style of serving and caring for their followers indicates that servant leaders believe in the abilities and talents of others and encourage them, which directly influences them to use them to achieve the organization's goals.

At the same time, self-love means that servant leaders must have the courage to acknowledge that they can benefit from the expertise and experience of others, consider all their comments, and accept constructive criticism from others. The source of all innovative ideas is people or human capital (Abduljalil, 2022). Servant leadership is established when leaders put the interests of others first, facilitate them, and provide

them with substantial support, which directly encourages them to be confident and apply innovative ideas to organizational processes (Han & Chen, 2018),

The Impact of Leaders' Reliability on Innovation

Based on the study findings, leaders' reliability is necessary for innovation since leaders' reliability results from interaction, past experiences, current position, and support. However, reliability automatically increases by building professional experience and working with leading thought leaders and influencers with solid reputations in their fields that motivate employees to provide innovative ideas and solutions (Ilsever and Joe, 2016). This is also in line with Ahmad and Easa (2020), that servant leaders direct themselves in ways consistent with honest thoughts and inner feelings; one of the dimensions of servant leadership is that the leader adheres to a perceived code of ethics, is fair and consistent with others who have good intentions, which creates a healthy environment for working, coordinating and exchanging different capabilities support innovation.

The Impact of Acceptance on Innovation

The study findings showed that leaders' acceptance by others is vital in reaching innovation. In line with this, Begzadeh & Nedaei (2018) believed that acceptance of leaders by others is the ability to recognize, understand, and win over the feelings and attitudes of others. Leaders who believe in serving their followers are more likely to carry the above traits, while servant leaders avoid offensive behavior and violations and lack of hatred from others towards others; as a result, they significantly influence others or organizations' members to reach better performance and obtaining innovation in HR activities. This result is also in line with Abdulla (2018) showed argued that to increase acceptance by others, and leaders must be empathetic, understand the emotional perspectives of others, and assume a sense of enthusiasm, compassion, and tolerance toward others, which produces a spirit of cooperation and competition to serve the organization better and provide innovative ideas in problem-solving or innovation in organizational tasks.

The Impact of Providing Guidance on Innovation

Results explained that providing guidance by leaders impacts innovation. This is in line with Aboramadan, Dahleez & Hamad (2021) mentioned that providing guidance by leaders is essential to servant leaders since they constantly assist and guide organization members to achieve common goals, which requires innovative ideas by human elements. Guidance is a process that helps people who need help understand tasks adapt to their environment, how to solve problems, and make decisions that contribute to innovation and creative problem-solving. In this context, Ahmad & Easa (2020) argued that providing guidance is a determined, continuous, constructive, and planned process, and the significance of guidance lies in the fact that it is one of the necessities to reach innovative performance. The guidance encourages the employees to behave effectively and rationally, become more independent, and bring about a positive change in their behavior through self-understanding and innovation (Abdulla, 2018).

The Impact of Serving Others on Innovation

It was hypothesized that serving others by servant leaders impacts innovation in the work of telecommunication and mobile services companies. The finding supported this hypothesis that when servant leaders focus heavily on serving their followers before the organization's interest, respecting individuals, raising their values, and growing innovative processes. This result is similar to Chi et al.(2020), who showed that serving others by servant leaders mainly means building team spirit, sharing power and position with staff, and practicing authenticity, all for the common benefit of the whole organization and each individual within the organization and the organization serves creates coordination that promotes a culture of innovation in the workplace. Serving others or employees by servant leaders establishes a context in which employees feel acknowledged and respected for their abilities in return for contributing new and innovative ideas, which often stem from human ingenuity (Jaiswal & Dhar, 2017). Additionally, collective activity directs reactions, knowledge, and behavior toward crucial organizational goals, which can be believed as the framework that promotes innovation (Bucciarelli, 2015).

