



**Faculty of Economics and Business**

**The Impact of Leadership on Innovative Work Behaviour and Adaptive Performance in Jordanian Higher Education Institutions**

**Enas Al-Zou'bi**

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**The Impact of Leadership on Innovative Work Behaviour and Adaptive  
Performance in Jordanian Higher Education Institutions**

Enas Al-Zou'bi

A thesis submitted

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## **DECLARATION**

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

.....

Signature

Name: Enas Al-Zou'bi

Matric No.: 17010164

Faculty of Economics and Business

Universiti Malaysia Sarawak

Date :

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## ABSTRACT

This study investigates the impact of inclusive and authentic leadership styles on innovative work behaviour and adaptive performance among academic staff in Jordanian Higher Education Institutions (HEIs), with the mediating role of psychological capital in shaping these relationships and the sector type as moderate. Although previous research has looked at different leadership styles in other fields, there are not many studies that particularly investigate at how the concepts are utilised in Jordanian higher education in general and among academic staff in specific. The objectives of this study are to examine the direct impact of inclusive leadership and authentic leadership on both innovative work behavior and adaptive performance addition to the role of psychological capital as a mediator. Also, the sector type as moderator. The theoretical framework developed for this study is based on the Social Exchange Theory and Self Determentation Theory. A quantitative research approach was employed, utilizing a self-administered questionnaire distributed to academic staff. Structural equation modelling (SEM) is utilised to assess proposal hypotheses using empirical data gathered from 422 participants in 26 Jordanian HEIs. The study implied the cluster method. Data are analyzed using smart PLS and SPSS. The findings indicate that both inclusive and authentic leadership styles significantly contribute to enhancing innovative work behaviour and adaptive performance among academic staff in Jordanian HEIs. Furthermore, psychological capital was found to mediate these relationships. However, certain relationships, such as those involving psychological capital and other variables, are found to be non-significant. Also, there was no role for the sector type in moderating the relation between AL and IWB and while it has a moderating role between IL and IWB and AP. These results highlight the critical role of leadership styles in shaping organizational outcomes and underscore the nuanced nature of relationships within higher education

settings, providing practical implications for leadership development and organizational management in Jordanian HEIs.

**Keywords:** Authentic Leadership, Inclusive Leadership, Adaptive Performance, Innovative Work Behaviour, Psychological Capital, Academic Staff, Higher Education.

***Kesan Kepimpinan Terhadap Gelagat Kerja Inovatif dan Prestasi Penyesuaian di  
Institusi Pengajian Tinggi Jordan***

**ABSTRAK**

Kajian ini menyiasat kesan gaya kepimpinan yang inklusif dan autentik terhadap tingkah laku kerja yang inovatif dan prestasi penyesuaian di kalangan kakitangan akademik di Institusi Pengajian Tinggi (IPT) Jordan. Objektif kajian ini adalah untuk mengkaji kesan langsung kepimpinan inklusif dan kepimpinan autentik ke atas kedua-dua tingkah laku kerja inovatif dan tambahan prestasi penyesuaian kepada peranan modal psikologi sebagai pengantara. Juga, jenis sektor sebagai penyederhana. Pendekatan penyelidikan kuantitatif telah digunakan, menggunakan soal selidik yang ditadbir sendiri yang diedarkan kepada kakitangan akademik. Pemodelan persamaan struktur (SEM) digunakan untuk menilai hipotesis cadangan menggunakan data empirikal yang dikumpul daripada 422 peserta di 26 IPT Jordan. Kajian itu membayangkan kaedah kluster. Data dianalisis menggunakan smart PLS dan SPSS. Penemuan menunjukkan bahawa kedua-dua gaya kepimpinan inklusif dan autentik menyumbang dengan ketara kepada peningkatan tingkah laku kerja yang inovatif dan prestasi penyesuaian dalam kalangan kakitangan akademik di IPT Jordan. Tambahan pula, modal psikologi didapati menjadi pengantara hubungan ini. Walau bagaimanapun, hubungan tertentu, seperti yang melibatkan modal psikologi dan pembolehubah lain, didapati tidak signifikan. Selain itu, tidak ada peranan untuk jenis sektor dalam menyederhanakan hubungan antara AL dan IWB dan sementara ia mempunyai peranan penyederhana antara IL dan IWB dan AP. Keputusan ini menyerlahkan peranan kritikal gaya kepimpinan dalam membentuk hasil organisasi dan menggariskan sifat perhubungan yang bernuansa dalam tetapan pendidikan tinggi, memberikan implikasi praktikal untuk pembangunan kepimpinan dan pengurusan organisasi di IPT Jordan.

**Kata kunci:** *Kepimpinan autentik, kepemimpinan inklusif, prestasi penyesuaian, tingkah laku kerja yang inovatif, modal psikologi, kakitangan akademik, pendidikan tinggi.*

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## LIST OF ABBREVIATIONS

CGS	Centre for Graduate Studies
UNIMAS	Universiti Malaysia Sarawak
IL	Inclusive leadership
AL	Authentic leadership
IWB	Innovative work behaviour
AP	Adaptive Performance
PSY-CAP	Psychological Capital
HEIs	Higher Education Institutions
SET	Social Exchange Theory
SDT	Self Determination Theory
SPSS	Statistical Package for Social Sciences
PLS	Partial Least Squares

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

The study explores two leadership styles, authentic and inclusive leadership styles, with a focus on their relationship with innovative work behaviour (IWB) in addition to adaptive performance (AP) and the factor that indirectly impacts them, which is psychological capital (PsyCap) among academic staff in Jordan. It also discusses the study's background, the problem statement, research objectives and questions, and the significance of the study. The last chapter discusses the study's principal objective and defines key terms connected to this research.

### 1.2 Background of the Study

The 21<sup>st</sup> century, in contrast to previous centuries, is very dynamic; as a result, it has become crucial for all leaders, regardless of their position, to demonstrate their abilities to influence other employees within their institutions in order to accomplish institutional goals and survive rapidly changing, and fierce environment (Yangailo, 2023). Leadership is crucial for every organisation to function well. As a result, the great majority of studies have focused on identifying the many leadership styles that might help any organisation flourish. Moreover, the appropriate leadership styles utilized by managers can improve staff relationships, performance efficiency, work setting, and psychological well-being at the workplace. In contrast, ineffective leadership costs more causes staff turnover and absences and decreases the performance and productivity of the staff (Cummings et al., 2018).

Even though various research studies in the area of management have focused on different styles of leadership, in this study, the most important point is the acknowledgement of authentic leadership (AL) in a new organizational leadership theory based on the principles of positive psychology (Luthans & Avolio, 2003). As this style is related to employee engagement in organizational activities to foster trust in management because when people realize that their managers have faith in them, they will exert every effort to accomplish their assigned tasks (Hsieh & Wang, 2015). Furthermore, organisations must prioritise real leadership and work to strengthen their employees' social and professional ties. Organisations should think about including elements of true leadership in their performance reviews, employee assessments, and other personnel policies if they want to reap the full advantages of authentic leadership (Iqbal et al., 2020).

Additionally, inclusive leaders prioritise their relationships with subordinates, combining the best features of transformational and transactional leadership while also utilising the power of a shared leadership style (Fang et al., 2019a). Inclusive leadership (IL) is predicated on supporting individuals who insist on treating all subordinates the same way, recognize the significance of cohesiveness throughout the community and use their behaviour as a model (Qi & Liu, 2017). Institutions require innovation to grow and survive. Institutions that cannot consistently bring innovative products and services to market may be at risk of failing. However, the core of innovation is the innovative behaviour of the employees (Jahangir et al., 2023). Therefore, the way forward is evidently to emphasise employees' innovative work behaviour (IWB) (Afridi et al., 2020).

Examining the root reasons and processes of an employee's IWB is thus much more important. This is especially visible in the contemporary workplace, where the Millennial

generation (individuals aged 26 to 40 years old) and Generation Z (individuals aged 18 to 25 years old) are expected to dominate by 2025. Innovative work behaviour is widely anticipated from these two generations as they are both fully skilled, analytical, creative, adaptable and ambitious, which has established the groundwork for being innovative in their character (Microsoft, 2021; Prakash & Tiwari, 2021). Leaders must modify their leadership styles to encourage everyone to participate in IWB because leadership influences innovation's social and psychological processes (Atitumpong & Badir, 2018). As the industry and work environment expand, employees' competency and adaptation to new conditions and work environments become increasingly important. As a result, adaptive performance requires more attention in order to understand the dynamic nature of employee performance (Tan & Antonio, 2022). Adaptive performance (AP) is crucial for organizations and staff to comprehend how to encourage employees' ability to modify their behaviour to fulfil the requirements of a new environment; this is what we call in the current research adaptive performance (Kaltiainen & Hakanen, 2022a). Research on the adaptive performance of employees contributes to a better understanding of the rapid evolution of individual performance under unpredictable conditions.

As demonstrated, innovative work behaviour and adaptable performance are viewed as critical components of the organization's growth and ability to compete in uncertain settings. Such a condition necessitates that management inside organisations adopt suitable work regulation regulations and encourage innovative work behaviours to sustain organisational performance. Psychological capital (PsyCap) is a type of strategic resource which has gained significant interest in studies due to its effect on human performance and behaviour (Burhanuddin et al., 2019). It is connected to the positive psychology of personnel, which displays how they behave in a good way rather than how they act in a bad manner

(Baig et al., 2021). Organisational success improves when positive psychological capital is implemented, increasing employee satisfaction and productivity (Tosten & Toprak, 2017). For higher education institutions (HEIs) to take advantage of both challenges and opportunities, they must be forward-thinking, flexible, innovative, and adaptable. It also needs to support integrative educational programs and become transformative (DePauw, 2019). Staff in the education industry are required to remain current and updated with the most recent knowledge in the expertise fields in which they specialize, they are required to exhibit innovative behaviours in their work. Educational leaders must provide a framework that allows their followers to preserve control over their professions while also keeping them up to date on current information (Jia et al., 2022). Public and private higher education institutions in Jordan typically operate under different organizational cultures and management structures. Public institutions are often influenced by government policies and bureaucratic processes, while private institutions might have more flexibility and entrepreneurial approaches. This variation can have a major impact on how leadership styles are viewed and influence PsyCap, innovative work behaviour, and adaptable performance (Alzghoul et al., 2023). According to Akanji et al. (2020), authentic and inclusive leadership styles may manifest differently in public versus private institutions due to variations in leadership training, development opportunities, and managerial autonomy. Thus, by comparing these two types of institutions, the study may show how context-specific elements influence the efficiency of both leadership styles in encouraging innovation and adaptation.

Public institutions might have more stable funding but face bureaucratic hurdles, whereas private institutions often rely on tuition fees and may have more competitive resource allocation (Bauer, Peters & Pierre, 2021). These differences can influence the development and utilization of PsyCap among faculty and staff, as well as their ability to

engage in innovative and adaptive behaviours. A comparison study might demonstrate how resource dynamics affect these factors. Government rules and policies apply to public institutions, which can help or impede the adoption of genuine and inclusive leadership practices. Private institutions, on the other hand, may have more leeway to implement innovative practices. Examining these differences can provide a comprehensive understanding of how external policy environments affect internal leadership and employee behaviour.

The Middle East's higher education system faces a number of challenges, including how to maintain and improve teaching methods, learning processes, research performance and scholarship, graduate output, methods of defining and measuring quality, the use of standardisation, and how to persuade a wide range of stakeholders and governments that universities are performing well (Bourini et al., 2017). Higher education in Jordan has substantially improved study programme diversity, teaching and learning methods that influence quantity and quality, and institution growth (Jmhesr, 2023). Jordan's education system generates 6.6 per cent of the country's GDP (Jordan News, 2022), while Jordan's overall expenditure on education was 3.2114% in 2021 (World Bank, 2023).

The education sector in Jordan consists of five types: public universities, private universities, university colleges, and regional universities. It is a non-profit regional university that includes different branches around the Arab world. The branches of this university are distributed in several Arab countries, this university relies on the open education system, and this system is characterized by flexibility in a way that suits the circumstances and capabilities of students and institutes; finally universities with private law (Universities are established following particular laws or special instructions from the

government. The institution's administrative structure, the range of activities it is permitted to carry out, and the particular fields of study it may concentrate on are all governed by these rules) (Jmhesr, 2023).

**Table 1.1** clarifies number of the HEIs in Jordan and their types.

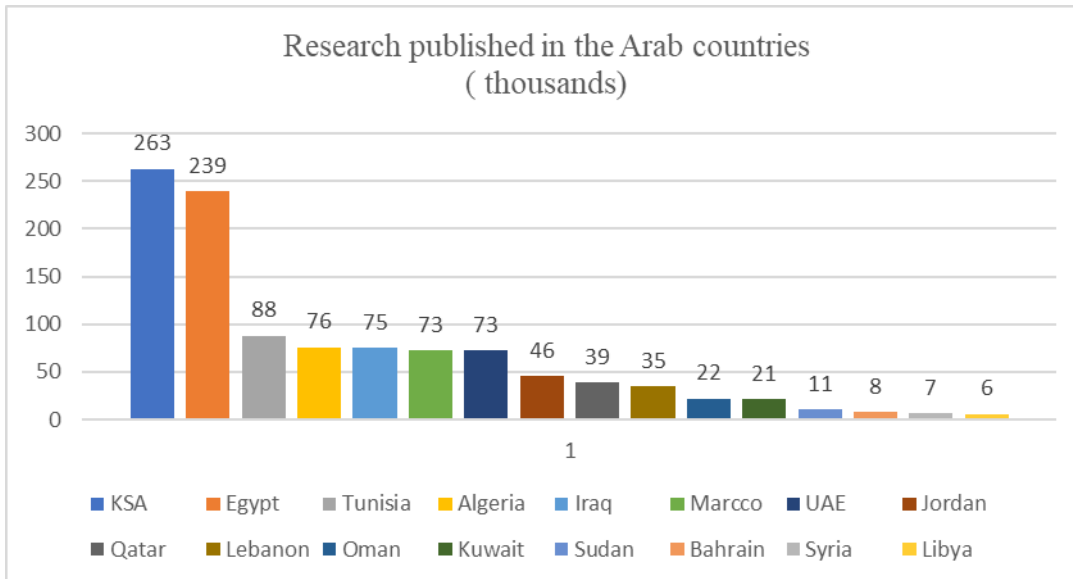
**Table 1.1: Types of Higher Education Institutions in Jordan (Academic Year 2023/2024 )**

Public	Private	Universities with private law	University colleges	Regional
10	17	2	9	1

**Source:** Jordan Ministry of Higher Education. 2024.Higher Education in Jordan <https://www.jmohe.gov.jo>.

Nevertheless, Jordan's image of higher education does not seem as great as it may appear; many believe that Jordan needs a major renovation to improve and provide quality education. For example, it is noted that publication in Jordanian public and private HEIs is still below what is required, as when comparing the number of scientific publications in the period 2010-2020 compared to Arab countries, this number is low, and Jordan ranks in the middle in terms of total published as shown in below chart according to Leviser Scopus website. For every faculty member, the pace of scientific research-creation is less than one study year (Economic & Social Council of Jordan, 2022). Below figure 1.1 shows the ranking of Jordan compared to Arab countries in research publications (2010-2020).

**Figure 1.1: Number of Scientific Publications in the Period 2010-2020 Compared to Arab Countries**



**Source :** Economic and Social Council of Jordan. (2024). Country Situation Report 2022. <https://www.esc.jo>

Since it is linked to academic advancement, staff instability, and the inability to establish a suitable environment for research and innovation, research improvement at private higher education institutions has also fallen short of its expected goal (Tarawneh & Abud Humeidan, 2020). Based on the discussion above, this study investigates the impact of inclusive and authentic leadership styles on innovation work behavior and adaptive performance for the academic staff in Jordanian public and private HEIs. In addition, the research assesses the function role of psychological capital as a mediator within this relationship's conceptual framework.

### 1.3 Problem Statement

Indeed, this study examines the problem from three key perspectives: theoretical, empirical, and contextual evidence. Public and private sectors operate within distinct organizational structures, cultures, and priorities, which influence leadership styles and their impact on outcomes (Alford & Greve, 2017). Qurrahtulain et al. (2022b) point out that when workers believe their contributions are recognised, they perform better in terms of

adaptability, especially when inclusive leadership is used, which stresses transparency and participation in decision-making. Higher education plays a critical role in fostering innovation and economic growth. However, concerns have emerged regarding the limited innovation potential among academic staff (Wu et al., 2022). Faculty members significantly influence students' creativity and practical skills, contributing to research and societal advancement (Prasetyono et al., 2024). While extensive research explores innovative behaviour in corporate settings (Elsetouhi et al., 2023; Kwon & Kim, 2020; Wang et al., 2022), academic staff remain underrepresented in this discourse. Compared to corporate and public sectors, studies on innovative work behavior (IWB) in higher education are limited. Many researchers apply generalized corporate concepts that may not align with the specific dynamics of academia. Additionally, methodological gaps persist, hindering a nuanced understanding of innovation among faculty members (Ardianti et al., 2024).

Although inclusive leadership has been linked to improved adaptive performance, research on its specific influence on IWB in Jordanian higher education remains scarce. While various leadership styles have been examined across industries and regions, studies focusing on their application within Jordanian universities are limited (Shakil et al., 2021; Bataineh et al., 2022; Yu, 2020). Furthermore, inclusive leadership lacks a standardized theoretical model, and its application often varies across contexts (Liu et al., 2024; Sharma et al., 2024). The incomplete internalization of inclusive leadership behaviours, particularly in informal and situational contexts, further complicates its implementation in higher education.

Hope, optimism, resilience, and self-efficacy are all components of psychological capital (PsyCap), which has been extensively researched in connection to well-being and

career success. Since much of the prior research has focused on leadership in corporate settings, using a management framework to examine leadership in Jordanian higher education institutions provides a unique viewpoint. This study exclusively investigates the higher education sector in Jordan, providing a deeper understanding of how leadership styles influence IWB and adaptive performance. By incorporating a comparative analysis between the public and private sectors, this research distinguishes itself by identifying disparities in leadership styles, organizational cultures, and management practices that may impact IWB and adaptive performance differently (Javed et al., 2018).

This study tackles the need to comprehend how inclusive and genuine leadership affects IWB and adaptive performance in Jordanian higher education institutions from a management standpoint. Fostering creativity and adaptation requires effective leadership, especially in the fast-paced world of higher education (Schulze & Pinkow, 2020). Technology improvements and curriculum revisions are only two of the ongoing difficulties that faculty and staff must deal with. PsyCap enables them to navigate these changes effectively, fostering a productive work environment (Wisetsri et al., 2022). Previous research confirms that PsyCap mediates leadership styles and positive organizational outcomes, demonstrating that leaders who enhance employees' confidence, self-efficacy, and optimism contribute to improved performance and creativity (Wang, Chen, & Zhu, 2021).

In educational settings, where trust and integrity are paramount, authentic leadership significantly influences faculty and staff morale, motivation, and engagement (Mutonyi, 2021). This, in turn, affects their willingness to innovate and adapt. Authentic leaders foster PsyCap by providing a transparent and supportive environment that encourages hope, optimism, resilience, and confidence. Similarly, higher education institutions benefit from

inclusivity, as diverse perspectives enhance collaboration and creativity. Inclusive leadership fosters psychological safety, where employees feel valued and respected, improving their optimism, resilience, and self-efficacy (Mather, 2020).

Higher education institutions must innovate to expand and remain competitive (Wang et al., 2021). According to a Boston Consulting Group study, 75% of organisations prioritise innovation to preserve a long-term competitive edge. Faculty and staff who participate in IWB contribute to institutional adaptation and long-term success. Authentic and inclusive leadership may foster innovation by encouraging and appreciating fresh ideas. PsyCap boosts people's confidence and resilience in seeking new solutions. Given the continuous improvements in educational technology, techniques, and regulations, adaptive performance is critical for faculty and staff to maintain high standards and fulfil institutional objectives (Wang et al., 2021). Leaders who exhibit authentic and inclusive behaviours inspire adaptability by modelling flexibility and providing necessary support. High PsyCap levels enable employees to cope with change, enhancing their adaptive performance.

A management-focused examination of leadership may yield useful insights for enhancing leadership practices in Jordanian higher education. Understanding how genuine and inclusive leadership affects IWB and adaptive performance can assist leaders in implementing initiatives that build an innovative and adaptable culture (Maryam Hafeez et al., 2019). IWB and adaptive performance are critical in many organisational settings, including higher education (Javed, Fatima, et al., 2021). The failure of higher education institution (HEI) employees to demonstrate innovation has hindered the development of innovative graduates, thereby delaying national progress. HEIs are expected to contribute significantly to national innovation efforts (Wadero, 2021). Faculty and staff must possess

innovative abilities to equip students with applicable skills across industries (Dehning et al., 2020). However, limited studies examine the impact of leadership styles and PsyCap on IWB and adaptive performance, particularly in Jordanian HEIs (Tarawneh & Abud Humeidan, 2020). Understanding these relationships offers valuable insights into how Jordanian HEI leaders can cultivate an innovative and adaptable work environment.

Furthermore, stakeholders (including students, parents, government authorities, and private investors) hold different expectations of public and private institutions (Sakamoto, 2022). These expectations determine leadership approaches and staff responses. A comparative examination demonstrates how stakeholder demands influence leadership practices and outcomes. Public institutions often prioritize social and educational mandates, whereas private institutions focus on financial performance and market competitiveness, impacting how IWB and adaptive performance are measured and valued (Parker et al., 2023). Ibáñez et al. (2020) found that public and private organisations had different worker composition and incentive characteristics, including age, educational background, employment security, and career objectives. Examining these demographic disparities improves our knowledge of PsyCap creation and use in various institutional contexts.

### **1.3.1 Theoretical Evidence**

Inclusive leadership (IL) is an emerging concept, with key aspects of its conceptualization and theorization still unresolved (Shore & Chung, 2021). While various perspectives on IL exist (Carmeli et al., 2010; Nembhard & Edmondson, 2006), there is no consensus on its definition (Randel et al., 2016). Scholars have proposed different models (Choi et al., 2015; Tran & Choi, 2019; Q. Ye et al., 2019), but their theoretical grounding varies.

Authentic leadership (AL) promotes favourable career outcomes by fostering a supportive and growth-oriented work environment (Gardner et al., 2005b). However, AL is still relatively new and warrants investigation in a variety of cultural contexts, including Jordan, which differs greatly from Western employment environments (Alzghoul et al., 2018). Research on IL and innovative work behaviour (IWB) has mostly concentrated on Leader-Member Exchange (Javed et al., 2021; Sürücü et al., 2023; Mansoor et al., 2021; Bibi & Afsar, 2018). This study is unique in that it explores the link between social exchange theory (SET) and self-determination theory (SDT). Psychological capital (PsyCap) is a positive psychological state that includes hope, self-efficacy, resilience, and optimism that promotes employee creativity (Luthans, Youssef et al., 2007; Lei et al., 2020). However, its significance as a bridge between leadership and creativity remains conceptually unexplored (Le, 2020; Luthans, 2012).

### **1.3.2 Empirical Evidence**

Leadership plays a crucial role in shaping employees' innovative behaviours (Liu et al., 2017; Zubair et al., 2015) and performance (Atikah & Qomariah, 2020; Dewi & Wibowo, 2020). Prior studies have examined the conditions under which leaders foster innovative work behavior (IWB) (Alheet et al., 2021; Sudibjo & Prameswari, 2021). In higher education institutions (HEIs), leadership should cultivate an environment that values employees' innovation and capabilities, as recognition enhances staff retention (Mwesigwa et al., 2020).

Effective leadership is critical to promoting IWB (Watts et al., 2020). However, most research has focused on leadership's overall impact on innovation rather than its effects on particular components at the human and organisational levels (Lei et al. 2019). Additionally, studies have not sufficiently explored leadership's effectiveness in shaping IWB (Saeed et

al., 2019; Afsar & Umrani, 2019). Future research should identify leadership styles that effectively promote innovation (Wipulanusat, 2017).

Inclusive leadership (IL) has been recognised for its role in promoting IWB by displaying care for employees, giving emotional support, and recognising individuality (Fang, 2021; Randel et al., 2018). This inclusive strategy allows employees to boldly offer ideas, which promotes creativity (Mansoor et al., 2021). While several research have looked at the IL-IWB link, they have all been conducted in various circumstances. Some researchers have asked for more in-depth examinations, notably in education, that take into account mediating elements (Aslan, 2019). Others have highlighted the need for examining additional mediating mechanisms in the IL-IWB relationship (Javed et al., 2018; Bataineh et al., 2022; Qurrahtulain et al., 2022). Despite advancements in IL research, there remains a lack of consensus on its theoretical framework (Shore & Chung, 2022; Veli Korkmaz et al., 2022; Wahab et al., 2024), justifying its selection in this study.

Along with IL, authentic leadership (AL) has been chosen because it integrates transformational, servant, charismatic, and other good leadership styles. (Avolio & Gardner, 2005). While AL is linked to employee attitudes and behaviours, research on the relationship between leader authenticity and employee behaviour remains limited (Khan et al., 2020; Ribeiro et al., 2019). Understanding AL's impact on performance is essential for organizational studies (Jang, 2022), yet little research has examined its relationship with adaptive performance (Kaya & Karatepe, 2020).

Psychological capital (PsyCap) is an important resource for reducing workplace stress and promoting innovative work processes (Maher et al., 2017). Expanding PsyCap increases staff productivity and gives organisations a competitive edge (Luthans, Avolio, et

al., 2007). It is cost-effective since it is based on interactions between leaders and employees (Nanesa and Fatmala, 2022). Despite its significance, research on PsyCap's role as a mediator remains scarce. The public sector, in particular, lacks sufficient knowledge of PsyCap's antecedents and impacts (Bak et al., 2022). Additionally, studies have not adequately explored PsyCap as a mediator between AL and performance (Jang, 2022; Duarte et al., 2019) or its relationship with IWB and adaptive performance (Fath & Radikun, 2019; Luo et al., 2021).

Given the paucity of research on the mediating processes between leadership and IWB (Mansoor et al., 2021), this study seeks to give theoretical and practical insights into how PsyCap mediates the links between IL, AL, IWB, and adaptive performance. Furthermore, the relationship between IL and adaptive performance requires further exploration (Qurrahtulain et al., 2020).

### **1.3.3 Contextual Evidence**

Jordanian Higher Education institutions (HEIs) confront substantial issues in meeting international accrediting criteria, which frequently result in program suspensions to enhance teaching techniques and educational resources (Khazaleh and Alshwa, 2020). Jordanian higher education institutions frequently rank poorly in worldwide university rankings (QS, THE, ARWU, and Webometrics), have no presence in the Shanghai classification, and numerous private HEIs are completely removed (AlZoubi & Salameh, 2020). Additionally, Qatar and Kuwait have removed most Jordanian public HEIs and all but one private HEI from their recognized university lists, negatively impacting institutional reputation and international student enrollment (MOEHE of Qatar, 2023; NBAQ, 2023).

Financial constraints further exacerbate these issues. Public universities struggle with mounting debt and rising operational costs, with total budgets reaching 619 million JOD in 2021 and accumulated debt exceeding 100 million JOD (ESCJ, 2022). Slow institutional change, inadequate planning, and rigid educational systems hinder adaptation to global trends (Mahasneh & Tawarah, 2020).

Faculty issues are another major topic. Academic personnel have restricted professional growth possibilities, poor functional and instructional development, and low participation with social concerns as a result of HEIs' lack of concentration on community service. Additionally, the lack of academic independence in research and community engagement remains a pressing issue (Nayf, 2021). Private HEIs further struggle with unsatisfactory salaries and unclear hiring policies, contributing to high turnover and talent loss (Rewashed, 2018).

