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“The moderating role of leadership style in the relationship of innovation and organizational performance in the Palestinian banking sector”.

الدور المعدل لانماط القيادة في العلاقة بين الابداع والاداء المؤسسي في قطاع البنوك الفلسطينية

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ABSTRACT (ENGLISH)

In this thesis, the researcher aimed to investigate the relationship between innovation (product, process, marketing, and organizational innovation) and organizational performance (financial, production (operational), marketing, and innovative performance). It also studies the moderating effect of transformational leadership style and transactional leadership style on the relationship between innovation and organizational performance. The research was implemented on seven local Palestinian banks; the data was collected by using online questionnaire that consists of Five-point Likert scale questions. The sample was drawn from 176 out of 309 departments' and branches' managers from banking sector, which was analyzed using Smart-PLS. The research analysis concluded that product innovation, marketing innovation and process innovation have a significant impact on organizational performance, whereas there is no significant impact of organizational innovation on organizational performance. Furthermore, transformational leadership style has a significant effect on product, process, marketing and organizational innovation, while the transactional leadership style has only a significant impact on organizational innovation. Moreover, Transformational and Transactional leadership styles have a significant impact on organizational performance. The analysis also showed that transformational leadership style is a moderator variable between innovation (product and process only) and organizational performance, whereas transactional leadership style is a moderator variable only between product innovation and organizational performance.

ABSTRACT (ARABIC)

تهدف هذه الرسالة إلى دراسة العلاقة بين الابتكار (ابتكار المنتج، ابتكار العملية، الابتكار التسويقي، و الابتكار التنظيمي) وأداء المنظمة (الأداء المالي، الأداء الإنتاجي، الأداء التسويقي، و الأداء الابتكاري). بالإضافة إلى دراسة تأثير نمط القيادة (قيادة المعاملات والقيادة التحويلية) كمتغير معدّل على العلاقة بين الابتكار والأداء التنظيمي. تم تطبيق الدراسة على سبعة بنوك محلية فلسطينية، وتم جمع المعلومات من خلال استبانة إلكترونية تم توزيعها على مدراء البنوك المستهدفة. تكونت الاستبانة من أسئلة خماسية الإجابات وفقاً لمقياس "ليكارتر" العالمي. تم تعبئة 176 استبانة من أصل 309 من مدراء الدوائر والفروع وتم تحليلها باستخدام برنامج (Smart PLS). أظهرت نتائج البحث أن ابتكار المنتج وابتكار العملية والابتكار التسويقي لها تأثير على أداء المنظمة في حين أنه لا يوجد تأثير واضح للابتكار التنظيمي على أدائها. كما وأظهرت أن نمط القيادة التحويلية يؤثر على ابتكار المنتج وابتكار العملية والابتكار التسويقي والابتكار التنظيمي بينما نمط قيادة المعاملات له تأثير على الابتكار التنظيمي فقط. كما وتظهر نتائج البحث تأثير نمطي القيادة التحويلية وقيادة المعاملات على أداء المنظمة. بالإضافة إلى أن نمط القيادة التحويلية يعد متغيراً معدلاً للعلاقة بين الابتكار (ابتكار المنتج وابتكار العملية) وأداء المنظمة، بينما أظهرت النتائج أن نمط قيادة المعاملات يعتبر كمتغير معدّل فقط في العلاقة بين ابتكار المنتج و أداء المنظمة.



CHAPTER ONE

RESEARCH GENERAL

FRAMEWORK

1.1 INTRODUCTION

These days, the importance of identifying and studying the factors that affect the performance of the organization has increased, as a result of continuous change in work environments, technological developments, increasing competition, and changing customer requirements. Thus, managers (leaders) must implement effective practices to achieve the organization's performance goals (Mammassis and Kostopoulos, 2019). These rapid changes and regional and global competition have contributed to organizations adopting innovation to gain a competitive advantage. Innovation is the main factor for the production (operational) and development of any economic activity, the results of investments depend on the type of innovation that is used (Kogabayev and Maziliauskas, 2017).

Innovation is simply defined as the development of new behaviors or ideas (Daft, 1978). Innovation is a new idea that can be a new service, product, market, administrative and operational structures, processes and systems (Damanpour et al., 2009). Also, innovation relates to change, renewal, and doing things differently, with the purpose of improving services, goods, and processes (Stoffers et al., 2021). Moreover, innovation is a tool to enhance an organization's market power, reduce product costs, and improve the ability to deal with competition (Hyytinen et al., 2015). According to Baregheh et al. (2009), innovation can be manifested in various types; a new process technology, new products and services, new administrative systems and new organizational structures, programs or plans.

The organization's performance is defined as the organization's ability to achieve its goals through the support and participation of management (Mahapatro, 2013). Also, organizational performance is defined as the “economic outcomes resulting from the interplay among an organization’s

attributes, actions, and environment” (Combs et al., 2005, p. 261). In the 21st century, leaders need to be aware of the factors, competencies and characteristics that are reflected in the performance and success of the organization, and make the right decisions to lead employees, in order to be able to work in an unstable environment (Itunga & Awuor, 2019). Leadership is considered as a social process in which the leader influences the followers’ behaviors in order to meet the desired organizational goals. The leader’s role involves many tasks like being an inspirational and motivational manager, encourage employees to find new ideas and lead teams to discover better ideas (Oke et al., 2009).

The interest in innovation is not limited to managers and leaders, but also attracted the attention of academics to study its impact on the performance of the organization (Canh et al., 2019). The performance and effectiveness of the organization get the focus of the organization’s leaders. Relying on different types of innovation within different aspects of the organization has many benefits reflected on the organization and its performance (Damanpour et al., 1989). Abou-Moghli et al. (2012) also added that adopting innovation in several aspects of an organization gives it a competitive advantage that is reflected in improving its performance. The reflection of innovation on the performance of the organization does not depend on one type of innovation, but rather on several types including product, process, marketing and organizational innovation. Also, the adoption of innovation may give it the advantage of the first mover which enables it to compete with its competitors (Roberts and Amit, 2003).

Leaders must also encourage employees to face risks and seize opportunities through creativity and innovation (Itunga & Awuor, 2019). The performance of the organization also depends on the leadership style and its effectiveness in accomplishing tasks. It is also explained that the performance of banks is affected by the leadership style that is followed, and to improve the

performance of the banking sector, it is necessary to apply the two styles of transformational and transactional leadership (Gunasekare, 2021). Moreover, innovation is also affected by the leadership style because leaders can set specific goals, encourage innovation and directly decide to introduce new ideas into an organization (Harborne & Johne, 2003).

This research will focus on studying the relationship between the four types of innovation (product, process, marketing and organizational innovation) and the organization's performance, which will be measured by financial, marketing, innovative, and production (operational) performance aspects. Moreover, the research will investigate the effect of the transformational and transactional leadership styles on product, process, marketing and organizational innovation. Furthermore, it studies the effect of the transformational and transactional leadership styles on the financial, marketing, innovative, and production (operational) performance. The research will also examine the moderating effect of leadership styles on the relationship between innovation and organization's performance. The research targets the managers of local Palestinian banks.

1.2 RESEARCH PROBLEM

Economists have considered that successful organizations are one of the most important elements of the renaissance of developing countries, as organizations represent an engine of social, political and economic progress (Gavrea et al., 2011). Organizations are always looking to achieve success in various aspects, and the success of the organization depends on its performance based on achieving goals through the effective application of strategies (Randeree and Al Youha, 2009 cited by Almatrooshi et al, 2016). Organizations also aspire to implement innovation within their activities, to obtain new results and ideas that give it a competitive advantage and affect their performance and position in the market. Achieving innovation requires many things, the most

important of which is leadership. The leadership style followed is one of the main determinants that affect innovation (Alblooshi, 2020). Leadership is considered as one of the important factors in achieving the success of the organization because of its impact on the subordinates and motivating them to accomplish the tasks required of them. Therefore, the performance of the organization is affected by the quality and efficiency of the leadership style followed, thus, this is what was indicated by the modern world management in the importance of leadership and its impact on the performance of the organization (Nandasinghe, 2020). According to these studies, it becomes clear the great importance of studying innovation, the performance of the organization and the leadership style followed. It is also the responsibility of the organization to pay attention to everything that may positively or negatively affect the performance so that it can reach the goals it aspires to. **This research will study the moderating role of leadership styles in the relationship between innovation and organizational performance within the Palestinian banking sector, especially in the West Bank.**

1.3 RESEARCH QUESTIONS

The main question that the research aspires to answer is: what is the influence of innovation on the performance of the organization with the presence of transformational and transactional leadership styles as moderating variables, especially in the banking sector. This question can be broken down into:

1. What is the effect of product innovation on the performance of the organization?
2. What is the effect of process innovation on the performance of the organization?
3. What is the effect of marketing innovation on the performance of the organization?
4. What is the effect of organizational innovation on the performance of the organization?
5. What is the effect of transactional leadership style on innovation?
6. What is the effect of transformational leadership style on innovation?
7. What is the effect of transactional leadership style on organizational performance?
8. What is the effect of transformational leadership on organizational performance?
9. What is the effect of leadership styles (transformational and transactional) on the relationship between innovation and organizational performance?

1.4 RESEARCH OBJECTIVES

The main purpose of this thesis is to study the relationship between innovation, organizational performance and leadership styles in the Palestinian banking sector.

1. Study the relationship between innovation and organizational performance.
 - A. Study the effect of product innovation on organizational performance.

- B. Study the effect of process innovation on organizational performance.
 - C. Study the effect of marketing innovation on organizational performance.
 - D. Study the effect of organizational innovation on organizational performance.
2. Examine the relationship between innovation and leadership styles (Transactional and Transformational styles).
 3. Examine the effect of the leadership styles (Transactional and Transformational styles) on the performance of the organization.
 4. Study the impact of leadership styles on the relationship between innovation and organizational performance.
 - A. Study the moderating effect of transactional leadership style on the relationship of innovation and organizational performance.
 - B. Study the moderating effect of transformational leadership style on the relationship of innovation and organizational performance.

1.5 SIGNIFICANCE OF THE STUDY

This part of the research contains the importance and benefits of the study. Many studies have focused on studying innovation and organizational performance. For example, Aragón-Correa (2007) demonstrates the importance of studying the relationship between innovation and the performance of the organization and leadership styles, especially within the banking sector. This is because innovation is one of the important factors in the modern era through which organizations can compete. Moreover, the importance of this study stems from the focus on studying an important topic, which is the performance of organizations, in which managers seek to preserve

and improve. Also, studying the factors affecting the performance of the organization is important, so leaders can take advantage of opportunities and reduce risks affecting performance. Arokodare & Asikhia (2020) indicated that organizations around the world are facing difficulty in maintaining the organization's performance within the constantly changing work environment, competition, and globalization in the 21st century. According to the researcher knowledge, there is a lack of researches and studies related to the impact of innovation on organizational performance with considering of leadership styles as a moderating variable in the banking sector in Palestine. Therefore, this research may increase managers' attention to the importance of innovation that can be reflected on the performance of banks in Palestine and the importance of the leadership styles followed. Thus, this research may be a reference to future and coming researches in this field. Furthermore, this research gains special importance because it expands to include studying the impact of four different types of innovation, which are product, marketing, process and organizational innovation on the performance of the organization in the same time, which will be measured through four different aspects; financial, production, marketing, and innovative performance, in addition to the moderating effect of the transformational and transactional leadership styles.



CHAPTER TWO LITERATURE REVIEW

2.1 PREVIOUS STUDIES

2.1.1 Introduction

Nowadays, organizations operate within a changing and evolving environment, a competitive market and changing and fluctuating customer desires and needs (Droge et al., 2008). Many studies consider that innovation is what the organization needs to keep pace with changes, and it is considered as one of the important factors in shaping and building a competitive advantage for the organization. Innovative organizations have a greater ability to exploit opportunities because of their flexibility and ability to respond to changes (Damanpour and Gopalakrishnan, 2001; Drucker, 1985). Organizations cannot survive and achieve their goals through following the same policies and plans only, they need more ideas, plans and innovations that would enable them to exploit opportunities that give them additional value and improve their performance (Ebrahimi, 2016).

In addition, Samad (2012) discussed the important role of leadership styles and innovation on the performance of the organization and building its competitive advantage. García-Morales et al, (2008) also emphasized the relationship between these variables, as the most important thing that affects innovation is the followed leadership style, because leaders are responsible of utilizing the skills and ideas of employees to get new innovations in various fields. In order to reach the organization's innovation, there must be an effective leadership style that encourages innovations in achieving the goals of the organization and reaching the performance it aspires (Alblooshi et al, 2020).

This part explores previous studies on innovation and its types (product/ service, process, marketing, and organizational) as an independent variable, in addition to displaying the organizational performance as a dependent variable. Moreover, it presents the leadership and its

styles (transactional and transformational) as a moderating variable. It also tackles the banking sector, the relationship between dependent and independent variables (innovation, organizational performance), and the effect of the moderating variable on the independent and dependent variables (leadership, innovation and organization performance).

2.1.2 Innovation

Organizations face many challenges and changes stemming from the rapidly evolving world, due to the globalization and technological growth in all aspects of life. The pursuit of achieving excellence and success in the organization depends on improving its capabilities to meet the needs and desires of customers and satisfy them (Abualloush et al., 2017). Nakano and Wechsler (2018) added that innovation is one of the most important factors that affect the success of the organization in the 21st century. According to Ngugi & Karina (2013), innovation is one of the important factors for the profitability and growth of organizations. Innovation is considered at the present time as the only factor that supports the development of the organization and building its competitive advantage (Blackwell 2006; Tidd, & Bessant, 2020, p:5).

The ability to create something new, provide a service in a better way, or do something in a different and new way that is better than others, is considered to be an advantage of the organization (Tidd, & Bessant, 2020, p:6). The importance of innovation stems from the fact that it affects the survival, growth and competitiveness of the organization. Also, innovation affects the performance of employees, their productivity and the service they provide, and the organization's shares and market value (Alrowwad et al., 2020). According to Easa (2012), innovation occurs as a result of transforming valuable ideas into new forms of added value for customers, employees,

organization and stakeholders. Moreover, innovation is “the introduction and application, within a group, organization, or wider society, of processes, products, or procedures new to the relevant unit of adoption and intended to benefit the group, individual, or wider society” (Anderson, 1996, p. 681).

Due to large and rapid changes and global competition, organizations realize the importance of innovation and the necessity of its presence in their strategies. Thus, the organization's strategies must include innovation, as it improves the performance of the organization and its position in customers' perception and gives the organization a sustainable competitive advantage (Gunday et al., 2011). Moreover, Drew (1997) said that relying on innovation in the continuous developments of the organization and its activities is the only way to maintain a competitive advantage. Hence, innovation contributes to the organization's acquisition of a competitive advantage that affects its performance (Jaiswal and Dhar, 2015).

Innovation can be defined as an important factor for companies and countries in achieving economic efficiency and one of the main long-term factors in achieving success (Damanpour, 1991). Innovation can also be considered as a means of responding to external and internal variables, which leads to the change of the organization (Rogers, 2003 cited by Baba, 2012). Innovation is also defined as the adoption of a new behavior or idea in relation to what is approved for the organization, whether it is a product, service, process, policy, program or a system (Daft, 1978). Abualloush et al., (2017) added that innovation means thinking of creative ideas and implementing these ideas; innovation does not depend on developing new ideas only, but also applying them to achieve the goals of the institution.

Alblooshi et al., (2020) explain innovation as implementing new and different ideas that contribute to increasing customer value and contributing to the improvement and development of the

organization. Aljamal (2020) also defined innovation as finding and implementing something new that has not been applied previously, which may contribute to creating value and an advantage for the organization. Innovation represents a way to make change in the organization, or a response to environmental changes and uncertainty, as this is done through new changes or by making changes within the organization's structure, to achieve the goals of the institution and improve its performance (Rosner, 1968).

Miles (2008) explains that the innovation could be adding and creating a completely new product or service, or by re-improving or modifying the current product or service, so that the innovation can be radical or incremental. Innovation has two dimensions according to the degree of change, a radical and an incremental innovation (The Oslo Manual, 2005; Easa, 2012). Incremental innovation requires additional practices and changes in some characteristics of the existing process (Darroch, 2005). This contributes to achieving the existing objectives of the organization, so the possibility of facing market and financial risks is low (Assink, 2006). On the other hand, radical innovation causes fundamental changes within the organization's operations, so it represents a clear departure from the existing functions of the organization. Also, the radical innovation creates changes for the first time, which increases the risks and losses that may occur (Keizer & Halman, 2007).

2.1.3 Innovation Types

Innovation is defined as creating new ideas, technologies, products, services, and concepts that in turn contribute to influencing the quality of the organization's performance (De Jong and Hartog 2007; Sutanto, 2017). Innovation implies working to achieve new creative ideas to make a specific

difference in the area covered by the innovation (Ngugi & Karina, 2013). Innovation may be divided into several types that include different aspects, these types are: product or service innovation, marketing innovation, process innovation, and organizational innovation (Kahn, 2018; Rajapathirana & Hui, 2018; YuSheng & Ibrahim, 2020). According to Schumpeter (1934), the theory of economic development discussed the types of innovation, which were described as new products, new way to organize business, new production methods, and the exploitation of new markets.

In addition, the third edition of the Oslo Manual (OECD, 2005), which represents a guideline for innovation's data, recognizes that innovation includes two additional types: marketing and organizational innovation, in addition to the two main types, product and process innovation. Moreover, Crossan & Apaydin (2011: p1155) explain innovation types as “production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. It is both a process and an outcome”.

2.1.3.1 Product innovation

Product innovation is the provision of a new or improved service or good with the characteristics and uses of the product that leads to an improvement in the product's qualities and functional characteristics (OECD, 2005). According to Kahn (2018), the term of product innovation includes all of the new products, services and programs. The way to manage product innovation revolves around linking it with the organization's marketing strategies (market penetration, product development, market development and diversification), in order to meet the desires of customers

and know the technology that should be used. Product or service innovation includes changes to the product offered by the organization using existing or new technologies; this will cause a product development and increases customer satisfaction (Ganzer et al., 2017).

The improvements and changes that will be done to products or services may affect several features, including: technical specification, software, component and material, portability, user friendliness, durability and other significant characteristics (Yusheng & Ibrahim, 2019). According to Wheelwright and Clark (1992, P:2), the emergence of product innovation was due to the presence of intense global competition, strength and hostility between organizations. As product innovation is important for the survival of organizations, it arose as a result of three reasons; the great competition all over the world, volatile and difficult markets, and rapid change and diversity in technologies. Fong et al. (2014) added that developing and creating new products is a difficult experience for the organization, but it is also extremely important for the organization to improve its performance, growth, employees' performance and customer satisfaction.

2.1.3.2 Process innovation

Process innovation occurs in organizations when new and different production processes are implemented (OECD 2005). Process innovation is defined as the new or improved way in which services and products are provided and created, which means producing goods and providing services in different ways (Ganzer et al., 2017; OECD, 2005; Gunday et al., 2011). Moreover, process innovation can be defined as the changes that occur in the production process contributing to the development of products and services, that would significantly lead to increasing the satisfaction and the value added to stakeholders (Savitz et al., 2000).

Process innovation adds new features to the services and products, or a new way of marketing, thus innovation affects profit, productivity, efficiency, production quality, and production costs (Veugelers, 2008). Moreover, process innovation is considered as new and changed distribution and production methods, by making equipment, technical or software changes (Gunday et al., 2011; Slimane, 2015). According to Hashi and Stojcic (2013), process innovation influences organization productivity and competitiveness, and it is considered as an important factor that affects the organization's success. Also, organizations usually aim to invest money and time to have process innovation to improve their performance.