The Implications of the Study

This study has important managerial and theoretical implications. The theoretical contribution is that there is still a lack of studies on the impact of servant leadership on innovation within the service sector, especially telecommunication. Innovation is vital to organizations, including telecommunication companies, in achieving competitive advantage. In this context, Duan et al. (2018) mentioned that all organizations today face a dynamic environment characterized by rapid technological changes, short product life cycles, and globalization. Based on this, telecommunication companies must be more innovative and creative to compete, grow and lead. From this perspective, researchers like (Abduljalil, 2022; Bao & Zhao 2018; Smith et al., 2010) have asserted the role of servant leadership, which is related to changing the traditional leadership style, which relies on dominance, to servant leadership associated with inspiration-based teamwork. Servant leadership helps leaders and employees understand their strengths and weaknesses, enabling them to feel job satisfaction and loyalty and strive for innovation in their work.

The results also showed that leadership enthusiastically pursues establishing research and development units to improve employee and organizational performance. As a result, companies have much scope for the innovation process. However, the innovation process is increasing from year to year. As mentioned by Das et al. (2018), one of the characteristics of servant leadership is that it stimulates the role of workforces and leaders and develops their abilities, besides making them release the energies they possess and have new skills and energy, in addition to the work environment accustomed to cooperation, and respect among them that motivate innovation.

The results demonstrated that rules and procedures within surveyed telecommunication companies are regularly renewed. They also have a particular innovation policy that affects all their managers and employees. Telecommunication companies' staff, suppliers, and partnerships are selected for their capacity to establish an innovative approach. In addition, survey participants agreed that leadership often modifies tasks and functions by applying new executive systems. In addition, surveyed companies have internal and outsourced teams with the same innovative approach.

Regarding managerial implications, the study provides unique information to managers within telecommunication companies that leadership is vital in influencing

human resources and encouraging them to reach innovation. When human resources are managed effectively, they devote more of their abilities to serving their company. In addition, servant leadership can significantly impact employees and motivate them more because this type of leadership pays more attention to employee needs. Furthermore, employees with positive organizational energy will join emotionally, be enthusiastic, mentally alert, and ready to mobilize exceptional efforts to achieve organizational goals, which is reflected in the generation of new and valuable ideas for the organization.

Recommendations and Future Research

First of all, one of the critical issues that must be considered by managers and the rest of the directors within telecommunication companies is the issue of enhancing the emotional, cognitive, and behavioral energy of the employees, especially by adopting servant and transformational leadership styles that inspire others and motivate them intellectually and behaviorally. In this context, telecommunication companies can prepare seminars emphasizing activity and vitality and the importance of considering aspects of work and caring for employees' feelings and social needs and problems. In addition, it has a good role in reaching innovation in human resources.

Managers can consider many factors to enhance the innovation process. Among the most important of these factors is considering the process of building mutual trust, enhancing job satisfaction and the sense of employees in the presence of leadership support, support for the company, and encouragement in the process of participating in decision-making, changing all measures that contradict these factors, as well as adopting reward systems that take entrepreneurship and innovative initiatives for all members of the company without exception. In addition, servant leaders must provide directions and instructions to the employees to define what is required and beneficial for both employees and the organization, as well as make the tasks move dynamically towards achieving innovation. In this direction, providing directives means providing the right degree of accountability through which the servant leaders can push followers to work with high-quality performance and their maximum potential in a framework that satisfies their needs and desires and achieves innovation (Chi et al., 2020).

Since servant leadership aims at improving working conditions within the organization and significantly impacts functional and personal relationships among the

members working in the organization, this improves the organizational climate that supports innovation. Finally, telecommunications companies need to invest in the impact of servant leadership practices because the results showed that they have an influential role in creating an excellent organizational environment that encourages employees to submit innovative ideas in organizational processes (Lemoine and Blum, 2019; Canavesi and Minelli, 2021).