Academic staff are critical to the success of higher education, with leadership having an important role in supporting innovation and adaptive performance (Al-Daibat, 2018; Samina et al., 2020). However, public institutions can have inflexible structures and suffer limited competition, which can lead to leadership styles that do not successfully promote innovation and workplace behaviours (Majudmdar and Ray, 2011). The impact of inclusive leadership (IL) and authentic leadership (AL) on adaptive performance (AP) and innovative work behavior (IWB) in public and private HEIs remains unclear.

Given the paucity of research on these links, particularly in Jordanian higher education institutions, the purpose of this study is to give policymakers insights into how to establish policies that improve academic staff creativity and institutional performance. Furthermore, the lack of a globally acknowledged scale for evaluating IWB in educational

institutions underscores the necessity for additional research (Lambriex et al., 2020). This research seeks to bridge these gaps by examining the interplay between IL, AL, psychological capital (Psy-Cap), IWB, and AP within Jordanian higher education.

#### **1.4 Research Questions**

This study aims to investigate the effect of authentic and inclusive leadership styles on IWB and adaptive performance and the mediating role of psychological capital and the role of sector typer as a moderate among the academic staff in Jordanian public and private higher education institutions. To achieve this, the study investigates driven by the answers to the following research questions. Therefore, this study seeks to answer the following questions:

- i.** What is the influence of IL and authentic AL on psychological capital in public and private higher education institutions in Jordan?
- ii.** What is the influence of IL and AL on innovative work behaviour in public and private higher education institutions in Jordan?
- iii.** What is the influence of psychological capital on innovative work behavior and adaptive performance in public and private higher education institutions in Jordan?
- iv.** What is the influence of inclusive leadership and authentic leadership on adaptive performance in public and private higher education institutions in Jordan?

- v. Does psychological capital mediate the relationship between inclusive leadership, authentic leadership and innovative work behaviour in Jordan's private and public higher education institutions?
- vi. Does psychological capital mediate the relationship between inclusive leadership, authentic leadership and adaptive performance in private and public higher education institutions in Jordan?
- vii. Does HEIs sector type ( public or private) moderate in the relationship between inclusive leadership, authentic leadership and innovative work behaviour in private and public higher education institutions in Jordan?
- viii. Does HEIs sector type ( public or private) moderate in the relationship between inclusive leadership, authentic leadership and adaptive performance in private and public higher education institutions in Jordan?

## **1.5 Research Objectives**

The following objectives build on the research questions above and generally lead to having a better understanding of the main objective of this study, which is to examine the effect of inclusive and authentic leadership styles on AP and IWB among academic staff in Jordanian public and private HEIs through psychological capital as a mediator:

- i. To examine the effect of IL and AL on PsyCap in public and private higher education institutions in Jordan.
- ii. To examine the effect of IL and AL on IWB in public and private higher education institutions in Jordan.

- iii. To examine the effect of PsyCap on IWB and AP in public and private higher education institutions in Jordan.
- iv. To evaluate the effect of IL and AL on AP in public and private higher education institutions in Jordan.
- v. To assess the mediating effect of PsyCap on the relationship between leadership (IL and AL) styles and IWB in public and private higher education institutions in Jordan.
- vi. To assess the mediating effect of PsyCap on the relationship between Leadership styles (IL and AL) and AP in public and private higher education institutions in Jordan.
- vii. To assess the moderating effect of HEIs sector type (public or private) on the relationship between Leadership styles (IL and AL) and IWB in public and private higher education institutions in Jordan.
- viii. To assess the moderating effect of HEIs sector type (public or private) on the relationship between Leadership styles (IL and AL) and AP in public and private higher education institutions in Jordan.

## **1.6 Significance of the Study**

The significance of this study derives from its contribution to theoretical and practical, as well as the robustness of the research techniques. The research looks at the influence of IL and AL on IWB and AP Jordanian public and private higher education institutions, using psychological capital as a moderator. Moreover, the study further provides contributions in perspective of the theoretical, practical, and methodological levels, in authentic and inclusive leadership styles, innovative work behavior, adaptive performance, and psychological capital. As a result, the study is vital for educational institutions as well as researchers in the fields of leadership and employee behaviour. Furthermore, comparing

the public and private sectors can assist improve a general understanding of leadership and management strategies. The findings of this study have the potential to give useful insights for various sectors and industries, both inside Jordan and beyond, emphasising the applicability of leadership ideas in a variety of organisational situations. This provides a unique perspective to existing literature and offers valuable insights that can have practical implications for leadership practices in different sectors.

### **1.7 Scope of Study**

The scope of this research focuses on inclusive and authentic leadership styles and their relationship to adaptive performance and innovative work behaviour and the mediating role of psychological capital. The study covers the population of Jordanian public and private higher education institutions. This choice is based on the key role that the sectors play in the process of comprehensive development of the nations.

This research study is the best at examining the interaction between IL, AL leaders, IWB, and AP academic staff. To achieve the study goals, a series of questionnaires is delivered to the respondents. It seeks to make theoretical contributions by offering leadership styles (IL and AL), innovative work behaviour, adaptive performance, and psychological capital as mediators. This comparative study allows for an exploration of how stakeholder pressures shape leadership and its outcomes. The differing priorities between private and public HEIs can affect how innovative work behaviour and adaptive performance are measured and valued. By comparing the two, the study can uncover how institutional goals impact the relationship between leadership, PsyCap, and performance outcomes.

## 1.8 Definition of Key Terms

This section defines the most essential terms utilised throughout the study. The concepts are defined conceptually, which is an important part of the research process since it requires accurately specifying the construct so that it can be assessed systematically. And operational definition is the actual approach, tools, or method demonstrating how constructed are measured (Edmonds & Kennedy, 2017).

**Leadership:** is mostly defined as the procedure of impacting the group towards accomplishing their goals and objectives in addition guiding institutions to make them more coherent and harmonious (Bass, 1997). Silva (2016, p3) defines leadership as a “process of interactive influence that occurs when, in a given context, some people accept someone as their leader to achieve common goals”.

Operationally: for this study, the term leadership refers to the impact the leaders have on academic staff performance and behaviour to achieve a certain goal and objectives.

**Inclusive Leadership:** Leaders who are visible, approachable, and available in their interactions with members (Carmeli et al., 2010). While Nembhard and Edmondson (2006, p. 941) define IL as a leadership style that invites, directs, and rewards followers for their actions (Nembhard & Edmondson, 2006).

Operationally: This study defines inclusive leadership as a positive leadership style that creates an environment in which all members are respected, appreciated, and heard, whatever their diverse backgrounds and perspectives are. It entails developing an open, trusting, and collaborative culture in which everyone feels empowered to participate in their unique perspectives and strengths.

**Authentic Leadership:** Walumbwa et al. (2008, p. 94) define authentic leadership as “A pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development.” Avolio et al. (2004) defined authentic leaders as “those individuals who are deeply aware of how they think and behave and are perceived by others as being aware of their own and others' values/moral perspective, knowledge, and strengths; aware of the context in which they operate; and who are confident, hopeful, optimistic, resilient, and high on moral character.”

Operationally: This study defines authentic leadership as the foundation of a positive leadership style that focuses on the relationship between the leader and the individual. This reality influences individuals' performance and behaviour in achieving desired outcomes and is distinguished by mutual trust, transparency, respect, and credibility.

**Psychological Capital:** Luthans & Youssef (2004) define psychological capital as a term used to describe the positive psychological resources or strengths that individuals have within themselves. Luthans (2002, p. 59) defined psychological capital as “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in current workplace”

Operationally: the focus of the psychological state of the academic staff, which is developed and characterized by self-confidence to succeed, willpower to accomplish goals, an ambition to take on challenging tasks to accomplish present and future goals, and the capacity to deal with issues in the event of their exposure with in higher education context.

**Innovative Work Behaviour:** has been defined as “a multi-stage iterative process in which employees' behaviour aims to intentionally create novel concepts after exploring various possibilities. It also includes the planning for implementation and the execution itself, without neglecting to examine the long-term viability of these ideas and the required actions, intending to benefit the entire organisation in the long run” (Lambriex-Schmitz et al. 2020). While Janssen (2000, p. 288) defines IWB as “the intentional creation, introduction and application of new ideas within a work role, group or organisation, to benefit role performance, the group, or the organisation.” While Ayoub defines IWB as “a faculty member’s intended behaviours to continuously explore opportunities and to generate, promote, and implement new ideas to improve their work role performance by maintaining the sustainability of these new ideas”.

Operationally: Behaviour added by employees intentionally intended to create opportunity exploration, idea generation, idea promotion, idea realization and idea sustainability in the institution that they work for.

**Adaptive Performance:** Johnson (2001, p. 985) defines “The proficiency with which a person alters his or her behaviour to meet the demands of the environment, an event, or a new situation.”. Charbonnier-Voirin, Akremi, and Vandenberghe (2010, p. 702) define “Employees’ ability to learn new skills and adapt to various contexts.”

Operationally, the ability of the academic staff to deal with the change in working conditions from several aspects, such as problem-solving, training and learning, stress, emergencies and crises, and interpersonal adaptability.

**Higher Education Institution:** “all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that

are approved as institutions of higher education by the competent state authorities.” (UNESCO, the World Bank and UNDP). “An organized tertiary learning and training activities and institutions that include conventional universities such as arts, humanities, and science faculties and more specialized university institutions in agriculture, engineering, science, and technology.” Kassaye Alemu (2018, p.212).

Operationally: an institution that is responsible for delivering higher education service to the students in a country in different subjects like economics, agriculture, engineering, medicine, and pedagogy, among many others.

**Academic Staff:** Personnel whose primary duties are teaching, research, or community service. This includes staff individuals with titles such as professor, associate professor, assistant professor, instructor, lecturer, or any title similar to one of these academic ranks who also have an academic role. Personnel with additional titles, such as dean, director, associate dean, assistant dean, chair, or head of department, fall into this group if their major duty is teaching or doing research. It excludes teacher assistants and student teachers (UNESCO, 2001).

Operationally: Personnel who work at higher educational institutions, whose main responsibility is teaching or conducting research, and who have lecturers, senior lecturers, assistant professors, associate professors and full professors titles.

## **1.9 Organisation of Chapters**

This thesis consists of five chapters that provide an overview of the study by outlining the background circumstances that gave rise to it. The literature review for this project is covered in Chapter 2, which also discusses the aspects of various models developed by

earlier researchers, the creation of the theoretical framework, and the formation of hypotheses. The research technique, including sample design, data collecting, instrument design, and statistical analysis, is covered in Chapter 3. Chapter 4 then presents the findings from the data analysis. Chapter 5 concludes with a review of the research findings, implications, limitations, and recommendations for future studies.

### **1.10 Summary**

This chapter presented a summary of the study's historical context and laid the groundwork for its future growth. The study's background described the start of the study's conception. Also, the chapter explained the study's problem in addition to its objective and questions. Accordingly, leadership styles and psychological capital have been emphasized as essential in improving IWB and AP in educational settings. The limitations of the study were presented. The study's literature review is presented in the following chapter.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Overview**

This chapter presents the literature that is relevant to the study's theoretical framework. This chapter begins with a discussion of the study's elements, then presents the research gaps, followed by underlined theories, then the theoretical framework and the hypotheses of this study. The importance of this chapter comes from the topic that it covers, starting from past studies that related to the elements of the research, clarifying the gaps of the research, and discussing the research hypotheses and model.

#### **2.2 Underlying Theory**

This section offers an overview of the structure of literature that served as the study's theoretical foundation and conceptual framework. Following that, crucial elements like IL, AL, PsyCap, and the theories are identified and understood. In order to provide readers with a comprehensive knowledge of the primary theory behind this research, the section briefly outlines the AL theory and the social exchange theory.

##### **2.2.1 Social Exchange Theory (SET)**

Since the 1960s, social psychology theory has been based on social exchange theory. The social exchange theory's central tenet is that social and financial resources are exchanged throughout human contact (Cook et al., 2013). Social exchange is defined as an interaction between a minimum of two people exchanging tangible or intangible activities or services that could be profitable (Homans, 1961, P:13). Social exchange theory was developed by Homans and is predicated on the concepts of distributive fairness, equilibration, and

anticipation (Homan, 1961). A cost-benefit analysis of social interactions led to the introduction of the social exchange hypothesis. According to the social exchange hypothesis, resource interaction is necessary for a positive leader-employee relationship. Once staff recognizes that leadership has morals and truly cares about them, proactive attitudes and behaviours are reciprocated (Fusco et al., 2015). Soon after, Blau (1964) also contributed to the development of the social exchange theory by arguing that interpersonal trade is mediated via an economic lens. The voluntary behaviour of people encouraged by the expected outcomes of engaging with others is referred to as social exchange. The two theories differ fundamentally in that Homan used psychological instrumental behaviour, whereas Blau (1964) used economic analysis when applying the social exchange theory. According to a key theoretical stance based on social exchange theory, any interpersonal interaction maximises gain while minimising costs (Blau, 1986). Social exchange theory is one of the most important theoretical models for explaining work environment operations because people develop their interactions with certain social entities by demonstrating impressive work attitudes and behaviours out of a sense of reciprocity when they feel valued or cared for at their workplaces (Loi et al., 2015).

The social exchange theory has been employed in the leadership literature over the last few decades (Avey et al., 2012). Trust in leadership, and a decrease in unproductive work behaviour (Bedi et al., 2016). According to the social exchange hypothesis, healthy social interaction requires reciprocity and trust. Similarly, as personnel witnessed the benefits of leadership behaviour, they felt committed to rewarding it with positive behaviours and attitudes (Foa & Foa, 1980; Gouldner, 1960).

Modern research, on the other hand, has discovered a link between mutual trust and set-high leadership exchange. To understand social exchange theory, it is critical to understand how ethical leadership affects employees (Bedi et al., 2016). Researchers have found that social interactions between moral leaders and their subordinates are characterized by a sense of long-term reciprocity and reciprocal commitment. By completing tasks at work or increasing their loyalty to the institution in return for the fair treatment and impartial decision-making processes provided by ethical leaders, employees will create a trust and mutual virtuous cycle (Garba et al., 2018). The social exchange theory helps to clarify the relationship between inclusive leadership and employee innovation and creativity. Staff members are more involved in innovative tasks and more committed to their organisation when inclusive leaders support and reward them (Carmeli et al., 2010b), which, in turn, enhances the institution's likelihood of survival. (Lin & Liu, 2012). Intellectual and emotional support from inclusive leaders assists in the development of work environments that encourage employees to engage in innovative behaviours (Carmeli et al., 2010b).

Researchers find a significant relationship between leadership and employee trust (A. Newman, Nielsen, et al., 2018; Y. Zhu & Akhtar, 2014). If leadership's behaviour and character are perceived as sincere, the relationship between the leader and the staff will become more reliable one essential condition for authenticity is that followers trust a leader's authenticity. The social exchange theory helps to clarify the relationship between inclusive leadership and employee innovation and creativity. Staff members are more involved in innovative tasks and more committed to their organisation when inclusive leaders support and reward them (Carmeli et al., 2010b), which, in turn, enhances the institution's chances for survival. Ilies et al., (2005) assert that when leaders demonstrate objective and impartial processing of self-relevant knowledge, personal integrity, and an authentic relational

orientation, the leader-follower relationship is marked by high levels of respect, beneficial effect, and trust. High-quality and narrow relationships will, in turn, encourage stronger value congruence and follower reciprocation in the form of values-congruent behaviour. Such reciprocity is thought to increase followers' authenticity and well-being.

Social exchange theory is an essential theoretical framework for accurately describing and comprehending employee attitudes and behaviour. The social exchange theory emphasizes the importance of reward-cost analysis in the interpersonal exchange for each social encounter. The exchange of socioeconomic resources and the notion of reciprocity are essential components of the social dynamic, which includes the leader-employee relationship (Pattnaik, 2018). This concept is important for this study because it emphasises reciprocity, which can be useful when studying interactions between leaders and employees. Increases in IWB and AP will occur if a leader can persuade employees that the benefits outweigh the expenses of the leader-employee relationship. Researchers discovered that individuals who received leadership mentoring and support demonstrated greater commitment and effective workplace behaviour (Chughtai, 2013). Social exchange theory is considered to be among the most influential theoretical paradigms for understanding behaviour in the workplace.

### **2.2.2 Self-Determination Theory (SDT)**

Self-determination theory (SDT) is a comprehensive theoretical framework that encompasses several aspects of human development, personality, motivation, and overall well-being (Ryan & Deci, 2019). It gives a big-picture view of how to explore the behaviour of individuals (Ryan & Deci, 2019). The basic concept is that every person has three fundamental psychological needs: the need for autonomy, the need for competence, and the

need for relatedness. Once an individual's three fundamental psychological needs are satisfied, they attain a state of autonomous motivation, enabling them to behave with autonomy (Ryan & Deci, 2000). Once a person has autonomous motivation, the process of internalizing external motivation takes place. Tasks of high quality, such as those that involve innovation (Ryan & Deci, 2019).

Based on the principles of self-determination theory, the intrinsic motivation of employees plays a crucial role in fostering employee innovation (Deci & Ryan, 1980).

According to the self-determination idea, innovative employee conduct emerges when individuals' internal psychological desires are met. Carmeli et al. (2010) define inclusive leadership as having three fundamental attributes: openness, accessibility, and availability. This leadership style emphasises the importance of self-work among employees and is constantly engaged in scientific and technological innovation to address challenges encountered during the innovation process (Yu & Frenkel, 2013). Inclusive leaders are more transparent because they foster an environment that is open, trusting, and tolerant of mistakes in innovation; they appreciate, assist, and promote positive thought among staff; and they give staff members greater authority in matters relating to policies and research. Employees who feel they can express themselves openly psychologically are more likely to contribute innovative methods to achieving organisational objectives and be alert to emerging possibilities (Wang et al., 2018).

Based on the Self-Determination Theory (SDT), it is posited that authentic leadership has the potential to influence proactive behaviour via its impact on workers' psychological outcomes (Rosen et al., 2014). Self-determination theory (SDT) clarifies how the autonomous motivation of workers influences their behaviours. Furthermore, while

operating under the guidance of an authentic leader who has a strong sense of self-awareness and internalised moral perspective workers are motivated to engage in open communication, sharing information, and expressing their genuine ideas and emotions. During this particular phase, individuals experience greater levels of autonomy and an increased sense of self-efficacy. To optimize their performance, individuals are motivated to use proactive strategies to exceed expectations in service of their respective organisations (J. Zhang et al., 2018).

Authentic leaders encourage positive growth and self-fulfilment, which fosters good conduct in the company by enhancing followers. As a result, real leaders influence their followers by modelling positive conduct and encouraging self-determination. They do these tasks while also setting examples and showing authentic behaviours such as self-awareness, relational transparency, a positive moral viewpoint, and psychological states. Applying the self-determination theory, followers' ability to self-regulate is strengthened by exposure to authentic leaders, which in turn boosts their participation, psychological well-being, and performance. According to the self-determination theory of human motivation, it is underlined that when leaders fill the fundamental needs of workers, it results in increased levels of worker persistence, innovation, and performance. Moreover, authentic leaders can meet their follower's needs by establishing an appropriate environment that includes autonomy, support, relatedness, and proficiency (Deci & Ryan, 2000). As a result, meeting the audience's essential requirements leads to desirable employee functioning, resulting in higher levels of positive energy that impact task performance and allow followers to be proactive in bringing desired changes to the workplace (Gagne and Deci, 2005).

The proposed theory demonstrates also significant connections to the existing body of literature on positive psychology (Ryan & Deci, 2001) and positive organisational behaviour (Luthans & Youssef, 2007).

### **2.2.3 Authentic Leadership Theory**

The third theory under consideration is the AL theory, which played a pivotal role as a fundamental theoretical framework for our research. Authentic leaders prioritize the incorporation of positive factors within the working environment to foster employee achievement. The rationale for selecting the AL theory was based on the potential enhancements in performance, attitudes, and behaviour and the expectation of positive results resulting from its implementation (Avolio et al., 2018).

The AL Theory is relevant to this research because it supports the notion that genuine connections between managers and employees might promote IWB. Self-awareness, relational transparency, internalized moral viewpoint, and balanced processing were highlighted as the four fundamental traits of an Authentic leader according to AL Theory. In the past few decades, social psychologists have made significant advancements in the theoretical understanding and empirical investigation of the idea of authenticity (Ahmed, 2023). Subordinates who strongly identify with their leaders are more likely to value and seek to sustain, expand, and improve the supervisor-subordinate relationship. Additionally, identified employees are more likely to act on behalf of the supervisor and perform as "good" subordinates (Braun & Peus, 2018). Authentic leadership is suitable for fostering innovation and creativity based on its characteristics. Leaders who have a better degree of self-awareness, value, and create creative and innovative behaviour. Highly authentic leaders

inspire their followers' innovative behaviours more than less authentic leaders (Zhou et al., 2014).

### **2.3 Leadership**

Even though social comparisons are common in leadership, comparative features of followers' perceptions and reactions to leadership have not yet been examined in public administration studies (Vogel,2024).

According to Alonderiene and Majauskaite (2016), leadership influences people to achieve specific goals or findings. Leadership has posed a significant challenge for researchers interested in comprehending the nature of leadership. It is a highly valued and complicated phenomenon. Leadership has been defined and conceptualized in various ways throughout years. The component shared by nearly all classifications is that leadership is an influence process that assists a group of individuals in achieving their goals (Northouse, 2022).

The definition of leadership has remained the same from the early 1990s to the present. It is characterised as an influence process that affects innovative work behaviour (Samul, 2020), and it may have an impact on the dynamic relationship between superiors and workers. However, according to the Harvard School, leaders nowadays have changed from autocratic to more collaborative. Moreover, 12,235 publications from 1923 to 2019 have discussed all changing leadership and management styles (Samul, 2020). Nonetheless, most studies have explored the statistical impact of influence on leadership style.

It takes a long time to establish leadership theories. It begins at the beginning of the twentieth century with the theory of the Great Man Theory, which highlights unique

leadership attributes. Later, leadership theory was questioned, and Beyer (2012) proposed new methods such as team leadership, leadership styles, contingency, situational, and path-goal theory. Throughout the same period of time, authentic, visionary, servant, distributed, and shared leadership styles have also emerged (Beyer, 2012). Leadership has several multiple perspectives, so it's challenging to come up with a universal definition that covers all the facts (Khan et al., 2020).

Table 2.1 is a summary of the highlighted Leadership definitions from different scholars. After reviewing all the definitions, it has been noticed that they all agree on a certain component: leaders, followers, the power or the degree of influence and the goal or objective. For this, we can say that somehow, they meet on the degree of influence the leader has on employees to achieve a specific goal or objectives. Leaders motivate followers and raise their awareness of the importance of the organization's mission and goals, allowing people to think creatively and perform above expectations. Leaders value their followers' contributions and constantly urge them to seek out new ideas both within and internationally. Leaders foster organisational learning, which is regarded as one of the most essential precursors of organisational innovation (Villaluz & Hechanova, 2019).

**Table 2.1: Leadership Definitions**

Researcher	Year	Definition
Blackmar	1911	It is the centralization of effort in a single person.
Bernard	1927	It concentrates group members' attention on the desired directions
Copeland	1942	"It is the art of influencing."
Knickerbrocker	1948	It includes a relationship between a group and a person.

<b>Table 2.1: leadership definition</b>		
Stogdill	1950	It is the process which influences the activities of organized groups to achieve and identify specific goals.
Benin	1959	It leads a follower to act in the desired manner.
Bass	1960	The individual attempts to adjust the behaviour of others.
Tannenbaum	1961	Interpersonal impact in achieving particular goals or a goal.
Burns 1978	1978	It transforms followers, sets up visions of goals that can be achieved and explains the followers' ways to achieve those goals.
Pond	1989	It is a method of social impact.
Schein	1992	It is the tendency to initiate evolved more adaptive change processes.
Bass	1994	It's an engagement, and leaders are drivers of change whose attitudes influence followers more than their actions affect them.
Drucker	1998	To take a person's view to the highest possible level, to assist others in breaking beyond their own constraints in order to achieve greater achievement.
Vroom and Jago	2007	Potential or capability to affect followers.
Jung	2013	It is the integration of the activities of the subordinates and their motivational activities to achieve goals.

<b>Table 2.1: leadership definition</b>		
Tareq, Khazaei, H., & Khazaei, A.	2017	Leadership is the ability to inspire, influence, and guide others towards a common goal.
Widyatmoko et al.	2020	Leadership is defined as a process for someone to make changes and improvements in an organization by influencing other people or pursuing processes in the organization.
Sarla	2020	Leadership is defined as a combination of position, responsibilities, attitude, skill and behaviour that allows someone to bring out the best in others and the best in their organisation.
Schaufeli	2021	leadership is defined as leadership behaviour that facilitates, strengthens, connects and inspires employees to increase their work engagement.
Ntshingila, Downing & Hastings-Tolsma	2021	Leadership” is defined as an individual's ability to lead or guide other individuals, or the position of being a leader.
Curtin	2022	Leadership is defined as the design, change, development of, and giving directions to social subsystems embedded in their environment.
Dağhan & Topçu	2022	Leadership is defined as the sum of the knowledge and skills to gather a group of people around specific goals and mobilize them to achieve these goals.
Hepriyanti et al.	2023	Leadership is defined as the full authority and concerted effort to do so.

<b>Table 2.1: leadership definition</b>		
Piwowar-Sulej, K., & Iqbal, Q. (2023)	2023	To effectively oversee an organization, leadership must possess not just a clear vision and the ability to effectively communicate that goal, but also the abilities necessary to inspire and motivate individuals. Effective leadership is essential.

Leadership promotes creativity is positively related to innovation implementation (Huang et al., 2022) and influences creative problem-solving (Carmeli et al., 2013).

**2.3.1 Authentic Leadership**

Authenticity is often viewed as a fundamental concept in Greek philosophy. However, it has been expanded by modern leadership researchers and practitioners (Tako et al., 2018). Authentic leadership has arisen as a result of a lack of integrity and morality in business practices (Grošelj et al., 2020). To foster greater self-awareness, an internalised moral perspective, balanced information processing, and relational transparency among leaders interacting with employees—all of which contribute to positive self-development—authentic leadership has been defined as a style of leader behaviour that depends on and fosters both advantageous psychological abilities and a favourable ethical environment. (Northouse, 2022). Authenticity is a state of knowing oneself (Liedtka, 2008) and being truthful (Walumbwa et al., 2008), and it is exposed through the embodiment of one's real self in daily acts and behaviours (Northouse, 2022). When a leader's behaviours align with his or her values and beliefs, this leader is defined as authentic (Luthans & Avolio, 2003).

Moreover, authentic leaders are also enthusiastic, dependable, self-confident, and truthful (Yamak & Eyupoglu, 2021a). Authentic leadership has become “a ‘widespread

emerging social trend' (Carroll, 2015, p 2) and a 'gold standard for leadership' in organizations" (Ibarra, p. 54; Cha et al., 2019, p. 634) as well as a great deal of interest in authentic leadership (Cha et al., 2019). Without authenticity, it is feasible to succeed primarily in the short term, but authentic leadership is essential for long-term benefits (Ahmed, 2023).