2.1.3.3 Marketing innovation

Marketing innovation is defined as the use of new methods of marketing, which leads to a change in product design, pricing, development, packaging, placement, promotion, and other changes in the appearance of the product rather than its qualities and functions (OECD, 2005; YuSheng, & Ibrahim, 2020; Shaukat et al., 2013). The goal of marketing innovation is to better meet the needs and wants of customers, penetrate new markets, and reposition the product in the market (Rajapathirana & Hui 2018; OECD 2005). Shaukat et al. (2013) added that marketing innovation contributes to increasing organizational sales, market share, and opening new markets. Marketing innovation is an important factor in the success and continuity of innovation in the organization (Drucker, 2015). Whereas marketing innovation supports innovation management activities, as well as it contributes in marketing new innovate products and services, moreover, marketing innovation helps in predicting future market needs, and identifying new opportunities (YuSheng & Ibrahim, 2020).

2.1.3.4 Organizational innovation

Organizational innovation means the application of a new organizational method for the organization's business, including organization procedures, workplace and external relations (OECD, 2005; Rajapathirana and Hui 2018). OECD (2005) added that organizational innovation includes a new structuring and organizing of routine work, and that the organization follows ways it did not follow before to accomplish its work. Organizational innovation can also be considered an act to improve the performance of the organization by reducing administrative costs, improving workplace quality, and increasing job satisfaction and customer satisfaction (Yusheng & Ibrahim, 2019; Van der Aa, & Elfring, 2002).

According to Samuelides (2001), the organizational innovation helps organizations in its development and growth and keeping pace with the growth and fluctuations of the market. Thus, absorbing the development and benefiting from it to create organizational innovations. Alblooshi (2020) reviewed organizational innovation in terms of organizational structure, as it has an impact on the flow of innovation ideas and how the organization deals with it from its inception to the stage of its application, which results from the impact of organizational innovation on centralization and formality. Moreover, organizational innovation is an approach to implementing new ideas, affecting how decisions are made, and how tasks are assigned among employees.

2.1.4 Organizational performance

The concept of enterprise performance expands to include a number of different dimensions of operational, management, activities of the organization and its competitive excellence. There are a number of indicators that help to understand the performance of the organization, whether they are financial or non-financial indicators, such as customer satisfaction and market performance (Chen & Quester, 2006). Organization performance includes real outcomes or productivity of a business which is calculated in opposite to its aims, plans, and targets. The organization's performance was defined as the organization's ability to achieve its goals through the support and participation of management (Mahapatro, 2013).

According to Conțu (2020), the organization performance can be defined as the position of the institution in the market by achieving efficiency using financial, human and information resources. In addition, the organizational performance indicates the extent to which the institution achieves its goals by exploiting the resources available to it (Horga, 2012 cited in Conțu, 2020). Mishra and Mohanty, (2014) also added that the financial performance of the organization is a measure of its performance. Also, the organizational performance shows the extent to which the actual results and outputs of the organization are compatible with the planned objectives (Tomal and Jones, 2015). Etzioni (1960), explained the performance of the organization as the growth and survival of the organization in the long term, and the important and vital goal is the continuous improvement of the performance of the organization and access to effectiveness in its performance. Organizational performance is the evaluation of specific indicators or standards of efficiency, effectiveness, and environmental accountability like regulatory compliance, productivity, and waste reduction. Organizational performance also refers to measures of how effectively something

is accomplished or a particular demand and need is addressed (Ngugi & Karina, 2013). For Masa'deh et al. (2016), the performance of the organization simply refers to the results of all the activities of the organization, and also includes the results of the various strategies that the organization follows. Smriti and Das (2018) define the organization's performance as the organization's ability to benefit from its resources to reach the organization's goals and objectives.

The performance of the organization can be measured through several aspects, and these aspects are the production, market, innovative and financial performance (Shaukat, et al., 2013). According to Hagedoorn and Cloudt (2003), innovative performance is reflected through research & development inputs, patent count, patent citation, and new product announcements. Also, innovative performance means new product success, customer satisfaction, and the acquisition of new customers (Pelham, 1997). In general, organizations aim to accomplish good financial performance, which includes financial measures such as return on assets, return on investment, and increase in profit (Gopalakrishnan, 2000). Moreover, financial performance is determined based on changes in profitability, sales growth, sales revenues, market share, and changes in marginal unit costs (Wang & Wei, 2005). Whereas marketing performance is “the effectiveness and efficiency of an organization’s marketing activities with regard to market-related goals, such as revenues, growth, and market share” (Homburg, 2007, p.21). Production performance is a combination of achievements related to production quality, speed, cost efficiency, and flexibility. It is also considered as one of the direct drivers of profitability (Chenhall, 1997; Gunday et al., 2011).

2.1.5 Leadership

To understand the challenging and complexity of the rapid change of global markets, organizations need an effective leader. Thus, leadership affects the productivity and performance of employees; an effective leadership style helps the organization achieve its goals (Nanjundeswaraswamy, 2014). Leadership is considered as a major function in managing any organization, it can help organizations to increase its competitiveness. Leadership constitutes the relationship between the leader and subordinates, as it works to take advantage of time, people, and resources to achieve the goals of the organization (Keskes et al., 2018). Moreover, Hlaing (2019) added that the selection and application of the appropriate leadership style is important in motivating employees and influencing their performance, which affects the performance of the organization as a whole.

According to Othman et al. (2014), leadership is an important skill for managers and one of the most important components of the organization, as effective leadership is one of the most important factors for the success of the organization. Also, organizations need an effective leadership because of its impact on motivating employees and improving their performance, which is reflected on the achievement of the organization's goals. For Alrowwad et al. (2020), leadership is the personal influence in a specific circumstance to achieve a specific goal. The leader's characteristics or behaviors are reflected in the realization and achievement of goals and the increase in the performance of the organization.

Leadership has different definitions due to multiple destinations, but the different definitions include that leadership is a process of social influence in which the leader influences a group of people (employees or subordinates), in order to organize relationships in the organization, define responsibilities, assign tasks, and organize the completion of tasks and projects (Druckman et al.,

1997, P: 97-98). Moreover, Wen et al., (2019) defined leadership as the process by which a person (the leader) influences others (employees) to direct the organization and achieve a specific goal. Memon (2014) also defines leadership as the leader's style of directing employees and motivating them to implement and achieve plans.

Leadership is one of the skills that influence the performance and behavior of subordinates to reach the goals and vision of the organization (Obiwuru et al, 2011). Many studies have considered leadership styles as one of the most important factors affecting innovation. In the twentieth century, studies considered leadership styles as a factor that affect the performance, innovation, and success of an organization (Porter, 1990). This is because the leader works to encourage employees and motivate them to innovate and achieve organization goals (Sethi, 2000). Madlock (2008), added that leadership aims to achieve common goals by directing and influencing employees or subordinates, either through power, authority, or charisma and inspiration, and it has different patterns and theories.

2.1.6 Leadership styles

In a competitive environment, organizations depend on leaders to gain a competitive advantage by driving the process of innovation and transformation. Since employees are the most important resource and asset for the organization, the leader should pay attention to the leadership style followed for its impact on employee performance (Wen et al., 2019). Leadership style is defined as a set of different traits, behaviors and characteristics that a leader adopts to deal with followers (Itunga, & Awuor, 2019). For Amanchukwu et al. (2015), leadership styles are considered as a motivational method for subordinates, so it is very important to choose leadership styles that are

appropriate to situations, individuals, groups, and organizations, which will lead to increase leadership effectiveness.

Thus, the presence of effective leadership that works to take decisions and solve the problems of the organization will improve the performance of the organization (Bennett, 2009). Several studies have discussed the issue of choosing the leadership style and its implications for subordinates. According to modern leadership styles, leadership styles can be categorized as follows: transactional leadership style, transformational leadership style, laissez Faire leadership style, and autocratic leadership style (Harris, 2007 cited by Itunga & Awuor, 2019). However, depending on the full range leadership model (FRL), transformational and transactional leadership are the most effective leadership styles, and the adoption of these two styles will affect the performance and behavior of employees (Bass and Avolio, 1994, P: 1). Moreover, Hunt (1999) described that the beginning of the development of new theories of leadership stems from the adoption of transformational and transactional leadership styles, which have received great interest by researchers.

2.1.6.1 Transactional leadership style

Transactional style defined as the relationship between employees and management in which rewards and benefits are exchanged (Ojokuku, et al., 2012). This style is based on the principle of rewards, whereby managers reward employees when they accomplish certain goals and tasks (Saeed & Mughal, 2019). Bass & Avolio (1994) define the transactional leadership style as a relationship between subordinates and their leader, and this style depends on the exchange between subordinates and leaders. Where this exchange depends on the leader, who determines the duties

and tasks required to be performed, and the rewards that employees obtain when completing these tasks. According to Van Eeden et al. (2008, P: 255), Transactional leadership involves a social exchange process where the leader clarifies what the followers need to do as their part of a transaction (successfully complete the task) to receive a reward or avoidance of punishment (satisfaction of the followers' needs) that is contingent on the fulfilment of the transaction (satisfying the leader's needs).

Moreover, the transactional style creates an ideal work environment that contributes to improving the performance of employees in line with the achievement of the goals of the organization, which is reflected on the performance of the organization (Longe, 2014; Hlaing 2019). Wen et al., (2019) indicated that the transactional leadership style has a positive impact on the organization's output and employee behavior. In transactional leadership, employees are expected to follow the orders and instructions of the leader and agree with him either for the sake of praise and reward or in order to avoid punishment (Liu, et al., 2011). According to Meindl (1993), transactional leadership (Known as managerial leadership) focuses on organizing, supervising, and performing groups, where the transactional leadership style encourages employee compliance to get their work done, whether because of penalties or rewards.

2.1.6.2 Transformational leadership style

Transformational leadership style defined as the style in which managers and subordinates interact with each other, thus motivating each other, which affects the performance of both parties (Venkat, 2012; Wen et al, 2019). Cheung and Wong (2011) show that transformational leadership style has many results that are reflected on the organization such as performance, commitment, job status, creativity, performance of tasks and employee behavior. In this style, the leader attempts to align each of the goals of employees, managers, and the organization as a whole to achieve those goals

(Bass & Riggio, 2008 cited by Mamza et al., 2019). Mamza et al. (2019) added that the transformational leadership style goes beyond being a normal leadership style that depends on monitoring the performance of employees only, but also expands to include taking corrective measures when problems occur and giving feedback for the overall benefit of the organization.

Al Khajeh (2018) suggests that the transformational leadership style contributes to improving the performance of employees by creating a happy and comfortable work environment, which shows the positive impact of this style on the performance of the organization. Transformational leadership also creates a work environment that encourages employees to innovate and change especially in challenged, uncertain and risky work places (Masood & Afsar, 2017). Moreover, Guo et al. (2016) provide that implementing transformational leadership style will cause leaders to encourage different perspectives and new ways that encourage the creation of an innovative work environment. Fitzgerald and Schutte (2010) added that the transformational leadership style is a method that motivates and inspires employees in order to achieve a clear organizational vision, by understanding the needs of employees and communicating with them, which leads to achieving constructive and effective results for the organization. Sudibjo and Prameswari (2021) have investigated in their study that transformational leaders have an impact on the performance of subordinates, their ways of solving problems and their desire to achieve entrepreneurial and innovative ideas within the scope of their work.

2.1.7 Banking sector

These days, the banking sector faces great challenges in adapting to the market as a result of the continuous changes within its scope of work, and it is always in an ambition to follow the approach

that helps it in success and continuity (Easa, 2019). As a result of this competitive environment, banks are working to provide innovative and new products and services, to maintain customer satisfaction and to ensure the long-term success of the organization (Fong et al. 2014). Moreover, the services sector needs to achieve growth and obtain a competitive advantage, and this can be achieved through innovation, so awareness must be raised of the importance of innovation in achieving economic growth within the banking sector in specific (Rajapathirana & Hui 2018; Ngugi & Karina, 2013).

According to Kamakia (2014), the products and services offered by banks must be innovative, and it is necessary to match the products to the level of innovation in the bank. Moreover, banks should pay attention to customer satisfaction through the products they offer and their diversity, and this is done by relying on innovation. Therefore, the bank's strategies, plans and objectives must encourage innovation, which will be reflected on the organization's position and market competition. According to Ojokuku et al. (2012), banks are considered to be catalysts for economic growth in the financial sector, and therefore, the countries that have good financial systems reflect these systems on their rapid economic growth. Moreover, based on the important role of banks in the economy, the performance of banks should be a priority. It is necessary to work on creating new products and services, developing new markets and customers, and developing the performance of banks, which will give banks a competitive advantage (Gunasekare, 2021).

The idea of innovation in the service sector prevails as a technological innovation that leads to the creation of new technologies, but this is not the only way to innovate in the service sector (Barras, 1986). According to Johne (1999), through adopting innovation, banks can provide new services and products to customers, and examples of these products or services include electronic banking, mobile banking, and mobile commerce. Moreover, YuSheng & Ibrahim (2020) added that

innovation also includes banking operations through which services are provided, which in turn works to enhance the performance of the organization's business. Additionally, banks can increase their profitability and growth by innovating marketing activities and providing services through new and innovative marketing ideas (Johne, 1999).

2.1.8 Innovation and organizational performance

Over decades, the impact of innovation on the performance of the organization has constituted a great interest for policy makers and economists, as innovation is considered a way to improve the performance of organizations and their competitiveness in local and global markets (Hashi and Stojčić, 2013). Buenechea-Elberdin (2017) added that in order to improve the organization, the manager should pay attention to innovation and generate competencies to be more innovative and creative, as innovation has a great impact on organizations. Moreover, an organization shall be working to improve its performance by developing and implementing effective work strategies through which to take advantage of and exploit opportunities in the market by employing the competencies and resources of the organization (Obeidat, 2016). Many studies have studied the relationship between innovation and organizational performance, through which the impact of innovation of its various types on the organization's performance has been shown. Thus, innovation is considered as an independent variable that affects the dependent variable, which is the performance of the organization (YuSheng & Ibrahim, 2020; Gunday et al., 2011; Suhag et al. 2017; Hashi and Stojcic, 2013; Ngugi & Karina, 2013; Damanpour et al. 1989).

Damanpour (1991), explains that there is no single indicator that measures the innovative performance of the organization, however, the performance of the organization depends on

different types of innovation more than on one type. According to Rajapathirana & Hui (2018), the primary indicator of organizational performance is the implementation of innovation strategies. This means that, innovation has a direct and strong impact on the performance of the organization. Thus, market, production, and financial performance are positively linked with innovation. Moreover, the organization's pursuit of innovation stems from its desire to obtain a competitive advantage and improved performance (Gunday et al., 2011). Also, innovation enhances the performance of the organization through its reflection on several aspects, and these aspects are the production, market, innovative and financial performance (Shaukat, et al., 2013; Gunday et al., 2011).

Gunday et al. (2011), added that organizations that devote part of their resources to innovation and encourage innovative activities should expect an improvement in their market and production performance. Ngugi & Karina, (2013) explained that the organization's adoption of innovation strategies is reflected on the performance and profitability of the organization, as the innovation and development of products or services provided by banks contribute to an increase in product supply. Also, marketing innovation and advertising campaigns improve the performance of the organization and give it a competitive advantage. As well as the positive impact of process innovation on the performance of the organization. Suhag et al. (2017), added that the adoption of organizational innovation also affects the performance of the organization and the decision-making process.

Innovation has a vital impact on organizational performance due to improving the organization's market position, competitive advantage, and performance (Walker, 2004). Damanpour et al. (1989), explained that all organizations' goals represented in the performance of the organization or its effectiveness and the adoption of innovation has an effect on the performance of the

organization, which may be useful and important from the point of view of the organization's management. In the financial services sector, YuSheng & Ibrahim (2020), discussed the actual existence of a relationship between product innovation, process, market, organization and bank performance, and therefore, it is the responsibility of the bank to choose the right type of innovation that meets customer needs and improves performance. Moreover, Tidd, & Bessant, (2020, p:466) added that innovation is created and implemented within the context of the organization, therefore innovation is considered one of the most important influences on the success and failure of the organization.

According to Baumol (2002), organizations should embrace innovation and research & development (R&D) in order to raise the competitive level of the organization, as they are effective and vital factors that contribute to the success and continuity of the organization. Shaukat, et al. (2013), added that the increase in adopting innovations improves and enhances performance in the manufacturing sector, as the research showed that there is a relationship between innovation (product, operations, marketing, and organization) and the performance of the organization, which can be measured by financial, marketing, productivity and innovation indicators. In addition, Polder et al. (2010) considered innovation as an important factor for the growth of the organization's productivity, as result of the production of new and innovative goods and services, production methods, in addition to marketing and management practices that are reflected on the organization's performance and improve its efficiency.

2.1.9 Leadership, innovation and organizational performance

Matzler et al. (2008), stated that the leadership style adopted by the management may have different impacts on both innovation and the performance of the organization. The manager/ leader has an important role in improving and enhancing the performance of the organization as a whole. It is the responsibility of managers to support and encourage employees, which would allow them discover new ideas and innovations for improving the organization (Arif & Akram, 2018). Sethi, (2000) addressed the importance of leadership for innovation, as the leadership style is an important factor in encouraging innovation within the organization, as the leader encourages subordinates' innovative ideas, presents new ideas, and sets goals and plans that encourage innovation.

According to Alheet, et al. (2021) the transactional and transformational leadership styles have a significant effect on the innovative behavior of employees. Oke et al. (2009) suggest that the transformational leadership style is important to enhance the creative innovation process, while adopting the transactional leadership style is more appropriate in the application and implementation of the innovation process. Moreover, Samad (2012) research aimed to examine the relationship between innovation, leadership and organizational performance. This study shows that transformational leadership and product or service innovation have a significant impact on the organization's performance. Alrowwad et al. (2020) added that organizations resort to innovation and creativity in order to maintain the organization's sustainability and competitiveness in an unstable work environment. Therefore, organizations should pay attention to the policies, practices and leadership styles that should be followed in turn to promote or prevent innovation and creativity in the organization.

Many studies have addressed the relationships and the links between organization performance, leadership styles and innovation. Al Khajeh (2018) discussed the importance of leadership for the organization; since it contributes to the success or failure of the organization due to its connection to the achievement of the objectives of the organization. The organization seeks to motivate employees in achieving the goals by choosing the appropriate type of leadership. It is the responsibility of the institution to pay great attention to the leadership style to be followed, therefore the performance of the organization affected by the chosen leadership style. According to Rajapathirana & Hui (2018), effective leadership of the organization's innovation capabilities works to achieve better results for innovation, which in turn is reflected on the organization's performance in the service sector.

Oke et al. (2009) argue that the researchers interest revolves more in studying the relationship between different leadership styles and their impact on the performance of the organization, while there are fewer studies related to leadership and innovation styles. However, the study of the relationship between innovation and leadership styles should have more importance, because leadership styles contribute to enhancing or fostering innovation, and due to the importance of innovation in maintaining the organization's survival and competitiveness. Furthermore, Sofi and Devanadhen (2015) explained the direct impact of transactional and transformational leadership styles on the organization's performance in the banking sector. Ojokuku, et al. (2012) also supported the idea that leadership styles have a strong relationship with the organization's performance.

According to Oke et al., (2009), transformational and transactional leadership styles are complementary to each other despite their differences. Also, the best leaders are those who follow both transformational and transactional leadership styles. These two styles of leadership improve

the performance of the organization, especially in complex and volatile environments. A systematic review by Sethibe and Steyn (2015) of the relationship between the three variables; innovation, organizational performance, and transformational and transactional leadership styles, shows that there is an important and positive relationship between innovation and outstanding and effective organizational performance. In addition, the transformational leadership style has a significant and positive relation with innovation and organization's performance, while transactional leadership is more appropriate when instilling a culture of innovation in the organization.