Because of the importance of servant leadership and the lack of research in improving innovation, especially in the service sector, the study suggests that future research should test the same variables in the service sector, for example, education and higher education, to ensure the same results. Other variables, such as creative performance, the mediating role of the ethical environment, and leadership intelligence, can be used. The study also suggests that future research should include more data in order to generalize the results further.

Conclusions

The primary purpose of this study was to explore the impact of servant leadership determinants on innovation: a case study of telecommunication companies in Kirkuk City. As a significant and necessary step, the reliability and validity were established by applying Cronbach's alpha and measurement model before hypotheses testing. The results supported all the hypotheses that servant leadership determinants positively enhance the process within telecommunication companies to reach innovation in providing telecommunication services.

In this study, it was hypothesized that servant leadership determinants impact innovation in the work of telecommunication and mobile services companies, which are less tested in the service sector, especially from the perspective of employees and managers of telecommunication companies. Results correlation analysis showed a significant relationship between servant leadership and innovation. The results also displayed that providing guidance to employees, serving others by servant leaders, and empowering and developing have significant and good relationships with innovation. In addition, leaders' humility, reliability, and interpersonal acceptance have weak relationships with innovation.

To clarify the direct impact of servant leadership determinants and demonstrate differences in impacts according to practices, we conducted regression analysis for the study hypotheses. The results showed that servant leadership determinants would improve innovation within telecommunications companies in Iraq. The regression analysis showed that leaders' humility is the most effective practice of servant leaders that positively influences achieving innovation within the telecommunications companies in Iraq. Serving others by the leaders will motivate the employees and, thus, positively influences achieving innovation within the telecommunications companies in Iraq.

Results also demonstrated that empowerment and development of employees positively influence achieving innovation. In addition, the results of the effect analysis demonstrated that guiding employees by the leaders positively influences achieving innovation within the telecommunications companies in Iraq. Results revealed that leaders' reliability positively influences achieving innovation within the telecommunications companies in Iraq. Furthermore, results clearly showed that interpersonal acceptance of others positively influences achieving innovation within the telecommunications companies in Iraq; however, the impact is weak compared to other servant leadership determinants.

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LIST OF ATTACHMENTS

Appendix (A1): Questionnaire Form

TC.

KARABUK UNIVERSITY

Dear Sir / Madam (Managers)

I am a master's student at Karabuk University, institute of graduate programs, department of business administration. This survey aimed to gain empirical data from telecommunication companies related to " **Servant Leadership and its Role in Achieving Innovation: A case study of telecommunication companies in Kirkuk City.**"

I would appreciate it if you would take some time to answer the survey questions. The answers reflect your field knowledge of servant leadership determinants and the impact of those determinants on strengthening innovation within the company, as these data will influence its completion. However, we assure you that the data will be used for scientific research purposes and will remain confidential.

Thanks in advance for your time.

Dalshad Abdullah SAEED
Karabuk University
Master Student

Assist. Prof. Dr. Essia Ries Ahmed ABU
RIE Karabuk University
Supervisor

Section One: General Information

Gender	Male	Level of Education	High School
	Female		Bachelor Degree
			Master Degree
Age Group	Less than 30 years		Management Position
		General Manager	
	CEO		
	Branch Manager		
	30-39	Overall Job Experience	Administrative Staff
			Less than five years
	40-49		6-10 years
	50-59		11-15 years
	60 and above		16-20 years
			21 years and more

Section Two: Survey

This section of the survey comprises two parts. The outcome variable is **Innovation (INNOV)** measures innovation policy, innovative ideas, rules and procedures, and new executive systems, and measures an innovative approach, establishing research, development, and innovation processes.

The independent variable, which is Servant Leadership (SL), included **Empowerment and Development (ED)**, **Humility (HUM)**, **Reliability (REL)**, **Acceptance (ACC)**, **Provide Guidance (PG)**, and **Serving Others (SO)**.

In each part, please read the statements; for answers to each statement, use the scale below:

1=Completely Disagree, 2=Mostly Disagree, 3=Somewhat Disagree, 4=Neither Agree nor Disagree, 5=Somewhat Agree, 6=Mostly Agree, and 7= Completely Agree.