Authentic leaders are concerned with strong personal beliefs; they affect their followers by expressing honesty to acquire their followers' trust. They believe that authority should be shared and that subordinates should be given authority or power to affect them. Authentic leaders strive to assist others generously, develop open relationships with others, and influence their subordinates' positive conduct (Malik & Khan, 2020)

For the purposes of this study, authentic leadership is conceptualised using a model based on the four-component model of AL that was developed from the works of Gardner et al. (2005), Ilies et al. (2005), and Luthans and Avolio (2003). The first component is self-awareness, which is the continuous process by which leaders examine and reevaluate their skills, flaws, limitations, values, and ethical standards. They are consciously aware of the effect they have on others, recognize those around them, and realize how others judge them (Walumbwa et al., 2008). This concept suggests that leaders may foster the authentic development of their subordinates by practising these traits themselves and fostering open and authentic interactions. Behaviour modelling, personal identification, emotional expansion, support for self-determination, and social interactions are all mechanisms via which authenticity is thought to affect followers in work environments (Zhang et al., 2021). The second one is relational transparency: this dimension refers to the leader's openness toward his or her followers. The leader maintains a balanced balance among his or her ideas,

beliefs, values, and the proper emotions. Their honesty and integrity encourage others to follow in their footsteps (Gardner et al., 2005). It also describes the practice of being open and honest with people about one's actual characteristics. The degree to which an individual controls their level of transparency with others is determined by their level of self-regulation (Northouse, 2022). The third pillar of AL is balanced processing, which fosters trust between leaders and followers. The leader gathers enough followers' ideas and perceptions and analyses them objectively before concluding. Such leaders frequently seek out opinions that are in contrast to their held beliefs (Zhang et al., 2021). As per Northouse (2013), "balanced processing" It is valuable to the firm since it includes effective management behaviours like listening, avoiding favouritism, recognizing other people's attitudes, and the absence of bias during the judgement phase (Yamak & Eyupoglu, 2021a). The last dimension of AL is the internalised moral perspective which describes a type of self-regulatory process that is internalised and integrated and is driven by inner moral principles. And norms (Northouse, 2013; Walumbwa et al., 2008) and which genuine leaders support despite difficulties with the group, the institution, or the culture A person is considered to be ethical if they consistently support these internal moral standards and values, indicates that they frequently make moral choices and act in ways that are consistent with their values (Northouse, 2013).

Indeed, there are many proofs in the literature of the beneficial effects of real leadership in organisations. Current studies (Wong et al., 2020; Yamak & Eyupoglu, 2021; Wirawan et al., 2020; Sri Ramalu & Janadari, 2022). indicates that authentic leadership has positive effects on followers' psychological health and well-being, as well as their work-related attitudes (e.g., work engagement, job performance, job satisfaction and interpersonal justice perceptions and behaviours (e.g., service innovation behaviour, creativity, and

organizational citizenship behaviour (OCB). Given these advantages, developing methods for fostering authentic leadership amongst organisational leaders becomes essential.

Specifically, authentic leadership is more strongly linked to the developing components of followers such as employee creativity, employee engagement, employees voice behaviour and (Grošelj et al., 2020; Imam et al., 2020; Zeb et al., 2020; Zhang et al., 2021). Subsequently, this study attempts to figure out how valuable authentic leadership might be, a critical task to find out how authentic leaders in Jordanian higher education institutions can influence academic staff's innovative behavior and adaptive performance and well-being.

### **2.3.2 Inclusive Leadership**

Shore et al. (2011) describe inclusiveness as the extent to which individuals think they are a valued part of a group by receiving treatment that fulfils their desires for belongingness and individuality. Inclusive leadership refers to “words and deeds by a leader that indicate an invitation and appreciation for others’ contributions” (Northouse, 2022). Carmeli, Reiter-Palmon, and Ziv (2010) created a measurement that identifies the behavioural manifestations of these indicators. Through this metric, they propose that a leader's observable presence and willingness to consult on any topic helps to express norms of accessibility and availability. Moreover, they hypothesise that a leader's sensitivity to and support of possibilities to improve work processes and achieve group goals signal openness norms that inspire people to take risks.

Even though different experts have various perspectives on inclusive leadership definitions, it is clear that inclusive leadership highlights the importance of individual differences via equality and respect (Bourke & Espedido, 2019). Hence, inclusive leadership

aim to achieve shared objectives by developing, adapting, and innovating while balancing requirements and recognizing diversity (Ackaradejruangsri et al., 2022).

Moreover, Inclusive Leadership (IL) has three dimensions, which are accessibility, availability, and openness (Carmeli et al., 2010). The first dimension is openness, which refers to how the leader will stand out by responding to new recommendations from employees. Along with looking for innovative ways to enhance organisational working procedures, a leader must be able to communicate with people at work. Individuals participate in the debate of innovative ways to achieve the intended aims. When a leader is more open and communicative, they pay attention to how openness can improve work efficiency while also listening to people's fresh perspectives. A global leader can assist people in obtaining employment and decrease incidents related to their assigned tasks (Rodriguez, 2018). The second dimension is availability, which contributes to improving how the leader interacts with employees by understanding what is going on in their heads and involving them in decision-making processes because they are more knowledgeable about their work (Hassan & Jiang, 2021). This implies that employees may consult with a leader at any moment, not just for assistance and advice, but also to improve workplace involvement and career freedom. Leaders tolerate people's viewpoints and failings by listening to them, logically accepting their mistakes, and offering encouragement and direction to help them when they make mistakes (Jasim et al., 2020). The third one is availability, this dimension identifies the way that a person can reach his/her leader at work, openly discuss his ideas, and reveal the challenges that he encounters while working as an incentive for him to build distinguished relationships between the leader and the working individuals. According to self-determination theory, working people have three basic psychological needs: competence, independence, and relevance. Working people strive to

meet these needs and care for the environment that meets these needs, and when the basic psychological need is met, people perform better (Zhao et al., 2020a).

On the contrary, the negative impact will prevent the employee from continuing his work. When people are in a supportive environment that can meet their efficiency, independence, and connectivity needs, their procrastination behaviour is reduced as an open and encouraging leadership style. Based on the foregoing, we can conclude that accessibility in inclusive leadership fosters an environment supportive of individual worker needs (Rodriguez, 2018).

Inclusive leaders bridge the gap between leaders and employees by recognising the distinctiveness and contributions of each team member, regardless of organisational rank (Hassan & Jiang, 2021). Inclusive leaders appreciate all workers, include them in decision-making, promote an inclusive environment, and recognise their achievements (Ağalday, 2022). Inclusive leadership has a significant impact on employees' proactive behaviours as employees' promotive and prohibitive voice behavior (Guo et al., 2022) employees' creativity (Zhu et al., 2020) and innovation (Gupta et al., 2022). B. Javed et al. (2018) identified a positive correlation between inclusive leadership and innovative employee behaviour. They recommended additional research in this particular field.

In addition, inclusive leadership proves its part in healthcare care sector as researchers (Ahmed et al., 2021) give attention to the role of inclusive leadership in the psychological well-being of employees in the healthcare sector. The study suggested that improved training programs for leaders on inclusive leadership in healthcare can contribute to implementing openness, availability, and accessibility into the workplace culture. In addition, inclusive leadership encourages cooperation and compassion among the medical

staff. It gives subordinates a psychological sense of security and supports their continued willpower in the face of illnesses like COVID-19, which create trauma and public health crises (Zhao et al., 2020a).

According to Bao et al. (2022), employees are more invested in their jobs when led by inclusive leaders. They emphasise that by strengthening leaders' inclusive leadership qualities, firms can improve the alignment between job requirements and employee professional skills and reap the benefits of increased employee work engagement. (Qurrahtulain et al., 2022a) studied the relationship between inclusive leadership and adaptive performance and they suggested that Leaders should maintain the IL style by emphasizing accessibility, openness, empowering, and creating opportunities for subordinates to discuss novel ideas, express opinions, and be motivated to execute useful ideas. They also recommended further studies to be conducted and study the IL with innovation.

### **2.3.3 Inclusive and Authentic Leadership Styles in Higher Education Institutions**

The innovative capability of academic staff is significantly influenced by leadership in higher education (Syah Putra et al., 2021). Leadership takes part in motivating university instructors to leave their comfort zone to seek controversy and challenge the status quo in teams, and to co-construct new techniques and knowledge for maintaining the added value of higher education (Koeslag-Kreunen et al., 2018). Leadership is one of the things that people will immediately encounter. Therefore, it significantly impacts academic staff behaviour (Avolio et al., 2018).

Authentic leaders can enhance and grow academics' pleasure and confidence, where academics' satisfaction with leaders' behaviour toward academics is capable of eliciting

reciprocal behaviour from lectures toward the leader. Such reciprocity may involve positive actions, such as being motivated to enhance performance and introducing and fostering innovative behaviours (Supriyadi, Lely Nur Hidayah Syafitri; et al., 2020). Authentic leadership can promote a positive identity and improve commitment and lecturers' satisfaction (Purwanto et al., 2019). A study conducted by (Alqarni, 2021) in KSA the research tested the relationship between authentic leadership and knowledge-sharing behaviour among academic staff. The results have shown that authentic leadership has a positive effect on sharing knowledge behavior and team climate between academic staff. Meanwhile, top management in higher education institutions should reform academic leadership and characterize it using reliable criteria that ensure the selection of efficient leaders based on authentic leadership principles.

Salem et al. (2021) investigated the role of authentic leadership as a moderate relationship between psychological capital and job satisfaction of academic staff in Egyptian HEIs. The study recommended that higher education institutions' leaders should promote new concepts such as psychological capital and authentic leadership into the culture of their institutions. Besides, because of the major challenges facing higher education, more research should be conducted on psychological capital and authentic leadership and given more consideration (Avolio et al., 2018). At the same time, inclusive leadership exist in higher education studies. Researchers ensure that inclusive leadership creates chances for academics to be involved in making decisions, indicating that staff intend to work cooperatively and participate in extra-role activities (Aboramadan et al., 2022). Aboramadan and Dahleez (2022) tested the relationship between inclusive leadership and management innovation and climate for innovation in higher education institutions; the study shows that a proactive diversity strategy moderates the positive effects of inclusive leadership on

management innovation and a climate for creativity. On the other side, the study concludes that, while research on inclusive leadership has advanced, there are still gaps to address, notably in the areas of leadership inclusiveness in higher education. Universities and faculties are becoming increasingly diverse, necessitating the implementation of a workforce tolerance and acceptance leadership philosophy marked by high levels of diversity (Northouse, 2022). Leaders' positive behaviours such as openness, tolerance, and concern will be recognized by followers, who will imitate their activities in terms of communicating with others (Avolio et al., 2018). These activities may lead to good attitudes in followers, such as positive perceptions of an atmosphere for creativity and innovative behaviours in the workplace. Inclusive leadership promotes a sense of belonging in the workforce, supporting the business's mission and vision. For this, educational leaders in higher education need to be diverse and adept in inclusive practices (Quayson, 2019).

The six traits of inclusive leadership presented by Bourke and Dillon (2016) (commitment, courage, cognisance of bias, curiosity, cultural intelligence and collaboration) are considered to be appropriate for ensuring inclusiveness in higher education leadership, particularly in university (Salihu, 2020). The significance of leadership at universities cannot be emphasised, since most leadership studies have focused on administrative and management roles in industrial and business contexts (Khan et al., 2020). The present conclusion is that authentic and inclusive leadership has been studied in different aspects of higher education. However, rare studies investigated the relationship between them and adaptive performance and innovative work behaviors, below table 2.2 shows a summary of the most recent studies on inclusive and authentic leadership styles conducted in higher education institutions.

**Table 2.2: Inclusive and Authentic Leadership Styles in HEIs Studies**

Author, Year	Variables	Sample of the Study	Result	Future Research
Shang et al. (2019), China	IV: AL DV: Students' creativity Moderator: effects of the three-power source. Mediator: regulatory focused behaviours.	298 academic supervisors and postgraduate research-based students.	There is a positive relationship between AL students' creativity through promotion-focused behaviour.	Test again the research in China and other countries to assess the model's generalisation. Further study approaches, such as follow-up interviews or focus groups, will aid in understanding the larger context of impact mechanisms.
Supriyadi, Nur, et al., (2020), Pakistan	IV: AL	Academic staff from private HEIs	AL and PsyCap have an impact on the IWB of academic staff. There is also a positive relationship between authentic leadership and lectures' IWB, as well as a positive relationship between PsyCap and lectures' IWB	Researchers are recommended to add study subjects that are predicted to improve the validity of the results and positively impact relevant universities.

<b>Table 2.3: Inclusive and Authentic Leadership Styles in HEIs Studies</b>				
Purwanto & Fahlevi, (2020), Indonesia	IV: Transactional leadership, transformational, authentic leadership styles DV: Academic performance	120 academic staff from 14 private	Transactional leadership and AL have no impact on academic staff performance, while transformational	the future survey, the respondents can be expanded to include government universities and additional locations.
Y. Jung, (2022), Korea	IV: AL DV: Sustainable Organizational Commitment	Full-time professors at 20 HEIs.	authentic leadership had a positive effect on organizational culture, trust, and	Further studies may offer an international analysis of university professors' leadership, organisational culture, trust, and commitment to higher education development, taking into account specific national characteristics.

<b>Table 2.4: Inclusive and Authentic Leadership Styles in HEIs Studies</b>				
Alqarni, (2021), KSA	IV: Knowledge sharing behaviours Mediator: Team Climate AL	King Abdulaziz University, 262 members of academic staff.	There is a positive relationship between authentic leadership practised by department leaders and knowledge-sharing behaviours among academic staff.	Future research should employ a seven-lakart scale to reduce bias caused by self-reporting. Furthermore, re-applying current study methodologies to larger populations and other contexts improves prospects for generalising study outcomes. Other styles of leadership, as well as organisational aspects that operate as mediators, such as psychological empowerment and mutual benefit, should also be investigated.
Wali & Ibrahim, (2021), Iraq	IV: Authentic Leadership Style DV: Achieving Strategic Ambidexterity	88 of college leaders' boards in the private HEIs in Erbil.	All positive impact of Strategic Ambidexterity, the more universities employ authentic leadership the greater	Future studies are recommended to apply the same study in another context.

			improvement in strategic dexterity.	
Salem et al., (2021), Egypt	IV: PsyCap DV: Career satisfaction Moderator: AL	237 Academic staff in Egyptian universities	AL has a positive impact on job satisfaction	future research may use quantitative research with the same study
Shabeer et al., (2020), Pakistan	IV: IL, DV: Career adaptability Mediator: Organization-based self-esteem Moderator: Organizational justice	Academic and non-academic staff public and private HEIs.	Inclusive leadership has a positive linked with employees' career adaptability through organization-based self-esteem.	Future studies should add subscales for these constructs. Future research can examine measurement invariance across various categories, including gender, education, age, job experience, and academic and non-academic staff at HEIs, to determine if there are any issues with the suggested model.

Table 2.2 shows the advantages of adapting both styles that HEIs will get either on employees' behavior and performance level or organisational level as most of the studies show a positive outcome of both styles, which consider a motivation for the HEIs leaders to adapt such leadership style when they lead their institutions.

## 2.4 Adaptive Performance

According to Catania (1998, p. 401), "performance consists of a series of activities that occur over extended periods. Many studies have established three performance indicators: task, contextual, and counterproductive (Pulakos et al., 2000; Rotundo & Sackett, 2002). Task performance refers to activities specifically defined in a job description, while contextual performance refers to behaviours that lead to an organisation's culture (Northouse, 2022). Scholars have added the concept of adaptive performance to the literature on an individual's performance. For example, Allworth and Hesketh (1999) defined adaptive performance as actions that demonstrate the ability to deal with change and transfer knowledge from one task to another when the job needs change. Moreover, Han and Williams, (2008) define adaptive performance in organisations as a type of job performance distinguished from task performance and citizenship behaviour. This definition supports the idea that individuals' ability to adapt to changes that occur at work is reflected by how well they manage those adjustments. In more general terms, (Johnson, 2001) defines adaptive performance as the ability with which an individual to modify his or her behaviours to match the requirements of the context, an activity, or a new circumstance. Adaptive performance is viewed as an important technique for strengthening organisational efficiency (Kanten et al., 2015).

Because none of the available scales address all of the underlying dimensions of adaptive performance, researchers must develop a psychometrically sound, multidimensional measure of adaptive performance that is applicable across a wide range of occupational contexts (Charbonnier-Voirin & Roussel, 2012). Accordingly, Charbonnier-Voirin and Roussel, (2012)'s conceptualization of adaptive performance consists of five

dimensions: (i) handling emergencies (4 items) as this refers to how rapidly an individual can respond to or avoid a risk, a crisis, or an emergency reliably (Northouse, 2022).

Leadership appears to be one of the that motivate adaptive performance, and this is found in the literature. For example, paradoxical Leadership (N. Li & Ding, 2022) task-oriented leadership (Adams & Webster, 2022) shared leadership (Rousseau & Aubé, 2020) (Xu & Zhang, 2022), transactional leadership (Hoandră, 2017) servant leadership (Kaltiainen & Hakanen, 2022b; Kaya & Karatepe, 2020) self-leadership (Marques-Quinteiro et al., 2019) innovative leadership and creative leadership (Riza et al., 2020) empowering leadership (Xu & Zhang, 2022). Table 2.3 is a summary of the latest studies that investigated the relationship between different leadership styles and adaptive performance. The studies are between (2019-2023).

**Table 2.5: Summary of Studies Leadership Styles and Adaptive Performance**

Author	Variables	Study's population	Results	Future study
Naiwen Li and Mingming Ding, (2022) China	IV: Paradoxical Leadership. DV: Adaptive Performance Mediator: Harmonious Work Passion and Core Self-Evaluation	New-generation employees in technology enterprises	Paradoxical leadership serves as an essential situational element for enhancing adaptive performance.	To expand the sample size in future studies, new samples from more diverse locations of various nations need to be chosen.

Vincent Rousseau, Caroline Aubé (2020), Canada	IV: Empowering leader behaviours DV: Adaptive performance Mediator: Shared leadership Moderator: Access to resources	Employees and Supervisors in public safety organizations	Team leaders who exhibit empowering behaviours are more likely to motivate members to participate in shared leadership, which may improve adaptive performance.	It would be advantageous to test the mediation hypothesis with a longitudinal design in further studies. Second, considering that the same source (i.e., team members) evaluated shared leadership, resource access, and empowering leader behaviours,
Janne Kaltiainen and Jari Hakonen, (2020), Finland	IV: Servant leadership. DV: adaptive performance through Mediator: employee well-being (work engagement and burnout)	Employees of 34 municipalities	Servant leadership may promote adaptive performance, particularly through the guidance of work engagement.	Further research is needed to clarify the contextual elements that could affect how workplace well-being affects productivity. Also further light on the possible moderators or mediators of burnout's effect on adaptive performance.
M Faisal Riza, Umar Nimran, M. Al Musadieg, Hamidah Nayati Utami, (2020), Indonesia	IV: Innovative Leadership and Creative Leadership DV: Adaptive Performance Mediator: Organizational Learning, Organizational Adaptation	An employee of PT. Otsuka (Medical products and drug company)	The effect of innovative leadership on adaptive performance is both positive and insignificant, implying that better innovation leadership will tend to increase adaptive performance. While creative leadership has a significant impact on adaptive performance.	More research is needed on Leadership, Organizational structure and Human Resource Management, concentrating on variables such as innovation, creative leadership, and adaptive performance.

Ying Xu and Mengliu Zhang, (2022), China	IV: Empowering Leadership DV: Adaptive Performance Mediator: Leader-Member Exchange Relationship, Psychological	Academic staff	Through the power of exchange between leading members, empowering leadership can promote adaptive performance. Furthermore, there is a positive link between empowering leadership and adaptive performance.	Researchers should investigate other mediating variables to enhance research findings.
Hui Fu, Ben Haobin Ye, Xiaoyu Xu (2020), China	IV: Shared Leadership DV: AP and team reflexivity	Employees from the hotel industry	Hui Fu, Ben Haobin Ye, Xiaoyu Xu (2020), Guangzhou, China	Additional research could include a broader and more representative sample from many cultures. A cross-cultural study that focuses on cultural issues such as individualism vs. collectivism and power distance.
Jinan Ismail Saleh, (2020), Baghdad -Iraq	IV: Empowering leadership DV: Adaptive performance	Employees of Al-Iraqi University	Empowerment of leadership's capacity to improve adaptability in all of its dimensions.	none

Ismail AlAbri, Rusinah Siron Mohammad Nurul Alam (2022)-Oman	IV: Human Resource Management Practices DV: Employees' Adaptive Performance Moderator: Transformational Leadership	Employees of the Ministry of Health in the Sultanate of Oman	Employee involvement was found to have a negligible correlation ship with AP, but TL improved it. transformational leadership has no impact on the relationship between job enlargement, job enrichment, training, performance appraisal, and AP	Future study aims to identify contextual factors that impact adaptive performance. Lack of necessary equipment and objectives can limit the effectiveness of HR procedures in improving employee performance. Additional study is needed to identify potential moderators or mediators of HR practices' impact on adaptive performance.
Amiel M. Yacon and Neliza Bautista Cayaban, (2023), Philippines	IV: Transformation Leadership DV: Adaptive Performance	Schools Teachers from the seven private international schools	Transformational leadership and teachers' adaptive performance have a positive relationship.	Future researchers might perform a study in both public and private schools to determine school leaders' specific tactics for ensuring teacher well-being. They may undertake similar studies in different areas, each emphasising a certain leadership style.

Table 2.3 indicates that leadership style in general, has a positive impact on motivating the adaptive performance of the employees.

Since the idea of IL is still in its early phases, there is insufficient literature on IL, its antecedents, and its benefits (Khan et al., 2021). According to this study, IL is one of the leadership styles that investigates its relationship with IWB and adaptive performance.

## **2.5 Innovative Work Behaviour**

Farr and Ford describe innovative work behaviours as an individual's conduct to initiate and intentionally present new and helpful ideas, processes, products, or procedures (within a work role, group, or organisation). Individuals' future-oriented and self-initiated activities are a relatively new dimension of research that has evolved in the field of innovation in recent years (Northouse, 2022). These actions are intended to change or improve one's existing circumstances (Ayoub et al., 2021). Proactive work behaviour and innovative work behavior are examples of such activities. According to Scott and Bruce (1994), creative activity entails generating novel outcomes and contributions for the company. Employee habits aimed at creating new goods, procedures, and services are included in the category of innovative work behaviour. Behaviours of people aimed at starting and implementing innovative and beneficial concepts, practices, goods, or processes inside a group, organisation, or professional function (De Jong & den Hartog, 2010). According to Baharuddin et al. (2019), innovation work behaviour relates to a linked series of procedures by which an employee generates, creates, improves, supports, realizes, implements, and develops new ideas to enhance employee position and performance.

Undeniably, innovative work behaviour has been explored from different dimensions, some scholars have examined the multidimensionality of IWB and have been harsh criticisms of the unidimensional approach. Researchers have employed two dimensions to evaluate IWB, including De Spiegelaere and Van Gyes (2012), De Jong and

Den Hartog (2007), and Yuan and Woodman (2010). Additionally, opportunity discovery, idea development, and idea promotion are the three ways that IWB may be assessed, according to Messman and Mulder (2020). The number of dimensions, as well as the content and signals of the dimensions themselves, hinder the ability to reach a consensus on a particular measurement for IWB investigations (Ayoub et al., 2021). IWB includes four related dimensions: idea exploration, generation, championing, and implementation. Lambriex-Schmitz et al. (2020) measured innovative work behaviour in five dimensions: opportunity exploration, idea generation, idea promotion, idea realization and idea sustainability.

Unlike other studies, their studies use an explanatory and confirmatory factor analysis to cross-validate the IWB dimensions. Besides, unlike prior research, the scale included homogeneous samples or respondents. However, their study includes a more diverse sample of survey respondents. As a result, their scale has been expanding and validates the five dimensions' relevance to the context of higher education (which is a context that previous research has neglected) (Ayoub et al., 2021). They conducted routine research that included all of the Gulf region's higher education institutions. Opportunity exploration, idea production, idea promotion, idea realisation, and idea sustainability are the five elements that make up their scale. (With certain modifications, the research undertaken by Lambriex-Schmitz et al. (2020b) appears to be valid in a higher educational context) with 27 items from the innovative work behaviour scales developed by Baharuddin et al. (2019), De Jong and Den Hartog (2010), Lambriex-Schmitz et al. (2020a), Messmann (2012), Radaelli et al., (2014). Moreover, different IWB measures have been produced over the past three decades, and a mixed variety of dimensions were found due to a scarcity of confirming the content validity and assessing the construct validity (Lambriex-Schmitz et al., 2020).

Higher education institutions must build IWB to overcome crises and stay in line with present and potential students even during hard times by giving new approaches, methods, techniques, and solutions to deal with rising educational concerns. Enterprises now need to be more competitive, adaptable, and innovative due to a lack of economic resources and increasing worldwide competitiveness (Khan et al., 2021).

The innovative behaviour of employees does not occur accidentally. Leadership has been identified as the most significant and beneficial aspect in increasing IWB among individuals (Khan & Hamzah, 2022). Accordingly, various studies have shown the impact of different leadership styles on achieving higher levels of innovative performance. As ethical leadership (Uppathampracha & Liu, 2022), servant Leadership (Faraz et al., 2019), transformational leadership (Afsar & Umrani, 2020; Wang et al., 2022), ambidextrous Leadership (Hafeez et al., 2019), empowering leadership (Rao Jada et al., 2019) and paternalistic leadership (Nazir et al., 2020). Table 2.4 explains the previous studies that were conducted investigating the relation between IL, AL and IWB.

**Table 2.4: Summary of Studies Leadership Styles and Innovative Work Behaviour**

Author	Variables	Study's population	Results	Future study
Indrayanti and Ulfia . Indonesia (2022)	IV: Authentic leadership DV: IWB Mediator Orgnsational Culture	272 employees of Indonesian state-owned enterprises	The study found that organisational culture mediated the relationship between authentic leadership and IWB	Future research should examine how each AKHLAK characteristic contributes to innovative work behaviour.

**Table 2.4: Summary of Studies Leadership Styles and Innovative Work Behaviour**

Yina Bai, Zheng Wang, Mehboob Alam, Fozia Gul and Yiqun Wang. China, (2022)	IV: Authentic leadership DV: IWB Medaitore: Work Engagement Moderator: Proactive Personality	311 high-tech manufacturing industries in Shenzhen, China	The study found that AL positively impacts IWB. Research indicates that having a proactive attitude leads to more innovative job behaviours. Research indicates that a proactive personality positively mediates the association between AL and IWB.	Future researchers can collect data from a larger population, as this study had only a small sample size. The study collected data from Shenzhen, China, which may lead to the generalisation of results in other locations or nations for future research.
Dewiana Novitasari, Dwi Ferdijatmoko Cahya Kumoro, Teguh Yuwono and Masduki Asbari. Indonesia, (2023)	IV: AL DV: Innovation Mediator: PsyCap	231 employees in manufacturing industries in Indonesia.	Authentic leadership style and psychological capital positively influence innovative work behaviour. Psychological capital serves as a mediator between authentic leadership and innovative work behaviour.	Researchers should plan further in the future as obtaining authorisation to do research can take up to two months, as reported in this study. Researchers are likely to focus more on gathering data, allowing for faster data collection. Additionally, adding study subjects is predicted to improve the validity of the data and positively impact the relevant organisation.

**Table 2.4: Summary of Studies Leadership Styles and Innovative Work Behaviour**

Mariola Laguna , Karolina Walachowska, , Marjan J. Gorgievski- Duijvesteijn and Juan A. Moriano. Spain, (2019)	IV: AL DV: IWB Mediator: Personal Initiative and Work Engagement	711 employees working in 85 small firms from three European countries: the Netherland s, Poland, and Spain	Leadership training can enhance the IWB by enhancing connections between leaders and subordinates, as well as increasing employee initiative and involvement.	Future studies should use longitudinal, experimental, or quasi-experimental methods to investigate the impact of authentic leadership on employee creativity and the underlying causes. Future research should explore the factors that influence the innovative behaviour of business owners, which may differ from that of individuals.
Çağlar Çelik, Soner Polat and Emre Esen Turkey (2024)	IV: IL DV: IWB Mediate: Emotional Attachment and Inclusive Climate	364 teachers in Turkish public school Kocaeli,	IL positively affects IWB. However, the impact is mediated by an inclusive climate and strong emotional commitment.	Future studies could include data gathering from private schools and other geographies in Turkey. Also, they could investigate different mediating variables to improve our understanding of the underlying dynamics in this situation. Additional research may broaden data collection to various educational environments, such as private schools.