Several researchers have studied the effect of transformational leadership style on innovation, and the results of many different studies showed that the transformational leadership style has a positive effect on innovation (Novitasari et al. 2021; Alheet, et al., 2021; Jia et al. 2018; Matzler et al. 2008). According to Alheet, et al. (2021), the transformational leadership style enhances the responsibility and participation of subordinates, which lead to the practice of innovation behavior. Moreover, transformational leadership is one of the factors affecting performance, as the traits of transformational leaders that include charisma, individual attention, motivation, and inspiration improve production and raise effectiveness, which in turn affect the performance of the organization (Brandt et al. 2016; Arif & Akram, 2018; Fu-Jin et al. 2010). İşcan et al. (2014) concluded that transformational leadership has a positive impact on innovation and organizational performance, and that this effect is beneficial, supportive, and develops innovation and organizational performance. Gumusluoglu & Ilsev (2009) showed that transformational leadership style encourages employees to innovate due to the personality and individual charisma of the leader, therefore the employee innovation behaviors and transformational leadership are positively related.

For the transactional leadership style, there are different researches' results. The transactional leadership style with its reliance on rewards, praise, disciplinary and punitive measures have a positive impact on implementing innovation in the organization (Jia et al. 2018; Novitasari et al. 2021). But on the other hand, transactional leadership can impede innovation, by relying on the orders and directions of leaders in executing and completing tasks to obtain rewards or punishments (Alheet, et al., 2021; Masood & Afsar, 2017). Thus, the performance of employees in this style does not match the expectations of the organization because the transactional style does not encourage creativity and innovation among employees, (Sofi and Devanadhen, 2015; Hlaing, 2019). Moreover, Alheet, et al. (2021) transactional leadership focuses on directing the performance of employees more than on innovation, because the satisfaction of transaction leaders is achieved when the employees' performance matches their expectations. According to İşcan et al. (2014), although there is a positive relationship between transactional leadership, innovation and organizational performance, there is no cause-and-effect relationship, which means that transactional leadership style has no meaningful impact on organizational performance and innovation.

2.2 THEORETICAL FRAMEWORK

The **theory of competitive advantage** appears in the presence of rare resources and qualities that are difficult to imitate. According to Barney, intangible resources are more important to the organization than tangible resources such as the organization's image, innovations and brand strength. This is because intangible resources give the organization a competitive advantage and are difficult for competitors to imitate (Barney, 1991). This was supported by Baregheh et al.

(2009), who affirm that innovation is the way for the organization to survive, whether it is a large or small organization, because it has an important and essential role in maintaining the organization's competitive advantage. In addition, this theory showed that the organization's ability to benefit from its resources in a new and different way from its competitors improves its performance, gives it a competitive advantage and increases the obstacles and difficulty in the entry of new competitors to its market (Barney, 1991). Moreover, the **creative destruction theory** argues that organizations that adopt innovation have a competitive advantage that distinguishes them from others. It also supports the idea that innovative organizations can succeed in achieving improvements that reflect positively on the organization's performance (Schumpeter, 1940).

The **theory of knowledge-based economy** is based on describing the trends of the advanced economy by increasing reliance on high skill levels, information, and knowledge and the need to achieve this in the public sector and the business sector. The development of the economy includes the growth of innovation. Thus, innovation works to create and disseminate new knowledge and thus expands the economy through the production of new products and efficient production methods. Hence, improvements depend on several knowledge and not only technological knowledge such as that used in the process, product, organizational, and marketing innovations. Also, it is necessary to determine the application of more than one type of innovation within the organization, due to the different impact of different types of innovation on the performance of the organization and economic change. Furthermore, the implementation of innovation is not only limited to the presence of continuous research and development, but also depends on the presence of skilled employees and managers and their ability to exploit knowledge in order to improve the performance of the organization (OECD, 2005). Furthermore, **the theory of resources and capabilities** adds that in order to obtain a competitive advantage through the implementation of

new innovative strategies, it is necessary to provide capabilities, techniques and resources for the successful implementation of these strategies. These innovative strategies are also reflected on improving the performance of the organization (Lengnick-Hall, 1992).

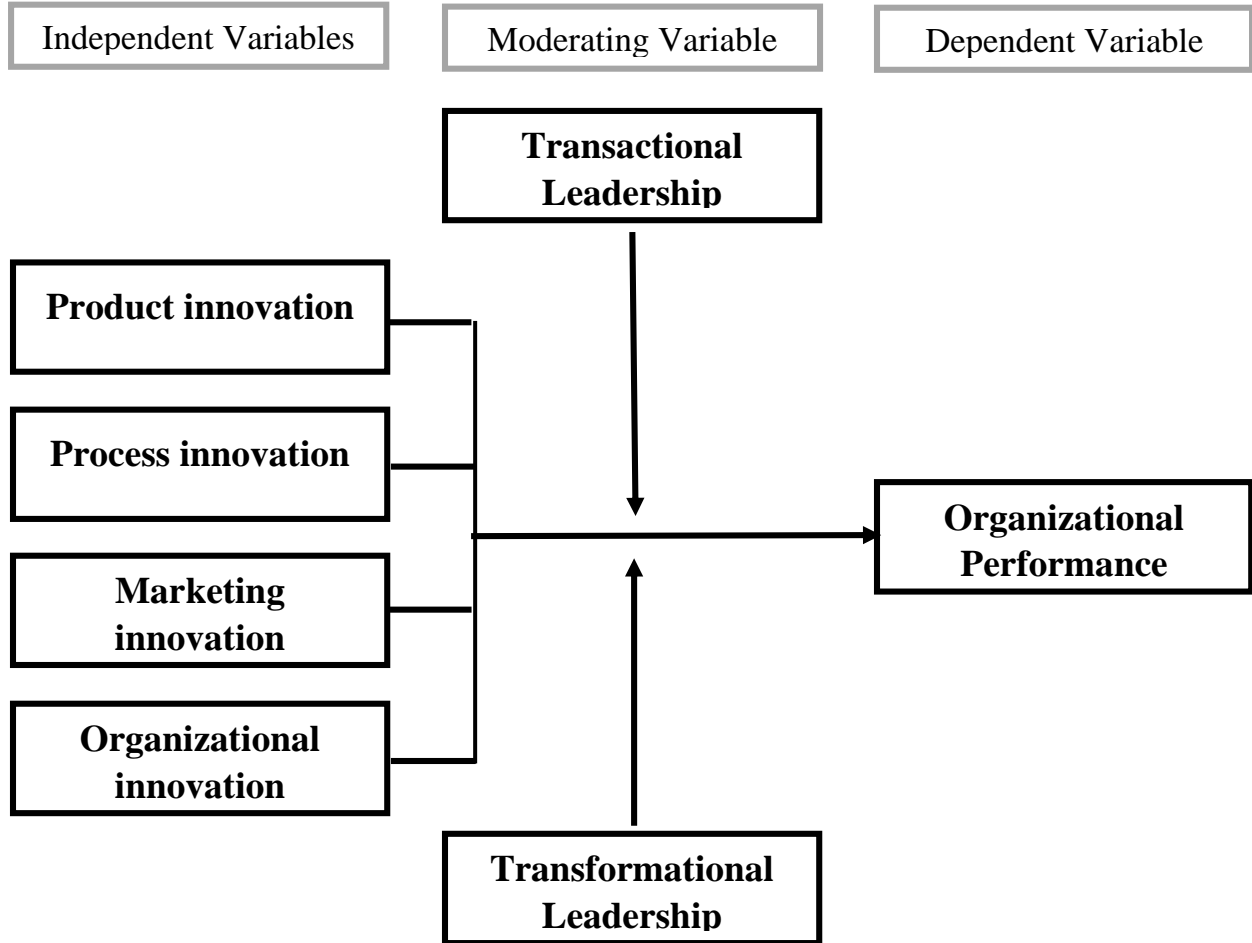
The **performance gap theory**, based on comparing the actual performance of the organization with what was planned to be achieved, shows that reducing the gap must depend on innovation. Also, this theory is applicable to all organizations and is not limited to bad performing organizations. As the leaders' application of innovation in organizations with good performance may contribute to utilize from new opportunities or producing products and providing different services or solving problems and reducing external pressures, which may improve the organizational performance (Wischnevsky & Damanpour, 2006). The performance gap theory assumes that performance is the primary goal of institutions. When managers can get continuous feedback on the organization's performance, it gives them the ability to implement new strategies and practices such as innovation, and this is not limited to the organizations with poor performance, but also to obtain a competitive advantage to distinguish it from competitors, deal with external threats and seize external opportunities (Andrews, 1971 cited by Wischnevsky & Damanpour, 2006).

The **resource-based theory** shows that the exploitation of the resources available to the organization works to sustain its competitive capabilities and strategies. The organization has to possess distinctive, unique and indispensable resources such as human resources that are observed through the experiences and skills of employees (Smriti and Das, 2018). Hitt et al. (2001) added that human capital enhances the organization's performance, directly or indirectly, through the application of the organization's strategies. According to the **upper echelons theory**, leadership affects the organization's strategic performance, as leadership works to change the organization's

behavior and decision making. Leadership also enhances the innovation in the organization by changing the organization's processes and structures (Hambrick, 2007). The **path-goal theory** also added that effective leaders who aim to improve the performance of the organization and increase its production work on the participation of employees in decision-making and achieving goals through diversity and innovation (Hayat Bhatti et al, 2019).

2.3 CONCEPTUAL FRAMEWORK

Based on the presented previous studies and theoretical framework, the performance of the organization is of great interest to managers and leaders, and maintaining it in a high rate and improving it continuously give the organization a competitive advantage that enables it to overcome changes in the external environment and its competitors in the market. Reviewing the literature showed that innovation in its different types is one of the vital factors that affect the performance of the organization. However, the leadership style followed by managers (leaders) has an impact on the adoption of innovation, that is reflected on the performance of the organization. According to this, the research variables framework has been determined. Innovation (Product, process, marketing and organizational innovation) is considered as an independent variable; organizational performance as a dependent variable; and leadership styles (transactional and transformational) as a moderating variable. The conceptual model of the research was built as follows:



2.4 HYPOTHESES

- Innovation has a significant impact on organizational performance.
 - H1: Product innovation has a significant impact on organizational performance.
 - H2: Process innovation has a significant impact on organizational performance.
 - H3: Marketing innovation has a significant impact on organizational performance.
 - H4: Organizational innovation has a significant impact on organizational performance.
- leadership styles have a significant impact on innovation.
 - H5: Transformational leadership style has a significant impact on product innovation.
 - H6: Transformational leadership style has a significant impact on process innovation.
 - H7: Transformational leadership style has a significant impact on marketing innovation.
 - H8: Transformational leadership style has a significant impact on organizational innovation.
 - H9: Transactional leadership style has a significant impact on product innovation.
 - H10: Transactional leadership style has a significant impact on process innovation.
 - H11: Transactional leadership style has a significant impact on marketing innovation.
 - H12: Transactional leadership style has a significant impact on organizational innovation.
- Leadership styles have a significant impact on organizational performance.
 - H13: Transformational leadership style has a significant impact on organizational performance
 - H14: Transactional leadership style has a significant impact on organizational performance.

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- Transformational style has a significant impact on the relationship between innovation and organizational performance.
 - H15: Transformational leadership style has a significant impact on the relationship between product innovation and organizational performance.
 - H16: Transformational leadership style has a significant impact on the relationship between process innovation and organizational performance.
 - H17: Transformational leadership style has a significant impact on the relationship between marketing innovation and organizational performance.
 - H18: Transformational leadership style has a significant impact on the relationship between organizational innovation and organizational performance.
 - Transactional style has a significant impact on the relationship between innovation and organizational performance.
 - H19: Transactional leadership style has a significant impact on the relationship between product innovation and organizational performance.
 - H20: Transactional leadership style has a significant impact on the relationship between process innovation and organizational performance.
 - H21: Transactional leadership style has a significant impact on the relationship between marketing innovation and organizational performance.
 - H22: Transactional leadership style has a significant impact on the relationship between organizational innovation and organizational performance.



CHAPTER THREE

RESEARCH METHODOLOGY

List of Abbreviations

Abbreviations	Construct
PcI	Process Innovation
PdI	Product Innovation
MI	Marketing Innovation
OI	Organizational Innovation
F	Financial Performance
M	Marketing Performance
I	Innovative Performance
P	Production (Operational) Performance
OP	Organization Performance
TFLS	Transformational Leadership Style
TSLs	Transactional Leadership Style

3.1 INTRODUCTION

This chapter describes the methodology used in this research. The researcher depended on the descriptive and inferential analysis methodologies so as to answer the research aims and objectives. It describes the research population represented by the Palestinian banking sector and the research sample which was represented by the banking managers. It also reviews the selection of the research tool and how it was built. The study also deals with the various statistical methods and tests used in the treatment of data.

3.2 RESEARCH DESIGN

In order to examine the research hypotheses, this research paper will be explanatory research, which aims to identify the causes and results of the research problem. The type of information collected and analyzed will be quantitative in order to study the relationship between variables in a numerical and statistical form. Research information is collected from the study sample through a semi-structured questionnaire; therefore, the research is based on the primary data.

3.3 POPULATION, SAMPLE SIZE AND PROCEDURE

The study population is represented by the Palestinian banking sector, in particular, the Palestinian local banks, which are constituted of seven banks according to the Palestinian Monetary Authority (2022). They include the Palestinian Islamic Bank, the Arab Islamic Bank, the National Bank, Quds Bank, Bank of Palestine, Safa Bank and the Palestine Investment Bank. The questionnaire

was distributed randomly among banks' managers, to form a representative research sample, which gives the researcher the ability to generalize the results to the study population. The number of managers was obtained by communicating with the human resources department for each of the local banks, to obtain the number of the study population and then determine the sample size. The number of the study population was determined, which can be represented in the following table: (Note: Quds Bank refused to reveal the exact number of managers).

Table 3. 1: Research population distribution on Palestinian banking sector

Bank name	Managers number
Palestinian Islamic Bank	63
Arab Islamic Bank	50
National Bank	46
Quds Bank	---
Bank of Palestine	89
Safa Bank	22
Palestine Investment Bank	39
Total	309

The sample size was determined using the following formula (Saunders et al., 2012):

$$N = \frac{NP}{1 + (NP \times e^2)}$$

Where N: Sample size, NP: population size, e: the errors term = 0.05, so the sample size must be 174 managers.

$$N = \frac{309}{1 + (309 \times 0.05^2)} = 174 \text{ participants}$$

In order to fill out the questionnaire, the banks stipulated that there should be no question or paragraph within the questionnaire that reveal the name of the bank, due to the laws and regulations of banks. The questionnaire was distributed to the study sample by sending its link electronically (by e-mail) to the managers of human resources departments in each bank to distribute and send to the managers of branches and departments. This led to the researcher's inability to determine the exact number of questionnaire responses from each bank.

3.4 DATA COLLECTION

The construction of the research questionnaire was based on several previous studies, which relied in their study on innovation, organizational performance, transactional and transformational leadership styles as variables, which in turn are similar to the variables of this study. These studies are Hlaing (2019), Gunday et al. (2011), Easa (2012), and Al Ahmad et al. (2019). The questionnaire is divided into two main parts; the first main part is demographic questions, that are multiple-choice questions. The second main part is questions about the variables of the study, represented by a Five-point Likert scale questions (1 = strongly disagree, 2 = disagree, 3 = no opinion, 4 = agree, and 5 = strongly agree) and divided into three sub-parts. The first sub-part is related to the independent variable, which is innovation, divided into four sections: product innovation (6 items), process innovation (5 items), marketing innovation (4 items), and organizational innovation (4 items). The second sub-part is related to the dependent variable, which is the performance of the organization, and it is divided into four sections: Financial (3 items), Marketing (3 items), Innovative (3 items), and Production (operational) (3 items). The third

sub-part is related to the moderating variable, which is the leadership style, and it is divided into two sections: transactional leadership (4 items) and transformational leadership (5 items).

3.5 DATA ANALYSIS

In this study, the researcher uses descriptive and inferential statistical tools to examine the hypothesis and questions as follows:

- **Descriptive statistics**

1. Frequencies and percentages were used to describe the characteristics of the sample characteristics.
2. Means and standard deviation were used to describe the sample responses about the study variables and interpreted according to Moidunny (2009) as shown in table 3.2.

Table 3. 2: Mean Score Interpretation

Mean Score	Interpretation
1.00 – 1.80	Very Low
1.81 – 2.60	Low
2.61 – 3.40	Medium
3.41 – 4.20	High
4.21 – 5.00	Very High

- **Inferential statistics**

To answer the researcher hypothesis, Structural Equation Modelling (SEM) was used by Smart-PLS (Ringle et al., 2012).

3.5.1 Structural Equation Modelling (SEM)

According to the wide application of the first-generation techniques of data analysis such as multiple regression analysis, researcher starts to use the second generation of data analysis in order to test the multivariate and complex model by using structural equation modelling, and this type of data analysis is considered to be more complex compared to the first-generation type.

There are two ways to apply the structural equation modelling: (1) covariance based structural equation modelling (CB-SEM) and (2) partial least squares structural equation modelling (PLS-SEM). CB-SEM was used to confirm or reject the theories tested, while PLS-SEM was used to develop a conceptual model of study. The CB-SEM way requires different assumptions in data set which are the normality distribution of the data, the number of indicators (items or observed variables) for constructs (factor or dimensions) and the sample size. Contrariwise, PLS-SEM deals with a non-normal and small size of data set (Hair Jr et al., 2013).

In this study, the sample size is 176 participants and according to Hair Jr et al. (2013) and Comery and Lee (1992), the study sample is small, thus, in order to evaluate the study model by SEM, the PLS-SEM must be used.

Hair Jr et al. (2013) describe the PLS-SEM way as a path analysis reflecting the research hypotheses and relationships among variables by a diagram containing two parts, the structural (inner) model that includes the relations between dependent (endogenous) and independent (exogenous) variables, while measurement (outer) model that includes the relationship between construct and their items, this construct represented with their indicators by reflective or formative models. If reflective construct changes, then reflective indicators will change, while the formative indicators represent the indicators that if change, then would lead to a change in the construct (Hair

Jr et al., 2013;2014). To represent the relation between the research constructs (product innovation, process innovation, marketing innovation, organizational innovation, financial, marketing, innovative, and production performance, transactional leadership and transformational leadership) and their items, a measurement model must be used. According to the researcher instrument, the measurement model is in reflective form (if the researcher deleted any items (statement) from their constructs, the construct meaning does not change). figure 3.1 displays the PLS-SEM measurement and structural models.

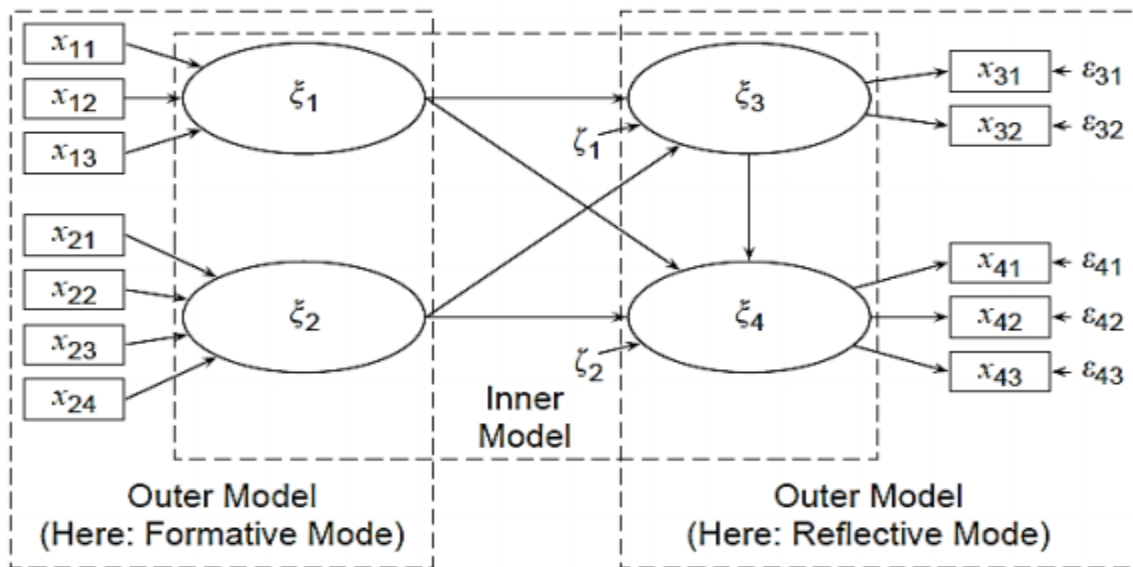


Figure 3. 1: Simple PLS-SEM; Adopted from Henseler et al. (2009)

Researcher sometimes tries to build a latent variable (constructs) in higher order called Hierarchical Components Models (HCMs), these constructs are more general constructs built from lower order constructs (Hair Jr et al., 2017). The main advantage of building a higher order construct is reducing the number of path model relationships. There are four types of higher order construct which are; reflective-reflective model, reflective-formative model, formative-formative model and formative-reflective. Figure 3.2 displays the higher order models type.