The Scale of Innovation (INNOV)

INNOV1	Our company has a particular innovation policy that affects all its managers and employees.	1	2	3	4	5	6	7
INNOV2	Our company leadership can implement innovative ideas to improve work effortlessly.	1	2	3	4	5	6	7
INNOV3	Our company leadership often makes modifications to tasks and functions.	1	2	3	4	5	6	7
INNOV4	Rules and procedures within our company are regularly renewed.	1	2	3	4	5	6	7
INNOV5	Our company is applying new executive systems.	1	2	3	4	5	6	7
INNOV6	Our company has internal and outsourced teams with the same innovative approach.	1	2	3	4	5	6	7
INNOV7	The leadership enthusiastically pursues establishing research and development units to improve employee and organizational performance.	1	2	3	4	5	6	7
INNOV8	There is much scope for the innovation process within our company.	1	2	3	4	5	6	7
INNOV9	The innovation process in our company is increasing from year to year.	1	2	3	4	5	6	7
INNOV10	Our company's primary goal should be innovation in fundamental business functions.	1	2	3	4	5	6	7
INNOV11	Our company staff, suppliers, and partnerships are selected for their capacity to establish an innovative approach.	1	2	3	4	5	6	7

Source: Zhang, Y., Khan, U., Lee, S., and Salik, M. (2019). The Influence of Management Innovation and Technological Innovation on Organization Performance. A Mediating Role of Sustainability, *Sustainability*, 11(495), pp.1-21.

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The Scale of Servant Leadership (SL)

Empowerment and Development (ED)								
ED1	The leader provides the information when they need to do the job well.	1	2	3	4	5	6	7
ED2	The leader encourages staff to use their talents while at work.	1	2	3	4	5	6	7
ED3	The leader always helps staff to develop themselves.	1	2	3	4	5	6	7
ED4	The leader motivates staff to innovate new methods and ideas.	1	2	3	4	5	6	7
ED5	The leader makes staff able to solve problems by themselves.	1	2	3	4	5	6	7
ED6	The leader considers the personal opinion of the staff.	1	2	3	4	5	6	7
ED7	The leader develops the leadership capabilities of the staff.	1	2	3	4	5	6	7
ED8	The leader gives staff the personal strength to make decisions and confidence in themselves.	1	2	3	4	5	6	7
Humility (HUM)								
HUM1	The leader consults the staff for new information.	1	2	3	4	5	6	7
HUM2	The leader dares to admit that they can benefit from the expertise and experience of others.	1	2	3	4	5	6	7
HUM3	The leader represents a servant leader model in cooperation with the staff.	1	2	3	4	5	6	7
HUM4	The leader accepts constructive criticism from staff.	1	2	3	4	5	6	7
HUM5	The leader considers all comments addressed to him/her by staff.	1	2	3	4	5	6	7
HUM6	The leader admits his/her mistakes to subordinates.	1	2	3	4	5	6	7
Reliability (REL)								
REL1	The leader expresses her or himself in ways that fit inner thoughts and feelings in front of the employees.	1	2	3	4	5	6	7
REL2	The leader encourages the staff to master the skills of procedural and field scientific research.	1	2	3	4	5	6	7
REL3	The leader is willing to express feelings despite undesirable consequences.	1	2	3	4	5	6	7
REL4	The leader is committed to delivering on what he/ she promises to others.	1	2	3	4	5	6	7
Acceptance (ACC)								
ACC1	The leader understands, receives, and gains the feelings and attitudes of others.	1	2	3	4	5	6	7