**Table 2.4: Summary of Studies Leadership Styles and Innovative Work Behaviour**

Lütfi Sürücü, Ahmet Maslakci, and Sesen Harun . Turkey (2023)	IV: IL DV: IWB Mediate: LXM and psychological resilience capacity Moderate: LXM	459 employees of a Turkish telecommunications companies located in Istanbul and Ankara.	IL has a positive effect on IWBs through psychological resilience capacity. Additionally, it has been determined that LMX plays a moderated mediation role in this relationship.	N.A
Yang-Chun Fang, Jia-Yan Chen , Mei-Jie Wang and Chao-Ying Chen2 (2019) China	IV: IL DV: IW Mediator: PSyCap	351 enterprise employees of Zhejiang.	Different dimensions of inclusive leadership affect a variety of innovative behaviours. Psychological capital mediates between leaders' esteem and equitable treatment of employees' innovation successes. It helped bridge the gap between	Future research can carry out the same study in different cultures because the results may differ for institutional, sociological, or cultural reasons, making it difficult to generalise the study's conclusions to other cities in other nations. To guarantee that the research findings are generalisable, additional research could broaden the survey's scope and expand the number of samples.

			leaders' support and recognition of employee innovation and innovative thinking.	
Saba Zafar, Muhammad Mustafa Raziq <sup>1,2</sup> · Josephine Igoe <sup>3</sup> · Muhammad Moazzam <sup>1</sup> · Ilknur Ozturk , Pakistan (2023)	IV: IL DV: IW Mediator: autonomous motivation Moderator : role of horizontal and vertical trust	235 full-time employees across various private IT organizations in Pakistan	Autonomous motivation enhances the link between IL and IWB. High levels of horizontal and vertical trust correlate with a greater link between IL and autonomous motivation.	Researchers could investigate causality through experiments or longitudinal studies that cover all IWB phases separately. Future research could include areas with less IWB research, such as fashion, event planning, and family-owned enterprises.

## 2.6 Psychological Capital

Psychological resources are capabilities which can be measured, developed, and managed appropriately in current workplace to improve performance. According to COR theory's conceptualization of resources and the movement for Positive Organizational Behaviour (POB).

Psychological capital is distinguished from various kinds of capital, such as human capital and social capital, where human capital relates to a person's abilities, and expertise and social capital refers to a person's network and interpersonal interactions. Positive psychological capital is linked to one's current identity and potential for personal growth

(Luthans and Youssef, 2004, 2007). Positive psychological capital comprises resilience, hope, optimism, and confidence (Luthans and Youssef, 2007; Avey et al., 2010, 2023).

The following are important psychological resources. The PsyCap idea is made up of these four psychological resources (Luthans, Avolio, Avey, & Norman, 2007): the first one is self-efficacy (the belief and trust in one's domain-specific abilities) beliefs are changeable and they can be developed by employing their four primary sources, which include enactive mastery, vicarious experience, verbal persuasion, and emotional engagement (Bandura, 1997). According to research, setting objectives, specifically proximal ones, enhances individual self-efficacy (Sani Mert & Aslan, 2021).

The second dimension is hope, which is characterised by motivation, activity, and pathways to achieving objectives. The hope process calls for tenacity, drive, and a proactive search for alternative routes. The third dimension is optimism is a general expectation of a positive outcome (Bannay et al., 2020). When dealing with unstable situations such as work, an optimistic employee believes that things will work out positively (Lupşa et al., 2020).

The last and fourth dimension of resilience is the ability to maintain and recover from challenges, disagreements, failures, or circumstances that need an increase in commitment (Shakil et al., 2021).

The five main personality qualities are included in the positive core values and individual differences that were the subject of earlier studies before the psychological capital scale was developed (Luthans et al., 2007; Avey et al., 2010). Among many psychological states, positive psychological capital spontaneously builds and evolves continually (Luthans et al., 2007; Luthans and Youssef, 2017; Avey et al., 2023). The development of positive psychological capital has been the subject of several research (e.g. Demerouti et al., 2011;

Peterson et al., 2011). Typically, psychological capital research focuses on important ideas like resilience, optimism, hope, and confidence. However, additional associated concepts like humour, gratitude, and forgiveness that are part of the psychological capital scale are also discussed in great detail (Luthans and Youssef, 2007; Luthans et al., 2008a). Although these methods seem plausible, they may not be sufficient on their own to evaluate ideas in real-world situations (Dawkins et al., 2013).

Psychology capital has been studied by researchers in a variety of fields, including managerial behaviour (e.g., Avey et al., 2011; Giltrow, 2015; Alessandri et al., 2018; Miao et al., 2021) and attitudes (e.g., Alkire and Avey, 2013; Youssef and Luthans, 2013; Paterson et al., 2014; Avey et al., 2022). Positive psychology has also been studied in the context of projects. Previous studies have explored the use of psychology capital in the context of projects (e.g. Natovich et al., 2013; Harmset al., 2017), servicemarketing (e.g. Memili et al., 2014; Friendet al., 2016), banking (e.g. Khalid et al., 2020; Santos and Ponchio, 2021) and intellectual capital (e.g. Asare et al., 2023). The origins of psychological capital. External and internal variables impact people's psychological capital (Newman et al., 2014).

The work setting is an ideal environment for developing workers' psychological capital, which comprises self-esteem, individual achievement, and individual resources for development. These assist workers rebuild morale after failures (Luthans et al., 2008). Jang (2022) found that unpredictability relates to a decline in psychological capital, which indicates stress among individuals to various degrees.

Previous studies have looked into how positive psychological capital influences the link between authentic leader behaviour and work performance, both at personal and group levels (e.g., Gooty et al., 2009; Rego et al., 2010; Uen et al., 2021). Besides, Shie and Chang

(2022), and Yuwono et al. (2024) revealed that psychological capital serves as a link between transformative leadership and both employee performance and organisational behaviour at the individual level. Rego et al. (2010) discovered a mediated association between genuine leaders and creative personnel via psychological capital. Jang (2022) argues that collective psychological capital acts as a bridge between authentic leadership, and performance tasks, the study indicates that psychological capital mediates the relationship between the al and task performance. Sarwar U, Aamir M, Bichao Y and Chen Z (2023) explore the relationship between AL and staff performance with the mediating role of Psy Cap. The results of the research demonstrated that AL has a direct and indirect positive impact on staff performance via PsyCap.

## **2.7 Research Gaps**

While existing literature acknowledges the importance of authentic and inclusive leadership styles in fostering innovative work behavior and adaptive performance (Indrayanti and Ulfia. 2022); (Batainah et al.,2022), there is a gap in research specific to Jordanian higher education institutions. Additionally, the mediating role of psychological capital in this context remains underexplored. This study aims to address these gaps by investigating the influence of authentic and inclusive leadership styles on innovative work behavior and adaptive performance, with a focus on the mediating role of psychological capital, in Jordanian higher education institutions. There is a lack of studies specifically focusing on the context of Jordanian higher education institutions. Besides, existing studies adequately did not address the mediating role of psychological capital in this context. Moreover, any recent developments or changes in the field may not have been covered in the existing literature.

Therefore, the first notable research gap is the dearth of studies examining the connections among innovative work behaviours, adaptable performance, and inclusive and genuine leadership styles in the higher education sector. Consequently, some past research calls for conducting studies in IL in the HE field (Aboramadan & Dahleez, 2022), Jordan and the Arab world. Moreover, although there has been theoretical advancement in the literature on inclusive leadership, most studies are limited to the Western context (Salem et al., 2021). Some studies investigated the relationship between the leadership styles and IWB and AP in hotels and hospitals. As for AL and psychological capital research call as (Salem et al., 2021) call for conducting more studies in HE sectors because of their positive consequences on the performance of these institutions.

The second gap is that, despite theoretical advancements, the majority of the content in the literature on inclusive leadership is limited to the Western world (Srivastava et al., 2022). Because the study is specifically conducted in Jordan, one of the Arab world contexts, this type of research provides information and will provide an opportunity to enhance the literature. (Q. Khan et al., 2021a).

The third gap is having psychological capital as a mediator, in higher education institutions, psychological capital is seen as an efficient way to improve wellbeing and performance. However, psychological capital has primarily been studied concerning students; its significance in academics has been relatively understudied. Thus, research on the impact of psychological capital on all stakeholders in higher education institutions is required (Zhang et al., 2024). Moreover, IWB has also not been properly studied as a consequence of psychological capital. This highlights the necessity for more examination of this link. Furthermore, there has been little attention on the relationship between inclusive

leadership and adaptive performance (Qurrahtulain et al., 2020). According to Fath and Radikun (2019), there are just a few research that explicitly investigate PsyCap as a mediator in the association between AL and IWB. There is limited study on the relationship between psychological capital and AP (Luo et al., 2021). Furthermore, little research has investigated the underlying causes and mediating processes of certain Psy-Cap features in institutional structures and interactions. Accordingly having PsyCap as a mediator fills the gaps of the past studies.

The fourth gap is that not much research has examined the two leadership styles (AL and IL), their link to psychological capital, IWB, and AP, as well as the distinctions between the two and the sector type (private versus public) as a moderator. As Khan et al. (2024), they study the relationship between AL IWB and PsyCap as a mediator with organisation unfairness as a moderate in the public sector; The results of their study indicate that the level of IWB is positively impacted by the AL. Similar to psychological capital, it is successful in modifying this link, highlighting the need for leaders to encourage employees' self-efficacy, optimism, hope, and resilience to encourage innovation. Also, Zhang and Zhao (2024) study the relation between IL and IWB and the intermediary model as a moderator. Their study shows that IL may establish an integrative organisational atmosphere and further increase IWB under the effect of employees' creative self-efficacy, promoting innovative behaviour and sustainable growth of firms.

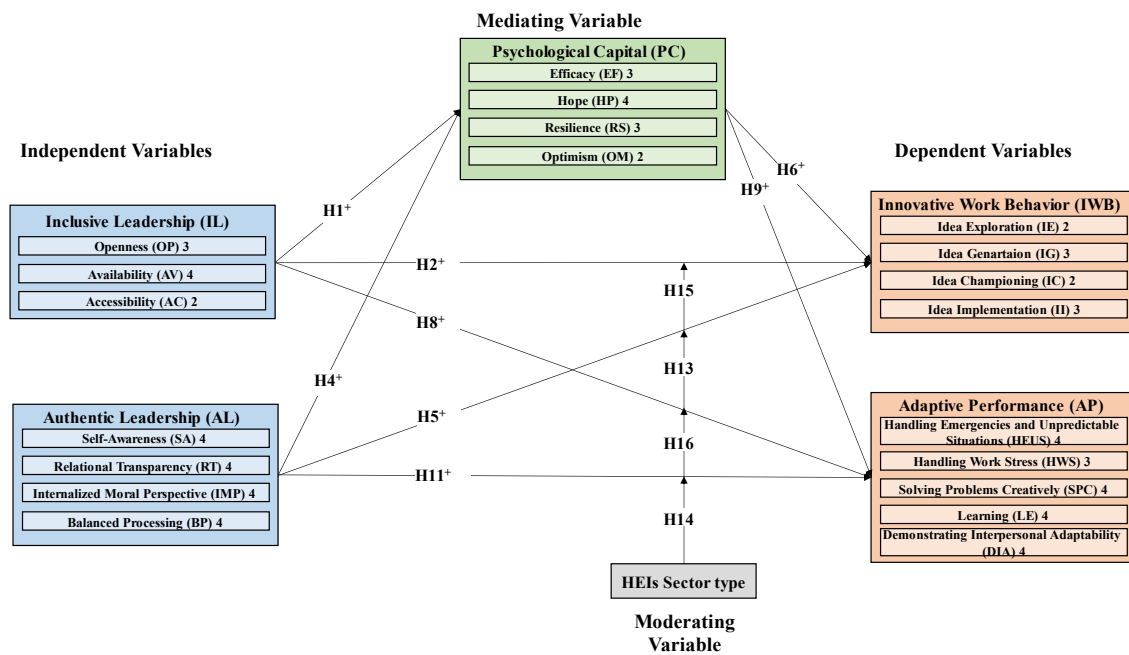
Although some researchers study the effect of inclusive leadership style and IWB and AP (separately) using other variables as mediators. For example, Javed et al. (2019) described the relationship between IWB and inclusive leadership using psychological empowerment as a mediator. The researchers call for testing the relationship between them

using another mediator to strengthen the relationship between the two variables. Fang et al. (2019b) tested the relationship between IL and IWB. However, the study combines the traditional Chinese cultural component of "tolerance as a virtue" into the meaning of inclusive leadership style and highlights the principles of tolerance and leniency. Accordingly, they study the IL from the three dimensions: encouragement and recognition of employees, respect and fair treatment, and failure tolerance.

Consequently, this study tries to cover the relationship between authentic performance and adaptive performance, there are very few studies that investigated the relationship between authentic leadership and adaptive performance, which means there is a need for more studies to cover this relationship and fill the gap in the literature. Furthermore, while the existing literature recognises the importance of authentic and inclusive leadership styles in fostering innovative work behaviour and adaptive performance, there is a scarcity of comprehensive studies examining the relationship between authentic leadership and adaptive performance, particularly in Jordanian higher education institutions. This gap is significant as adaptive performance is crucial for organizations, especially in dynamic environments. Therefore, this study aims to explore and justify the relationship between authentic leadership and adaptive performance, considering the unique cultural and organizational context of Jordanian higher education institutions.

## **2.8 Study Framework and Development of Research Hypotheses**

This section explores the research framework and discusses the research hypotheses. The relationship theorized in the above section is shown in figure 2.1.



**Figure 2.1: Study Framework**

This research model is developed based on the social exchange theory, self-determination theory and authentic leadership theory can be found in the literature on organizational design.

This research investigates the relationship between inclusive leadership and authentic leadership as independent variables with innovative work behavior and adaptive performance as dependent variables. In addition, psychological capital in addition to the effect of these relations the type of sector (the variety of the institution context whether public or private) plays a moderate as public sector employees may respond differently to leadership styles compared to employees in private.

More study on the link between collaborative leadership and innovative behaviour is required to provide a significant addition to the literature. Greater commitment to work leads to more innovative output, and IL positively influences employee commitment and motivation to work. Employee involvement develops strategies for overcoming innovation

challenges (Bandura & Locke 2003).IL builds high-quality connections by fostering transparency and cooperation, allowing workers to share difficulties with supervisors. Excellent and innovative leaders constantly provide their staff with work development instructions that are consistent with their plans (Carmeli et al., 2010). authentic leadership (AL), a positive psychology-based leadership style fostering trust and employee engagement (Luthans & Avolio, 2003). Since AL includes self-awareness, relational transparency, balanced processing, and an internalized moral perspective. This leadership style encourages individuals to be innovative and adaptive positively to organisational improvements.

Psychological capital contains self-efficacy, optimism, hopefulness, and resilience. Inclusive leaders tend to increase workers' psychological capital, which promotes innovations in employee performance and flexibility. They demonstrate considerably improved inventive work behaviour as a result of this increased PsyCap, which is characterised by the development, promotion, and execution of creative ideas, as well as adaptive performance, which is well-adapted reactions to fast-changing organisational needs.

Since organizations differ as public institution demands for qualifying often rely on completing particular standards established by the sponsoring organisation. Such standards might involve proving the possible influence on the public, adhering to laws and regulations, and achieving certain social or economic goals. The requirements of private institutions for qualifying might vary greatly according to the source of private funds. Private investors may assess the firm or project's feasibility, the possibility for financial profits, the alignment of aims and values, and the individuals' track records or experience. For this public sector employees may interact differently to the leadership styles rather than private.

This study has filled a research objective; to determine related issues on IL and AL styles on IWB and AP in Jordanian HEIs and to present suggestions to leaders in Jordanian higher education institutions by coming up with approaches to IWB and AP that employ AL, IL, and Psy-Cap.

### **2.8.1 Justifications of Framework**

The current study makes a theoretical contribution by presenting psychological capital as a mediator between inclusive leadership, authentic leadership, innovative work behavior, and adaptive performance among academic staff in public and private HEIs in Jordan.

In addition, this study has been structured according to social exchange theory, self-determination theory and authentic leadership styles to develop a study model that has not been tried in Jordanian culture to examine innovative work behaviour and adaptable performance. Therefore, this research is also of theoretical significance for its initiative in examining leadership styles, innovative work behaviour, and adaptive performance in the Jordanian higher education sector.

### **2.8.2 Empirical Contribution**

Few empirical types of research have focused on adaptive performance and innovative work behavior, particularly in Jordan. This research contributes to the existing body of knowledge on leadership and organizational behaviour by demonstrating the necessity for more empirical studies, especially among developing nations. The current study proposes more information on leaders' performance from an eastern context. Both public and private Jordanian higher education institutions are the focus of this research.

The entire spectrum of individual action performance that leads to work effectiveness in complex and interdependent processes was not taken into account in earlier insights on employee performance. As a result, adaptive performance is gaining traction as a means of understanding how employee performance is dynamic in the drastically changing workplace. (Hesketh & Neal, 1999).

Despite the significant number of studies on IL's impacts on various institutional and individual behaviours as well as work outcomes, there are still too many unexplored areas where more detailed studies are required. Jundt et al., (2015) further pointed out on absence of study on contextual studies in the field of adaptive performance research and recommended additional research to investigate its relevance.

Rana, Ahmed & Shahzadi, (2021) ensure that More research is needed to examine the moderating influence of some concepts, such as job stress, work demand, or employees' psychological capital, on the relationship between leadership and AP (Rana et al., 2021).

Several calls from researchers to conduct in-depth studies to investigate the relationship between leadership styles and IWB as Łukowsk, (2017); Kark, Dijk, & Vashdi, (2018); Khan et al, (2020) and Echebiri & Amundsen, (2021).

Despite past studies indicating that IL and AL differ across public and private institutions, it is unknown how IL and AL influence IWB and AP in the two sectors through the Psy Cap. Thus, the current study aims to fill a vacuum in the literature by studying these problems. Furthermore, the study looks at sector-specific disparities in IL and AL practice in public and private HEIs to determine which has the most influence on IWB and AP. As a result, it hopes to provide additional details about the policies and procedures that could be applied in each business. Accordingly, this study enhances the literature to better understand

the relationship between inclusive leadership, authentic leadership, IWB, and AP. In addition, highlights the moderating role of psychological capital.

### **2.8.3 Policy Development Contributions**

The findings of this research are beneficial for establishing policies for public and private higher education institutions, especially those that encourage and advance academic professionals in public and private higher education institutions which have a good effect on Jordanian public and private HEIs. These study's recommendations are beneficial to public and private higher education institutions (HEIs) in Jordan and other nations in developing leadership and psychological capital that drives the adaptive performance and innovative work behavior of academic staff in public and private HEIs.

In addition, the importance of the research comes from the importance of adopting modern trends in positive psychology and positive organizational behavior to make academic staff focus on innovation in educational institutions in Jordan, in addition, to motivating the leaders of HEIs in Jordan to the adapt new trend of leadership styles as the culture of authentic leadership and inclusive leadership styles which plays an important role in utilizing intellectual resources to reach a high quality of educational service.

In conclusion, the results of the study may help to provide empirical proof concerning the association of AL and IL styles on IWB and adaptive performance through the mediating function of psychological capital and thus help educational institutions in setting criteria for selecting leaders and managers, which contributes to the development of these institutions to achieve more professionalism, which reflects positively on the individual's quality of life.

#### **2.8.4 Methodological Robustness**

The research seeks to examine the effect of inclusive leadership styles on IWB and AP in Jordanian public and private HEIs using a quantitative methods approach. As part of the study's effort to examine the causal relationships between IL, AL, and IWB, AP throughout Psy-Cap, academic staff is requested to respond to a self-administered questionnaire. What makes the sample significant is that the data is collected from all public and private HEIs in the country, which hopefully represents a great model of a methodology that could be employed to measure the level of AL and IL's effects on IWB and AP. In addition, the role of Psy-Cap in similar studies.

From the previous framework and explanation, the research hypotheses can be explored.

### **2.9 Research Hypotheses**

#### **2.9.1 Inclusive Leadership and Psychological Capital**

Inclusive leadership positively influence employee self-efficacy (Fang, 2014). Inclusive leaders prioritize the importance of varied viewpoints and establish a secure atmosphere where employees feel comfortable expressing their thoughts, which promotes a culture of transparency and stimulates people to think imaginatively, resulting in inventive solutions (Javed et al., 2018). They empower their team members by granting them autonomy and accountability. Inclusive leadership include actions and techniques that ensure that everyone on a team feels valued, revered, and included. The basic goal is to acknowledge and value a diverse variety of perspectives, advocate for justice, and provide an environment in which all persons may make substantial contributions. Inclusive leaders foster an atmosphere in which all individuals feel acknowledged and esteemed, resulting in increased levels of employee engagement and drive. Ensuring this is vital for keeping a

productive and optimistic work atmosphere in academic environments. Faculty and staff in higher education encounter a multitude of problems, such as heavy workloads, shifting technologies, and evolving educational requirements. PsyCap enables individuals to sustain an optimistic perspective and efficiently manage these difficulties. Elevated levels of Psychological Capital are correlated with superior performance outcomes (Novitasari et al., 2020). Individuals who possess high levels of self-efficacy, optimism, and resilience are more inclined to actively participate in proactive and inventive actions, making a significant contribution to the success of the organization.

Employees become more optimistic and confident when leaders focus on their needs, motivations, and interactions. Inclusive leadership behaviours support group members' perceived inclusion, which contributes to individual work identity, psychological empowerment, and behavioural results (creativity, job success, and less turnover) in achieving group goals. (Randel et al., 2018). Inclusive leadership helps to ease such psychological restraints, reassuring employees that they have someone to turn to in times of need. Constant communication between employees and inclusive leaders can alleviate most hypertension or mental strain cases because inclusive leaders are naturally excellent listeners (Zhao et al., 2020b). Inclusive leaders' supportive behaviour reduces uncertainty, anxiety, and role stress, which may enhance psychological capital. According to the above discussion, this study presents below hypotheses:

H1. Inclusive Leadership (IL) has a positive effect on Psychological Capital (PsyCap) in public and private higher education institutions in Jordan.

## **2.9.2 Inclusive Leadership and Innovative Work Behaviour**

Inclusive leadership relates to leaders' openness, readiness, and accessibility in their interactions with followers. Leaders who engage in participative behaviour provide a supportive environment where followers' opinions are valued. Likewise, inclusive leadership handles circumstances where leaders interact directly with their followers by recognizing and respecting their perspectives (Javed et al., 2018). IL is considered to be the most efficient approach to managing diverse work values by allowing employees to participate in decision-making. Employees who participate in decision-making are more likely to implement innovative ideas. Inclusive leadership improves employee IWB in a variety of ways. To begin, inclusive leaders encourage openness and open communication with employees. Employees who acquire their supervisors' trust are less likely to fear reprisal if they fail to achieve the required results (Piansoongnern, 2016).

The second reason is that inclusive leadership encourages workers to contact their leaders with emergent difficulties (Carmeli et al., 2010). Employees are thus motivated to discuss concerns and come up with creative solutions. Lastly, IL facilitates IWB for staff members. Managers need to recognize, enlighten themselves on, and encourage inclusive work behaviour to maximize IWB among staff members. Managers can successfully create a work environment where employees feel supported and confident presenting innovative ideas with the aid of key IL characteristics, specifically "openness, availability, and accessibility (Fatima, et al., 2021). According to the above discussion, This study puts forth the followings:

H2. Inclusive Leadership (IL) has a positive effect on Innovative Work Behavior (IWB) in public and private higher education institutions in Jordan.

### **2.9.3 Inclusive Leadership, Psychological Capital and Innovative Work Behaviour**

To establish a psychologically secure workplace where employees feel at ease taking chances and freely expressing their views without apprehension of criticism. Psychological safety fosters creativity and exploration, which are essential elements of innovation. Maryam Hafeez et al. (2019) explain that there is a positive relationship between IL and IWB. Their studies were conducted among nurses in private hospitals in Pakistan. The researchers used psychological empowerment to mediate the relationship (Sani Mert & Aslan, 2021). This confirmed that inclusive leaders significantly and positively influence innovative work behaviour, implying that inclusive leadership promotes innovative work behaviour. The findings align with research investigating the relationship between inclusive leadership and innovative behaviours (Bannay et al., 2020; Shakil et al., 2021).

Possessing and having faith in something allows people to take risks and research new ideas, which fosters creativity. Inclusive leaders build a culture of collaboration and teamwork by breaking down barriers and encouraging cross-functional engagement. The cooperative atmosphere allows personnel to merge their expertise and insights, resulting in inventive results. Inclusive leaders inspire people to create and contribute to the organization's success by offering learning and growth opportunities. After reviewing past studies (Fang et al., 2019d; Xiang et al., 2017), they explain how inclusive leaders' respect and fair treatment of workers might impact employees' innovative behaviours through the mediation effect of psychological capital. Leaders' support and acknowledgement of workers may impact employees' innovative behaviour and inventive thinking through the mediation effect of psychological capital (Fang et al., 2019d; XIANG et al., 2017). According to the above discussion, this study presents below hypotheses:

H3. Psychological capital mediates the relationship between inclusive leadership and innovative work behaviours in public and private higher education institutions in Jordan.

#### **2.9.4 Authentic Leadership and Psychological Capital**

The research indicated that authentic leadership behaviours significantly influence employees' psychological capacities of hope, optimism, resilience, and self-efficacy (Grudić Kvasić et al., 2021). Moreover, psychological capital is a central component of authentic leadership philosophy. Psychological capital's significance and growing popularity stem from its favourable effect on desirable employee work-related attitudes and behaviours, especially in the service industries (Grudić Kvasić et al., 2021).

Adil and Kamal (2020) investigate how psychological capital (PsyCap) and authentic leadership influence the JD-R model's stress and motivational processes among Pakistani university academics. The findings revealed that there is a direct relationship between work engagement, PsyCap, quantitative overload, and job-related emotional well-being. (Niswaty et al., 2021) show that authentic leadership has the ability to have a huge impact on the mental health, attitudes, and actions of personnel in Indonesia's public sectors. Positive attributes of leaders can guide employees' self-development, improve their PsyCap, and repair possible resource loss, all of which are important for maintaining work engagement in Indonesian public institutions. According to Sri Ramalu & Janadari (2022), the positive relationship between PsyCap and AL demonstrates that individuals develop their psychological capital at a greater rate, and their leadership appears to be more authentic. This study puts forth the followings::

H4. Authentic Leadership (AL) has a positive effect on psychological capital (PsyCap) in public and private higher education institutions in Jordan.