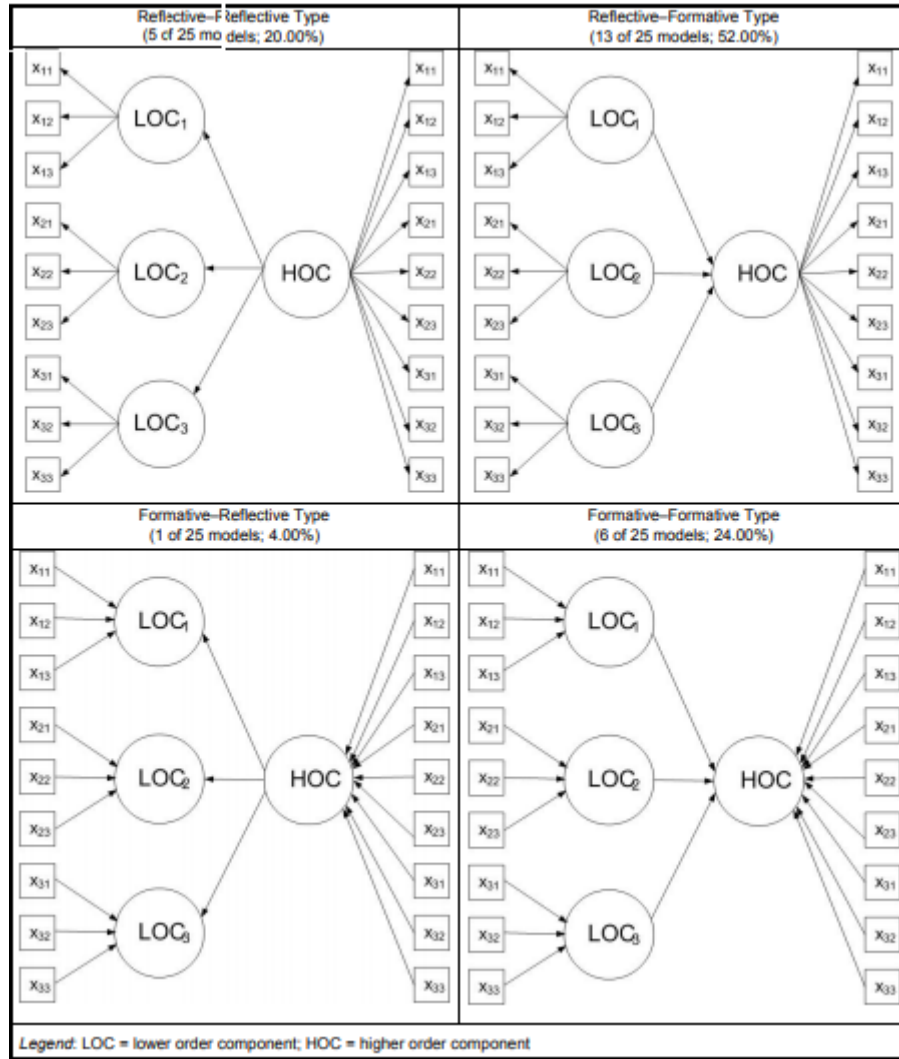


Figure 3. 2: Type of higher order measurement model; Adopted from Ringle et al. (2012)

According to the research hypothesis, there are ten first order latent variables while the model included one latent variable in higher order (second-order), which is the organization's performance represented by four constructs in the first order (Financial, Marketing, Innovative, and Production (operational)). Table 3.3 represents the first and second order latent variables of study model and their components.

Table 3. 3: Study Variables

Abbreviations	Constructs	# of indicators	Type of measure
PcI	Product innovation	6	First order
PdI	Process innovation	5	First order
MI	Marketing innovation	4	First order
OI	organizational innovation	4	First order
F	Financial	3	First order
M	Marketing	3	First order
I	Innovation	3	First order
P	Production	3	First order
OP	Organization performance	12	second order
TFLS	Transformational leadership style	5	First order
TSLS	Transaccional leadership style	4	First order

3.5.2 PLS-SEM Evaluation

To evaluate the research model, two steps of analytical procedure were performed: (1) measurement evaluation (validity and reliability of the measures) and (2) structural model evaluation (study hypothesis evaluation).

3.5.2.1 Measurement Model Evaluation

There are three main stages to evaluate the measurement model which are: the assessment of internal consistency, the convergent validity and discriminant validity. Table 3.4 represents the measurement model evaluation criteria.

Figure 3.3 represents the PLS-SEM of study and the research hypothesis.

Figure 3. 3: PLS-SEM and the research hypothesis

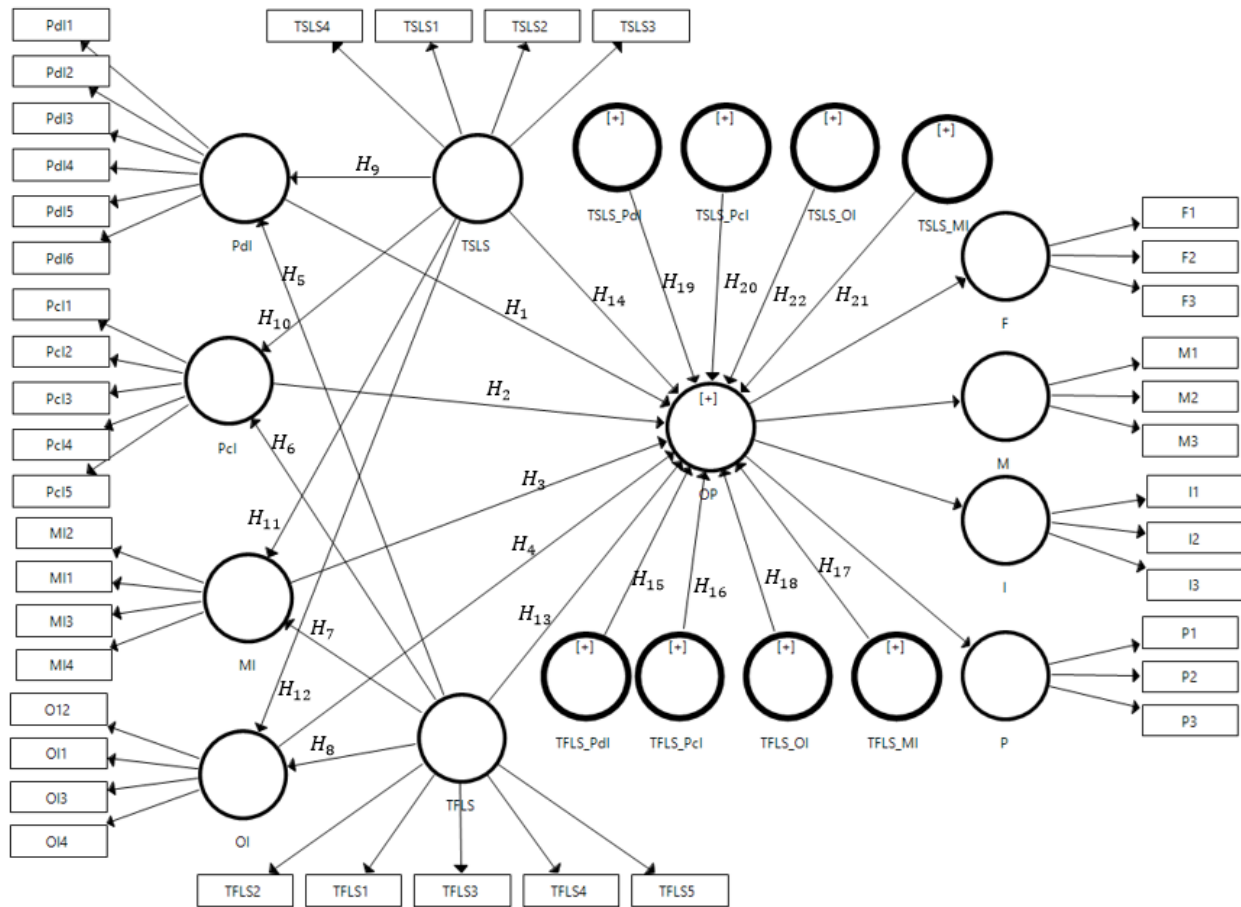


Table 3. 4: Measurement model evaluation criteria


Criteria	Cut off value
1. Internal consistency	
<ul style="list-style-type: none"> • Cronbach's α coefficient (CA) • Composite Reliability coefficient (CR) 	Should be more than 0.70 (Hair et al., 2017).
Convergent validity	
<ul style="list-style-type: none"> • Outer loading 	Should be more than 0.50 (Hair et al., 2017).
<ul style="list-style-type: none"> • Average Variance Extracted (AVE) 	Should be more than 0.50 (Fornell and Larcker, 1981).
Discriminant validity	
<ul style="list-style-type: none"> • Cross Loading 	Every outer loading of any indicator is the highest for its assigned construct contrasted with the others (Hair et al., 2017).
<ul style="list-style-type: none"> • Fornell-Larcker criterion 	The squared root of AVE for any construct should be greater than any correlation between it and any other construct (Fornell & Larcker, 1981)

3.5.2.2 Structural Model Evaluation

Hair et al. (2017) determined four tests for assessing the structural model of PLS-SEM. Table 3.5 represents the structural model evaluation criteria.

Table 3. 5: Structural model evaluation criteria

Criteria	Cut off value
1. Collinearity test	Variance Inflation Factors (VIF) of construct should be below 5 (Hair et al., 2017).
2. Coefficient of determination (R^2)	Chin (1998) suggests that the R^2 value less than 0.19 is rejected, 0.19, 0.33 and 0.75 are often used weak, moderate and strong coefficient of determination respectively.
3. Predictive Relevance (Q^2)	Q^2 should be greater than Zero (Henseler et al., 2009).
4. Effect size (f^2)	Cohen (1988) suggests that the f^2 value of 0.02, 0.15, and 0.35 are often used to small effect, medium effect, and large effect, respectively



CHAPTER FOUR

DATA ANALYSIS & RESULTS

4.1 INTRODUCTION

This chapter includes the presentation of data analysis and testing the research hypotheses by answering the research questions and reviewing the main results of the questionnaire reached through analyzing its various paragraphs. This chapter starts by descriptive analysis of respondents' answers about banking implementation of innovation, leadership styles and the organizational performance. After that, assessment of the study model quality by PLS-SEM is presented by the reporting of the key findings from the evaluation of the measurement model and the structural model. The researcher presents the study results to answer the questions that appeared and were included in the questionnaire, which represent the problem of the study after collecting the data required by the study tool. Several of the results were reached, and advice for future research are offered to researchers in the same field, both in banks and in any other organization.

4.2 DESCRIPTIVE STATISTICS

4.2.1 Sample Characteristics

Through the questionnaire, the researcher observed certain demographic characteristics of respondents that included four variables in this study as shown in Table 4.1; which contains the frequency and percentage for each variable listed according to the survey categories.

The result in Table 4.1 showed that 176 participants participated in responding to the questionnaire, 73.9% of them were male and 26.1% were female. Also, 44.3% of the participants' age ranged from 41 to 50 years, 26.1% of them their age was more than 50 years, 21.6% of them their age ranged from 31 to 40, and only 8% of them their age was between 21-30 years. Most of participants had BA degrees (75.0%), 21.6% had master degrees, while only 3.4% of them had

diploma degrees. In addition, the results indicate that 71.6% of the respondents have more than 12 years of experience, 14.8% of them have an experience between 10 to 12 years, and 13.6% of them have less than 10 years.

Table 4. 1: Results of analyzing the sample characteristic

Variable	Options	Frequency	Percentage %
Gender	Male	130	73.9
	Female	46	26.1
Age categories	21- 30 years	14	8.0
	31 – 40 years	38	21.6
	41 – 50 years	78	44.3
	Above 50 years	46	26.1
Education level	Diploma	6	3.4
	BA Graduate	132	75.0
	Master Degree	38	21.6
	PHD	0	0
Working Experience	1 – 3 years	8	4.5
	4 – 6 years	6	3.4
	7 – 9 years	10	5.7
	10 – 12 years	26	14.8
	12 years and above	126	71.6

4.2.2 Innovation Analysis

The Innovation is measured by using four dimensions which are product innovation, process innovation, marketing innovation and organizational innovation. To describe the innovation dimensions; means, standard deviation and percentage were calculated. According to the results in table 4.2, the mean and standard deviation scores of sample response about the innovation level are 4.01 and 0.54 respectively with a percentage of 80.2%, which indicate a high level of innovation implementation in local Palestinian banks. Also, all innovation dimensions have a high level of implementation, more specifically; product innovation has the largest level, followed by process innovation, organizational innovation and marketing innovation respectively.

Table 4. 2: Mean, standard deviation and percentage of innovation dimensions

Rank	Dimensions	Mean	Std.	Percentage	Level
1	Product innovation	4.11	0.56	82.2	High
2	Process innovation	3.98	0.59	79.6	High
4	Marketing innovation	3.92	0.60	78.4	High
3	Organizational innovation	3.97	0.64	79.4	High
	Innovation	4.01	0.54	80.2	High

To determine the main innovation type that banking sector was applying, means, standard deviation and percentage were calculated, and the statements were arranged descending according to the mean score.

4.2.2.1 Product Innovation

According to the results in table 4.3, the means and standard deviation of product innovation dimension are 4.11 and 0.56 respectively with a percentage of 82.2%, which indicates a high level of product innovation implementation in local Palestinian banks. The statement “The bank provides new services to improve customers’ access to service” has the highest percentage of implementation (84.8%) with a very high level, followed by the statement “The bank initiates the development of new services based on customers’ needs and market trends” with a high level of implantation and with a percentage of 84.6%. However, the statement “The bank introduces new services into the market before its competitors” has got the lowest percentage of implementation (77.6%) with a high level, as well.

Table 4. 3: Mean, standard deviation and percentage of product innovation statement

#	Statement	Mean	Std.	Percentage	Level
PdI6	The bank provides new services to improve customers' access to services.	4.24	0.66	84.8	Very High
PdI1	The bank initiates the development of new services based on customers’ needs and market trends.	4.23	0.71	84.6	Very High
PdI2	The bank applies new technologies and software to add new services and improve the quality of current services.	4.21	0.77	84.2	Very High
PdI4	The bank develops new products with technical specifications and functionalities totally differing from the current ones.	4.09	0.69	81.8	High
PdI3	The bank adopts new / non-traditional solutions to solve problems.	4.02	0.80	80.4	High
PdI5	The bank introduces new services into the market before its competitors.	3.88	0.81	77.6	High
Product Innovation		4.11	0.56	82.2	High

4.2.2.2 Process Innovation

The means and standard deviation of process innovation dimension are 3.98 and 0.59 respectively with a percentage of 79.6%, which indicates a high level of process innovation implementation in local Palestinian banks (see table 4.4). Moreover, all items came to high degree. The statement “The bank adopts new technology to improve its processes” has the highest percentage of implementation (82.2%), followed by the statement “The bank tracks the relevant research studies to improve its processes” and “The bank follows a formal process to keep on improving its services to customers” which have the percentage 79.8% for each of them. However, the statement “The bank aims at increasing manufacturing quality in components and materials of current products” has got the lowest percentage of implementation (77.8%).

Table 4. 4: Mean, standard deviation and percentage of process innovation statement

#	Statement	Mean	Std.	Percentage	Level
PcI1	The bank adopts new technology to improve its processes	4.11	0.67	82.2	High
PcI2	The bank tracks the relevant research studies to improve its processes	3.99	0.82	79.8	High
PcI3	The bank follows a formal process to keep on improving its services to customers	3.99	0.67	79.8	High
PcI4	The bank aims at decreasing manufacturing cost in components and materials of current products	3.91	0.83	78.2	High
PcI5	The bank aims at increasing manufacturing quality in components and materials of current products	3.89	0.85	77.8	High
Process Innovation		3.98	0.59	79.6	High

4.2.2.3 Marketing Innovation

The results in table 4.5 indicate the means and standard deviation of marketing innovation dimension which are 3.92 and 0.60 respectively with a percentage of 78.4%, which indicates a high level of marketing innovation implementation in local Palestinian banks. All items came to

high degree. The statement “The bank adopts new technology to improve its processes” has the highest percentage of implementation (82.2%), followed by the statement “The bank tracks the relevant research studies to improve its processes” and “The bank follows a formal process to keep on improving its services to customers” have the percentage of implementation 79.8% for each of them. However, the statement “The bank aims at decreasing manufacturing cost in components and materials of current products” has got the lowest percentage (78.2%).

Table 4. 5: Mean, standard deviation and percentage of marketing innovation statement

#	Statement	Mean	Std.	Percentage	Level
MI4	The bank renews the product pricing techniques employed for the pricing of the current and/or new products.	4.11	0.67	82.2	High
MI1	The bank renews the design of the current and/or new products through changes such as in appearance, packaging, shape and volume without changing their basic technical and functional features.	3.99	0.82	79.8	High
MI3	The bank renews general marketing management activities.	3.99	0.67	79.8	High
MI2	The bank adopts new marketing strategies in its promotions and services.	3.91	0.83	78.2	High
	Marketing Innovation	3.92	0.60	78.4	High

4.2.2.4 Organizational Innovation

According to the results in table 4.6, the means and standard deviation of organizational innovation dimension are 3.97 and 0.64 respectively with a percentage of 79.4%, which indicates that the high level of organizational innovation implementation in local Palestinian banks. Also, all items came to a high degree. The statement “The bank updates the routines, procedures and processes employed to execute firm activities in an innovative manner ” has the highest percentage of implementation (80.4%), followed by the statement “The bank provides significant improvements in its structures, practices, and techniques” that has the percentage 79.8%. However, the statement

“The bank follows flexible management strategies to deal with unexpected changes” has got the lowest percentage (77.8%).

Table 4. 6: Mean, standard deviation and percentage of organizational innovation statement

#	Statement	Mean	Std.	Percentage	Level
OI1	The bank updates the routines, procedures and processes employed to execute firm activities in an innovative manner	4.02	0.89	80.4	High
OI2	The bank follows flexible management strategies to deal with unexpected changes.	3.89	0.72	77.8	High
OI3	The bank provides significant improvements in its structures, practices, and techniques.	3.99	0.78	79.8	High
OI4	The bank introduces more developed and distinctive strategies to manage its processes, in comparison with competitors' strategies.	3.98	0.73	79.6	High
Organizational Innovation		3.97	0.64	79.4	High

4.2.3 Organization performance Analysis

The Organization performance was measured by using four dimensions which are financial, marketing, innovative and production (operational) performance. To describe the organizational performance dimensions; means, standard deviation and percentage were calculated. According to the results in table 4.7, the mean and standard deviation scores of sample response about the organizational performance level are 4.08 and 0.55 respectively with a percentage of 81.6%, which indicate a high level of organization performance. Also, all organizational performance dimensions have a high level, marketing dimension has the largest level, followed by production, financial and innovative respectively.