ACC2	The leader takes the reins with enthusiasm, compassion, and tolerance to those who criticize him.	1	2	3	4	5	6	7
ACC3	The leader does not seek to possess hatred and dislike from other situations and situations towards others.	1	2	3	4	5	6	7
Provide Guidance (PG)								
PG1	The leader provides instructions and directions on what is required to perform the tasks.	1	2	3	4	5	6	7
PG2	The leader encourages the employees to cooperate among themselves	1	2	3	4	5	6	7
PG3	The leader motivates staff to perform the tasks with high-quality performance and maximum potential.	1	2	3	4	5	6	7
PG4	The administration holds staff fully responsible for handling the job.	1	2	3	4	5	6	7
Serving Others (SO)								
SO1	The leader considers that serving the staff is a human responsibility that must be adhered to.	1	2	3	4	5	6	7
SO2	The leader stresses the importance of focusing on the right things.	1	2	3	4	5	6	7
SO3	The company management and leaders pursue serving and caring for others rather than controlling for self-interest.	1	2	3	4	5	6	7
SO4	The company management and leaders emphasize following social responsibility in our work.	1	2	3	4	5	6	7

Abdulla, D. F. (2018). The role of Servant Leadership in achieving job involvement: An Analytical Study of the views of a sample of teachings staff at the University of Suleimani. *Journal of Administrative and Economic Sciences, Kirkuk University*, 8(1), 227- 278.

Appendix (A2): Descriptive

Respondent's Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	139	55.2	55.2	55.2
	Female	113	44.8	44.8	100.0
	Total	252	100.0	100.0	

Respondent's Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 30 years	23	9.1	9.1	9.1
	31–40	77	30.6	30.6	39.7
	41-50	93	36.9	36.9	76.6
	51-60	57	22.6	22.6	99.2
	61 and above	2	.8	.8	100.0
	Total	252	100.0	100.0	

Respondent's Management Position					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	General Manager	14	5.6	5.6	5.6
	CEO	34	13.5	13.5	19.0
	Branch Manager	113	44.8	44.8	63.9
	Administrative Staff	91	36.1	36.1	100.0
	Total	252	100.0	100.0	

Respondent's Level of Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ph.D.	1	.4	.4	.4
	Master	23	9.1	9.1	9.5
	Bachelor Degree	171	67.9	67.9	77.4
	Diploma Degree	57	22.6	22.6	100.0
	Total	252	100.0	100.0	

Respondent's Overall Experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than five years	39	15.5	15.5	15.5
	6-10 years	53	21.0	21.0	36.5
	11-15 years	65	25.8	25.8	62.3
	16-20 years	57	22.6	22.6	84.9
	21 years and more	38	15.1	15.1	100.0
	Total	252	100.0	100.0	

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
SL	252	2.86	6.66	5.6903	.66031
ED	252	1.00	7.00	5.8100	.83159
HUM	252	2.17	7.00	5.7619	.84825
REL	252	2.25	7.00	5.5883	.94146
ACC	252	2.00	7.00	5.5873	.90733
PG	252	2.50	7.00	5.5813	.87166
SO	252	3.00	6.75	5.6319	.80257
Valid N (listwise)	252				

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ED1	252	1	7	6.27	1.278
ED2	252	1	7	5.71	1.198
ED3	252	1	7	5.87	1.096
ED4	252	1	7	5.67	1.136
ED5	252	1	7	5.95	1.153
ED6	252	1	7	5.72	1.251
ED7	252	1	7	5.73	1.078
ED8	252	1	7	5.56	1.259
HUM1	252	1	7	5.65	1.099
HUM2	252	1	7	5.74	1.137
HUM3	252	1	7	5.91	1.289
HUM4	252	1	7	5.78	1.264
HUM5	252	1	7	5.75	1.267
HUM6	252	2	7	5.74	1.102
REL1	252	2	7	5.65	1.200
REL2	252	1	7	5.58	1.388
REL3	252	1	7	5.59	1.238
REL4	252	1	7	5.54	1.192
ACC1	252	1	7	5.35	1.283
ACC2	252	1	7	5.60	1.144
ACC3	252	1	7	5.81	1.171
PG1	252	1	7	5.55	1.211
PG2	252	2	7	5.63	1.069
PG3	252	2	7	5.50	1.216
PG4	252	1	7	5.64	1.198
SO1	252	1	7	5.58	1.196
SO2	252	1	7	5.51	1.199
SO3	252	2	7	5.72	1.095
SO4	252	3	7	5.72	.984
Valid N (listwise)	252				