### **2.9.5 Authentic Leadership and Innovative Work Behaviour**

Innovative work behaviour is when an individual achieves self-competence to fulfil two elements, internal and external, Leadership is viewed as an external factor influencing innovative work behaviour (Li & Zheng, 2014). Walumbwa et al. (2008) clarify that AL has four components to which they are: the first is self-awareness, which means how a person sees himself, how well they understand themselves, how well they can define the world based on what they have been through, and how well they understand their strengths and weaknesses, which helps them see how they affect other people. For instance, leaders are ready to confess their faults and encourage staff to contribute ideas. Staff with a strong assessment of a leader's self-awareness believe that the leader can inspire others to keep moving forward and make progress; when individuals are driven to work, they are more passionate about accomplishing their duties. This is consistent with findings by (Suryani et al., 2018; Usman et al., 2019), which state that motivation can promote inventive work behaviour, motivation can raise worker's enthusiasm., motivation is an instrument to engage particular talents in completing performance, means of developing one's capabilities for future task mastery. The second is the transparent relationship. Such behaviour includes the open disclosure of varied information and the presentation of genuine ideas and feelings, hence instilling trust in others. The manager, for example, will show emotions that match how persistent he or she is, while the ambitious individual will always act in line with his or her goals. Individuals who have a strong sense of the leader's openness know that the leader is not covering anything bad. This gives the leader faith and does not stop the leader from becoming an example. Superiors who turn out to be role models might encourage their workers to come up with new ideas so they can be like their leaders., this is consistent with a study that took place by (Che et al., 2019), which indicated that transparency would boost

employee engagement at work. The third is the balanced processing of leader behaviour, which shows that leaders examine all relevant and valid evidence before deciding. The leader solicits people's viewpoints and takes input and criticism from those who disagree. Individuals who have a good interpretation of the leader's balanced processing assume that they will behave equally, so they believe they are on the same level as their coworkers, which makes them more enthusiastic about their job and improves their abilities to achieve the defined objectives. Accordingly, this positive environment of work will motivate employees to engage in innovative behaviour, one way to do this is to look for new ways to do work that will help them finish the job. This is in line with a study carried out by K. Guo (2022), who claims that employees will be happier with their jobs if leaders implement policies objectively. Job satisfaction is thought to be reached by increasing and improving work performance.

The last one is internalising the moral perspective, which is the leader's ability to handle or control himself. This self-organisation aligns with moral ideals that people in the group, company, and society have internalised. Because of this, people make choices based on their internalized moral standards. As a result, decisions are made following internalised moral standards. Consequently, decisions are made based on internalised moral standards. Individuals who realize their leaders have an internalised moral perspective tend to be grateful to the leader, so employees will comply with the leader's instructions, work hard, and improve their workability. The employee's work behaviour has improved due to the development of these capabilities, which can enhance the performance of prior tasks considered insufficient, followed by the identification of alternative solutions. As a result, it is compatible with the study performed by (Kim & Brymer, 2011), which suggested that leaders who promote moral ideals, or so-called ethical leaders, will increase employee job

satisfaction; job satisfaction is defined as increasing and developing work performance. The preceding description corresponds to studies done by (Novitasari, Siswanto, et al., 2020a; Purwanto et al., 2021), which state that transformational leaders significantly impact innovative behaviour. Transformative leadership is a component of AL.

Furthermore, according to Avolio et al. (2004), AL combines transformative leadership with ethical leadership, which is why AL correlates with innovative behaviour. Some studies investigate the influence of authentic leadership on innovative work behaviour, such as Komang et al. (2020), whose results show that authentic leadership influences innovation both directly and indirectly via psychological means and work engagement. Authentic leaders motivate employees' innovative work behaviour by providing a workplace environment that provides them with a sense of individuality and empowerment. Jung et al. (2021) studied the relationship between AL and IWB using leader-member exchange as a mediator and organizational learning culture as moderate in Korean manufacturing and service organizations; the researchers found a positive relationship between authentic leadership and employee innovative behaviour. Other studies such as (Yamak & Eyupoglu, 2021a) and (Javed et al., 2021) ensure the same positive link between AL and IWB. Based on the above arguments, This study puts forth the followings:

H5. Authentic Leadership (AL) has a positive effect on innovative work Behavior (IWB) in public and private higher education institutions in Jordan.

### **2.9.6 Psychological Capital and Innovative Work Behaviour**

People with high self-efficacy are very smart, proactive, and willing to try innovative and challenging activities (Mishra et al., 2019). Individuals who are optimistic stay positive in the face of difficulties. They will thus look for new ways to solve issues and take

advantage of any chance (Rego et al., 2012). Ambitious individuals seek new ideas and examine possibilities and issues from several perspectives (Mishra et al., 2019). Resilience is especially important whilst completing jobs that call for constant effort while retaining outstanding productivity.

Mishra et al. (2017) assert that PsyCap has a large and positive effect on IWB. This is essential since employee creativity may be impacted by their overall well-being. According to Brunetto et al. (2020), managers can enhance the psychological resources of Street Level Bureaucrats (SLBs) in order to strengthen their potential for creative behaviour. Since it gives workers a way to decompress and is linked to better performance (Luthans & Youssef-Morgan, 2017) and safer consequences for individuals in the TS (Xerri et al., 2019), PsyCap is essential. Prior studies have shown a correlation between high PsyCap and authentic leadership practices in workers in the public sector (Adendorff et al., 2021). They suggest the following hypothesis based on the above arguments:

H6. Psychological capital (PsyCap) has a positive effect on innovative work behavior (IWB) in public and private higher education institutions in Jordan.

### **2.9.7 Authentic Leadership, Psychological Capital and Innovation Work Behaviour**

PsyCap plays a vital role as an intermediary factor between different leadership styles and the results experienced by employees (Lei Leungkhamma, L., & Le, 2020). Leadership can improve Psychological Capital (PsyCap) by cultivating a nurturing and empowering atmosphere, hence increasing both innovation and adaptation. Innovative work behavior may create, advocate, and implement novel ideas, procedures, or goods within a company. It refers to the capacity to think creatively, take initiative, and solve difficulties. To adapt and thrive in an ever-changing educational environment, schools must exhibit innovative work behaviour. Faculty and staff that demonstrate innovative behaviours can help to

promote new teaching techniques, research methodology, and administrative systems. To maintain competitiveness and relevance, higher education institutions must engage in continual innovation (Sharma & Sharma, 2021). Promoting a culture of inventive work behaviour among employees can result in the development of pioneering programs and research that are very appealing to students and attract funding. Authentic leaders exhibit qualities of honesty, transparency, innovative behavior and trustworthiness (Novitasari et al., 2020). Thus, they establish robust relationships with their team members founded on mutual trust, fostering a friendly atmosphere where employees feel at ease expressing their unique ideas.

According to Luthan et al. (2007), psychological capital is made up of four components. The first aspect is self-awareness, which refers to a person's ability to recognise himself, understand oneself, describe the world based on one's experiences, and recognise one's strengths and weaknesses to see how he affects others. For instance, a leader may admit faults and continuously encourage staff to contribute ideas. Employees with a strong assessment of the leader's self-awareness believe that the leader can provide incentives to continue to progress. Work motivation is linked to innovative behaviours, where when employees are motivated to work, they are more enthusiastic about completing tasks, one of which is seeking solutions to get the job done to increase the innovative work. This is consistent with findings by (Suryani et al., 2018; Usman et al., 2019). This states that motivation can promote innovative work behaviour, and raise employee interest in work, Motivation is an instrument to engage particular abilities in accomplishing performance, and motivation is a tool to grow the skills that are possessed to master tasks in the future.

The third one is resilience, where when a human has challenges and varied problems, the individual can address them and resolve them to make improvements and reach success. Individuals who view themselves to be resilient are more likely to be able to address difficulties and make changes to achieve success. Someone resilient views stressful situations as non-threatening and will endeavour to handle their difficulties in unique and innovative ways (Shani, 2020). This is closely related to innovative behaviour, in which individuals must be able to create good changes, both in themselves and their ways of working, to survive in the workplace. This was shown in the (Novi & Etikariena, 2022) study, which shows that the more resilient individuals are, the more innovative their work behaviour the institution will get.

The fourth factor is an optimistic attitude, which is one's ability to develop positive traits within themselves to succeed in difficult activities. Employees who believe they are hopeful will be able to encourage themselves to work more. The advent of the new item might be the appearance of new working methods, methods of issue solving, and other things connected to self-improvement and organisational development. This is in line with (Azizah et al., 2021; Christian, 2019) whose studies show that optimism positively influences innovative work behaviour. In addition, (Rizana, 2022) claims that optimism will assist teachers in creating and implementing innovative methods to accomplish challenging tasks.

Some research investigates the relationship between authentic and innovative behaviour using Psy-Cap as moderate. For example, Purwanto & Fahlevi (2020a) use Psy-Cap as a moderator in testing the relationship between AL and IWB. Their study shows that authentic leadership and psychological capital have an effect and can be utilized to serve as predictors of innovative behaviours shown by lecturers. There is also a strong correlation

between genuine leadership and lecturers' innovative work behaviour, and there's also a positive connection between lecturers' innovative work behaviour and psychological capital (Grudić Kvasić et al., 2021). They suggest the following hypothesis based on the above arguments:

H7. Psychological Capital (PsyCap) mediates the relationship between Authentic Leadership (AL) and Innovative Work Behavior (IWB) in public and private higher education institutions in Jordan.

### **2.9.8 Psychological Capital and Adaptive Performance**

AP is an approach to work performance that differs from task performance and individuals' behaviour in the organisation Han & Wiliam, (2008). Allworth and Hesketh (1999) define adaptive behaviour as "behaviours that indicate the ability to cope with uncertainty and transfer learning from one task to another due to variations among job requirements." According to this concept, adaptability is shown when workers cope well with changes in their workplace. Furthermore, Qurrahtulain et al. (2022b) defined adaptive efficiency as a change in conduct in response to a new situation. For adaptive behaviour to occur, two factors are required: a change in the environment and the ability of the individual to successfully handle that change. Qurrahtulain et al. (2022b) show that leadership support for adaptive performance benefits from inclusion because it promotes high-quality connections, which considerably boosts positive emotions. Employees are more likely to demonstrate adaptive performance when they feel their contributions are appreciated in the workplace, thanks to inclusive leadership traits like openness and participation in decision-making. Moreover, past studies also state that inclusive leadership positively impacts adaptive performance (Bataineh et al., 2022; Yu, 2020). Furthermore, Khan et al. (2022) test the relationship between inclusive leadership and psychological safety as moderators. The

results demonstrate a positive correlation between inclusive leadership and employee adaptive success. Adopting an inclusive leadership model helps to improve results. When a team's appreciation for leadership success is high, adaptive performance improves.

Individuals with psychological capital frequently have an inner motivation for improvement and advancement. Previous research has found that psychological capital affects more than just employee attitudes. And improves job performance (Homayoun & Bouzari, 2019) and encourages creativity (Paek et al., 2015), making personal potential a reality. Since self-efficacy is a comprehensive confidence or conviction in one's abilities to cope with several challenging or unusual scenarios, it has the potential to influence an individual's behaviour (Schwarzer, 1994). That is, when employees encounter new wants or conditions, their confidence or conviction may help them change their conduct and strive to attain their objectives (Y. Zhang et al., 2021).

In other words, believing in one's own skills to achieve work-related objectives can improve adaptive performance (Bataineh et al., 2022). Ghashghaeizadeh et al. (2018) studied adaptive performance based on psychological capital and spiritual intelligence among nurses in Iranian hospitals, they state that because psychological capital and spiritual intelligence can predict adaptive performance in nurses, leaders of medical clinics must develop strategies to boost capital psychological and spiritual intelligence at their choice. If they wish to improve adaptive performance, they should increase psychological capital and spiritual intelligence. According to the above, this study presents the following hypotheses:

**H9:** Psychological Capital (PsyCap) has a positive effect on adaptive performance (AP) in public and private higher education institutions in Jordan.

### **2.9.9 Inclusive Leadership and Adaptive Performance**

Inclusive leadership acknowledges and values the distinct contributions of individuals from varied backgrounds (Sani Mert & Aslan, 2021). This fosters an atmosphere where diverse viewpoints are esteemed, resulting in inventive resolutions and an enhanced ability to adjust to change. These leaders create a positive environment in which workers feel valued and respected (Fatima et al., 2021). This emotional support helps employees cope with stress and readily adjust to unexpected situations. Inclusive leaders foster a conducive climate that encourages employees to freely articulate their thoughts, embrace uncertainty, and learn from their errors without apprehension of adverse outcomes (Gong et al., 2019).

This sense of psychological safety fosters a climate that promotes both exploration and adaptability. Inclusive leaders prioritize ongoing learning and development, fostering an environment where people are encouraged to acquire more skills and knowledge. By prioritizing growth, personnel can maintain their adaptability when confronted with new problems and possibilities. The presence of several perspectives is especially advantageous when it comes to adjusting to intricate and changing difficulties. This all-encompassing approach facilitates improved decision-making and flexibility. According to the above, this study presents the following hypotheses:

**H8:** Inclusive Leadership (IL) has a positive effect on adaptive performance (AP) in public and private higher education institutions in Jordan.

#### **2.9.10 Inclusive Leadership, Psychological Capital and Adaptive Performance**

Psychological capital has been investigated in the relationship between different variables and plays a positive role in mediating the relationship between social capital and entrepreneurial attitude orientation on entrepreneurial intentions (Mahfud et al., 2020),

psychological empowerment and turnover intention, job satisfaction, and normative organizational commitment(Shah et al., 2019), Individual spirituality and nonviolence behaviour(Sarkar & Garg, 2020), emotional intelligence on job burnout and job performance(Gong et al., 2019), occupational stress on job burnout (Khalid et al., 2020), intrapreneurship and work engagement(Pandey et al., 2020), emotional labour strategies and job burnout(Peng et al., 2019), perceived management commitment and safety behaviour (X. Ye et al., 2020) and leadership styles and knowledge workers' work engagement(Y. Li, 2019).

Kirige et al. (2019) investigate the effects of LXM on adaptive performance via psychological capital. They took a sample of 234 employees from a Finance and Banking Institute. The research findings show that greater interactions with leaders promote followers' PsyCap, which in turn develops workers' adaptive performance within an organisational setting. Luo et al. (2021) investigated the relationship between psychological capital and adaptive performance among internal social capital, it was collected from a sample of 304 employees working. They show that employees with greater psychological capital experience more pleasant feelings, which boosts their energy and focus at work, improving their adaptive performance. Furthermore, the study discovered that psychological capital improves adaptive performance. These outcomes are in line with another study in the same field, but they used the role of change readiness as a mediator (Luo et al., 2022).

Thus, inclusive leadership improves adaptive performance by creating a diverse and supportive environment, promoting open communication and collaboration, increasing employee engagement and motivation, establishing psychological safety and trust,

encouraging continuous learning and development, and leveraging diverse perspectives for problem-solving.

**H10:** Psychological Capital (PsyCap) mediates the relationship between Inclusive Leadership (IL) and Adaptive Performance (AP) in public and private higher education institutions in Jordan.

### **2.9.11 Authentic Leadership Style and Adaptive Performance:**

AL is seen as the basis for different leadership styles, such as transformational leadership (Avolio et al., 2004). Authentic leaders are positive, optimistic, confident, and ethical, prioritising their subordinates' future leadership development. (Luthans and Avolio, 2003). Authentic leaders foster positive psychology in their followers by increasing self-awareness, balanced processing, internalised moral perspective, and relational transparency, which results in numerous positive impacts such as voice behaviour, organisational trust, and high job performance (Avolio et al., 2004; Banks et al., 2016).

Authentic leadership is defined by the leader's self-awareness, transparency, ethics, and strong sense of personal values. In contrast, adaptive performance refers to an organization's capacity to adapt and respond successfully to external changes. Authentic leadership is regarded by educational institutions as the most true, useful, transparent, and ethical model. AL has demonstrated the importance of promoting efficient organisational practices in the context of education. According to research, authentic leadership can influence employee participation, academic enthusiasm, extra-role behaviours, trust, intrinsic motivational needs, and performance in an educational institution setting (A. P. Srivastava & Dhar, 2019). Saeed & Ali (2019) conducted a study demonstrating that private education institutions have a more positive association between AL attributes and managing

the learning environment than public education institutions. Authentic leaders exemplify their leadership through actions, showcasing qualities such as innovation, embracing uncertainty, and being receptive to new ideas (Novitasari et al., 2020). By setting an example, they may inspire their team members to think creatively and independently investigate new ideas. Transparency and consistency in actions are two ways that real leaders foster confidence. This trust fosters a culture where employees are empowered to embrace uncertainty and adjust to unfamiliar circumstances without apprehension of adverse outcomes. Authentic leaders establish a climate of psychological safety, which is crucial for adaptive performance (Komang et al., 2020). Authentic leaders offer unwavering support and encouragement, enabling employees to develop the self-assurance necessary to confront unknown challenges and adapt to dynamic surroundings.

Besides, clarity can also facilitate employees' comprehension of the rationales underlying changes and enhance their ability to adjust more efficiently (Che et al., 2019). Genuine leaders offer valuable feedback that assists employees in gaining insights from their experiences and enhancing their performance. The ongoing feedback loop is essential for the development of adaptive skills. Previous research promoted the idea that authentic leadership is a phenomenon of ongoing self-awareness and self-regulation growth. (Chang et al.2005, page. 35). According to Avolio and Gardner (2005, p. 232), the fundamental objective of true leadership is self-improvement before adopting or achieving leadership. It is one of the features that set true leadership apart from other forms of leadership. Even if someone achieves authentic leadership, they will continue to develop their personality in order to become a more authentic leader (Daryanto et al., 2021). Kim & Yoon (2021) investigate the relationship between authentic leadership and adaptive performance. The results show that authentic leadership positively affects the adaptive performance of

institution members. The study covered a sample of 348 individuals from public institutions in Korea. Research suggests that authentic leadership has a positive impact on adaptive performance. Authentic leaders are more likely to build an open work environment, encouraging employees to take initiative and develop new and innovative solutions. This study put forth the following:

**H11:** Authentic Leadership (AL) has a positive effect on Adaptive Performance (AP) in public and private higher education institutions in Jordan.

#### **2.9.12 Authentic Leadership Style, Psychological Capital and Adaptive Performance:**

Daraba, Wirawan, Salam, and Faisal (2021) conducted research among 116 respondents from Indonesia's institutions under the Minister of Home Affairs. The findings show that employees' perceptions of leaders' authenticity can directly or indirectly affect their performance via PsyCap. Rational transparency, self-awareness, and processed behaviour may contribute to the organization's success (Karamet et al., 2017). Leaders should suggest an authentic strategy to foster a healthy and vulnerable employee relationship (Koon & Ho, 2021). Swain, Cao, and Gardner (2018) agreed that authentic leadership theory is important because it enhances authenticity among followers through increased self-awareness, self-regulation, and positive modelling. In turn, accomplishing authenticity benefits followers' well-being and attaining sustainable and authentic business performance (Waraga, 2020).

Additionally, Kaya and Karatepe (2020) investigate the link between servant and AL, as well as adaptive performance, using job engagement as a mediator. According to the study, the AL effect has a beneficial impact on AP. Authentic leadership allows team members to take responsibility for their roles and make their own decisions. Instead of

excessively controlling, they offer assistance and direction, fostering a culture that motivates people to be more creative and make informed decisions. The presence of a good atmosphere fosters creativity and innovation among team members. It establishes trust and fosters a psychologically secure workplace that encourages employees to take chances and adapt to new circumstances confidently. This culture of trust and safety fosters an environment where employees are more receptive to change and more inclined to modify their behaviour to confront new problems. Transparency and vision facilitate employees' comprehension of the necessity for change and inspire them to modify their performance to accomplish organizational objectives (Che et al., 2019). According to the above, This study put forth the following:

**H12.** Psychological Capital (PsyCap) mediates the relationship between Authentic Leadership (AL) and Adaptive Performance (AP) in public and private higher education institutions in Jordan.

### **2.9.13 HEIs Sector Type, Authentic Leadership Style AP and IWB:**

Authentic leadership is viewed in educational institutions as the most truthful, beneficial, transparent, and ethical model. AL has demonstrated the importance of promoting efficient organisational practices in the context of education. According to research, authentic leadership can have an impact on employee participation, academic enthusiasm, extra-role behaviours, trust, intrinsic motivational needs, and performance in an educational setting (A. P. Srivastava & Dhar, 2019). Saeed and Ali (2019) conducted a study that demonstrates that private education institutions have a more positive association between AL attributes and managing the learning environment than public education institutions.

Cortés-Denia et al. (2023) conducted a study to investigate the relationship between AI and job satisfaction and the role of work vigor. The participants included 1029 staff members from private and public institutions across Spain's regions. The researchers show that AL has a more significant effect on the state of vigour at work rather than in public. As a result of the influence that noticed levels of AL have on staff members' performance and beliefs, private organisations need to consider leadership style to be a significant consideration. In the same context, a cross-sectional study compared the perspectives of employees from private and public sector organisations (Grobler, 2022). Eight leadership styles were investigated, and authentic leadership was one of them.

The findings of the study suggest that employees in the private sector are more conscious of leadership than those in the public sector. It was also discovered that the perceived cultures of both sectors vary strongly, and the cultural types connect to their views of leadership. According to the above, the below hypotheses are presented:

**H13:** HEIs sector is moderate in the relationship between authentic leadership and innovative work behavior in public and private higher education institutions in Jordan.

**H14:** HEIs sector is moderate in the relationship between authentic leadership and adaptive performance in public and private higher education institutions in Jordan.

#### **2.9.14 HEIs Sector Type, Inclusive Leadership Style AP and IWB:**

Rindfleish (2018) argues that institutional variables like size and industry sector impact businesses' ability to employ inclusive leadership (Najmaei & Sadeghinejad, 2019).

Curiosity about inclusive leadership has grown in the setting of higher education (Lewis, 2016). Academics can participate in decision-making through inclusive leadership,

which suggests that they will act cooperatively and participative and go above and beyond their designated responsibilities in terms of extra-role behaviours (Aboramadan & Dahleez, 2022b). According to the above, the below hypotheses are presented:

**H15:** HEIs sector type (private or public) moderate in the relationship between inclusive leadership and innovative work behavior in public and private higher education institutions in Jordan.

**H16:** HEIs sector type (private or public) moderate in the relationship between inclusive leadership and adaptive performance in public and private higher education institutions in Jordan.

## **2.10 Summary**

In this chapter, we review literature relevant to each of the research variables. In addition to discussing the status of the higher education sector in general and in Jordan in particular, this study described how this study employed social exchange theory to build the study framework. Following that, the hypotheses were developed. The following chapter presents the methodology of the study.

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.1 Overview**

In the previous chapter, this study critically examined the various literature reviews based on the explanatory variables of this study, which provided the basis for explaining the relationship between the leadership styles (authentic and inclusive), innovative work behaviour, adaptive performance and psychological capital of public and private HEIs in Jordan. The chapter further deliberates on innovative work behaviour and adaptive performance, its measurement, previous empirical literature, and conceptualization based on the arguments of different professionals. Each of the variables, including psychological capital (as a mediating variable), and authentic and inclusive leadership styles, was critically evaluated and the specific measures to be used are expressed with supporting evidence from the literature. The chapter shows the theoretical linkage of the variables studied and investigated from the previous literature. On that evidence, several hypotheses were designed in relationship to the research questions to serve as a guide to this study.

The chosen technique and additional estimating procedures that correspond to the aforementioned theoretical framework and research topics are therefore thoroughly outlined in this chapter. Other approaches are also thoroughly examined, such as the study's population, the necessary sample size, and the research design. The questionnaire design for data collection with due linkages of the purposiveness of its choice to the research objectives are provided, and the validity and reliability of the measurement including how the pilot test

is conducted are expressed. Further justification on the need for the adoption of the PLS-SEM estimation technique and its relevance to this study is highlighted.

### **3.2 Research Philosophy**

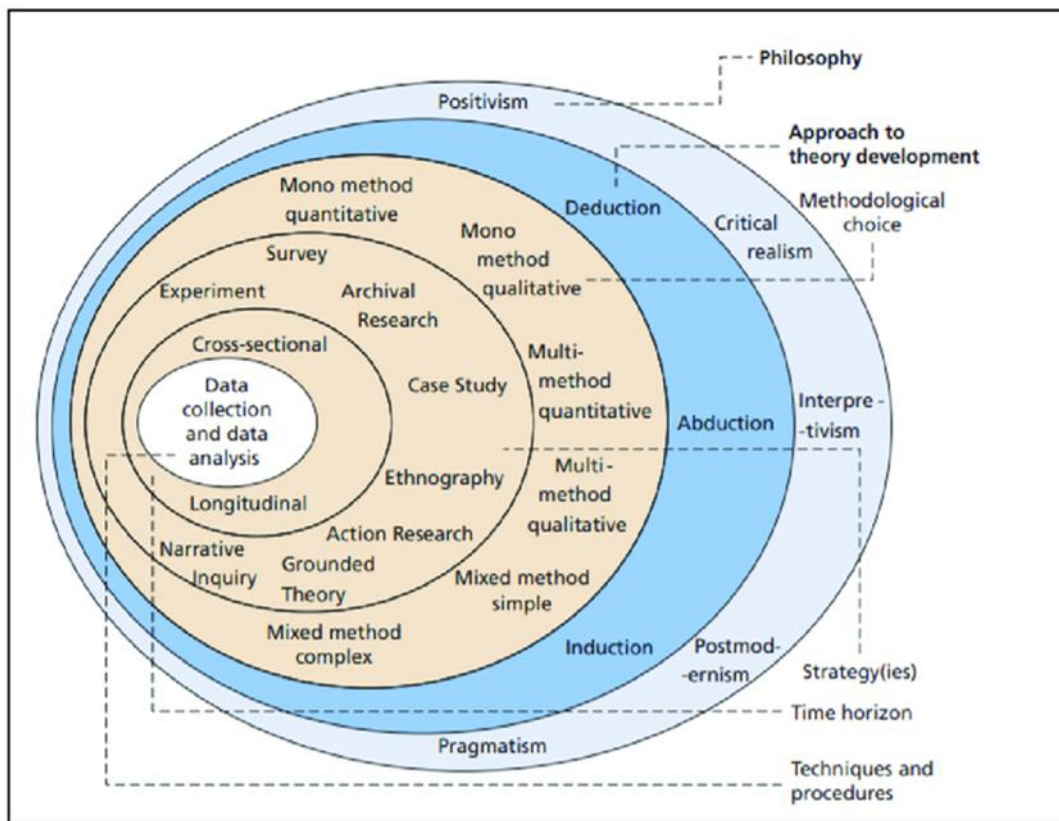
Research philosophy refers to a range of assumptions and concepts concerning the development of knowledge. Smith et al. (2018) highlighted that the research of philosophical issues gained numerous benefits: it enables studies to better understand research designs; it guides scholars to discover and improve designs that are probably beyond their previous expertise; it also enables researchers to determine which designs will be more effective. Sekaran and Bougie (2018) distinguished research philosophies from two types of research assumptions: ontology, which is related to ‘what can be said to exist and epistemology, concerning the nature of knowledge or how we acquire knowledge.

Nevertheless, Creswell & Clark (2018) added these three additional components: axiology, which refers to the part moral and ethical principles play in the research process; methodology, which deals with the methods of conducting research, including gathering, evaluating, and interpreting data; and rhetoric, which deals with the type of language employed during the study. According to Sekaran and Bougie (2018), the four major philosophical strategies in business research are positivism, critical realism, constructionism, and pragmatism. By including postmodernism, Saunders et al. (2016) considered the major philosophies to be five, and they used the term interpretivism rather than constructionism. Positivism is commonly connected with quantitative research designs, especially when they use preset and highly organised data-gathering techniques. (Saunders et al. 2019). The primary concept of this method is that it utilises the positivism paradigm to test hypotheses and verify that theories have a causal relationship (Creswell, 2009). Johnson and

Onwuegbuzie (2004) claim that this method has several benefits as it is simple and does not take much time or money. Many scholars recommended the usage of this method compared to other methods in the field of social science and pointed out some of these advantages, such as the time and cost associated with the data collection processes (Tashakkori et al., 2015; Heyvaert et al., 2013).