Table 4. 7: Mean, standard deviation and percentage weight of organization performance dimensions

Rank	Dimensions	Mean	Std.	Percentage	level
3	Financial	4.07	0.68	81.4	High
1	Marketing	4.14	0.67	82.8	High
4	Innovative	3.98	0.58	79.6	High
2	Production	4.13	0.62	82.6	High
Organization performance		4.08	0.55	81.6	High

To determine the main dimensions of organizational performance, means, standard deviation and percentage were calculated, and the statements were arranged descending according the man score.

4.2.3.1 Financial Performance Analysis

The results in table 4.8 illustrate the means and standard deviation of financial dimension which are 4.07 and 0.68 respectively with a percentage of 81.4%, which indicates that the financial performance of organization is high. All items came to high degree. The statement “The bank's return on sales affected by implementing innovative activities” has the highest percentage (82.8%), followed by the statement “The adoption of innovation is reflected on the bank’s General profits” that has the percentage of 82.0%, and the statement “The bank's return on assets affected by implementing innovative activities” has got the lowest percentage (79.6%).

Table 4. 8: Mean, standard deviation and percentage of Financial performance statement

#	Statement	Mean	Std.	Percentage	Level
F2	The bank's return on sales affected by implementing innovative activities	4.14	0.78	82.8	High
F1	The adoption of innovation is reflected on the bank’s General profits	4.10	0.81	82.0	High
F3	The bank's return on assets affected by implementing innovative activities	3.98	0.75	79.6	High

Financial	4.07	0.68	81.4	High
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4.2.3.2 Marketing Performance Analysis

According to the results in table 4.9, means and standard deviation of marketing dimension are 4.14 and 0.67 respectively with a percentage of 82.8%, which indicates that the marketing performance of organization is high. The statement “Banks’ Customer satisfaction is affected by implementing innovative activities” has the highest percentage (84.6%) with a very high level, followed by the statement “Banks' total sales are affected by implementing innovative activities” and the statement “Banks' market share is affected by implementing innovative activities” which have got the percentages of 82.0% and 81.6% respectively.

Table 4. 9: Mean, standard deviation and percentage of marketing performance statement

#	Statement	Mean	Std.	Percentage	Level
M3	Banks’ Customer satisfaction is affected by implementing innovative activities.	4.23	0.81	84.6	Very High
M1	Banks' total sales are affected by implementing innovative activities.	4.10	0.69	82.0	High
M2	Banks' market share is affected by implementing innovative activities.	4.08	0.83	81.6	High
	Marketing	4.14	0.67	82.8	High

4.2.3.3 Innovation Performance Analysis

According to the results in table 4.10, the means and standard deviation of innovation dimension are 3.98 and 0.58 respectively with a percentage of 79.6%, which indicates that the innovation performance of the organization is high. All items came to high degree. The statement “The Quality of new products and services introduced is improved” and the statement “The number of new product and service projects increased” have got the percentage of 80.2% for each of them.

However, the statement “The administrative system and the mindset are in line with the bank's environment” has got the lowest percentage (78.4%).

Table 4. 10: Mean, standard deviation and percentage of innovation performance statement

#	Statement	Mean	Std.	Percentage	Level
I2	The Quality of new products and services introduced is improved.	4.01	0.73	80.2	High
I3	The number of new product and service projects increased.	4.01	0.75	80.2	High
I1	The administrative system and the mindset are in line with the bank's environment.	3.92	0.64	78.4	High
Innovation		3.98	0.58	79.6	High

4.2.3.4 Production (operational) Performance Analysis

The results in table 4.11 display that the means and standard deviation of production dimension are 4.13 and 0.62 respectively with a percentage of 82.6%, which indicates that the production performance of organization is high. The statement “The bank production quality is affected due to innovation” has the percentage of 84.2% with a very high level, followed by the statement “The bank production cost is affected due to innovation” and the statement “The bank production volume is affected due to innovation” which have the percentage of 81.8% with high level for each of them.

Table 4. 11: Mean, standard deviation and percentage of production (operational) performance statement

#	Statement	Mean	Std.	Percentage	Level
P3	The bank production quality is affected due to innovation.	4.21	0.71	84.2	Very High
P2	The bank production cost is affected due to innovation.	4.09	0.71	81.8	High
P1	The bank production volume is affected due to innovation.	4.09	0.77	81.8	High
Production		4.13	0.62	82.6	High

4.2.4 Leadership Analysis

The leadership style was measured using transformational leadership style and transactional leadership style. To describe the leadership styles, means, standard deviation and percentage were calculated. According to the results in table 4.12, the mean and standard deviation scores of sample response about the leadership style level are 3.93 and 0.57 respectively with a percentage of 78.6%, which indicates a high level of leadership. All leadership style dimensions have a high level, transactional leadership style has the largest level, followed by transformational leadership style.

Table 4. 12: Mean, standard deviation and percentage of leadership style dimensions

Rank	Dimensions	Mean	Std.	Percentage	Level
2	Transformational leadership style	3.91	0.54	78.2	High
1	Transactional leadership style	3.95	0.71	79.0	High
	Leadership	3.93	0.57	78.6	High

4.2.4.1 Transformational Leadership Style Analysis

The results in table 4.13 display that the means and standard deviation of transformational leadership style are 3.91 and 0.54 respectively with a percentage of 78.2%, which indicates the high level of transformational leadership style implemented in local Palestinian banks. The statement “The leader establishes relationships with all staff as important persons for the organization development” has the highest percentage (80.2%) with high level, followed by the statement “The leader stimulates the staff’s enthusiasm for acting their responsibilities” that has the percentage of 79.8% with high level. However, the statement “The leader treats the employee as an individual rather than just as member of a group” has got the lowest percentage (72.6%) with moderate level.

Table 4. 13: Mean, standard deviation and percentage of transformational leadership style statement

#	Statement	Mean	Std.	Percentage	Level
TFLS4	The leader establishes relationships with all staff as important persons for the organization development.	4.01	0.75	80.2	High
TFLS5	The leader stimulates the staff's enthusiasm for acting their responsibilities.	3.99	0.78	79.8	High
TFLS1	The leaders motivate their subordinates to work effectively.	3.98	0.70	79.6	High
TFLS3	The leader gets the employees to look at problems from many different angles.	3.97	0.74	79.4	High
TFLS2	The leader treats the employee as an individual rather than just as member of a group.	3.63	0.95	72.6	Moderate
Transformational Leadership Style		3.91	0.54	78.2	High

4.2.4.2 Transactional Leadership Style Analysis

According to the results in table 4.14, the means and standard deviation of transactional leadership style dimension are 3.95 and 0.71 respectively with a percentage of 79.0%, which indicates the high level of transactional leadership style implemented in local Palestinian banks. The statement "The leader directs employees' attentions to meet standards" has the highest percentage (80.2%) with high level, followed by the statement "The leader concentrates his full attention to solve complaints and failures" that has the percentage of 79.4% with high level. However, the statement "The leader supports all staff to achieve their target" has got the lowest percentage (78.0%) with moderate level.

Table 4. 14: Mean, standard deviation and percentage of transactional leadership style statement

#	Statement	Mean	Std.	Percentage	Level
TSL3	The leader directs employees' attentions to meet standards.	4.01	0.77	80.2	High
TSL4	The leader concentrates his full attention to solve complaints and failures	3.97	0.87	79.4	High
TSL1	The leader discusses in specific terms who is responsible for achieving performance targets.	3.93	0.75	78.6	High
TSL2	The leader supports all staff to achieve their target.	3.90	0.84	78.0	High
Transactional Leadership Style		3.95	0.71	79.0	High

4.3 STUDY MODEL EVALUATION

To evaluate the research model, two steps of analytical procedures were followed; measurement evaluation (validity and reliability of the measures) and structural model evaluation (research hypothesis evaluation).

4.3.1 Measurement Model Evaluation

There are three main stages to evaluate the measurement model: the assessment of the convergent validity, discriminant validity and internal consistency.

4.3.1.1 Convergent Validity

Hair Jr et al. (2013) defined the convergent validity as “the extent to which a measure correlates positively with alternative measures of the same construct”. To assess the convergent validity, three tests were used; outer loading, cross loading and Average Variance Extracted (AVE).

4.3.1.1.1 Outer Loading

The outer loading or indicators' reliability represent the association between the constructs and indicators (Hair Jr et al., 2017). According to the results in table 4.15, the outer loading of all indicators were between 0.622 and 0.907 except the indicator TFLS2 which states that "The leader treats the employee as an individual rather than just as member of a group", which indicates all indicators are acceptable except TFLS2 (Hair Jr et al., 2017). While the indicators OI2 and MI2 were dropped from the model because they affect the validity test. According to the result in the Fornell-Larcker Criterion for first order construct in the appendix, the correlation coefficient of marketing innovation and organizational innovation is more than the square root of AVE of marketing innovation, so the discriminant validity assumption does not satisfy.

Table 4. 15: outer loading of indicators

Construct and indicators		Outer loading
First order construct		
PdI	Product innovation	
PdI1	The bank initiates the development of new services based on customers' needs and market trends.	0.741
PdI2	The bank applies new technologies and software to add new services and improve the quality of current services.	0.811
PdI3	The bank adopts new / non-traditional solutions to solve problems.	0.769
PdI4	The bank develops new products with technical specifications and functionalities totally differing from the current ones.	0.767
PdI5	The bank introduces new services into the market before its competitors.	0.766
PdI6	The bank provides new services to improve customers' access to services.	0.726
PcI	Process innovation	
PcI1	The bank adopts new technology to improve its processes	0.622
PcI2	The bank tracks the relevant research studies to improve its processes	0.819
PcI3	The bank follows a formal process to keep on improving its services to customers	0.771
PcI4	The bank aims at decreasing manufacturing cost in components and materials of current products	0.782
PcI5	The bank aims at increasing manufacturing quality in components and materials of current products	0.832
MI	Marketing innovation	
MI1	The bank tracks the relevant research studies to improve its processes	0.810

MI2	The bank aims at decreasing manufacturing cost in components and materials of current products	0.655
MI3	The bank follows a formal process to keep on improving its services to customers	0.800
MI4	The bank adopts new technology to improve its processes	0.754
OI	Organizational Innovation	
OI 1	The bank updates the routines, procedures and processes employed to execute firm activities in an innovative manner	0.832
OI 2	The bank follows flexible management strategies to deal with unexpected changes.	0.719
OI 3	The bank provides significant improvements in its structures, practices, and techniques.	0.879
OI 4	The bank introduces more developed and distinctive strategies to manage its processes, in comparison with competitors' strategies.	0.831
F	Financial	
F1	The adoption of innovation is reflected on the bank's General profits	0.878
F2	The bank's return on sales affected by implementing innovative activities	0.872
F3	The bank's return on assets affected by implementing innovative activities	0.878
M	Marketing	
M1	Banks' total sales are affected by implementing innovative activities.	0.862
M2	Banks' market share is affected by implementing innovative activities.	0.846
M3	Banks' Customer satisfaction is affected by implementing innovative activities.	0.864
I	Innovation	
I1	The administrative system and the mindset are in line with the bank's environment.	0.696
I2	The Quality of new products and services introduced is improved.	0.881
I3	The number of new product and service projects increased.	0.860
P	Production (operational)	
P 1	The bank production volume is affected due to innovation.	0.857
P 2	The bank production cost is affected due to innovation.	0.844
P 3	The bank production quality is affected due to innovation.	0.834
TFLS	Transformational leadership style	
TFLS1	The leaders motivate their subordinates to work effectively.	0.826
TFLS2	The leader treats the employee as an individual rather than just as member of a group.	0.220
TFLS3	The leader gets the employees to look at problems from many different angles.	0.775
TFLS4	The leader establishes relationships with all staff as important persons for the organization development.	0.816
TFLS5	The leader stimulates the staff's enthusiasm for acting their responsibilities.	0.816
TSLs	Transactional leadership style	
TSLS1	The leader discusses in specific terms who is responsible for achieving performance targets.	0.854
TSLS2	The leader supports all staff to achieve their target.	0.907

TLS3	The leader directs employees' attentions to meet standards.	0.865
TLS4	The leader concentrates his full attention to solve complaints and failures	0.883
Second order construct		
OP	Organization Performance	
F	Financial	0.837
M	Marketing	0.921
I	Innovation	0.803
P	Production	0.882

After dropping three indicators (TFLS2, OI2, MI2), the outer loading of constructs is displayed in Figure 4.1.

4.3.1.1.2 Average Variance Extracted (AVE)

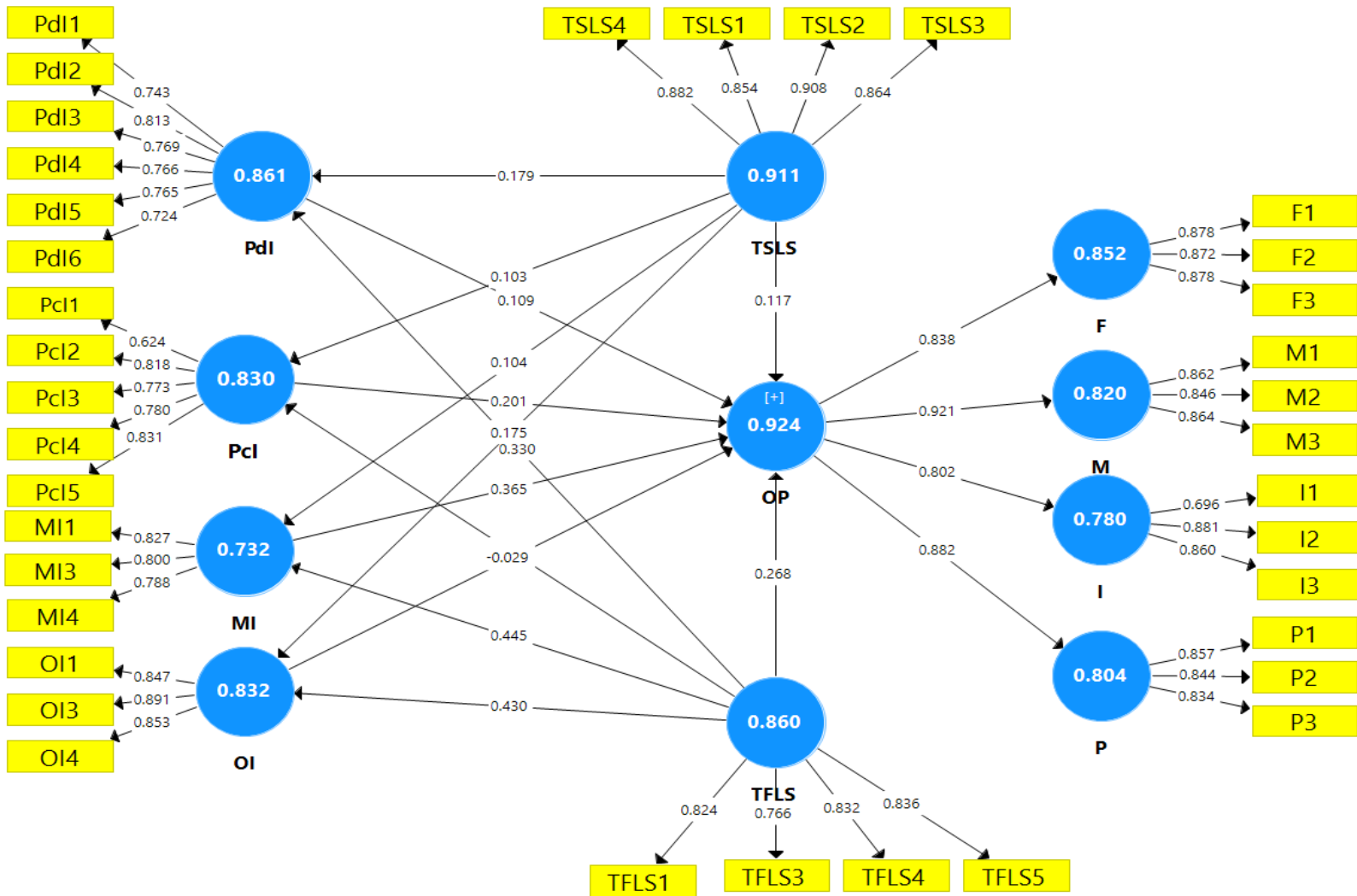
Average Variance Extracted (AVE) is the famous measure of convergent validity, it represents the sum of the squared outer loading of all indicators of that construct divided by the number of indicators. According to the results in table 4.16, the average variance extracted (AVE) of all construct is more than 0.50, indicating good convergent validity (Fornell et al., 1981).

Table 4. 16: Result of average variance extracted (AVE)

Abbreviations	Construct	AVE
PcI	Product innovation	0.583
PdI	Process innovation	0.591
MI	Marketing innovation	0.648
OI	organizational innovation	0.746
F	Financial	0.767
M	Marketing	0.735
I	Innovation	0.667
P	Production	0.714
OP	Organization performance*	0.521
TFLS	Transformational leadership style	0.664
TLS	Transactional leadership style	0.770

* calculated by recommended Sarstedt et al. (2019).

Figure 4. 1: Measurement modal; value in path represent outer loading of indicators



Also, the convergent validity was confirmed in figure 4.2, all constructs were more than 0.50, indicating good convergent validity (Fornell et al., 1981).

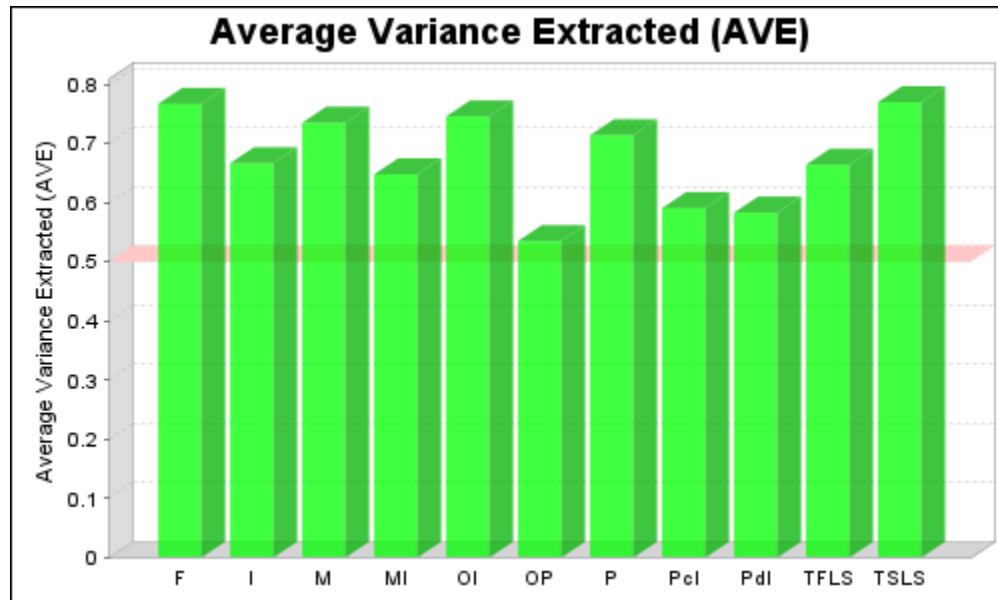


Figure 4. 2: Average variance extracted (AVE) values of construct

4.3.1.2 Discriminant validity

Discriminant validity shows the extent to which one given construct is different from others. For evaluation discriminant validity, two criteria have been proposed, cross loading of indicators and Fornell-Larcker criterion.

4.3.1.2.1 Cross Loading

According to the results in table 4.17, every outer loading of any indicator is the highest for its assigned construct contrasted with the others, at that point it may be assumption that the different indicators of the construct are not tradable.