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
INNOV	252	4.09	6.73	5.8268	.45832
Valid N (listwise)	252				

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
INNOV1	252	4	7	5.92	.851
INNOV2	252	2	7	5.85	1.044
INNOV3	252	1	7	5.87	.959
INNOV4	252	3	7	5.94	1.012
INNOV5	252	1	7	5.84	.974
INNOV6	252	3	7	5.69	.880
INNOV7	252	1	7	5.78	1.166
INNOV8	252	1	7	5.78	1.074
INNOV9	252	1	7	5.77	1.064
INNOV10	252	2	7	5.73	1.000
INNOV11	252	1	7	5.91	.990
Valid N (listwise)	252				

Appendix (A3): Reliability

Scale: ALL VARIABLES

Case Processing Summary			
		N	%
Cases	Valid	252	100.0
	Excluded ^a	0	.0
	Total	252	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.920	29

Reliability Statistics	
Cronbach's Alpha	N of Items
.619	11

KMO and Bartlett's Test ^a		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.858
Bartlett's Test of Sphericity	Approx. Chi-Square	3266.961
	df	406
	Sig.	.000

a. Based on correlations

Total Variance Explained										
	Component	Initial Eigenvalues ^a			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
		Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
Raw	1	12.978	31.665	31.665	12.978	31.665	31.665	6.177	15.070	15.070
	2	3.597	8.775	40.440	3.597	8.775	40.440	4.780	11.663	26.733
	3	2.340	5.710	46.151	2.340	5.710	46.151	3.790	9.248	35.982
	4	1.998	4.875	51.025	1.998	4.875	51.025	3.955	9.651	45.632
	5	1.822	4.447	55.472	1.822	4.447	55.472	3.427	8.360	53.993
	6	1.749	4.268	59.740	1.749	4.268	59.740	2.355	5.747	59.740
	7	1.386	3.381	63.121						
	8	1.355	3.307	66.428						
	9	1.303	3.180	69.608						
	10	1.118	2.728	72.336						
	11	1.042	2.543	74.879						
	12	.954	2.329	77.207						
	13	.883	2.155	79.362						
	14	.871	2.125	81.487						
	15	.787	1.920	83.407						
	16	.732	1.787	85.194						
	17	.693	1.691	86.885						
	18	.648	1.580	88.466						
	19	.630	1.537	90.003						
	20	.561	1.369	91.372						
	21	.540	1.318	92.689						

22	.493	1.204	93.893						
23	.472	1.152	95.045						
24	.440	1.073	96.119						
25	.407	.992	97.111						
26	.370	.903	98.015						
27	.314	.766	98.781						
28	.279	.681	99.461						
29	.221	.539	100.000						

Extraction Method: Principal Component Analysis.

a. When analyzing a covariance matrix, the initial eigenvalues are the same across the raw and rescaled solution.