### **3.3 Research Design**

Research design is defined as a comprehensive strategy you will take to answer your study questions (Saunders et al., 2019). Specific objectives derived from the research query(s) will be included, as well as a description of the data collection and analysis methods you'll employ, an examination of any ethical considerations raised by the study, and an overview of any practical challenges you'll face along the way. It should, in particular, show that you have thoroughly examined every component of your specific research design (Saunders et al., 2019). Saunders et al. (2019) designed a way that aims to easily assist the researchers in constructing their research design, which is called Research Onion. There are valuable outer layers of the onion that the researcher must comprehend and discuss rather than simply peel and dismiss (Saunders et al., 2019). Figure 3.1, adapted from Sanders et al. (2019) shows “Research Onion” which clarifies the interaction and the components of research design.



**Figure 3.1: The Research Onion** (Saunders et al., (2019) , p.174)

The Research onion framework described by Saunders et al. (2019), is carefully used throughout the methodological design of this study. The study's major goal is to examine the relationship between authentic and inclusive leadership styles, psychological capital, adaptive performance, and innovative work behaviour using empirical and statistical analysis.

Moreover ,the research onion framework offers an organised strategy for researchers to defend their methodology, emphasising the merits and limits of each approach within the framework's different layers (Mphale et al. (2024). This aligns with the positivist philosophy that this study adopted. The study uses a deductive methodology, relies on theories and creating testable hypotheses using quantitative techniques. Our selection of the survey

approach enhances the reliability and generalizability of the findings by enabling the collection of extensive and standardized data from faculty members in Jordanian higher education institutions. Whereas other research methodologies, such as explanatory and qualitative, were considered, their emphasis on subjective meanings rather than quantifiable objective relationships proved them ineffective for this study. The chosen methodological approaches are ideal to attain research objectives, including hypothesis testing and verification.

Our selection of the survey approach enhances the reliability and generalizability of the findings by enabling the collection of extensive and standardized data from faculty members in Jordanian higher education institutions. Whereas other research methodologies, such as explanatory and qualitative, were considered, their emphasis on subjective meanings rather than quantifiable objective relationships proved them ineffective for this study. The chosen methodological approaches are ideal to attain research objectives, including hypothesis testing and verification.

According to diagram 3.1 The first layer describes the research philosophy. This study adopted positivism which is generally associated with quantitative research designs, particularly when these designs integrate with predetermined and highly structured data collection techniques. (Saunders et al., 2019). The main idea behind this method is that it employs the positivist paradigm to test hypotheses and confirm that hypotheses have a causal relationship (Cresswell, 2009). Johnson and Onwuegbuzie (2004) claim that this method has several benefits as it is simple and does not take much time or money. A number of scholars recommended the usage of this method compared to other methods in the field of social science and pointed out some of these advantages, such as the time and cost associated with the data collection processes (Tashakkori et al., 2015; Heyvaert et al., 2013).

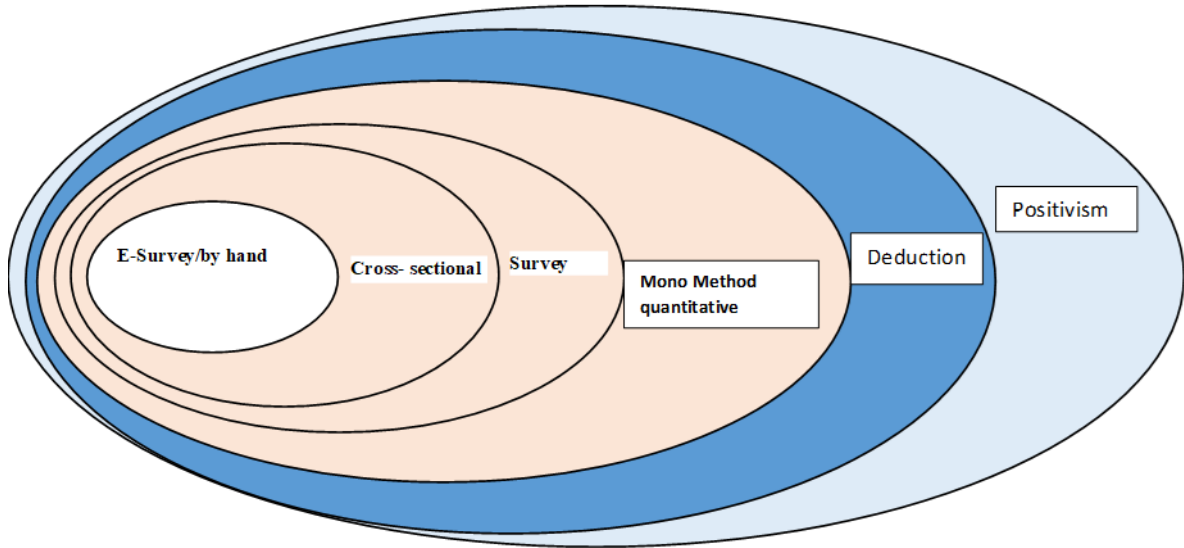
The second layer describes the approach of theory development. This study is a deductive approach. According to (Sekaran & Bougie, 2019) quantitative research is frequently attached to an inductive approach, whereby empirical evidence is tested against theoretical assumptions.

The third layer is related to the methodological choice. A quantitative methodology is adopted quantitative research design employs a single method for gathering data, such as a survey, and a corresponding quantitative analytical procedure. This is referred to as a mono-method quantitative study (Saunders et al., 2019). A qualitative design, on the other hand, enables the formulation of the conclusion to be based on a subjective interpretation of the data. Based on the circumstances of the study, this interpretation may differ from researcher to researcher, and it allows for subjective feelings to influence the results (Rahman, 2017).

The fourth layer is the research strategy, The survey strategy is used since it is quite common in business research, and it allows the researcher to get quantitative and qualitative data on a wide range of research questions (Sekaran & Bougie, 2019). In fact, in descriptive and exploratory studies, surveys are often used to collect information on participants, processes, or scenarios. Survey research is frequently associated with a deductive methodology and is one of the common positivism-based studies (Neuman, 2014; Saunders et al., 2007). The fifth layer is the time horizon. Since data collection for this study is collected only once, this study has a cross-sectional time horizon. Cross-sectional research is a study that can be undertaken in which data is only gathered one time, sometimes over a duration of weeks, months, or days, to investigate the question of the research (Kesmodel, 2018). The last layer is data collection and analysis, this study, which is an e-survey. Survey

that is distributed all participants by emails which is collected from the websites of the universities.

In conclusion, the research design of this study is summarised in Figure 3.2.



**Figure 3.2: Study's Research Onion Model, Sanders et al. (2019)**

### 3.3.1 Population, Location and Sample

According to Sekaran and Bougie (2019), a population is the entire group of people, circumstances, or activities that the researcher is interested in examining. The population of this study involved all the faculty staff (lecturers, senior lecturers, assistant professors, associate professors and full professors ) who work at ten public Jordanian higher education institutions (i.e., Jordan University of Science and Technology, Yarmouk University and Mut'ah University) and sixteen private HEIs (i.e., Madaba American University, Irbid National University, Middle East University, Isra University) that located in the north-central and central of the kingdom.

Higher education institutions' performance is reliant upon the high quality of their faculty; therefore, more productive and effective faculty members may enhance the HEI's performance (Duyan & Yildiz,2020). Tawalbeh, Al-Khazaleh, Albhirat, and Tawalbeh (2025) state that academic staff are the backbone of educational institutions and are in charge of teaching, conducting research, and advancing the intellectual development of the academic community. Accordingly, their fulfilment affects their engagement, motivation, and dedication to their institutions, which has an immediate impact on academic outcomes like learning for students, the standards of research, and the image of the educational organisation. Moreover, Academic staff members hold a highly valuable position in HEIs when it comes to offering a competitive advantage (Duyan & Yildiz, 2020). Accordingly, this motivates this study to consider academic staff as a population

According to the statistics report issued by the Jordanian Ministry of Higher Education for the 2023/2024 academic year and the official website of the universities, the study's population consists of 10,920 faculty members. The total number of academic staff in public higher education institutions is 7,429, while 3,491 academic staff are working in private HEIs. The choice of public and private universities for the sampling was due to the struggles and challenges that both sectors face.

### **3.3.2 Higher Education Institutes**

According to the Global Situation Report (2020), tremendous progress in health and poverty reduction has been made in recent decades, resulting in major work in the field of global problem resolution. At the same time, issues are still associated with unequal development, global warming, wars, etc. The globe requires individuals who can assist their communities in these difficult times, which makes global competency critical for the labour force (Diachkova et al., 2021). Education is the key to advancement. It is the foundation of

a democratic culture that ensures the proper functioning of democratic institutions and laws. It is critical to ensure that young people develop knowledge and skills and gain the knowledge, principles, and ability to be responsible people in sophisticated, multicultural, democratic communities (Council of Europe, 2018).

There are many higher education systems developed all over the world where students study and can increase or expand their knowledge by applying in various fields of professional policies for the HEI's and funding them with the finances they need. Graha (2013) distinguishes higher education into three different models: universities and colleges, research and technical universities where technical and practical education is provided. These days, HEI's follow a more hybrid approach that caters to practical and religious knowledge and considers cultural context and mannerisms (Kromydas, 2017). The HEI's that are present in the West hold the most value as there are a lot of foreign students who go there to study even without HEI's present in their own countries as they have a higher worth in the market. There are many contemporary trends in the higher education system and they have been changing what problems are occurring with the system and how these problems can be rectified is the main discussion (Dorling, 2015).

Likewise, in philosophical terms, Kromydas (2017) calls for more conceptual studies in higher education, where the task of an effective philosophy of higher education is not just to comprehend or support the institution of higher learning but to improve it.

Higher education institutions must serve a public purpose that extends beyond narrow self-interest and achieve social change that reflects the characteristics of a society that individuals require. Since globalization organizations have tried to attract the talent that is available from anywhere all over the world and it is the job of HEIs to teach and make

students learn in a way that they are the talent that is being looked for and there has been a rise in competition even among the HEIs (Aboramadan & Dahleez, 2022b).

The demographic needs for higher education are always changing. Higher education has evolved into an international company. As more nations provide more graduate and postgraduate opportunities to non-nationals, typically at a greater expense than to nationals, the competition to recruit talent worldwide is intensifying (Shakil et al., 2021). Rapidly developing nations such as China and Singapore are investing enormous amounts of funds to enhance their higher education systems and make them more attractive to intelligent international students (Li Yuan & Powell, 2013).

Higher education is regarded through the lens of a digital, knowledge-based society in which the economy is dominant. Competencies such as technical competence, critical thinking, and multitasking are in high demand in the labour market, increasing competitiveness and quickening the workday (Aboramadan & Dahleez, 2022b). Strong proficiency in both soft and hard skills is insufficient because higher education must focus more on modifying attitudes and behaviours as they become the foundation of a global knowledge-based economy (Aboramadan & Dahleez, 2022b). Eight general quality standards for higher education were suggested by Noaman et al., (2017), which include a well-organized curriculum, qualified professional staff, employment opportunities for graduates, modernized educational facilities, services that promote accessibility to global information and eliminating geographical barriers, digital library, management systems, and university campuses that are convenient and secure (Pherali & Lewis, 2019).

### **3.3.2.1 Arab HEIs**

International development institutions present Higher education restructuring as a political and economic imperative. As a result, Arab governments have implemented a variety of widely circulated reform ideas, such as expansion, quality assurance, and privatization, radically transforming the region's higher education scene (Buckner, 2019). At the same time, Arab higher education institutions may cope with internally focused innovation, but it is still debatable whether or not they have the motivation and resources to deal with externally focused innovation. Universities are not yet actively involved in advanced research and R&D, and they are not given the funds or incentives necessary to lead the on-knowledge economy problems (Waterbury, 2020). Furthermore, Arab institutions place little emphasis on strengthening academic staff capacities; the majority of programming and projects focus on students rather than academic staff. Which negatively on the faculty members' performance level over time (Sam Alfoqahaa & Abdalnaser Nour, 2022). Researcher Altaee, (2020) stated that one of the higher education challenges in the Arab world is the centralization in decision-making mechanisms and financing that some HEIs follow, even laws and regulations instructions have become stereotyped as repetitive patterns.in addition to. The same added that the level of cognitive knowledge in Arab HEIs is low and development processes are slow.

### **3.3.2.2 Higher Education in Jordan**

The Jordanian Education and Research Council was created in 1982, following the adoption of the first higher education law in 1980. The Jordanian Ministry of Higher Education and Scientific Research was created in 1985, with the passage of Higher Education Law No. (28) (of 1985). It specified the authorities, responsibilities, and tasks of the Ministry of Higher Education and Scientific Research, as well as its relationship with

higher education institutions, as more than one law for higher education and Jordanian universities had been issued since then. The most recent was the Higher Education and Scientific Research Law No. (17) (of 2018), which defined the ministry's roles and authorities (MJHESR, 2019).

According to the National Strategy for Human Resources Development 2016-2025 report, while many achievements have been made in Jordan's higher education sector, there has been a decline in the quality and outputs of university education in several areas; the legislation is still unstable and does not rise to the level of forming an integrated system for HEIs, as it is unable to address all of the gaps and imbalances. In addition to the low financial support for universities to meet their needs. Furthermore, scientific research is still restricted because it cannot produce tangible outcomes. In terms of the university environment, it is experiencing an imbalance in the beneficial interaction between its aspects, and it is no longer able to attract exceptionally talented faculty members in sufficient numbers, which has impacted motivation to accomplish the necessary change in the process of education and its outcomes (MHESR, 2022).

Higher education has an important role in building human development, therefore it is considered the basic foundation for progress and development in various aspects of Life. Jordan is one of the countries that seek to raise the level of scientific and educational institutions. These institutions play a significant and distinguished role in bringing about comprehensive development in a variety of fields, through their contribution to the preparation of civilized generations that possess the ingredients for success, as well as the graduation of cadres-qualified individuals who bear the responsibility of serving the

community and the dedication to upgrading it in light of his requirements (Alhur & Tnash, 2019).

AL-Saraireh & Ghaidan, (2021) show in their study that academic staff in Jordanian HEIs suffer from a lack of opportunities for professional growth, and the poor development of functional and teaching performance. Moreover, the academic staff are kept away from various social issues and problems, and this is because Jordanian HEIs do not pay enough attention to community service and openness to society (AL-Saraireh & Ghaidan, 2021).

In a study investigating the academic freedom of the academic staff in Jordanian HEIs for Nayf, (2021) the researcher endorses that the public HEIs in Jordan enhance and develop academic independence for faculty staff, particularly in the fields of scientific research and community service.

Rewashed, (2018) clarifies that most private educational institutions fail to offer their academic staff satisfactory salaries, i.e., based on qualification, rank, experience, country of graduation, university, etc., but rather on each employee's ability to negotiate. This behaviour supports academic staff members' beliefs that private universities lack a clear hiring and compensation policy. This demonstrates that some private universities that pay their academic staff poorly are more likely to lose talented employees to universities that pay their employees well. The low pay received by academic staff members at higher education institutions contributes to their high rate of turnover.

According to the Jordanian Ministry of Higher Education and Scientific Research, there are 10 public HEIs, in addition to 17 private universities, 2 universities with private law, 1 regional university and 51 community colleges. The student population enrolled in public and private universities is estimated to be close to (236) thousand, of which (28,000)

thousand are of Arab or foreign nationality. This improvement in the number of universities is associated with a significant increase in the number of students enrolled to study in these universities. The number of academic staff (that are working in both public and private Jordanian HEIs) is 11750 members. While the total number of students enrolled in private and Jordanian HEIs reached 356,000 students. Moreover, the value of allocations to support Jordanian public HEIs amounted to about 99,099,723 US dollars from the government budget for the year 2022. During A panel discussion organized by the Cultural Forum at the Abdul Hameed Showman Foundation and the Scientific and Cultural Association of University Professors (2023), it was shown that eight public HEIs were 192 million dinars (about 270,464,062 US dollars) in debt, which harmed their performance and made some of their admissions practices unhealthy.

In summary, the importance of the higher education sector and because of the above-mentioned challenges that the higher education sector is facing this study found that conducting such a study in this sector hopefully will contribute to take part in developing and enhancing the sector.

Below is a brief about the public and private HEIs:

1- The University of Jordan (UJ): Jordan's largest institution, the University of Jordan (UJ), was established in 1962. It is Jordan's first university, founded by Royal Decree in 1962 in the country's capital of Amman. According to the QS World University Rankings 2023, UJ has five QS Stars and is classified among the top 591-600 universities around the world.

2- Jordan University of Science and Technology (JUST): It was founded in 1986. Jordan University of Science and Technology was named the "Jewel of Jordanian

Universities" by the late King Hussein bin Talal. It is located in the governorate of Irbid, 70 kilometres north of Amman. It has 1,006 members, with 28.6% of them being female. The University has 12 faculties, one institute, 61 academic departments, 45 bachelor's programmes, 98 master's degrees, and two doctoral programmes. In addition, its rank in the World University Rankings in 2022: 401-500, the university achieved first place in the Jordanian classification of universities.

3- Yarmouk University: It was established in 1976 AD; it is located in the governorate of Irbid. The number of students in its first year was (640) students, and during this period the university developed until the number of students per semester reached the first academic year of the academic year 2020/2021, to (38,901) students distributed over (15) colleges, including (66) majors from the bachelor's level and (66) majors. Of programs from the master's level, (16) programs from the Doctorate level, and two Diploma-level programmes. The number of faculty members in the various colleges of the university reached (1097) members in the first semester of the year University 2021/2020.

4- The Hashemite University: A Royal Decree was issued to establish the university on the nineteenth of June 1991 AD, and it began its educational career in 1995 AD. The university is located in Zarqa Governorate, where it occupies a strategic location located on the international road linking the capital, Amman, and Mafraq Governorate.

5- Al-Balqa Applied Institution (BAU): it was established by royal decree in 1996. BAU has six faculties on its main campus in Salt City and twelve university colleges as satellite campuses throughout the kingdom. The university also oversees Jordan's 51 private and public community colleges.

6- Tafila Technical University: it was established on the seventeenth of January 2005, The university is located on the hills of the Al-Ais region, overlooking the city of Tafila, the number of university students in the first semester of 2020/2021 reached (6795) students distributed in different academic programs: Master 7, Bachelor 29, Higher Diploma 3, and Intermediate Diploma 7, and the number of faculty members reached (251) members in various scientific disciplines and ranks. The Academy, along with (654) employees, including administrators, technicians, and workers.

7- University of Al Hussein bin Talal: The university was established in 1999. it is located near Ma'an, south of Jordan. The number of academic staff is 366 members, while the number of students (8678) registered in the University for the 2020-2021 academic year.

8- Al al-Bayt University: it is located on the outskirts of the city of Mafraq, 65 kilometres to the northeast of the capital, Amman. The university was established in 1992.

9- The German-Jordanian University (GJU): It is situated in Mushaqa. A Royal Decree established it in 2005. It has around 20 programmes and a student body of roughly 5,000 people, mostly Jordanians but also international students.

10- Middle East University: founded in 2005, is a prestigious Jordanian university which provides a wide range of sought-after Master's and Bachelor's degree programmes. MEU, which is situated a few kilometres from Amman, has been awarding postgraduate degrees in 11 different fields of study since it was founded and has awarded degrees to 2,978 students to date. MEU's undergraduate programme, which began in the 2008/2009 semester and currently offers 21 fields of study, has produced 4,214 effective graduates.

11- Isra University (IU): was established in 1991, it received its first batch of students at the start of the academic year 1991/1992.

12- Princess Sumaya University College for Technology (PSUT): It was founded in 1991. It only offered just one Bachelor's degree in Computer Science at the time. Then the Electronics Engineering Department launched in 1993. The university celebrated the successful completion of the initial group of 72 Computer Science undergraduates in 1995.

13- Amman Arab University: It was established in 1997 as a private, non-profit university specialising in higher university studies, under the name of “Amman Arab University for Postgraduate Studies”; To be the first Jordanian university specialized in postgraduate master's and doctoral programs; On September 30, 1998, the Council of Higher Education approved the university to start teaching, as the university received the first cohort of its students since the beginning of the second semester of the academic year 1999/2000.

14- Ajloun National Private University: It was established and obtained the license under Resolution No. (1/2008) dated 5/1/2008, and general accreditation under Resolution No. (1/25/2008) dated (5/10/2009), and it has been striving since its establishment to be An active partner in the national and regional efforts aimed at improving the quality of university education and providing a university environment that is committed to providing the best means of freedom and creativity, attracting students qualified for university education from Jordan and foreign countries, and providing sufficient opportunity for these students to interact with the local, regional and international community.

15- Philadelphia University: It was established in 1989 and welcomed the first class in the academic year 1991/1992. It is situated between Jerash and Amman.

16- Jadara University: it is located in Irbid; The Ministry of Higher Education granted the university its authorization as the initial phase of founding in 2004. afterwards completion of the recognition criteria and requirements in the subsequent stage of the establishment, it received the final license for its establishment in 2005, achieving the desired goal and receiving graduate students in the academic year 2006/2007.

17- Jerash University: It was founded in 1991 and began classes in 1993. It is Jordan's first private HEI in the north. From the beginning until the first term of 2018/2019, the university has graduated (23083) students.

18- Al-Ahliyya Amman University (AAU): Jordan's first private HEI was founded in 1989 and welcomed students in 1990.

19- Aqaba University of Technology: It accepted its first batch of students in the first semester of the academic year 2015/2016. it is located in Aqaba city.

20- Zarqa University (ZU): It was established in 1994, it is located in Zarqa City. The institution began with a total of six faculties and 150 students enrolled in twenty majors across six faculties. However, in the course of the year 2019/2020, the total number of students has grown to around 6,000, distributed across thirteen faculties.

21- The University of Petra: it was launched in 1991. It was originally known as the Jordanian Girls University for its policy of being a university for girls, but the name was changed to the Jordanian University of Petra in 1999 because of a change in regulations that allowed male applicants to enrol.

22- Zaytoonah Private University: It was founded in 1993. It now has six faculties, 19 undergraduate specializations, and one graduate programme.

23- The Applied Science Private University - ASU: It is situated on 356,000 M2 in Shafaa Badran. Arab International Company for Education and Investment owns the university. It was founded in 1989 and started to receive its first students in 1991, with 553 enrolled students, as it began with three faculties: and 13 majors.

24-: Irbid Al Ahlia University: The Hashemite Kingdom of Jordan's Ministry of Higher Education granted the institution a license in 1991 by Resolution No. (601), and among its specializations were computer science, business administration, accounting, law, mathematics, Arabic, and English. In 1994, the institution started to admit students. The university has grown intellectually to the point where it now includes 17 departments for bachelor's programs and 3 departments for master's programs. The institution has made an effort to draw in as many Jordanian and foreign students as it can in recent years. to make a direct contribution to the development of Jordanian society and the Arab communities that surround the Kingdom. The university started offering postgraduate courses in 2012.

25- Mutah University: The university includes (15) colleges, including (7) scientific colleges and (7) humanities colleges, and the College of Graduate Studies, in addition to two deanships: the Deanship of Scientific Research, the Deanship of Student Affairs, and the Deanship of Academic Affairs / Military Wing. The university offers (105) academic programs, including (53) programs at the bachelor's level, one program at the higher diploma level, (42) programs at the master's level, and (9) programs at the doctorate level. The total number of university students for the academic year (2020/2021) reached (19735) male and female students, of whom (14,773) students are in undergraduate programs, and (2,826) students are in graduate programs, representing (16.06%) of the total number of university students. The number of non-Jordanian students at the university reached (2,136) students

distributed across (28) Arab, Islamic and foreign countries, representing approximately (8%) of the total number of university students.

26- American University of Madaba: The university has grown intellectually to the point where it now includes 17 departments for bachelor's programs and 3 departments for master's programs. The institution has made an effort to draw in as many Jordanian and foreign students as it can in recent years. to make a direct contribution to the development of Jordanian society and the Arab communities that surround the Kingdom. The university started offering postgraduate courses in 2012.

### **3.4 Location**

Jordan's future prosperity relies heavily on higher education. Jordan's higher education business has improved greatly over the last two decades, as seen by an increase in the number of institutions, students enrolled, administrative and academic personnel, and funds invested in this sector. Despite the kingdom's limited financial resources, higher education is one of the nation's top goals since it participates in developing the economic, social, and intellectual levels of Jordanians (SPHERE, 2019). Every year, over 300,000 students enrol in higher education (ETF, 2020; SPHERE, 2019).

However, Jordanian universities' development processes are gradual and do not follow the global trend, since many visions stay constant due to a variety of issues, including University education systems and the experiences they include continue to lack the optimal route that represents effective planning and implementation, and hence fall short of the level of more fast advancements. (Mahasneh & Tawarah, 2020). For this study, Jordan has been selected to investigate the relationship between the IL and AL and adaptive performance and

innovative work behavior, in addition to the psychological capital role in mediating the relation.

### 3.5 Sample

Sampling is the process of choosing a selected group of a population to conclude its characteristics (J. Hair et al., 2008). If the researcher does not have the resources or the time to survey the whole population, then the data must be acquired from a sample that is representative of the entire population rather than from the entire population itself (Sekaran & Bougie, 2019). The sample in this study is comprised of full-time academic staff in all ranks in Jordanian public and private HEIs. Table 3.2 shows the details of the selected sample universities.

**Table 3.1: Distribution of Higher Education Institutions (HEIs) Across Regions in Jordan**

No.	Region	No. of public HEIs	No. of private HEIs
1	North	3	5
2	Central	4	10
3	South	3	1

#### 3.5.1 Sampling Method

The literature discusses two types of sampling: probability and nonprobability. With probability samples, the chance that a case will be selected from the target population has been identified and it's usually similar for all cases. It shows that it is possible to react to research questions and achieve objectives that demonstrate statistical estimation of the characteristics of the desired population from the sample. Consequently, probability sampling is commonly employed and linked with questionnaire and experiment research

methods, and non-probability which is defended as a sampling method in which not every participant in the population has an equal chance of being selected (Saunders et al., 2019). The current study looks into public and private HEIs with varying numbers of academic staff.

In cluster sampling, the sample units containing groups of elements rather than individual members/items in the population are chosen (Pandey & Pandey, 2015). Cluster sampling has its pros and cons, and among its advantages are; that it is a good representation of the population, it is an easy method to use, it is an economic method, it is a practicable and applicable method in several fields and the observations can be utilized for inferences. The selected Jordanian HEIs were made into a cluster. Meanwhile, tables 3.3 and 3.4 present each public and private HEIs' academic staff in terms of amount.