Table 4. 17: Cross loading result

	F	I	M	MI	OI	P	PcI	PdI	TFLS	TSLs
F1	0.878	0.395	0.638	0.463	0.350	0.536	0.445	0.363	0.395	0.354
F2	0.872	0.507	0.748	0.606	0.567	0.577	0.534	0.541	0.461	0.420
F3	0.878	0.334	0.626	0.517	0.489	0.494	0.610	0.449	0.444	0.371
I1	0.278	0.696	0.410	0.499	0.460	0.386	0.369	0.402	0.445	0.380
I2	0.424	0.881	0.575	0.607	0.652	0.653	0.571	0.583	0.544	0.484
I3	0.442	0.860	0.567	0.541	0.517	0.631	0.521	0.501	0.486	0.415
M1	0.647	0.540	0.862	0.657	0.599	0.655	0.599	0.647	0.584	0.521
M2	0.783	0.542	0.846	0.591	0.530	0.624	0.523	0.484	0.568	0.442
M3	0.540	0.569	0.864	0.617	0.570	0.606	0.532	0.531	0.597	0.567
MI1	0.545	0.614	0.608	0.827	0.661	0.522	0.590	0.696	0.446	0.354
MI3	0.461	0.474	0.561	0.800	0.703	0.468	0.667	0.578	0.467	0.389
MI4	0.455	0.529	0.581	0.788	0.567	0.509	0.498	0.535	0.345	0.314
OI1	0.425	0.498	0.545	0.723	0.847	0.468	0.604	0.595	0.464	0.397
OI3	0.454	0.551	0.575	0.680	0.891	0.471	0.681	0.642	0.492	0.441
OI4	0.511	0.674	0.588	0.675	0.853	0.517	0.677	0.649	0.495	0.448
P1	0.547	0.672	0.687	0.513	0.503	0.857	0.480	0.507	0.520	0.461
P2	0.511	0.558	0.632	0.542	0.495	0.844	0.536	0.525	0.526	0.400
P3	0.495	0.528	0.531	0.519	0.426	0.834	0.445	0.449	0.372	0.375
PcI1	0.589	0.402	0.444	0.431	0.468	0.348	0.624	0.511	0.312	0.242
PcI2	0.412	0.536	0.543	0.666	0.638	0.496	0.818	0.625	0.448	0.379
PcI3	0.511	0.546	0.579	0.647	0.568	0.520	0.773	0.655	0.377	0.292
PcI4	0.440	0.412	0.430	0.509	0.633	0.408	0.780	0.500	0.295	0.311
PcI5	0.376	0.403	0.450	0.506	0.600	0.417	0.831	0.510	0.435	0.356
PdI1	0.409	0.436	0.426	0.531	0.396	0.504	0.435	0.743	0.362	0.353
PdI2	0.492	0.477	0.538	0.536	0.522	0.410	0.535	0.813	0.447	0.446
PdI3	0.400	0.476	0.581	0.602	0.625	0.536	0.672	0.769	0.350	0.329
PdI4	0.362	0.485	0.449	0.584	0.616	0.412	0.542	0.766	0.295	0.249
PdI5	0.311	0.464	0.447	0.567	0.611	0.332	0.569	0.765	0.296	0.264
PdI6	0.374	0.472	0.497	0.638	0.589	0.470	0.623	0.724	0.355	0.283
TFLS1	0.509	0.662	0.665	0.540	0.546	0.572	0.549	0.454	0.824	0.609
TFLS3	0.450	0.344	0.493	0.298	0.321	0.412	0.330	0.237	0.766	0.545
TFLS4	0.367	0.423	0.518	0.424	0.489	0.464	0.366	0.430	0.832	0.648
TFLS5	0.257	0.455	0.495	0.382	0.417	0.334	0.291	0.341	0.836	0.643
TSLs1	0.403	0.385	0.457	0.351	0.373	0.424	0.323	0.355	0.600	0.854
TSLs2	0.360	0.460	0.468	0.351	0.443	0.381	0.290	0.327	0.692	0.908
TSLs3	0.364	0.504	0.475	0.324	0.414	0.405	0.388	0.364	0.593	0.864
TSLs4	0.404	0.478	0.649	0.486	0.499	0.492	0.432	0.436	0.732	0.882

4.3.1.2.2 Fornell-Larcker criterion

Fornell-Larcker criterion is the second method to test the discriminant validity. According to the results in table 4.18, the square root of each construct's (AVE) is higher than the correlation with another construct in the first order.

Table 4. 18: Fornell-Larcker Criterion for first order construct

	F	I	M	MI	OI	P	PcI	PdI	TFLS	TSLs
F	0.876									
I	0.476	0.817								
M	0.770	0.642	0.857							
MI	0.607	0.672	0.725	0.805						
OI	0.539	0.670	0.660	0.801	0.864					
P	0.614	0.697	0.734	0.620	0.563	0.845				
PcI	0.604	0.606	0.643	0.728	0.759	0.577	0.769			
PdI	0.519	0.613	0.646	0.753	0.729	0.585	0.737	0.764		
TFLS	0.496	0.602	0.680	0.523	0.561	0.563	0.492	0.465	0.815	
TSLs	0.438	0.523	0.593	0.438	0.497	0.490	0.414	0.427	0.751	0.877

Note: Diagonals in bold represent the square root of each construct AVE. Off-diagonal represents the constraint's correlation.

In addition, the results in table 4.19 confirm that the square root of each construct's (AVE) is higher than the correlation with another construct in the second order.

Table 4. 19: Fornell-Larcker Criterion for second order construct

	MI	OI	OP	PcI	PdI	TFLS	TSLs
MI	0.805						
OI	0.801	0.864					
OP	0.761	0.704	0.722				
PcI	0.728	0.759	0.705	0.769			
PdI	0.753	0.729	0.685	0.737	0.764		
TFLS	0.523	0.561	0.680	0.492	0.465	0.815	
TSLs	0.438	0.497	0.593	0.414	0.427	0.751	0.877

Note: Diagonals in bold represent the square root of each construct AVE. Off-diagonal represents the constraint's correlation.

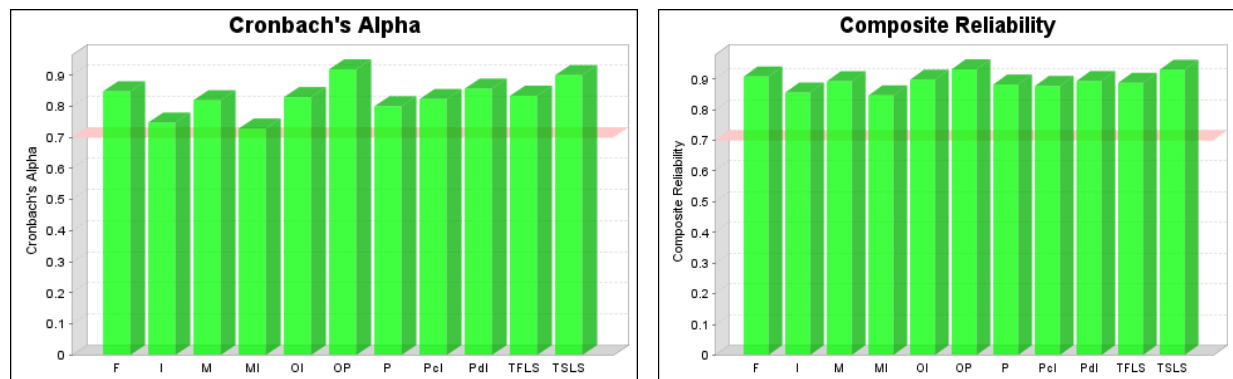
4.3.1.3 Internal consistency reliability

The internal consistency was evaluated by the Cronbach's α coefficient (CA) and the Composite Reliability coefficient (CR). According the results in table 4.20, the CA value for the first order and second order construct were found to range from 0.729 to 0.919, which indicates an excellent internal consistency among construct (Hair et al., 2010). Composite reliability value above 0.70 is considered satisfactory (Hair et al., 2017), the models CR values of constructs were 0.847 and above for all constructs, which satisfactorily meets the cutoff value.

Table 4. 20: result of Cronbach's α (CA) and the Composite Reliability (CR) coefficients

#	Statement	CR	CA
PcI	Product innovation	0.893	0.857
PdI	Process innovation	0.877	0.824
MI	Marketing innovation	0.847	0.729
OI	organizational innovation	0.898	0.830
F	Financial	0.908	0.849
M	Marketing	0.893	0.820
I	Innovation	0.856	0.748
P	Production	0.882	0.800
OP	Organization performance*	0.932	0.919
TFLS	Transformational leadership style	0.888	0.834
TSLS	Transaccional leadership style	0.930	0.901

* calculated by recommended Sarstedt et al. (2019).



A. Cronbach's α (CA)

B. Composite Reliability (CR)

Figure 4. 3 : Internal consistency assessment reliability

4.3.2 Structural Model Evaluation

After establishing the reliability and validity of the constructs, the next step proceeds to examine the structural model which estimates hypothesized paths between the constructs. In order to assess the structural model, four different tests were used as follows before testing the research hypotheses:

1. Collinearity test
2. Coefficient of determination (R^2)
3. Predictive Relevance (Q^2)
4. Effect size (f^2)

4.3.2.1 Collinearity Test

The first step to assess the structural model is a collinearity test. According to the results of table 4.21, there were no presence of collinearity in the structural model since all Variance Inflation Factors of all constructs are below 5 (Hair et al., 2017).

Table 4. 21: collinearity Assessment

	F	I	M	MI	OI	P	PcI	PdI	TFLS	TSLs
MI									2.293	2.293
OI									2.293	2.293
OP	1.000	1.000	1.000	3.509	3.729	1.000	2.941	2.908	2.631	2.358
PcI									2.293	2.293
PdI									2.293	2.293

4.3.2.2 Coefficient of determination (R^2)

A commonly criterion to assess the structural model is the coefficient of determination (R^2), this coefficient represents a mount of variance in the endogenous constructs that is clarified by all of the exogenous constructs. The coefficient (R^2) amount ranges from zero to one, where the high levels of indicating refer to high levels of predictive accuracy. According the results in table 4.22, the estimated of R^2 are lying between 0.230 to 0.849.

Table 4. 22: Result of R^2

	R^2	Degree of explanation
F	0.701	High
I	0.644	Moderate
M	0.849	High
MI	0.278	Week
OI	0.328	Week
OP	0.814	High
P	0.778	High
PcI	0.246	Week
PdI	0.23	Week

Also, figure 4.4 displays the R^2 of endogenous variables, the innovation dimensions and leadership dimensions can explain 81.4% of the variation of organizational performance, leadership dimensions can explain 27.8%, 32.8%, 24.6% and 23% of marketing innovation, organizational innovation, process innovation and product innovation respectively with week relationship for each of them.

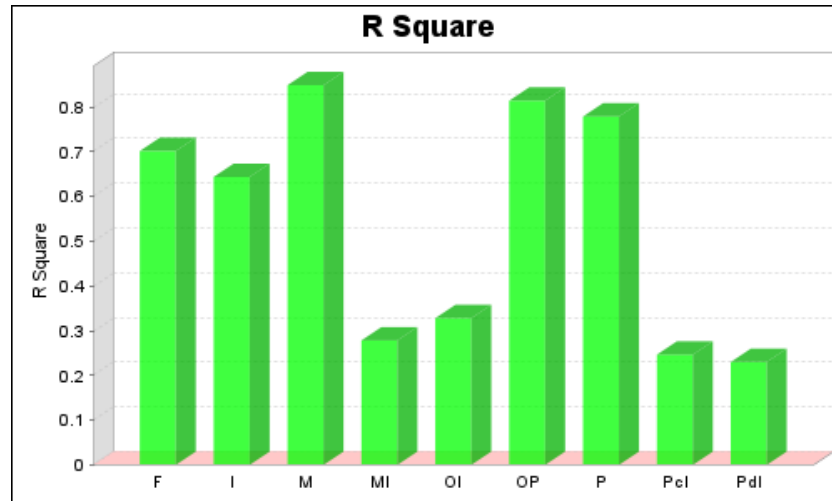


Figure 4. 4: R² assessment

4.3.2.3 Predictive Relevance (Q^2)

The predictive relevance (Q^2) is the second test of structural model which was introduced by both Geisser (1974) and Stone (1974) as a measure to indicate the level of relevance model especially with complex models using blindfolding process. Q^2 results greater than Zero indicate that the exogenous constructs are predictively relevant for endogenous constructs. According to the results in table 4.23, all Q^2 values are more than zero, which means the exogenous constructs are predictively relevant for endogenous constructs.

Table 4. 23: Result of Q^2

	SSO*	SSE*	$Q^2 (=1-SSE/SSO)$
F	528	249.958	0.527
I	528	305.757	0.421
M	528	203.266	0.615
MI	528	437.007	0.172
OI	528	400.593	0.241
OP	2112	1225.516	0.420
P	528	237.713	0.550
PcI	880	757.959	0.139
PdI	1056	927.717	0.121

*sum of squares of prediction errors (SSE). *sum of squares of observations (SSO).

4.3.2.4 Effect size (f^2)

The effect size f^2 is used to estimate the effect of specific exogenous constructs that contribute to an endogenous construct by means of change if it was deleted from structural model (Chin, 1988). Table 4.24 indicates that the effect size of deleting marketing innovation and transformational leadership style on organizational performance is medium, which means that to explain the variation of organization performance, the marketing innovation and transformational leadership style must be included. Whereas the effect size of process innovation on organization performance is small. On the other hand, the effect to delete the moderating variables (transactional leadership style) on explaining the relationship between the process innovation and organizational performance, and the relationship between the product innovation and organizational performance is small. The effect of deleting the moderating variable (transformational leadership style) on explaining the relationship between (1) the process innovation and organizational performance, (2) the product innovation and organizational performance, and (3) the organizational innovation and organizational performance is small.

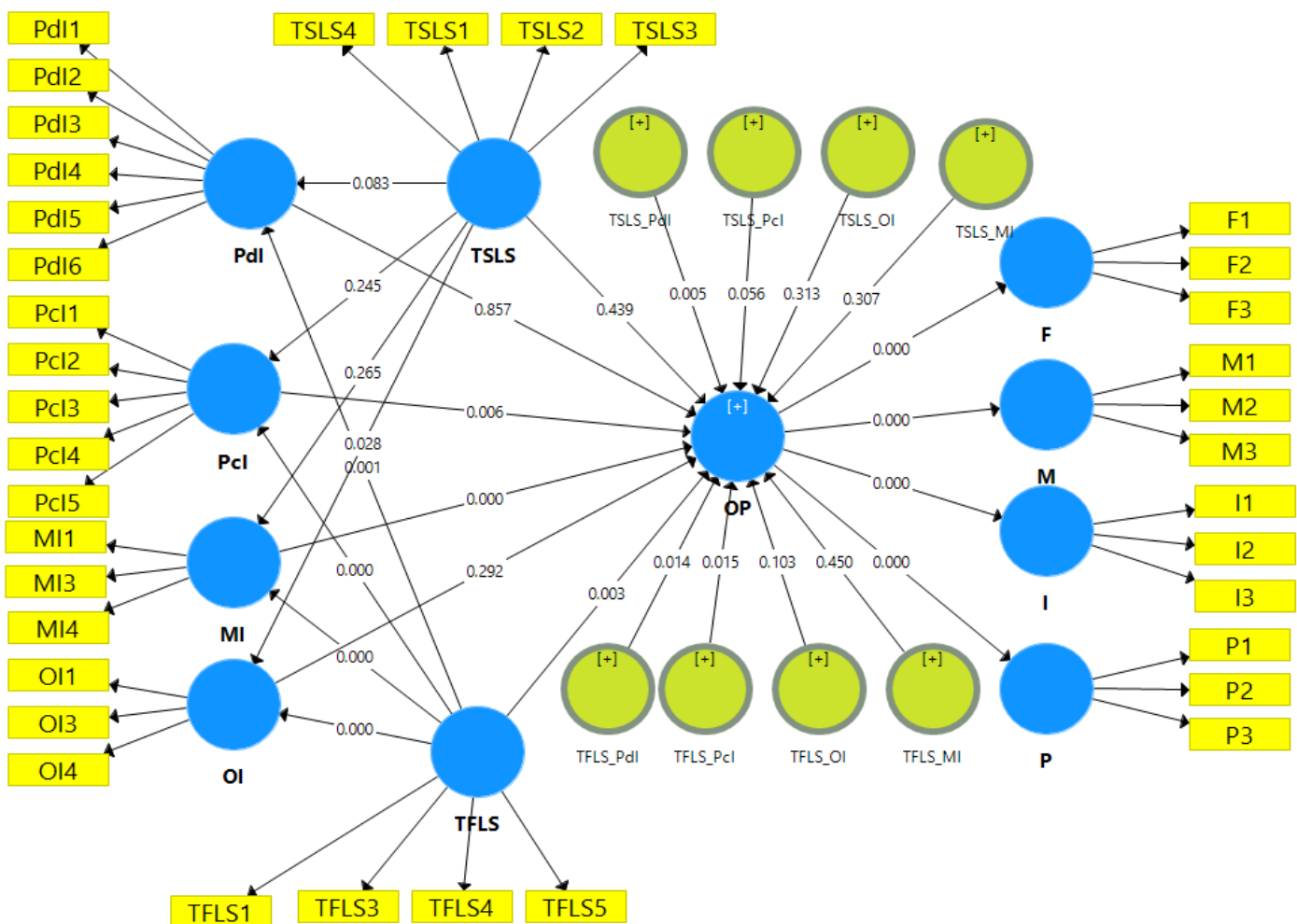
Table 4. 24: Result of effect size (f^2)

Exogenous constructs	Endogenous constructs					Effect size
	MI	OI	OP	PcI	PdI	
MI			0.154			Medium
OI			0.006			No effect
PcI			0.075			small
PdI			0.000			No effect
TFLS	0.120	0.120	0.156	0.099	0.062	Small, small, medium, small, medium
TFLS_MI			0.013			No effect
TFLS_OI			0.030			Small
TFLS_PcI			0.075			Small
TFLS_PdI			0.073			Small
TSLs	0.007	0.020	0.008	0.006	0.018	No effect, small, no effect, no effect, no effect
TSLs_MI			0.017			No effect
TSLs_OI			0.009			No effect
TSLs_PcI			0.044			Small

4.3.2.5 Research hypotheses assessment

The final step of structural model evaluation was to test the hypothesized relationships by using the path coefficient test. To test the study hypotheses as proposed by Hair et al. (2017), the bootstrapping techniques were used (5000 subsample). Figure 4.5 displays the result of study hypotheses.

Figure 4. 5: Result of path analysis; value in path represent p-value



4.3.2.5.1 Result of the first hypothesis

This section displays the result of the first hypothesis which states: “**product innovation has a significant impact on organizational performance**”. According to the result in table 4.25, there is no significant impact of product innovation on organizational performance ($\beta = 0.012$, $t = 0.187$) which did not support H_1 , since the p-value (0.852) is more than the significant level 0.05.

Table 4. 25: Result of first hypotheses

No.	Hypothesis	Coefficient (β)	SD	t value	p value	Result
H_1	PdI \rightarrow OP	0.012	0.064	0.187	0.857	Not Supported

4.3.2.5.2 Result of the second hypothesis

This section displays the result of the second hypothesis which states: “**process innovation has a significant impact on organizational performance**”. According to the result in table 4.26, there is a significant and positive impact of process innovation on organizational performance ($\beta = 0.216$, $t = 2.729$) that supported H_2 , since the p-value (0.005) is less than the significant level 0.05. If the process innovation increases by one degree, the organizational performance will increase by 0.126 degree.

Table 4. 26: result of second hypotheses

No.	Hypothesis	Coefficient (β)	SD	t value	p value	Result
H_2	PcI \rightarrow OP	0.216	0.079	2.729	0.005	Supported

4.3.2.5.3 Result of the third hypothesis

This section displays the result of the third hypothesis which states: “**marketing innovation has a significant impact on organizational performance**”. According to the result in table 4.27, there is a significant and positive impact of marketing innovation on organizational performance ($\beta = 0.350$, $t = 4.393$) that supported H_3 , since the p-value (0.000) is less than the significant level 0.05. If the marketing innovation increases by one degree, the organization performance will increase by 0.35 degree.