Rotated Component Matrix ^a												
	Raw						Rescaled					
	Component						Component					
	1	2	3	4	5	6	1	2	3	4	5	6
ED1	.856	.324	.131	.043	.219	-.158	.670	.254	.102	.034	.171	-.124
ED2	.807	.130	.040	.320	.083	.458	.674	.109	.033	.267	.069	.382
ED3	.657	.280	.121	.075	.346	-.192	.599	.256	.111	.068	.316	-.175
ED4	.630	.098	.197	.198	.371	-.029	.555	.087	.174	.174	.327	-.025
ED5	.879	.112	.059	.190	.183	.072	.763	.098	.051	.164	.159	.063
ED6	.805	-.056	.401	.123	-.218	.343	.644	-.045	.321	.099	-.174	.274
ED7	.710	.014	.226	.169	.045	.011	.659	.013	.210	.157	.042	.010
ED8	.686	-.080	.229	.206	.051	.649	.545	-.064	.182	.164	.041	.516
HUM1	.437	.214	.226	.058	.641	.079	.398	.195	.205	.052	.493	.072
HUM2	.410	.181	.346	.055	.362	.438	.361	.159	.304	.048	.318	.385
HUM3	.224	.130	.544	.234	.852	.032	.174	.101	.422	.182	.661	.025
HUM4	.415	.072	.511	.179	.570	.430	.328	.057	.405	.142	.451	.340
HUM5	.260	.159	.990	.171	.185	.064	.205	.126	.781	.135	.146	.050
HUM6	.144	.087	.782	.137	-.002	.286	.131	.079	.710	.124	-.002	.260
REL1	.323	.126	.790	.226	.296	-.269	.269	.105	.659	.188	.247	-.224
REL2	.416	.087	.137	.895	.441	.081	.300	.063	.099	.645	.318	.058
REL3	.312	.032	.216	.879	.209	.170	.252	.026	.174	.710	.169	.138
REL4	.213	.318	.029	.630	.533	-.140	.179	.266	.025	.528	.447	-.117
ACC1	.145	.346	.216	.950	-.134	-.027	.113	.270	.169	.740	-.104	-.021
ACC2	.058	.399	.124	.602	.140	.083	.051	.349	.108	.526	.122	.073
ACC3	-.011	.782	.207	.285	-.055	.140	-.009	.668	.176	.244	-.047	.119
PG1	.511	.729	.340	.124	-.124	-.043	.422	.602	.281	.103	-.102	-.035
PG2	.295	.622	.408	.116	.021	.016	.276	.488	.382	.109	.020	.015
PG3	.250	.744	.172	-.062	.410	.364	.206	.612	.142	-.051	.337	.299
PG4	.044	.880	-.108	.099	.234	-.034	.037	.734	-.090	.083	.196	-.028
SO1	-.129	.703	.033	.019	.158	.830	-.108	.454	.028	.016	.132	.693
SO2	.111	.701	-.034	.213	.478	.269	.092	.585	-.028	.178	.398	.224
SO3	.038	.316	-.063	.199	.577	.129	.035	.288	-.057	.181	.527	.118
SO4	.101	.617	.074	.218	.212	.025	.103	.627	.075	.222	.216	.026

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. ^A

a. Rotation converged in 12 iterations.

KMO and Bartlett's Test ^a		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.767
Bartlett's Test of Sphericity	Approx. Chi-Square	326.815
	df	55
	Sig.	.000

a. Based on correlations

Total Variance Explained										
	Component	Initial Eigenvalues ^a			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
		Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
Raw	1	2.866	25.806	25.806	2.866	25.806	25.806	2.865	25.794	25.794
	2	1.265	11.390	37.196	1.265	11.390	37.196	1.235	11.118	36.912
	3	1.211	10.904	48.100	1.211	10.904	48.100	1.242	11.187	48.100
	4	.991	8.922	57.022						
	5	.848	7.639	64.661						
	6	.819	7.377	72.038						
	7	.776	6.991	79.029						
	8	.737	6.640	85.669						
	9	.617	5.556	91.225						
	10	.523	4.710	95.935						
	11	.451	4.065	100.000						
Extraction Method: Principal Component Analysis.										
a. When analyzing a covariance matrix, the initial eigenvalues are the same across the raw and rescaled solution.										