**Table 3.2: Number of Academics from Public HEIs by Region**

No.	Region	Universities	No. of Academics	Total	% of sampling
1	North	Yarmouk University	1,099	2,482	33.4%
		Jordan University of Science and Technology	1,003		
		Al Al-Bayt University	380		
2	Central	University of Jordan	1,527	3,743	50.4%
		Hashemite University	627		
		Al-Balqa` Applied University	1,382		
		German Jordanian University	207		
3	South	Mutah University	631	1,204	16.2%
		Al-Hussein Bin Talal University	345		
		Tafila Technical University	228		

<b>Table 3.3: Number of Academics from Public HEIs by Region</b>			
<b>Total</b>	<b>10</b>	<b>7,429</b>	<b>100%</b>

**Source:** Ministry of Higher Education and Scientific Research - Jordan. (2024). *Higher education statistics report 2023*. <https://www.mohe.gov.jo>

According to table 3.2 kingdom is divided into three clusters north, central and south. The calculation for each region was according to this formula:

$$: \left( \frac{\text{total populstion for each regin}}{\text{grand total of the sample}} \right) \times 100$$

- North:  $(7,4292/482) \times 100 = 33.4\%$  (public)     $(3491/965) \times 100 = 27.6\%$  (private)
- Central:  $(7,4293/743) \times 100 = 50.4\%$  (public)     $(3491/2451) \times 100 = 70.2\%$  (private)
- South:  $(7,4291/204) \times 100 = 16.2\%$  (public)     $(3491/75) \times 100 = 2.1\%$  (private)

**Table 3.4: Number of Academics from Private HEIs by Region**

No.	Region	Institution's Name	Academic Staff NO.	Grand total	Percentage of Sampling
1	North	Jadara University	254	965	27.6%
2		Ajloun National University	100		
3		Jerash University	235		
4		Irbid National University	132		
5		Philadelphia University	244		
1	Central	Al-Ahliyya Amman University	316	2451	70.2%
2		Amman Arab University	176		
3		Madaba American University	100		
4		Applied Science University	282		
5		Isra University	258		

6		Princess Sumaya University College for Technology	165		
7		The University of Petra	284		
8		Zaytoonah Private University	322		
9		Middle East University	204		
10		Zarqa University	344		
1	South	Aqaba University of Technology	75	75	2.1%
<b>Grand TTL</b>				<b>3491</b>	<b>100.0%</b>

**Source:** Ministry of Higher Education and Scientific Research - Jordan. (2024). *Higher education statistics report 2023*. <https://www.mohe.gov.jo>

The same formula was used to calculate the percentage of each cluster as below :

- South :  $(3491/965) \times 100 = 27.6\%$
- Central:  $(3491/2451) \times 100 = 70.2\%$
- South:  $(3491/75) \times 100 = 2.1\%$

### 3.5.2 Sample Size

The sample size is critical in all statistical studies. This study uses a clustering technique, and the sample size is determined by the study's objectives, timetable, and available resources (Teddlie & Yu, 2007). The sampling technique is employed to gather data from the study population that was selected instead of from each population segment (Saunders et al., 2019). Selecting representative samples from the target population is thought to improve the validity and consistency of the study (Sekaran & Bougie, 2019). It is vital to choose the right sample since it is almost hard to gather data from every segment of the population due to high expenses, timescales, and a lack of research assistants. Recent trends recommend that researchers should use power analysis to determine sample size (Hair et al., 2019; Ringle et al., 2020). Recent. Used this technique to calculate the same size

of their sample such as Giebelhausen et al. (2020), Cheah et al. (2019), and Awang et al. (2019) are just only some of the several studies that have computed sample sizes using G\*Power (Memon et al., 2020).

When calculating the sample size for the present study, an a priori power analysis was conducted using G\*Power 3. The input parameters used for the analysis were: a desired power of 0.95, an alpha significance level of 0.05, a medium effect size ( $f^2 = 0.15$ ), and 20 dimensions. Based on these parameters, the required sample size is 222 participants. This sample size is considered appropriate given the size of the target population.

In previous studies conducted in Jordan, a response rate of 100% was initially reported, meaning that every participant contacted in the study responded. However, this figure includes all responses, whether complete or incomplete. Upon further examination, only 66% of these responses were considered complete and valid for data analysis, meaning they met the criteria for usable data. This distinction is crucial: while the overall response rate might appear high, the 66% figure refers to the proportion of fully completed surveys or valid responses, which is the metric that directly influences the quality of the data used in the analysis.

In light of this, the current study adopts a conservative approach and, using past data from Jordanian studies, assumes a 66% valid response rate. This assumption accounts for potential non-responses, incomplete responses, and the likelihood of respondents providing unusable data. Since achieving a higher valid response rate may be challenging due to factors such as participant reluctance, incomplete survey submissions, and issues related to survey clarity or engagement, a 66% response rate was deemed a more realistic and cautious estimate.

To ensure the study achieves the required 222 valid responses, the initial sample size was adjusted accordingly. This means that to obtain 222 completed responses with a 66% response rate, the number of participants needed to be increased. Therefore, the total number of respondents that should be distributed across sectors is calculated as follows: 336 respondents ( $222 \times 100 / 66 = 336$ ) respondents should be distributed for each sector. This conservative estimate of 66% reflects both the nature of survey response rates in similar contexts and the specific challenges in obtaining valid responses in this study's setting.

In relationship to this, the sample size was used by this research owing to the size of the target population. Further, the technique of proportionate random sampling is also employed in this study. The purpose is to determine the number of academics in the sample scope of the study. The details are presented in tables 3.4 and 3.5.

**Table 3.5: The Sample Distribution of Public HEIs**

Region	Percentage from target population	Population of Academics	Allocated sample	Will distribute
North	33.4%	2,482	74	112
Central	50.4%	3,743	112	169
South	16.2%	1,204	36	55
Total	100%	7,429	222	336

**Table 3.6: The Sample Distribution of Private HEIs**

Region	Percentage from target population	Population of Academics	Allocated sample	Will distribute
North	27.6%	965	156	236
Central	70.2%	2,451	61	93
South	2.1%	75	5	7

<b>Table 3.7: The Sample Distribution of Private HEIs</b>				
Total	100%	3,416	222	336

The sample size for each institution was chosen based on the university's population. As will use the below equation to calculate the percentage of each HEI and the sample number collected from each HEI.

Percentage of sample :  $(\text{academic staff No.} / \text{TTL academic staff}) \times 100$

Example: Jadara University :  $(245/3491) \times 100 = 7.3\%$

Sample Size =  $\text{TTL Sample Size of the population} / \text{Required Percentage of Sample} \times 100$ .

Example:

Jadara University:  $222/7.3\% \times 100 = 16$

In other words, the percentage of the Al Balqa Applied University was calculated by dividing the number of academic staff at the institution by the total population ( $1.382 \times 100 / 7429 = 18.6\%$ ). The formula was used to multiply the percentage of the institution by the total sample size of each sector.  $18.6\% \times 222 = 41$ . The same was applied to all the HEIs.

Tables 3.6 and 3.7 show the exact sample size that was taken from each HEI public and private :

**Table 3.8: The Sample Distribution of Private HEIs**

<b>No.</b>	<b>Institution</b>	<b>Academic Staff No.</b>	<b>Percentage of Sample</b>	<b>Sample Size</b>
<b>1</b>	Jadara University	254	7.3%	16
<b>2</b>	Ajloun National University	100	2.9%	6
<b>3</b>	Jerash University	235	6.7%	15
<b>4</b>	Irbid National University	132	3.8%	8
<b>5</b>	Philadelphia University	244	7%	16
<b>6</b>	Al-Ahliyya Amman University	316	9%	20
<b>7</b>	Amman Arab University	176	5%	11
<b>8</b>	Madaba American University	100	2.9%	6
<b>9</b>	Science	282	8.1%	18
<b>10</b>	Isra University	258	7.4%	16
<b>11</b>	Princess Sumaya University College for Technology	165	4.7%	10
<b>12</b>	The University of Petra	284	8.1%	19
<b>13</b>	Zaytoonah Private University	322	9.2%	20
<b>14</b>	Middle East University	204	5.8%	14
<b>15</b>	Zarqa University	344	9.9%	22
<b>16</b>	Aqaba University of Technology	75	2.2%	5
<b>Total</b>		<b>3491</b>	<b>100%</b>	<b>222</b>

**Table 3.9: The Sample Distribution of Public HEIs**

<b>No.</b>	<b>Institution</b>	<b>Academic staff No.</b>	<b>Percentage of Sample</b>	<b>Sample Size</b>
<b>1</b>	Yarmouk University	1,099	14.8%	33
<b>2</b>	Jordan University of Science and Technology	1,003	13.4%	30
<b>3</b>	Al al-Bayt University	380	5.2%	12
<b>4</b>	University of Jordan	1,527	20.6%	46
<b>5</b>	Hashemite University	627	8.4%	19
<b>6</b>	Al-Balqa` Applied University	1,382	18.6%	41
<b>7</b>	German Jordanian University	207	2.8%	6
<b>8</b>	Mutah University	631	8.5%	19
<b>9</b>	Al-Hussein Bin Talal University	345	4.6%	10
<b>10</b>	Tafila Technical University	228	3.1%	7
<b>Total</b>		<b>7429</b>	<b>100%</b>	<b>222</b>

### **3.6 Research Instrument**

The Likert-style rating is one of the most commonly used in rating questions, where participants are essential to rate the degree of agreement or disagreement with a statement or set of statements using a four, five, six, or seven-point rating scale (Saunders et al., 2019). At the same time, for analytical tools like confirmatory factor analysis or structural equation models, 5-, 7-, or 10- point scores are the same (Dawes, 2008). The respondent of this study is formed on a 5-point Likert scale utilized in this study since it is broadly known. Adapting the five-point Likert scale is widely known due to several benefits, such as its simplicity and ease of use in development (Cooper & Schindler, 2008).

### 3.6.1 Inclusive Leadership

It comprises three dimensions (openness, availability, and accessibility). This study adopted the scale of Carmeli et al. (2010). The scale measures the respondents' perceptions of their leader's openness, availability in times of need, and accessibility when seeking advice or support. Several researchers, such as (Ahmed et al., 2021; B. Javed, Khan et al., 2021) utilized a similar scale and reported a high level of reliability.

**Table 3.10: Inclusive Leadership Measures**

Original Item	Adapted Item
1. The manager is open to hearing new ideas.	In my department, my leader is open to hearing new ideas from me.
2. The manager is attentive to new opportunities to improve work processes	In my department, my leader is focused on new opportunities to improve work processes.
3. The manager is open to discussing the desired goals and new ways to achieve them	In my department, my leader is open to discussing the desired goals to achieve them.
4. The manager is available for consultation on problems	In my department, my leader is available for consultation.
5. The manager is an ongoing 'presence' in this team someone who is readily available.	In my department, my leader is consistently present and involved with the team.
6. The manager is available for professional questions I would like to consult with him/her.	In my department, my leader is available for professional questions I would like to consult with him/her.
7. The manager is ready to listen to my requests.	In my department, my leader is ready to listen to my requests.
8. The manager encourages me to access it.	In my department, my leader encourages me to assess him/her on emerging issues.
9. The manager is accessible for discussing emerging problems.	In my department, my leader is accessible for discussing emerging problems.

### 3.6.2 Authentic Leadership

It comprises four dimensions (balanced processing, internalized moral perspective, relational transparency, and self-awareness). The construct is measured via sixteen items adapted from (Neider & Schriesheim, 2011). This scale has been adapted for use in several studies. For Example (Al-Jaradat et al., 2020; Munyon et al., 2021).

**Table 3.11: Authentic Leadership Measures**

Original Item	Adapted Item
1. My leader solicits feedback to improve his/her dealings with others.	In my department, my leader solicits feedback to improve his/her dealings with others.
2. My leader in a clear way states what he/she means.	In my department, my leader in a clear way states what he/she means.
3. My leader shows consistency between his/her beliefs and actions.	In my department, my leader shows consistency in his/her beliefs and actions.
4. My leader asks for ideas that challenge his/her core beliefs.	In my department, my leader asks for ideas that challenge his/her core beliefs.
5. My leader describes accurately the way that others view his/her abilities.	In my department, my leader describes accurately the way that others view his/her abilities.
6. My leader admits mistakes when they occur.	In my department, my leader admits mistakes when they occur.
7. My leader uses his/her core beliefs to make decisions.	In my department, my leader uses his/her core beliefs to make decisions.
8. My leader carefully listens to alternative	In my department, my leader carefully listens

perspectives before reaching a conclusion	to alternative perspectives before concluding.
9. My leader shows that he/she understands his/her strengths and weaknesses.	In my department, my leader shows that he/she understands his/her abilities.
10. My leader openly shares information with others.	In my department, my leader openly shares information with others.
11. My leader resists pressures on him/her to do things contrary to his/her beliefs.	In my department, my leader resists pressures on him/her to do things contrary to his/her beliefs.
12. My leader objectively analyzes relevant data before making a decision.	In my department, my leader objectively analyzes relevant data before making a decision.
13. My leader is undoubtedly aware of the impact he/she has on others.	In my department, my leader is aware of the impact he/she has on others.
14. My leader expresses his/her ideas and thoughts in a clear way to others.	In my department, my leader expresses his/her ideas in a clear way to others.
15. My leader is guided in his/her actions by internal moral standards.	In my department, my leader is guided in his/her actions by internal moral standards.
16. My leader encourages others to voice opposing points of view.	In my department, my leader encourages others to voice opposing points of view.

### 3.6.3 Innovative Work Behavior

This study adapted De Jong and Den Hartog's (2010) scale with 10 10-item scale.

This is measured in four dimensions, which are (Opportunity Exploration, Idea generation, Idea championing and Idea exploration).

**Table 3.12: Innovative Work Behavior Measures**

Original Item	Adapted Item
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1. How often does this employee pay attention to issues that are not part of his daily work?	In my department, I pay attention to issues that are not part of my daily work.
2. How often does this employee wonder how things can be improved?	In my department, I wonder how things can be improved.
3. How often does this employee search out new working methods, techniques or instruments?	In my department, I search out new working methods, techniques or instruments.
4. How often does this generate original solutions for problems?	In my department, I generate original solutions for problems.
5. How often does this employee find new approaches to execute tasks?	I find new approaches to executing tasks.
Table 3.11: Innovative Work Behavior Measures	
6. How often does this employee make important organizational members enthusiastic about innovative ideas?	I make important institutional members enthusiastic about innovative ideas.
7. How often does this employee attempt to convince people to support an innovative idea?	In my department, I attempt to convince people to support an innovative idea.
8- How often does this employee systematically introduce innovative ideas into work practices?	In my department, I systematically introduce innovative ideas into work practices.
9. How often does this employee contribute to the implementation of new ideas?	In my department, I contribute to the implementation of new ideas.
10. How often does this employee put effort into the development of new things?	In my department, I put effort into the development of new things.

### 3.6.4 Adaptive Performance

Nineteen items for the job adaptability inventory are adapted from Charbonnier-Voirin & Roussel (2012). The measure includes nineteen items in five domains (managing crises, stress management, creative problem solving, and training and learning activities).

Handling emergencies and unpredictable situations, Handling work stress, Solving problems creatively, Learning, Demonstrating interpersonal adaptability) After reviewing the literature, some studies have successfully used the scale (Kaltiainen & Hakanen, 2022c; Nandini et al., 2022).

**Table 3.13: Adaptive Performance Measures**

Original Item	Adapted Item
1. I keep focused on the situation to react quickly.	In my department, I keep focused on the situation to react quickly.
2. I quickly take effective action to solve the problem.	In my department, I quickly take effective action to solve the problem.
3. I examine available options and their implications to choose the best solution.	In my department, I examine available options and their implications to choose the best solution.
4. I easily change plans to deal with the new situation.	In my department, I easily change plans to deal with the new situation.
5. I stay calm under circumstances where I have to make many decisions at the same time.	In my department, I stay calm under circumstances where I have to make many decisions at the same time.
6. I seek solutions by talking to more experienced colleagues.	In my department, I seek solutions by talking to more experienced colleagues.
7. My colleagues often ask me for advice in difficult circumstances because I keep cool.	In my department, my colleagues often ask me for advice in difficult circumstances because I keep cool.
8. I try to develop new methods for solving atypical problems.	In my department, I try to develop new methods for solving atypical problems.
9. I rely on a wide variety of information to find an innovative solution to the problem.	In my department, I rely on a wide variety of information to find an innovative solution to the problem.

10. I try to avoid following established ways of addressing problems to find an innovative solution.	In my department, I try to avoid following established ways of addressing problems to find an innovative solution.
11. My colleagues take advice from me for generating new ideas and solutions.	In my department, my colleagues take advice from me for generating new ideas and
12. I search for innovations in my job to improve work methods.	In my department, I search for innovations in my job to improve work methods.
13. I take actions (within or outside the company) to keep my skills up to date.	In my department, I take action (within or outside the institutions) to keep my skills up to date.
14. I anticipate changes in my job by participating in projects or assignments that help me deal with change.	In my department, I anticipate changes in my job by participating in projects or assignments that help me deal with change.
15. I am always looking for opportunities (e.g., training, interactions with colleagues, etc.) that help me increase my job performance.	In my department, I always look for opportunities (e.g., training, interactions with colleagues, etc.) that help me increase my job performance.
16. I change my way of working as a function of others' feedback and suggestions.	In my department, I always change my way of working as a function of others' feedback and suggestions.
17. I always develop positive relationships with the people I interact with when doing my job because it helps me perform better.	In my department, I always develop positive relationships with the people I interact with when doing my job because it helps me perform better.
18. I learn new ways of doing my job to better cooperate with colleagues.	In my department, I learn new ways of doing my job to better cooperate with colleagues.
19. I try to consider others' viewpoints to better interact with them.	In my department, I try to consider others' viewpoints to better interact with them.

### 3.6.5 Psychological Capital

The construct is measured via twelve items adapted from Luthans et al., 2007 (the survey provided by mind garden web). The scale is based on four dimensions (self-efficacy, hope, optimism, and resiliency). Several studies adopted this scale for example (Novitasari, Siswanto, et al., 2020b; Poots & Cassidy, 2020; Purwanto & Fahlevi, 2020b).

**Table 3.14: Psychological Capital Measures**

Original Item	Adapted Item
I feel confident analyzing a long-term problem to find a solution.	In my department, I feel confident analyzing a long-term problem to find a solution.
I feel confident contributing to discussions about the organisation's Strategy.	In my department, I feel confident contributing to discussions about the institution's Strategy.
I feel confident presenting information to a group of colleagues	In my department, I feel confident presenting information to a group of colleagues
If I should find myself in a jam at work, I could think of many ways to get out of it.	In my department, If I should find myself in a jam at work, I could think of many ways to get out of it.
I can think of many ways to reach my current work goals.	In my department, I can think of many ways to reach my current work goals.
At this time, I am meeting the work goals that I have set for myself.	In my department, at this time, I am meeting the work goals that I have set for myself.
I can be "on my own," so to speak, at work if I have to.	In my department, I can be "on my own," so to speak, at work if I have to.
I usually take stressful things at work in stride	In my department, I usually take stressful things at work in stride
I can get through difficult times at work because I've experienced difficulty before	In my department, I can get through difficult times at work because I've experienced difficulty before
I always look on the bright side of things regarding my job.	In my department, I always look on the bright side of things regarding my job.

I'm optimistic about what will happen to me in the future as it pertains to work.	In my department, I'm optimistic about what will happen to me in the future as it pertains to work.
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### 3.6.6 Demographic information

The respondents' ages, gender, experience, and education levels were adapted from a study carried out in Jordan (Elrehail et al., 2018), detailed in Table 3.13.

**Table 3.15: Demographics Characteristics**

<b>Institution Name</b>	
<b>Gender</b>	Male
	Female
<b>Marital Status</b>	Single
	Married
	Divorced
	Widowed
<b>Age</b>	Under 30
	30-39
	40-49
	50-59
	60 and above
<b>Work experience</b>	below 5
	5-10 years
	11-15 years
	16-20 years
	21-25 years
	More than 25 years
<b>Academic Rank</b>	Lecturer
	Senior Lecturer
	Assistant Professor
	Associate Professor
	Professor

<b>Table 3.16: Demographics Characteristics</b>	
<b>Academic Qualifications</b>	Bachelor degree
	Master's Degree
	Ph.D.

### **3.7 Pilot Study**

The pilot test's purpose is to improve the questionnaire as the respondents have no difficulties in responding to it and that data collection will go as planned. Furthermore, this study evaluates the validity of the questions, and the data is reliable, both for individual questions and, when suitable, scales made up of multiple questions (Saunders et al., 2019). Face validity will be tested throughout the study by soliciting comments from persons with a background or competence in this field. As a result, the questionnaire was delivered to five randomly selected academic staff members to ensure that the questions were clear and to gather their comments. In addition, the questionnaire was distrusted by five expert professors in management faculty to collect their feedback. After that, the questionnaire was adjusted according to the expert's feedback and comments. Then, it was translated into the participants' mother tongue language, Arabic.

Convergent validity refers to how strongly a measure correlates with other measures of a comparable construct (e.g., reflective) using numerous indicators. Meanwhile, discriminant validity refers to how dissimilar a notion is experimentally from other constructs. Thus, creating discriminant validity means that a construct is distinct and reflects phenomena that other constructs in the conceptual framework do not have (Hair et al., 2017).

Reliability indicates the degree to which the data collection or analysis procedures are employed to lead to consistent results. Cronbach's alpha values are applied to this. In exploratory research, combined reliability scores ranging from 0.60 and 0.70 are deemed acceptable; at higher stages of study, values between 0.70 and 0.90 tend to be appropriate and more sufficient (Hair et al., 2017). In light of the above, pilot research was conducted in this investigation to guarantee that the intended respondents easily understood the questionnaire questions. In contrast to the actual study, which requires a larger sample size, the testing of a section needs a small number of samples, as recommended by various scholars. For instance, Fink (2016) indicates that ten is the bare minimum for small projects for a pilot.

### **3.7.1 Validity**

Table 3.14 shows the validity of the questions in the questionnaire according to the comments of 5 academic and managerial experts.

**Table 3.17:** Calculating Validity of the Questions according to 5 Experts' Answers.

1 <sup>st</sup> Order Construct	Item	Totally Suitable (5)	Suitable (4)	Moderate (3)	Unsuitable (2)	Totally Unsuitable (1)	Validity %
Openness (OP)	OP1	4	1				96%
	OP2	5	0				100%
	OP3	3	1	1			88%
Availability (AV)	AV1	4	1				96%
	AV2	4	1				96%
	AV3	4	1				96%
	AV4	3	1	1			88%
Accessibility (AC)	AC1	3	2				92%
	AC2	4	1				96%
Self-Awareness (SA)	SA1	3	1	1			88%
	SA2	3	1	1			88%
	SA3	4	1				96%
	SA4	5	0				100%
Relational Transparency (RT)	RT1	3	1		1		84%
	RT2	4	1				96%
	RT3	3	1	1			88%
	RT4	4	1				96%
Internalized Moral Perspective (IMP)	IMP1	3	1	1			88%
	IMP2	3	2				92%
	IMP3	4	1				96%
	IMP4	5	0				100%
Balanced Processing (BP)	BP1	3	1	1			88%
	BP2	2	2		1		80%
	BP3	4	1				96%
	BP4	3	2				92%
Idea Exploration (IE)	IE1	2	2		1		80%
	IE2	3	2				92%
Idea Generation (IG)	IG1	3	1	1			88%
	IG2	3	1	1			88%
	IG3	3	1		1		84%
Idea Championing (IC)	IC1	3	2				92%
	IC2	2	2		1		80%
Idea Implementation (II)	II1	3	2				92%
	II2	4	1				96%
	II3	3	1	1			88%
Handling Emergencies and Unpredictable Situations (HEUS)	HEUS1	3	2				92%
	HEUS2	3	2				92%
	HEUS3	4	1				96%
	HEUS4	3	2				92%
Handling Work Stress (HWS)	HWS1	3	2				92%
	HWS2	3	2				92%
	HWS3	4	1				96%
Solving Problems Creatively (SPC)	SPC1	3	1	1			88%
	SPC2	4	1				96%
	SPC3	3	2				92%
	SPC4	3	2				92%
Learning (LE)	LE1	3	1	1			88%
	LE2	4	1				96%
	LE3	3	2				92%
	LE4	3	1	1			88%
	DIA1	5	0				100%

Example: Calculation of the percentage of first question validity

Calculation of the percentage of validity belonging to questions in the questionnaire:

$$V_{Total} = (\sum_{i=1}^{66} V_i) / 66 = 92\%$$

As shown in Table 3 2, the validity of the questionnaire from the consensus prospects of the 5 academic experts was 92% which could be considered a satisfactory result.

### **3.7.2 Reliability**

Following comments made by the experts for testing the validity of the survey instrument, 30 interested respondents were invited to this pilot study to allow the running of proper statistical testing procedures to examine the reliability of the collected data. Those 30 participants were academic staff from both public and private universities 15 were from public and 15 from private. as three were from the university of Jordan, 3 were from JUST, 4 were from Albalqa university and 3 were from Altafaila university and 2 were from Mutah university.

As for private 3 were from Amman AlAhlyia university, 3 were from Irbid university, 4 were from Amman Arab university, 3 from Isra university and 2 were from Petra university.

Respondents were logically informed about the purpose of this research and were familiar with the contents of the research. The Cronbach alpha coefficient was applied to assess the reliability of the data and measurements. According to Churchill (1979), reliability must be the first measure in assessing the quality of the instrument. In general, the minimum acceptance value of Cronbach's alpha is 0.60 to 0.70 (Hair, Anderson, Tatham, & William, 1998). Table 3.15 represents the results of reliability tests on the feedback from 30 respondents as a pilot study.

**Table 3.15: Results of Reliability Tests upon the Feedback from 30 Respondents as Pilot Study**

1 <sup>st</sup> Order Construct	Items' Number	$\alpha$
Openness (OP)	3	0.855
Availability (AV)	4	0.745
Accessibility (AC)	2	0.863
Self-Awareness (SA)	4	0.788
Relational Transparency (RT)	4	0.847
Internalized Moral Perspective (IMP)	4	0.747
Balanced Processing (BP)	4	0.798
Idea Exploration (IE)	2	0.880
Idea Generation (IG)	3	0.905
Idea Championing (IC)	2	0.866
Idea Implementation (II)	3	0.888
Handling Emergencies and Unpredictable Situations (HEUS)	4	0.710
Handling Work Stress (HWS)	3	0.845
Solving Problems Creatively (SPC)	4	0.835
Learning (LE)	4	0.819
Demonstrating Interpersonal Adaptability (DIA)	4	0.770
Efficacy (EF)	3	0.868
Hope (HP)	4	0.837
Resilience (RS)	3	0.759
Optimism (OM)	2	0.828

$\alpha$  = Cronbach Alpha

As shown in Table 3.15, the reliability of the constructs ranged between 0.710 and 0.905 which all were above 0.7 as the cut-off (Hair, Bush, & Ortinau, 2003). Following the reliability test, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted to test the convergent and discriminant validity. However, assessments of EFA and CFA were not practical to be done in the pilot study due to the small sample size (only 30). Therefore, the assessment and examination of factor loadings were performed after the final data collection. Moreover, the internal reliability of Cronbach's alpha was conducted once again upon gathering the final data.

### 3.8 Ethical Consideration

Researchers should take into consideration the ethical dilemmas when he/she conducts research. In this thesis, this study takes into account the points listed in (Diener & Crandall, 1978), which contain four categories of research. The first one is harm to

participants, which explains that participants should be informed that their identity will not be declared to anyone and that there is no obligation to participate in this study, the second one is consent, as this research is part of the PhD degree in business management (University of Malaysia Sarawak) and it was clarified this issue to the participants, the third one is deception as it is identified the idea of the research for participants. The final one is privacy since the information is kept confidential and deleted six months after the completion of the investigation. According to Compt (2014), ethical considerations impact every stage of the research process, starting with the choice of study setting, design, methods, and data analysis. This study ensures to the participants that the information will not be shared with third parties. Participants were reassured that whatever details they provide have no impact on their performance or job assessment. This has been mentioned in the cover letter of the questionnaire.

### **3.9 Data Collection Method**

Data collection is a crucial part of quantitative research. A questionnaire is the most popular and efficient technique for gathering data for a study. Accordingly, it is being employed as the main data collection instrument. Participants can provide the needed information briefly to interact with questionnaires while significantly lowering reaction bias (Sekaran & Bougie, 2016).

According to Krosnick & Presser (2010), when creating a questionnaire, researchers should consider some aspects such as using simple and clear language, avoiding using jargon or words with confusing shades of meaning, and avoiding using trick and indirect questions. Avoiding double-direct questions, using straightforward questions, collecting the 'same topic questions' together, sorting the "similar topic questions" in one group, ordering the

complicated or critical in the last and testing the questionnaire beforehand. All of these suggestions were taken into account when developing the questionnaire.