Table 4. 27: Result of third hypotheses

No.	Hypothesis	Coefficient (β)	SD	t value	p value	Result
H_3	MI \rightarrow OP	0.350	0.080	4.393	0.000	Supported

4.3.2.5.4 Result of the fourth hypothesis

This section displays the result of the fourth hypothesis which states: “**organizational innovation has a significant impact on organizational performance**”. According to the result in table 4.28, there is no significant impact of organizational innovation on organizational performance ($\beta = 0.070$, $t = 1.007$) which did not support H_4 , since the p-value (0.301) is more than the significant level 0.05.

Table 4. 28: Result of fourth hypotheses

No.	Hypothesis	Coefficient (β)	SD	t value	p value	Result
H_4	OI \rightarrow OP	0.070	0.069	1.007	0.301	Not Supported

4.3.2.5.5 Result of transformational leadership style impact on innovation dimensions

This section displays the results of the four hypothesis which are:

1. **Transformational leadership style has a significant impact on product innovation.**
2. **Transformational leadership style has a significant impact on process innovation.**
3. **Transformational leadership style has a significant impact on marketing innovation.**
4. **Transformational leadership style has a significant impact on organizational innovation.**

According to the results in table 4.29, there is a significant and positive impact of transformational leadership style on product innovation ($\beta = 0.330$, $t = 3.473$) that supported H_5 , on process innovation ($\beta = 0.414$, $t = 3.638$) that supported H_6 , on marketing innovation ($\beta = 0.445$, $t = 3.684$) that supported H_7 , and on organizational innovation ($\beta = 0.430$, $t = 3.921$) that supported H_8 . If the transformational leadership style increases by one degree, the product innovation will increase by 0.33 degree, the process innovation will increase by 0.414 degree, the marketing innovation will increase by 0.445 degree and the organizational innovation will increase by 0.43 degree.

Table 4. 29: Result of transformational leadership style impact on innovation dimensions

No.	Hypotheses	Coefficient (β)	SD	t value	p value	Result
H_5	TFLS \rightarrow PdI	0.330	0.095	3.473	0.001	Supported
H_6	TFLS \rightarrow PcI	0.414	0.114	3.638	0.000	Supported
H_7	TFLS \rightarrow MI	0.445	0.121	3.684	0.000	Supported
H_8	TFLS \rightarrow OI	0.430	0.110	3.921	0.000	Supported

4.3.2.5.6 Result of Transactional leadership style impact on innovation dimensions

This section displays the results of the four hypothesis which are:

1. **Transactional leadership style has a significant impact on product innovation.**
2. **Transactional leadership style has a significant impact on process innovation.**
3. **Transactional leadership style has a significant impact on marketing innovation.**
4. **Transactional leadership style has a significant impact on organizational innovation.**

According to the results in table 4.30, there is a significant and positive impact of transactional leadership style on organizational innovation ($\beta = 0.175$, $t = 2.198$) that supported H_{12} , since the p-value (0.028) is less than the significant level 0.05. Whereas, there is no significant impact of transactional leadership style on marketing innovation (p-value=0.265 > 0.05), product innovation (p-value=0.083 > 0.05) and process innovation (p-value=0.245 > 0.05) that did not support H_{11} , H_9 and H_{10} respectively.

Table 4. 30 : Result of transactional leadership style impact on innovation dimensions

No.	Hypotheses	Coefficient (β)	SD	t value	p value	Result
H_9	TSLS \rightarrow PdI	0.179	0.103	1.737	0.083	Not Supported
H_{10}	TSLS \rightarrow PcI	0.103	0.089	1.164	0.245	Not Supported
H_{11}	TSLS \rightarrow MI	0.104	0.093	1.116	0.265	Not Supported
H_{12}	TSLS \rightarrow OI	0.175	0.080	2.198	0.028	Supported

4.3.2.5.6 Result of transformational leadership style impact on organizational performance

This section displays the result of the hypothesis which state: “**Transformational leadership style has a significant impact on organizational performance**”. According to the result in table 4.31, there is a significant and positive impact of transformational leadership style on organizational performance ($\beta = 0.295$, $t = 2.958$) that supported H_{13} , since the p-value (0.003) is less than the significant level 0.05. If the transformational leadership style increases by one degree, the organizational performance will increase by 0.295 degree.

Table 4. 31: Result of thirteen hypotheses

No.	Hypothesis	Coefficient (β)	SD	t value	p value	Result
H_{13}	TFSL \rightarrow OP	0.295	0.100	2.958	0.003	Supported

4.3.2.5.7 Result of transactional leadership style impact on organizational performance

This section displays the result of the hypothesis which states: “**transactional leadership style has a significant impact on organizational performance**”. According to the result in table 4.32, there is no significant impact of transactional leadership style on organizational performance that did not support H_{14} , since the p-value (0.403) is more than the significant level 0.05.

Table 4. 32: Result of fourteen hypotheses

No.	Hypothesis	Coefficient (β)	SD	t value	p value	Result
H_{14}	TTSL \rightarrow OP	0.062	0.080	0.774	0.439	Not Supported

4.3.2.5.8 Result of transformational leadership style impact on the relationship between innovation and organizational performance

This section displays the result of transformational leadership style as a moderating variable of the relationship between innovation dimensions and organizational performance by four hypotheses which are:

- 1. Transformational leadership style has a significant impact on the relationship between product innovation and organizational performance.**
- 2. Transformational leadership style has a significant impact on the relationship between process innovation and organizational performance.**
- 3. Transformational leadership style has a significant impact on the relationship between marketing innovation and organizational performance.**
- 4. Transformational leadership style has a significant impact on the relationship between organizational innovation and organizational performance.**

According to the results in table 4.33, transformational leadership style is a moderator variable between product innovation and organizational performance ($\beta = 0.409$, $t = 2.460$) that supported H_{15} , since the p-value (0.014) is less than the significant level 0.05. In addition, the result indicates that transformational leadership style is a moderator variable between process innovation and organizational performance ($\beta = -0.395$, $t = 2.433$) that supported H_{16} , since the p-value (0.015) is less than the significant level 0.05. Whereas, transformational leadership style is not a moderator variable between marketing innovation and organizational performance (p-value=0.450 > 0.05) and organizational innovation (p-value=0.103 > 0.05), which did not support H_{17} and H_{18} respectively.

Table 4. 33: Result of transformational leadership style impact on organizational performance

No.	Hypotheses	Coefficient (β)	SD	t value	p value	Result
H_{15}	PdI \times TFLS \rightarrow OP	0.409	0.166	2.460	0.014	Supported
H_{16}	PcI \times TFLS \rightarrow OP	-0.395	0.162	2.433	0.015	Supported
H_{17}	MI \times TFLS \rightarrow OP	-0.164	0.217	0.755	0.450	Not Supported
H_{18}	OI \times TFLS \rightarrow OP	0.282	0.173	1.632	0.103	Not Supported

4.3.2.5.9 Result of transactional leadership style impact on the relationship between innovation and organizational performance

This section displays the results of transactional leadership style as a moderating variable of the relationship between innovation dimensions and organizational performance by four hypotheses which are:

- 1. Transactional leadership style has a significant impact on the relationship between product innovation and organizational performance.**
- 2. Transactional leadership style has a significant impact on the relationship between process innovation and organizational performance.**
- 3. Transactional leadership style has a significant impact on the relationship between marketing innovation and organizational performance.**
- 4. Transactional leadership style has a significant impact on the relationship between organizational innovation and organizational performance.**

According to the results in table 4.34, transactional leadership style is a moderator variable between product innovation and organizational performance ($\beta = -0.439$, $t = 2.809$) that

supported H_{19} , since the p-value (0.005) is less than the significant level 0.05. Whereas, transactional leadership style is not a moderator variable between organizational performance and marketing innovation (p-value=0.307 > 0.05), organizational performance and organizational innovation (p-value=0.313 > 0.05) and organizational performance and process innovation (p-value=0.056 > 0.05), that did not support H_{21} , H_{22} and H_{20} respectively.

Table 4. 34: Result of transactional leadership style impact on the relationship between innovation and organizational performance

No.	Hypotheses	Coefficient (β)	SD	t value	p value	Result
H_{19}	PdI \times TSLS \rightarrow OP	-0.439	0.156	2.809	0.005	Supported
H_{20}	PcI \times TSLS \rightarrow OP	0.348	0.182	1.918	0.056	Not Supported
H_{21}	MI \times TSLS \rightarrow OP	-0.224	0.220	1.022	0.307	Not Supported
H_{22}	OI \times TSLS \rightarrow OP	0.173	0.171	1.010	0.313	Not Supported

4.3.2.6 Additional model: Path analysis of leadership style as a moderating variable of the relationship between innovation and organizational performance in general

This section displays the result of leadership style as a moderating variable of the relationship between innovation and organizational performance in general (without dividing the organizational performance into its four dimensions, innovation into its four types, or the leadership to its two styles). Figure 4.6 clarifies that leadership style is not a moderator variable between innovation and organizational performance ($\beta = -0.046$, $t = 1.078$), since the p-value (0.282) is more than the significant level 0.05. On the other hand, there is a significant and positive impact of leadership style on organizational performance (p-value=0.000 < 0.05), and there is a significant and positive impact of leadership style on innovation (p-value=0.000 < 0.05).

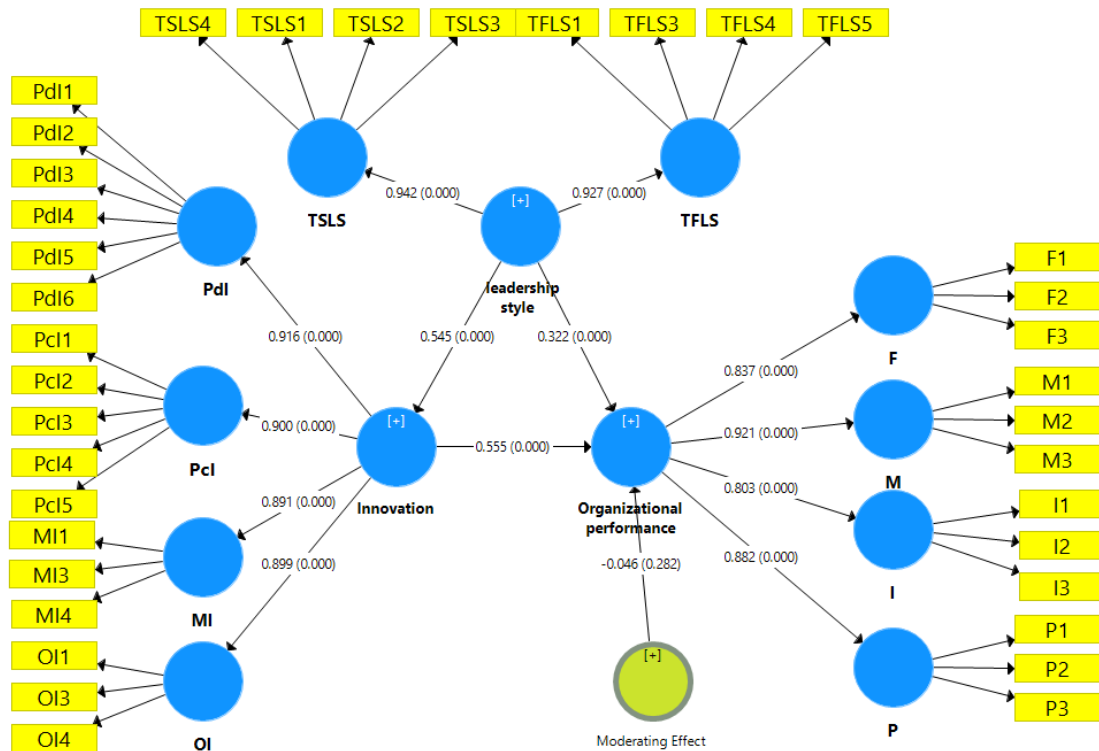


Figure 4. 6: Path analysis of leadership style as moderating variable of the relationship between innovation and organizational performance; value in path represent path coefficient (p-value)

4.3.2.7 Additional model: Path analysis of leadership style dimensions as moderating variables of the relationship between innovation and organizational performance

This section displays the results of transformational and transactional leadership style as moderating variables of the relationship between innovation and organizational performance in general (without dividing the organizational performance into its four diminutions or innovation into its four types). Figure 4.7 illustrates that transformational and transactional leadership styles are not moderator variables between innovation and organizational performance, since the p-value of these paths are 0.955 and 0.713 respectively which is more than the significant level 0.05. On the other hand, there is a significant and positive impact of transformational leadership style on organizational performance (p-value=0.005 < 0.05), and there is a significant and positive impact

of transformational leadership style on innovation ($p\text{-value}=0.000 < 0.05$). Whereas, there is no significant impact of transactional leadership style on organizational performance ($p\text{-value}=0.157 > 0.05$), and there is no significant impact of transactional leadership style on innovation ($p\text{-value}=0.075 > 0.05$).

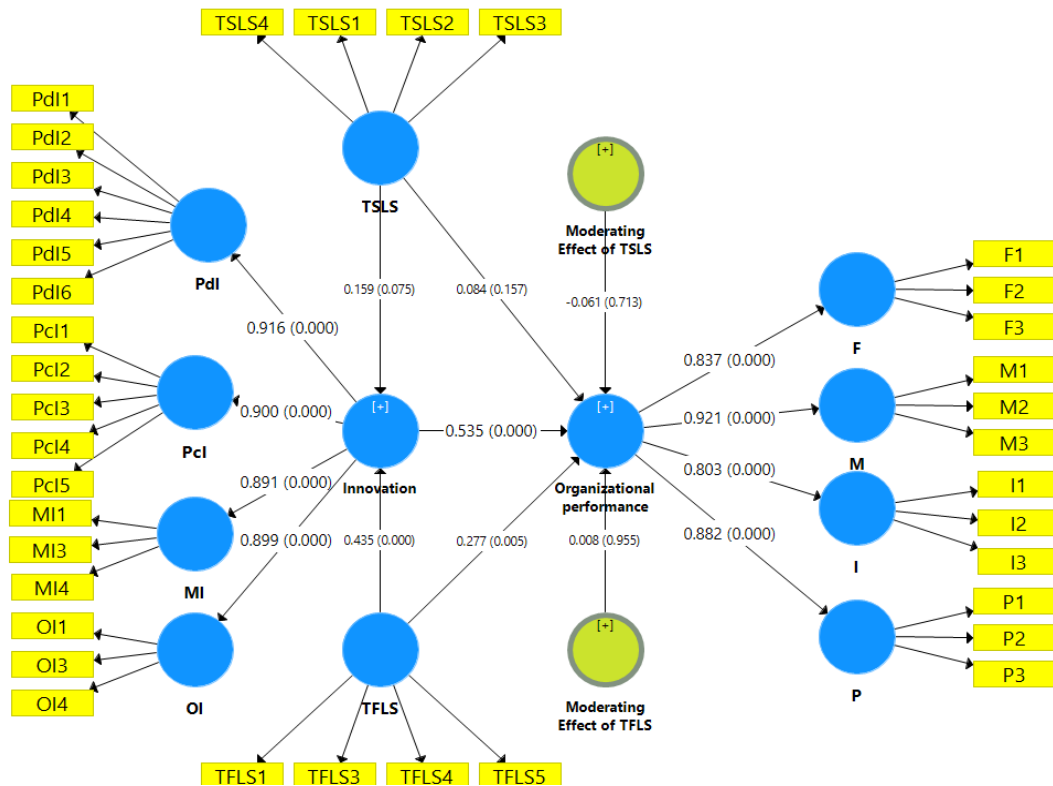


Figure 4. 7: Path analysis of leadership style dimensions as moderating variable of the relationship between innovation and organizational performance; value in path represent path coefficient (p-value)

4.3.2.8 Summary of Analysis results:

Hypothesis No	Hypotheses	Result
H ₁	Product innovation has a significant impact on organizational performance	Hypothesis rejected
H ₂	Process innovation has a significant impact on organizational performance	Hypothesis accepted
H ₃	Marketing innovation has a significant impact on organizational performance	Hypothesis accepted
H ₄	Organizational innovation has a significant impact on organizational performance	Hypothesis rejected
H ₅	Transformational leadership style has a significant impact on product innovation	Hypothesis accepted
H ₆	Transformational leadership style has a significant impact on process innovation	Hypothesis accepted
H ₇	Transformational leadership style has a significant impact on marketing innovation	Hypothesis accepted
H ₈	Transformational leadership style has a significant impact on organizational innovation	Hypothesis accepted
H ₉	Transactional leadership style has a significant impact on product innovation.	Hypothesis rejected
H ₁₀	Transactional leadership style has a significant impact on process innovation.	Hypothesis rejected
H ₁₁	Transactional leadership style has a significant impact on marketing innovation.	Hypothesis rejected
H ₁₂	Transactional leadership style has a significant impact on organizational innovation.	Hypothesis accepted
H ₁₃	Transformational leadership style has a significant impact on organizational performance	Hypothesis accepted
H ₁₄	Transactional leadership style has a significant impact on organizational performance	Hypothesis rejected
H ₁₅	Transformational leadership style has a significant impact on the relationship between product innovation and organizational performance.	Hypothesis accepted
H ₁₆	Transformational leadership style has a significant impact on the relationship between process innovation and organizational performance.	Hypothesis accepted

H ₁₇	Transformational leadership style has a significant impact on the relationship between marketing innovation and organizational performance.	Hypothesis rejected
H ₁₈	Transformational leadership style has a significant impact on the relationship between organizational innovation and organizational performance.	Hypothesis rejected
H ₁₉	Transactional leadership style has a significant impact on the relationship between product innovation and organizational performance.	Hypothesis accepted
H ₂₀	Transactional leadership style has a significant impact on the relationship between process innovation and organizational performance.	Hypothesis rejected
H ₂₁	Transactional leadership style has a significant impact on the relationship between marketing innovation and organizational performance.	Hypothesis rejected
H ₂₂	Transactional leadership style has a significant impact on the relationship between organizational innovation and organizational performance.	Hypothesis rejected



CHAPTER FIVE

DISCUSSION & CONCLUSION

5.1 Introduction

This chapter discusses the study findings presented in Chapter Four. Then it sums up the conclusions drawn in the light of the discussion. In addition, this chapter outlines some recommendations and limitations of the research.

5.2 Conclusions

The Innovation is measured by using four dimensions which are product innovation, process innovation, marketing innovation and organizational innovation. The level of innovation implementation in baking sector is high with an implementation percentage of 80.2%. Also, all innovation types have a high level of implementation; product innovation has the largest level, followed by process innovation, organizational innovation and marketing innovation respectively. Furthermore, the organizational performance was measured by using four dimensions which are financial, marketing, innovative and production (operational) performance. The level of organizational performance in banking sector in Palestine is high with a percentage of 81.6%. Moreover, all organizational performance dimensions have a high level, marketing dimension has the largest level, followed by production, financial and innovative respectively. The leadership style was measured by using transformational leadership style and transactional leadership style. The level of adopting transactional and transformational leadership styles in Palestinian baking sector is high with a percentage of 78.6%. Transactional leadership style has the highest score compared to transformational leadership style, both dimensions have a high level of implementation.

According to figure 5.6, $p\text{-value}=0.000 < 0.05$, innovation has a significant and positive impact on organizational performance, this result is supported by many studies results, for example: Ebrahimi (2016); YuSheng & Ibrahim (2020); Gunday et al. (2011); Suhag et al. (2017); Hashi and Stojcic (2013); Ngugi & Karina (2013); Damanpour et al. (1989); Walker (2004); Rajapathirana & Hui (2018); Polder et al. (2010); Samad (2012). Moreover, the results in tables 4.23, 4.24, 4.25, and 4.26 show that, marketing innovation and process innovation have a significant impact on organizational performance, whereas there is no significant impact of product innovation and organizational innovation on organizational performance. These results vary among many studies, for example: Shaukat, et al. (2013); Gunday et al. (2011); YuSheng & Ibrahim (2020) studies explain that all innovation types (product, process, marketing and organizational innovation) has a significant effect on organizational performance. The results of this research do not meet with Fong et al. (2014), where product innovation affects the organizational performance. On the other hand, they meet with Hashi and Stojcic (2013), who explain that process innovation affects the organizational performance. They also agree with Shaukat et al. (2013), which show that marketing innovation affects the organizational performance. On the other hand, the study differs from Yusheng & Ibrahim, (2019) and Van der Aa, & Elfring, (2002) results, which confirm the relation and effect of organizational innovation on organizational performance.