Component Matrix ^a						
	Raw			Rescaled		
	Component			Component		
	1	2	3	1	2	3
INNOV1	.765	.104	.056	.430	.122	.065
INNOV2	.604	-.334	.150	.569	-.320	.144
INNOV3	.601	-.178	.112	.627	-.186	.116
INNOV4	.609	-.025	-.124	.572	-.025	-.122
INNOV5	.608	.116	.099	.419	.119	.101
INNOV6	.792	-.150	.227	.560	-.171	.258
INNOV7	.826	.351	-.283	.709	.301	-.243
INNOV8	.758	-.029	-.126	.706	-.027	-.117
INNOV9	.117	.653	.778	.110	.520	.732
INNOV10	-.030	-.401	.628	-.030	-.401	.628
INNOV11	-.052	.695	.001	-.052	.702	.001
Extraction Method: Principal Component Analysis.						
a. 3 components extracted.						

Appendix (A4): Correlation Analysis

Correlations										
			SL	ED	HUM	REL	ACC	PG	SO	INNOV
Spearman's rho	SL	Correlation Coefficient	1.000	.660**	.748**	.711**	.740**	.712**	.668**	.327**
		Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.000	.000
		N	252	252	252	252	252	252	252	252
	ED	Correlation Coefficient	.660**	1.000	.472**	.450**	.337**	.299**	.211**	.174**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.001	.006
		N	252	252	252	252	252	252	252	252
	HUM	Correlation Coefficient	.748**	.472**	1.000	.530**	.422**	.413**	.416**	.210**
		Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000	.001
		N	252	252	252	252	252	252	252	252
	REL	Correlation Coefficient	.711**	.450**	.530**	1.000	.519**	.385**	.340**	.185**
		Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000	.003
		N	252	252	252	252	252	252	252	252
	ACC	Correlation Coefficient	.740**	.337**	.422**	.519**	1.000	.517**	.480**	.195**
		Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000	.002
N		252	252	252	252	252	252	252	252	
PG	Correlation Coefficient	.712**	.299**	.413**	.385**	.517**	1.000	.571**	.293**	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.	.000	.000	

		N	252	252	252	252	252	252	252	252
	SO	Correlation Coefficient	.668**	.211**	.416**	.340**	.480**	.571**	1.000	.279**
		Sig. (2-tailed)	.000	.001	.000	.000	.000	.000	.	.000
		N	252	252	252	252	252	252	252	252
	INNOV	Correlation Coefficient	.327**	.274**	.210**	.185**	.195**	.293**	.279**	1.000
		Sig. (2-tailed)	.000	.001	.001	.003	.002	.000	.000	.
		N	252	252	252	252	252	252	252	252

** . Correlation is significant at the 0.01 level (2-tailed).

Appendix (A5): Regression

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	SL ^b	.	Enter

a. Dependent Variable: INNOV
b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.307 ^a	.094	.091	.43709

a. Predictors: (Constant), SL

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.963	1	4.963	25.979	.000 ^b
	Residual	47.762	250	.191		
	Total	52.725	251			

a. Dependent Variable: INNOV
b. Predictors: (Constant), SL

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	4.615	.239		.000
	SL	.213	.042	.307	.000

a. Dependent Variable: INNOV

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.336 ^a	.113	.091	.43694

a. Predictors: (Constant), SO, ED, ACC, REL, PG, HUM

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.950	6	.992	5.194	.000 ^b
	Residual	46.775	245	.191		
	Total	52.725	251			

a. Dependent Variable: INNOV
b. Predictors: (Constant), SO, ED, ACC, REL, PG, HUM

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.062	.199		25.482	.000
	ED	.132	.034	.239	3.889	.000
	HUM	.153	.033	.283	4.670	.000
	REL	.100	.030	.206	3.335	.001
	ACC	.070	.032	.138	2.205	.028
	PG	.125	.032	.238	3.871	.000
	SO	.153	.035	.269	4.410	.000
a. Dependent Variable: INNOV						



CURRICULUM VITAE

The researcher graduated from Kirkuk University, Department of Business Administration in 2017-2018 and still works as an employee in his private home. On 23-2-2021, he started his master's degree at Karabuk University, Department of Business Administration. Business Administration.