According to figure 4.6, leadership has a significant effect on innovation ($p\text{-value}=0.000 < 0.05$) which supports the results of many studies such as, Sethi, (2000); Alheet, et al. (2021). According to the research results, there is a positive impact of transformational leadership style on product innovation, process innovation, marketing innovation and organizational innovation. This result agreed with deferent studies, for example, Masood & Afsar (2017); Novitasari et al. (2021); Alheet, et al. (2021); Jia et al. (2018); Matzler et al. (2008). On the other hand, the analysis shows

that transactional leadership style has a significant impact only on organizational innovation, while there is no significant impact of transactional style on product innovation, process innovation and marketing innovation. There are many studies that show different results of the effect of transactional leadership style on innovation. Some studies have shown that transactional leadership style has a significant impact on innovation, like; Jia et al. (2018); Novitasari et al. (2021). However, there are many studies which show that transactional leadership style has no significant impact on innovation, such as, Alheet, et al., (2021); Masood & Afsar, (2017). According to figure 4.6, leadership has a significant effect on organizational performance ($p\text{-value}=0.000 < 0.05$) which supports the results of the studies: Hlaing (2019); Alrowwad et al. (2020); Bennett, (2009); Ojokuku, et al. (2012). Moreover, the analysis shows that transformational leadership style has a significant and positive impact on organizational performance, this result is supported by various studies such as; Devanadhen (2015); Wong (2011); Al Khajeh (2018). Furthermore, transactional leadership style has a significant effect on organizational performance, this result is supported by some studies such as Longe, (2014) and Hlaing, (2019).

In this study, the researcher used transformational leadership style and transactional leadership style as moderator variables to the relationship between innovation types and organizational performance. According to the analysis, transformational leadership style is a moderator variable between product innovation and organizational performance, and transformational leadership style is a moderator variable between process innovation and organizational performance. Whereas, transformational leadership style is not a moderator variable between marketing innovation and organizational performance nor between organizational innovation and organizational performance. On another note, Transactional leadership style is a moderator variable between product innovation and organizational performance. Whereas, transactional leadership style is not

a moderator variable between organizational performance and marketing innovation, organizational innovation, and process innovation. Many previous studies have discussed the moderating effect of leadership styles on the relationship between the innovation and organizational performance (Porter, 1990; Matzler et al., 2008; Arif & Akram, 2018; Al Khajeh, 2018; Rajapathirana & Hui, 2018; Sethibe and Steyn, 2015). These studies have concluded that leadership styles have an important role in improving the innovation and the performance of the organization. Moreover, İşcan et al. (2014) and Sethibe & Steyn (2015) show that transformational leadership style has a moderate and significant effect on the relation between innovation and organizational performance. However, İşcan et al. (2014) indicates that transactional leadership style has no meaningful impact on organizational performance and innovation.

5.3 Recommendations

This research was characterized by studying the three variables in detail, as it included four types of innovation (product, process, marketing and organizational innovation) and two styles of leadership (transformational and transactional), and included four areas of the organizational performance (financial, marketing, innovative, and production). Its application to the Palestinian banking sector (West Bank) gave it an advantage, because according to the researcher's knowledge, this topic is under-researched as there is no similar research that studies all these variables in the Palestinian banking sector.

Relying on the results revealed by the analysis, it is good to take advantage of them to reflect on the reality of the banks' work. The research has shown the positive impact of innovation on the performance of the organization, which shows the importance of applying innovation in banks to

improve performance such as; nontraditional or new services, products, technologies, processes, pricing techniques, product design, marketing strategies, and organizational procedures and structure. The questionnaire responses showed that the mean of application of innovation in banks is 4.01, which is estimated at a high rate and it is good to keep it high. Also, process innovation and marketing innovation positively affect the banks' performance, as the rate of application of process innovation and marketing innovation is 3.98 and 3.92, respectively. These are high rates and it is necessary to work on increasing them and maintaining their height.

The results of the study also showed that leadership affects innovation. The questionnaire responses showed that the mean of Palestinian managers who adopt transformational and transactional leadership style is relatively high, (3.91 and 3.95 respectively). It is good to work on raising these rates because transformational leadership affects the application and adoption of product, process, marketing and organizational innovation, while transactional leadership supports organizational innovation only. In addition, both transformational and transactional leadership styles affect the performance of the organization.

In the Palestinian banking sector, to increase the impact of product and process innovation on the banks' performance, it is preferred that managers follow the transformational leadership style, as the research results showed that it is a moderating variable between innovation and the performance of the organization. Whereas, banks' managers' adoption of transactional leadership style will only strengthen the relationship between product innovation and the organizational performance.

Based on the research analysis and results, it is important to study the main three variables (innovation, leadership, and organization performance) by dividing them into their types, styles and dimensions. Studying and analyzing the variables in general will not lead to specific results

and conclusion. Moreover, it may be recommended that it is better for the organization to implement more than one type of innovation due to the different effects on the organizational performance. Another recommendation for organizations is to adopt both the transformational and transactional leadership styles according to their different effect on improving and implementing the innovative activities in the organization.

Theory of knowledge based economy has supported that it was necessary to adopt several different types of innovation in the enterprise to include different aspects of the enterprise for its positive impact on its performance. The results of the study showed that innovation affects the enterprise's performance, especially marketing and process innovation. Palestinian local banks must improve their reliance on different types of innovation, where they should try to improve their ability to develop, for example; new products with technical specifications and functionalities totally differing from the current ones and introduces new services into the market before their competitors. Moreover, banks can adopt process innovation to decrease manufacturing cost in components and materials of current products and increase manufacturing quality in components and materials of current products. Local Palestinian banks can also advance their adoption of marketing innovation by renewing the design of the current and/or new products through changes such as in appearance, packaging, shape and volume without changing their basic technical and functional features. Furthermore, Palestinian banks can increase the level of adopting organizational innovation through follow flexible management strategies to deal with unexpected changes and introduce more developed and distinctive strategies to manage its processes, in comparison with competitors' strategies. According to these recommendations, Palestinian banks will gain a competitive advantage that distinguishes them from other banks, and this is what the

theory of competitive advantage and creative destruction theory indicated, which revolves around the organization getting a competitive advantage through its implementation of innovation.

The results of the study showed the importance of choosing the leadership style that the leader follows. The analysis indicates that transformational and transactional leadership styles have an impact on banks' performance; transformational style affects the four types of innovation and transactional style affects the adoption of organizational innovation only. Managers of branches and departments in banks increase the implementation level of transformational leadership style by, for example; treating the employee as an individual rather than just as member of a group and giving him/her the ability to look at problems from many different angles. Moreover, managers can enhance the level of adopting the transactional leadership style by discussing in specific terms who is responsible for achieving performance targets and support all staff to achieve their targets. These recommendations are consistent with the performance gap theory, which indicates that improving organizations' performance can depend on many factors. One of them is the leadership style that the managers in the organization follow, due to the important effect of leaders on increasing the acceptance and implementation of the different type of innovation, which positively affect the organizational performance.

5.4 Limitations

The researcher faced some challenges in collecting secondary information due to the lack of similar research that studies the three variables at the same time, whether in the Arab world or in Palestine. The research also faced challenges related to the ability of generalizing the research results, the first is the inability to generalize the research to sectors other than the banking sector, and the

second is the inability to generalize the research to other countries because Palestine is different from other countries and has special conditions because it is under the Israeli occupation. Furthermore, the researcher has faced some challenges in collecting the primary data from the study sample, during the researcher's attempt to collect the necessary information to be used in analyzing variables and obtaining results to answer the study questions and examine the hypotheses. The researcher faced a problem in distributing the questionnaires to local banks. For example, Al-Quds Bank refused to cooperate to help filling out the questionnaire or even give any information about the number of bank managers. In addition, the banks refused to answer the questions of the questionnaire except after deleting the paragraph related to the name of the bank for reasons related to the bank's policies and laws, as they claim.



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APPENDIX

Questionnaire – English version

Questionnaire

I am Fatima Shath studying at Birzeit University, I am preparing a study as one of the requirements for obtaining a Master degree in Business Administration. This study aims to explore your view on “The impact of innovation on Organizational Performance, leadership styles as a moderating factor, applied on Bank sector in West Bank” hoping that you kindly answer all the questions contained therein. Please note that all information will not be used for other purposes besides this study. Thank you!

Part 1- Multiple Choice Questions

Part A: Demographic information:

1. Gender
 - Male
 - Female
2. Age
 - 21-30 years
 - 31-40 years
 - 41-50 years
 - Above 50 year
3. Educational Level
 - Diploma
 - BA Graduate
 - Master Degree
 - PHD
4. Working Experience
 - 1-3 years
 - 4-6 years
 - 7-9 years

- 10-12 years
- 12 years and above

Part 2- Five Point Likert Scale Questions:

Please make an "×" mark on your response to each statement according to the five-point scale labeled at each statement:

5= Strongly Agree

4= Agree

3= Neutral

2= Disagree

1= strongly disagree

Part A - Innovation

Section (a) Product innovation

		1	2	3	4	5
1	The bank initiates the development of new services based on customers' needs and market trends.					
2	The bank applies new technologies and software to add new services and improve the quality of current services.					
3	The bank adopts new / non-traditional solutions to solve problems.					
4	The bank develops new products with technical specifications and functionalities totally differing from the current ones.					
5	The bank introduces new services into the market before its competitors.					
6	The bank provides new services to improve customers' access to services.					

Section (b) Process innovation

		1	2	3	4	5
1	The bank follows a formal process to keep on improving its services to customers.					

2	The bank tracks the relevant research studies to improve its processes.					
3	The bank adopts new technology to improve its processes.					
4	The bank aims at decreasing manufacturing cost in components and materials of current products.					
5	The bank aims at increasing manufacturing quality in components and materials of current products.					

Section (c) marketing innovation

		1	2	3	4	5
1	The bank renews the product pricing techniques employed for the pricing of the current and/or new products.					
2	The bank renews the design of the current and/or new products through changes such as in appearance, packaging, shape and volume without changing their basic technical and functional features.					
3	The bank renews general marketing management activities.					
4	The bank adopts new marketing strategies in its promotions and services.					

Section (d) organizational innovation

		1	2	3	4	5
1	The bank updates the routines, procedures and processes employed to execute firm activities in an innovative manner.					
2	The bank follows flexible management strategies to deal with unexpected changes.					
3	The bank provides significant improvements in its structures, practices, and techniques.					
4	The bank introduces more developed and distinctive strategies to manage its processes, in comparison with competitors' strategies.					

Part B – Organization performance

		1	2	3	4	5
Financial						
1	The adoption of innovation is reflected on the bank's General profits					

2	The bank's Return on sales affected by implementing innovative activities					
3	The bank's return on assets affected by implementing innovative activities					
Marketing						
4	Banks' total sales are affected by implementing innovative activities.					
5	Banks' market share is affected by implementing innovative activities.					
6	Banks' Customer satisfaction is affected by implementing innovative activities.					
Innovative						
7	The administrative system and the mindset are in line with the bank's environment.					
8	The Quality of new products and services introduced is improved.					
9	The number of new product and service projects increased.					
Production (operational)						
10	The bank production volume is affected due to innovation.					
11	The bank production cost is affected due to innovation.					
12	The bank production quality is affected due to innovation.					

Part C- Leadership

Section (a) Transformational leadership style

		1	2	3	4	5
1	The leaders motivates their subordinates to work effectively.					
2	The leader treats the employee as an individual rather than just as member of a group.					
3	The leader gets the employees to look at problems from many different angles.					
4	The leader establishes relationships with all staff as important persons for the organization development.					
5	The leader stimulates the staff's enthusiasm for acting their responsibilities.					

Section (b) Transactional leadership style

		1	2	3	4	5
1	The leader discusses in specific terms who is responsible for achieving performance targets.					
2	The leader supports all staff to achieve their target.					
3	The leader directs employees attentions to meet standards.					
4	The leader concentrates his full attention to solve complaints and failures					

Questionnaire – Arabic version

استبانة

أنا الباحثة فاطمة شعث، طالبة في جامعة بيرزيت، أدرس الماجستير في إدارة الأعمال في سنتي الدراسية الثانية. أقدم هذه الاستبانة استكمالاً لمتطلبات كتابة رسالتي الماجستير في الجامعة من أجل معرفة آرائكم بخصوص "أثر الابتكار على أداء المنظمة، مع الأخذ بعامل نمط القيادة باعتباره عاملاً وسيطاً: قطاع البنوك نموذجاً".

أشكر لكم تعاونكم في مساعدتي للإجابة عن الأسئلة الواردة في هذه الاستبانة، والتي سيتم استخدام إجاباتها لغرض هذه الرسالة فقط.

الجزء الأول: أسئلة متعددة الخيارات

القسم (أ): معلومات عامة

1- الجنس:

ذكر

أنثى

2- العمر:

21-30 عام

31-40 عام

41-50 عام

أكثر من 50 عام

3- المستوى التعليمي

دبلوم

درجة بكالوريوس

درجة الماجستير

درجة الدكتوراة

4- الخبرة العملية

1-3 سنوات

4-6 سنوات

7-9 سنوات

10-12 سنة

12 سنة فما فوق

الجزء الثاني: أسئلة يتم الإجابة عنها بحسب مقياس ليكيرت (خمس درجات):

الرجاء وضع إشارة (x) على الخيار المناسب مع الأخذ بعين الاعتبار أن:

5= أوافق بشدة

4= أوافق

3= محايد

2= لا أوافق

1= لا أوافق بشدة

الجزء (أ): الابتكار

القسم (1): الابتكار المتعلق بالمنتجات

5	4	3	2	1	
					1 تبادل البنوك بتطوير خدمات جديدة لملاءمة حاجات العملاء ومواكبة توجهات السوق.
					2 تتبنى البنوك تكنولوجيات وبرامج جديدة لإضافة خدمات مستحدثة وتطوير الخدمات التي تقدمها في الوقت الحالي.
					3 تتبنى البنوك حلولاً جديدة وغير تقليدية من أجل حل المشاكل التي تواجهها.
					4 تعمل البنوك على تطوير منتجات جديدة ذات مواصفات ومميزات تقنية تختلف تماماً عن المنتجات التي تقدمها في الوقت الحالي.
					5 تقدم البنوك خدمات جديدة تتفوق فيها على منافسيها.
					6 تستحدث البنوك خدمات مختلفة تساهم في تطوير قدرة وصول العملاء إلى الخدمات نفسها.

القسم (2): الابتكار المتعلق بالعمليات

5	4	3	2	1	
					1 تتخذ البنوك إجراءات/ عمليات رسمية للإبقاء على تطوير الخدمات التي تقدمها للعملاء.
					2 تطلع البنوك على الدراسات والأبحاث المتعلقة بتطوير عملياتها.
					3 تتبع البنوك تكنولوجيات جديدة لتطوير عملياتها.
					4 تعمل البنوك على تقليل تكاليف التصنيع للمواد المستخدمة في إنتاج المنتجات الحالية.

5	تعمل البنوك على زيادة جودة التصنيع للمواد المستخدمة في إنتاج المنتجات الحالية.				
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القسم (3): الابتكار المتعلق بالتسويق

5	4	3	2	1	
					1 تعمل البنوك على تجديد تقنيات تسعير المنتجات الحالية التي تعمل على إنتاجها/ أو المنتجات الجديدة التي تخطط لإنتاجها.
					2 تعمل البنوك على تجديد تصميم المنتجات الحالية أو المنتجات الجديدة من خلال تغيير المظهر والتغليف والشكل والحجم وذلك دون تغيير في صفات المنتجات التقنية والوظيفية.
					3 تعمل البنوك على تغيير الأنشطة الإدارية العامة المتعلقة بالتسويق.
					4 تتبنى البنوك استراتيجيات تسويقية جديدة في عملياتها الترويجية والخدمات التي تقدمها.

القسم (4): الابتكار التنظيمي

5	4	3	2	1	
					1 تعمل البنوك على تجديد الممارسات الاعتيادية والإجراءات والعمليات التي تستخدمها من أجل تنفيذ أنشطتها بصورة مبتكرة.
					2 تتبع البنوك استراتيجيات إدارية مرنة لمواجهة التغييرات غير المتوقعة.
					3 تطرح البنوك تطويرات مهمة في هيكلتها وممارساتها والتقنيات التي تستخدمها.
					4 تقدم البنوك استراتيجيات أكثر تطوراً وتميزاً من أجل إدارة وتنظيم عملياتها بالمقارنة مع منافسيها.

الجزء (ب): الأداء التنظيمي

5	4	3	2	1	
الأداء المالي					
					1 تبني الابتكار ينعكس على الأرباح العامة للبنك.
					2 عوائد مبيعات البنك تتأثر بتنفيذ أنشطة مبتكرة.
					3 عوائد أصول البنك تتأثر بتنفيذ أنشطة مبتكرة
الأداء التسويقي					
					4 يتأثر إجمالي مبيعات البنك بتنفيذه لأنشطة مبتكرة.
					5 تتأثر الحصة السوقية للبنك بتنفيذه لأنشطة مبتكرة
					6 تؤثر الأنشطة المبتكرة التي ينفذها البنك على رضا العملاء.
الأداء الابتكاري					

					7	يتمشى النظام الإداري والتفكيري مع بيئة البنك نفسه.
					8	جودة المنتجات والخدمات الجديدة في تطور مستمر.
					9	عدد المنتجات والمشاريع الخدمية الجديدة آخذة بالازدياد.
الأداء الانتاجي						
					10	يؤثر الابتكار على حجم الإنتاج البنكي.
					11	يؤثر الابتكار على سعر الإنتاج البنكي.
					12	يؤثر الابتكار على جودة الإنتاج البنكي.

الجزء (ج): القيادة

القسم (1): نمط القيادة التحويلي

	5	4	3	2	1	
1						يعمل القادة على تحفيز المرؤوسين على العمل بفعالية.
2						يعامل القائد الموظف على أنه فرد بدلاً من أن يعامله على أنه عضو من مجموعة.
3						يسمح القائد للموظفين بالنظر إلى المشكلة من زوايا مختلفة.
4						يسعى القائد إلى إنشاء علاقات مع الموظفين بأكملهم باعتبارهم أفراد مهمين في عملية تطوير المنظمة.
5						يحفز القائد الموظفين على إبداء حماسهم في تحمل مسؤولياتهم.

القسم (2): نمط القيادة التبديلي

	5	4	3	2	1	
1						يتطرق القائد بالتفصيل إلى مسؤولية كل شخص في تحقيق أهداف الأداء المرجوة.
2						يدعم القائد كل الموظفين في سبيل تحقيق أهدافهم.
3						يعمل القائد على توجيه تركيز الموظفين في إطار المعايير المتبعة.
4						يركز القائد كامل طاقاته لحل الشكاوى ومواجهة نقاط الضعف.

Fornell-Larcker Criterion for first order construct

	F	I	M	MI	OI	P	PcI	PdI	TFLS	TSLs
F	0.876									
I	0.476	0.817								
M	0.77	0.642	0.857							
MI	0.588	0.666	0.708	0.757						
OI	0.54	0.689	0.655	0.814	0.817					
P	0.614	0.697	0.734	0.606	0.581	0.845				
PcI	0.604	0.606	0.643	0.752	0.783	0.577	0.769			
PdI	0.519	0.613	0.646	0.774	0.713	0.586	0.737	0.764		
TFLS	0.496	0.602	0.68	0.522	0.535	0.564	0.492	0.465	0.815	
TSLs	0.438	0.523	0.593	0.418	0.464	0.49	0.415	0.427	0.751	0.877