Each faculty member was contacted to obtain permission to distribute the questionnaires from the faculty scientific affairs. The deputy dean was provided with an explanation of the questionnaire's elements and the study's purpose. Each questionnaire involves a cover letter that guarantees respondents the confidentiality of their information. Since the institutions are located in different locations throughout Jordan. The study used an e-survey. The mailing list was obtained from the university's website. Survey Monkey software is used to develop the survey (SurveyMonkey Inc., Portland, OR). To ensure participants' privacy, the survey was designed to delink responses from respondents' e-mail addresses. To avoid having one person respond more than once, the software generates a unique identifier.

The data collection started end of September, 2023 and ended on the first of May, 2024. All the questionnaires were sent by email to the participants.

### **3.10 Statistical Techniques and Data Analysis**

The principal target of this study is to test the research hypothesis based on the conceptual framework proposed. This study is quantitative and collected primary data through self-administered questionnaires. This study claims that leadership style, organizational commitment and organisational culture are success factors of organization, and these factors' effect on Jordanian five-star hotels (OCB) are to be investigated. Furthermore, Partial Least Square Structural Equation Modelling (PLS-SEM) is utilized to analyze the data collected.

### **3.10.1 Statistical Package for Social Sciences (SPSS)**

SPSS is the most popular and widely used data analysis software in the academic community (Zikmund, 2003). This study employs this program to examine the data for coding, missing values, and outliers before doing basic data analysis and descriptive statistics. It will also be employed for descriptive analysis in this study, including age, marital status, and academic rank.

### **3.10.2 PLS Path Model**

The PLS path modelling method is widely used for estimating causal links in path models that are assessed indirectly across several dimensions incorporating latent components. This model is described by two models: a measuring model (initial model) that links manifest variables (MVs) to latent variables (LVs), and a structural model (final model) that connects endogenous LVs to other LVs. The measurement model is referred to as the outer model, while the structural model is referred to as the inner one. The inner model describes the relationship between unobserved or latent variables, while the outer one describes the relationship between a latent variable and its manifest variable. The general design of a PLS presents a recursive inner model that is exposed to predictor specifications. Therefore, the inner model comprises a causal chain system and includes two different outer models: the reflective and the formative measurement models.

#### **3.10.2.1 Testing the Initial Model of the PLS Approach**

There are two steps in PLS SEM analysis and testing the Initial Model (measurement model) is the first step. Before hypothesis testing (also referred to as structural model), the measurement model is evaluated based on some criteria. Test of measurement model includes the reliability test, outer loadings calculations and validity test. These are discussed in detail below.

### 3.10.2.2 Reliability Analysis

Reliability is defined as an evaluation of the stability level among several measurements of a construct (Heale & Twycross, 2015). Consequently, the instrument's reliability analysis was conducted to measure the consistency level of items employed to measure the construct. The instrument's reliability means that the evaluation will generate similar findings if used repeatedly. Because of its practical advantage, Cronbach's alpha method has become the popular and widespread reliability testing method utilized, particularly among the ample and diverse social sciences literature. This study uses Cronbach's alpha method to assess the reliability of the measurements. The estimated coefficient of Cronbach's alpha shows the stability of items that are used to evaluate the same construct. In other words, a high coefficient in Cronbach's alpha among items of the construct also implies high consistency and provides more tendency to assess the meant construct. To determine the most suitable and standard cut point for Cronbach's alpha coefficient level, Taber (2018) and Bujang, Omar, and Baharum (2018) recommended some minimum standards for Cronbach's alpha. For instance, Cronbach's alpha is 0.7, 0.8 and 0.9 for exploratory, basic and critical issue-based research. The evaluation of the Cronbach's alpha is shown in the Table below.

**Table 3.18: Summary of Reliability Coefficient**

<b>Reliability coefficient</b>	<b>Remarks</b>
Less than 0.60	Poor
0.70	Acceptable
0.80	Good
0.90 and more	Excellence

Sources: ( Sekaran and Bougie ,(2010), p. 162)

### **3.10.2.3 Loadings**

The PLS measuring model can also be used to load items. A concept should have absolute correlations greater than 0.7 with each of its manifest variables, including the absolute standardised outer loadings. Furthermore, other literature for instance, Richter, Sinkovics, Ringle, and Schlaegel (2016) suggested “eliminating reflective indicators from measurement models if the outer standardized loadings are smaller than 0.4”. Based on the consistency characteristics of PLS, empirical studies should be cautious when eliminating indicators. Only if an indicator's reliability is low and eliminating it goes along with a substantial increase in composite reliability will it become appropriate to abandon this indicator. However, this study adopted an item loading value of 0.60, as recommended by (Park, Lee, & Chae, 2017).

### **3.10.2.4 Validity Analysis**

Validity refers to the level at which the measuring device or test accurately measures what the researcher is looking for. To perform an exploratory analysis, convergent and discriminant validities and scale reliability are important (Wipulanusat, Panuwatwanich, & Stewart, 2017). Usually, two types of validity are involved in social science research. The first one is convergent validity, and the second one is discriminant validity. Convergent validity evaluates the condition that an item can effectively reflect its corresponding factors, while discriminant validity evaluates two factors as statistically different (Henseler, Ringle, & Sarstedt, 2015). The criteria for these two types of validity are discussed below.

### **3.10.2.5 The Convergent Validity of the Measurement**

Convergent validity is the degree to which a set of variables converge in measuring a particular concept (Hair, Hult, Ringle, & Sarstedt, 2016). Convergent validity indicates the same underlying construct, which can start through the same dimensions. Ab Hamid, Sami, and Sidek (2017) state that for using average variance extracted (AVE) as a convergent validity criterion. An AVE value of at least 0.5 indicates sufficient convergent validity, meaning that a latent variable on average can explain over half of the variance of its indicators. Hair et al. (2016), suggested some criteria to ensure convergent validity such as the factor loadings, average variance extracted (AVE) and composite reliability (CR). The acceptable value for the item's loadings in the measurement model is 0.5, as suggested by Hair et al. (2016) in the multivariate analysis literature. The second aspect of convergent validity is composite reliability, which shows the extent to which the latent construct is consistently indicated by a set of items in the model of Hair et al. (2016). Composite reliability values are normal once the loading and AVE meet their minimum requirement. These results will confirm the convergent validity of the outer model. In sum, to confirm the convergent validity of the outer model, the values of the item loading, average variance extracted (AVE) and composite reliability were examined.

### **3.10.2.6 The Discriminant Validity of the Measurements**

To ensure the construct validity of the outer model, it is also necessary to establish the discriminant validity. This step is compulsory before testing the hypothesis through the path analysis. The measures of discriminant validity show the extent to which items are discriminated among constructs. Simply put, it shows that the items used in different constructs do not overlap. Therefore, constructs although correlated, measure distinct concepts. This meaning was explained by Voorhees, Brady, Calantone, and Ramirez (2016)

who concluded that if the discriminant validity of the measures was established, it means that the shared variance between each construct among their respective measures should be higher than the variance shared among different constructs. There are two ways to determine the validity of discrimination. The first one is by examining the correlations between the measures of potentially overlapping constructs. The second one is by using Farrell's (2010) approach. In this approach, the AVE of each construct should be higher than the square of the interrelationship between a construct and another construct or the square root of the AVE of each construct is expected to be higher than the relationship between a particular construct and other constructs. For this study, the measures of discriminant validity were justified by adopting both approaches. Table 3.17 provides detailed information about the specific criteria for convergent and discriminant validity evaluation.

**Table 3.19: Criteria for Assessing Measurement Model (Outer Model)**

<b>Convergent Validity</b>	
<b>Criteria</b>	<b>Description</b>
Individual item reliability - factor loading;	Factor loading should be greater than 0.70 for each item.
Composite reliability (CR)	(CR) should be higher than 0.70 to materialize internal consistency between constructs' indicators.
Average Variance Extracted (AVE)	AVE should be greater than 0.50.
<b>Discriminant Validity</b>	
<b>Criteria</b>	<b>Description</b>
Cross loading	The value of the factor loading of each item to its respective construct should exceed the correlation with other constructs.
Latent variable correlations (square root of AVE).	The value of the square root of AVE should be higher than the correlation between the factors of off-diagonal elements in the rows and columns.

### **3.11 Assessing the Final Model (Structural Model)**

Assessment of the structural model is the second step in PLS-SEM analysis. Estimation of a valid and reliable outer model allows for assessing the estimates of the inner path model. The necessary measures for evaluating the endogenous latent variables include the coefficient of determination ( $R^2$ ), effect size ( $f^2$ ) calculation and predictive relevance ( $Q^2$ ). The next discussion covers these issues.

#### **3.11.1 Model Fit and Validity**

##### **3.11.1.1 Coefficient of Determination ( $R^2$ )**

The value for the coefficient of determination ( $R^2$ ) shows the variation in the endogenous or manifest variables caused by the exogenous variables. Henseler, Ringle, and Sarstedt (2012), proposed the value of  $R^2$  up to 0.19, 0.33, and 0.67 in PLS path models as weak, moderate and substantial, respectively. On the other hand, different submissions by Cohen (1988) indicate that the value of  $R^2$  for endogenous latent variables are assessed as follows: 0.26 and above means substantial, 0.13 – 0.25 indicates moderate and 0.02 – 0.12 denotes weak variance caused by the exogenous variables.

##### **3.11.1.2 Standardise Root-Mean-Square Residual (SRMR)**

The SRMR is the root mean square discrepancy between correlations among the observed and the model implied (Hair et al. 2016). Hu & Bentler (1998) consider that a value below 0.08 is generally considered a good fit. However, Hair et al. (2016) suggest that this threshold is too low for PLS-SEM. Further, Kline (2015) also states that an SRMR value below 0.01 is still acceptable.

### **3.11.1.3 Goodness of Fit (GOF) (SRMR)**

Unlike other approaches for instance CB-SEM approach; PLS Structural Equation Modelling has a single evaluating factor for goodness of fit. As defined by Tenenhaus, Vinzi, Chatelin, and Lauro (2005), a goodness of fit measure (GoF) in the PLS path modelling is the geometric mean of the average communality and average  $R^2$  for the endogenous constructs. Therefore, the goodness of fit measure accounts for the variance extracted by both outer and inner models. To justify the reliability of the PLS model, the value of goodness of fit was assessed based on the guidelines set up by (D'Agostino, 2017) as follows;

GOF = 0.10 means small; GOF = 0.25 means medium and GOF = 0.36 means large explanatory power.

Tenenhaus et al. (2005) proposed GoF as a metric that combines effect magnitude and convergent validity. However, the usage of GoF II is frequently criticised in the literature due to its statistical flaws (Hair et al., 2014). Weaknesses identify including not being appropriate for model justification (Henseler et al., 2012) and poor treatment of misspecified models (J. F. Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Interestingly, GoF cannot be generated from PLS but rather is manually computed.

### **3.11.1.5 Predictive Relevance (Q2)**

Predictive Relevance (Q2) is a different evaluation approach to the structural model, which comprises the ability to predict the model. The most widely used approach of predictive relevance is Stone-Geisser's Q2 (Geisser, 2017), which can be assessed using the blindfolding process (Tenenhaus et al., 2005). The Stone–Geisser criterion suggests that the model has to be capable of providing estimates of the indicator among the endogenous latent variable. The technique denotes a synthesis of function fitting and cross-validation. As Chin

(1998) points out, “the prediction of observables or potential observables is of much greater relevance than the estimator of what are often artificial construct parameters”. Ali et al. (2018) claim that the sample reuse technique, especially the blindfolding procedure to get the cross-validated redundancy (instead of the cross-validated communality) fits the PLS path modelling approach like “hand in glove.” The blindfolding procedure is only applied to endogenous latent variables which have a reflective measurement model operationalization. Where the value of any respective endogenous latent variable is greater than zero, the explanatory variables provide predictive relevance. In correlation with the effect-size  $f^2$  measurement, the relative effect of the predictive relevance can be measured by employing the  $Q^2$  evaluation. The  $Q^2$  values of 0.35, 0.15, and 0.02, stand for a large, medium, or small predictive relevance of any respective latent variable, thus explaining the latent endogenous variable in the model. Table 3.18 illustrates the detailed criteria to evaluate the Structural Model (Inner Model).

**Table 3.20: Criteria for Evaluating Structural Model (Inner Model)**

Criteria	Description
Coefficient of determination ( $R^2$ )	Chin (1998), suggested that values of $R^2$ above 0.67 are considered high, while values ranging from 0.33 to 0.67 are moderate, whereas values between 0.19 to 0.33 are weak and any $R^2$ values less than 0.19 are unacceptable.

Effect size ( $f^2$ )	Cohen (1988), criteria to determine effect size ( $f^2$ ) recommended that values of $f^2$ above 0.35 are considered large, values ranging from 0.15 to 0.35 are medium, values between 0.02 to 0.15 small effect size and lastly any values less than 0.02 are considering with no effect size.
Predictive relevance ( $Q^2$ )	According to the recommendation of Fornell and Cha (1994), a value of cross-validity redundancy above zero ( $Q^2 > 0$ ), indicates that there is a predictive relevance while a value of $Q^2$ less than zero means that the model lacks predictive ability.
Goodness of fit (GoF)	Regarding the criteria of (Wetzels, Odekerken-Schröder, & Van Oppen, 2009), 0.1 means a small GoF, 0.25 is considered medium and a value greater than 0.36 indicates a large GoF.
Estimate path coefficient	The value of the path coefficient should be estimated in terms of magnitude, sign and significance (the latter via bootstrapping), commonly used critical values for two-tailed tests are 1.65 (significance level = 10%), 1.96 (significance level = 5%), and 2.57 (significance level = 1 %) (J. F. Hair et al., 2014).

### 3.12 Hypotheses Testing

For hypotheses testing purposes, parameter estimates together with coefficient values were examined through bootstrapping with 5000 replications (Wetzels, Odekerken-Schröder, & Van Oppen, 2009). According to Hair et al. (2017), bootstrapping is a non-parametric procedure that allows the testing of the statistical significance where subsamples are created with randomly drawn observations from the original set of data (with replacement). According to Hair et al. (2019), the hypothesis can be considered as supported

under four conditions: (1) when the direction of the beta value aligns with the direction of the hypothesis, (2) when the t-value is greater than or equal to 1.645, (3) when the p-value is smaller than or equal to 0.05, and (4) when the 95% confidence interval does not have a zero straddle between lower level (LL) and upper level (UL). The evaluation of the results of the structural model involves the examination of the constructs' relationships and the model's predictive capabilities (Hair et al., 2018).

### **3.13 Effect Size ( $f^2$ )**

Change in  $R^2$  can be explored to see whether the impact of a particular independent latent variable on a dependent latent variable has a substantive impact (Chin, 2010). This is known as an effect size ( $f^2$ ) analysis. The effect size measures the impact on the endogenous constructs when a specified exogenous construct is omitted from the structural model (Hair et al., 2018).

Effect size assesses the magnitude or strength of the relationship between the latent variables. It is important since the effect size helps researchers to assess the overall contribution of a research study.

Chin et al., (1996) have pointed out that researchers should not only indicate whether the relationship between variables is significant or not but also report the effect size between these variables. The  $f^2$  is calculated as follows:

$$f^2 = \frac{R_{included}^2 - R_{excluded}^2}{1 - R_{included}^2}$$

According to Carte & Russell (2003), there is no effect size for f-squared below 0.02, small if the f-squared ranges within 0.02 to 0.15, medium if ranges within 0.15 to 0.35 and large for the f-squared above 0.35.

### **3.14 Common Method Variance (CMV) & Collinearity**

The issue of common method variance (CMV) may arise since this study adopted a single source to gain the data, as the dependent and independent variables are obtained from the same person at the same time (Mackenzie et al., 2011). Podsakoff et al. (2003) proposed procedural and statistical methods to overcome Whistleblowing intentions among external auditors in this issue. In this study, several procedural remedies were performed as follows; firstly, in the questionnaires' cover page, the instructions to the respondents were carefully written, together with the statements on the assurance that their personal information and responses would be kept confidential and anonymous. The cover page also indicates the response given to the questionnaire would be wholly voluntary and that there were no right or wrong answers.

Secondly, the different scale endpoints were used for predictor and criterion measures as suggested by Mackenzie et al. (2011). In this study, all variables were measured with a 5-point Likert scale. Since data was collected using a single source, we first tested the issue of Common Method Bias by following the suggestions of Diamantopoulos and Siguaw (2006), Kock and Lynn (2012), Kock (2015), and Ngah et al., 2019 by testing the full collinearity. In this method, all the variables are regressed against a common variable and if the variance inflation factor (VIF) is less than 5, then there is no bias from the single source data that would bias the regression results (Hair, Ringle & Sarstedt, 2011).

### 3.15 PLS -SEM Justification

PLS-SEM researchers agree that those models that only use common factor models, should mainly consider the Covariance-based Structural Equation Model (CBSEM). While researchers using models with composites should use methods based on composites such as PLS-SEM (Dijkstra & Henseler, 2011), in the case of mixed models where both factors and composites are to be found, the option is limited to PLS consistent (PLSc) (Dijkstra & Henseler, 2015).

The following indications prompt the justification for selecting the PLS technique in this study:

First, PLS-SEM is attributed to the type of latent variables in the path model that researchers intend to estimate (i.e. these models are intended primarily as speculative proposals and as conceptual constructs). According to Rigdon (2014), the specified constructs in a path model are just proxies, and there is always a validity gap between these proxies and the true value of the theoretical concept. The last ones are the main goal of path models' specifications. Thus, the specification of measures (i.e. latent variables) is named as the measurement model in the SEM.

Second, another reason for using PLS-SEM is related to the nature of the construct. Although the researcher determines the type of latent variable or measurement model, Henseler (2017) suggests that the selection should be based on the nature of the construct. And by doing so, "behavioural constructs" and "design constructs" can be identified. On the one hand, when the construct independently exists in reality as an ontological entity associated with psychological characteristics (such as authentic leadership, inclusive leadership, innovative work behavior, adaptive performance and psychological capital), it

can be stated that this construct is “behavioural”. Therefore, this construct is probably modelled as a common factor. If this construct possesses causal and formative indicators, it can be considered as a “formative construct”. On the other hand, when the construct is a theoretical thought product, created by and for the research, and it is an artefact composed of elemental components like a mix of them, we can consider this construct as a “design construct”, and, therefore, this is better modelled employing composites (Henseler, 2017; Henseler et al., 2014). Following Henseler, Hubona, and Ray (2016) PLS-SEM can only be estimated by composites. The implications of this election, as commented, determine the more suitable types of SEM (i.e. CB-SEM vs PLS-SEM). The works of Ringle, Rigdon, and Sarstedt (2018) and Henseler (2017) can help in this discussion.

Third, structural equation models have been proven and established to be an efficient technique that conducts better estimations than other regression methods (Tarka, 2018).

Fourth, in real-world scenarios and the application of complex models, the modelling of PLS has better advantages hence it's suitable and appropriate compared to other models in the literature (Hair et al., 2014). The basic assumption guiding the modelling of PLS includes the ability to dynamically develop and measure complicated models, making the model possess the superior qualities of evaluating complex and large models (Akter, Fosso Wamba, & Dewan, 2017). Hence, this study applied a complex model with several variables. This serves as a further justification for the adoption of the PLS technique in this study.

Fifth, in several literatures among social science disciplines, the normality problem of data is a common phenomenon (Shaheen, Ahmad, Waqas, Waheed, & Farooq, 2017) while the normality of data is not a requirement in the PLS technique (Cepeda-Carrion, Cegarra-Navarro, & Cillo, 2019). It is better to mention that PLS relatively handles all data

with non-normality features. Because of that, the PLS modelling technique is adopted and chosen to be used in the estimation process of this study to assist in any possible data-normality problem that may occur during the analysis period.

Sixth, the PLS technique provides significant and reliable findings in contrast to other statistical estimation packages (for instance, SPSS), which frequently provide unclear conclusions and require numerous analyses individually for the model (Ong & Puteh, 2017). Empirical evidence by (Sarstedt, Ringle, & Hair, 2017) shows that PLS-SEM is one of the most powerful statistical tools in social and behavioural sciences that can test several relationships simultaneously. Additionally, one of its powerful features is its suitability for forecasting studies where the technique assists professionals and experts in concentrating on the description of endogenous constructs.

Seventh, PLS determines the measurement and structural models through multiple regressions, whose estimates can be vulnerable to multicollinearity issues (Jung & Park, 2018).

Finally, the PLS technique is also been utilized in the measurement of formative and reflective models (Duarte & Amaro, 2018). The PLS modelling has to be employed in the initial stage of theoretical development to assess and validate exploratory models.

**Table 3.22: Key Reasons for Using PLS-SEM**

No.	Reasons	Source
1	Latent variables in the path model are composites	Ringle et al. (2018), Sarstedt et al. (2017)

<b>Table 3.23: Key Reasons for Using PLS-SEM</b>		
<b>2</b>	The research objective is the prediction of critical constructs.	Carrión, Henseler, Ringle, and Roldán (2016), Shmueli, Ray, Estrada, and Chatla (2016)
<b>3</b>	Identify drivers constructs	J. F. Hair et al. (2014)
<b>4</b>	Secondary or file data are used.	Gefen, Rigdon, and Straub (2011), Rigdon (2014)
<b>5</b>	The sample size is small because the population is small.	Richter et al. (2016)
<b>6</b>	Complex path models (i.e. high indicator numbers and constructs) are estimated.	Chin (2010), Hair, Hult, Ringle, Sarstedt, and Thiele (2017)
<b>7</b>	An exploratory approach is adopted in a situation where there is abundant data, low theoretical support and no clear guide to specifying the measurement models.	Ringle et al. (2018)
<b>8</b>	Latent variable scores are required, for example, high-order constructs.	Chin (2010)

### **3.16 Summary**

This chapter is designed to highlight the detailed and extensive discussions on the selected methodology and other estimation procedures following the stated research questions and theoretical framework of this study. The research is quantitative and exploratory in nature which utilized PLS SEM as a technique for data analysis and estimation. The PLS SEM as shown and supported by the literature is regarded as a second-

generation structural equation modelling (Herman, 1982). This technique performs all functions relatively better in contrast to other structural equation models which also comprise of series of cause-and-effect relationships and latent variables (Tarka, 2018). Therefore, this PLS technique is an appropriate and dynamic tool for building and predicting statistical models (J. F. Hair et al., 2014). The structural equation models of PLS have been proven and established to be an efficient technique that conducts better estimations than other regression methods (Matthews, Hair, & Matthews, 2018).

The study adopted the post-positivist epistemological paradigm because it is based on testing the formulated hypothesis (Creswell & Clark, 2017). This approach represents a pattern of research conducted with research activities that involve problem identification, research purpose specification, data collection, analysis and interpretation (Quinlan, Babin, Carr, & Griffin, 2019). To achieve this objective, this study is guided by its underpinning theory and other associated contributing theories. Relevant data needed for this study is collected through primary and secondary sources. The primary data collection involves the use of a survey instrument. According to Bell, Bryman, and Harley (2018), survey research is a more accurate, less costly and faster method of gathering data compared to other data-gathering methods such as interviews. This survey instrument is either an adaptation of comparable questions or a fresh design created specifically to examine the components under study. Primary data are used to assess continuous variables in the model, which include inclusive leadership, genuine leadership, adaptive performance, innovative work behaviour, and psychological capital. It has also been established that a questionnaire is beneficial in translating specific questions to the information that is needed by the respondents (Zikmund, Babin, Carr, & Griffin, 2013).

To evaluate the model and ensure the validity of the findings, the study utilized several assessment criteria which are compatible with the PLS-SEM model, including the coefficient of determination ( $R^2$ ), the effect size, the goodness of fit, and the predictive relevance. These assessment criteria are very essential in academic research utilizing the PLS-SEM technique because they show the superiority and significance of the model in contrast to other estimation techniques, particularly the regression.

The next chapter therefore will provide the research findings from the analysis conducted based on the data scope of this study. It will also indicate how Smart PLS version 3.2 was employed to analyze the data, including the visual representation of the findings. Furthermore, the chapter provides the characteristics of the study sample size as represented by the respondents' profile which serves as the demographic information in the questionnaire template. The chapter will also indicate how the 5-point Likert scale in the questionnaire presentation is employed to preliminary investigate the data collected and further analyse the results.

## **CHAPTER 4**

### **DATA ANALYSIS AND FINDINGS**

#### **4.1 Overview**

This chapter describes the analysis conducted and displays the empirical results to examine the hypotheses of this research, using SMART-PLS 4.0 and SPSS 26 software. This chapter comprises eleven major sub-sections. Following the first section as an introduction, the second section checks the missing values. The third section provides a general explanation of the survey respondents and sample profile. The fourth section presents the results of conducting common method bias, using Harman's Single Factor test. The fifth section conducts exploratory factor analysis (EFA) to examine the stability of the factor loadings of the items on their constructs. The sixth section represents the measurement models' results through Confirmatory Factor Analysis (CFA) used to assess the unidimensionality, reliability and validity of the constructs. The seventh section checks the multicollinearity between the variables. The eighth section provides the descriptive results of the constructs. The ninth section reports the results of structural models to test the hypothesized causal, mediation and moderation effects developed in this research. Section tenth section conducts comparative tests of the Independent Sample T-test and One Way ANOVA/Welch test to examine the mean difference of the latent constructs between the groups of HEIs sector, gender, age, academic rank, work experience and educational level. The eleventh section provides a summary of the data analysis results and the findings.

#### **4.2 Rating response**

The current research employed non-probability sampling, specifically cluster sampling and proportionate random sampling. The population was divided into clusters

based on location, and proportionate random sampling was then applied to determine the number of academics included in the sample from both public and private higher education institutions (HEIs) in Jordan. In total, 26 HEIs were included in the study (refer to Figure 4.1). To ensure sufficient representation, 700 questionnaires were distributed, with equal allocation to public and private HEIs (i.e., 350 questionnaires for each sector).

Out of the 700 distributed questionnaires, 511 were returned, resulting in an initial response rate of 73%. However, after reviewing and coding the responses, 67 questionnaires were deemed unusable as they either failed to meet the data collection criteria or were returned empty. Consequently, the final valid response count was 444, leading to a valid response rate of 63.4%. Despite 27% of the questionnaires not being returned, this response rate is considered adequate in survey-based academic research. The study accounted for potential non-response bias by ensuring proportionate distribution between public and private HEIs, which helps maintain data reliability and representativeness.

The rationale for distributing 700 questionnaires was to secure a sufficient and statistically significant dataset, considering possible non-responses and unusable questionnaires. Ensuring equal distribution between public and private HEIs (350 each) allowed for a balanced comparison between the two sectors. The inclusion of both public and private HEIs was essential to examine variations in leadership styles, innovative work behavior (IWB), and adaptive performance. Since organizational structures, leadership practices, and faculty expectations differ between public and private institutions, gathering data from both sectors provided a more comprehensive understanding of the factors influencing academic staff performance.

This response rate and sampling approach reinforce the reliability of the study's findings, ensuring meaningful insights into the academic environment across Jordanian HEIs.

### **4.3 Sample Profile**

Table 4.1 represents the frequencies and percentages of the demographical variables. Over 444 collected useful questionnaires, the distribution between HEI's public and private sectors was equal and 222 (50%) for each. In specifying gender, 338 (76.1%) were received from males and 106 (23.9%) were received from females. In specifying the Age of the respondents, 1.6% were under 35 years old, 30% were between 30 thru 39 years old, 42.6% were between 40 thru 49 years old, 21.4% were between 50 thru 59 years old and 4.5% were above 60 years old. In specifying marital status, 78.8% of the respondents were married, 4.3% were divorced, 0.9% were separated, 1.1% were widowed and 14.9% were single. The respondents were asked to specify their educational level, as a result, 3.2% had a Bachelor's degree, 8.6% had a Master's Degree and 88.3% had a PhD degree.

The respondents were also asked to specify their academic rank. As the results, 10.6% were Lecturer, 4.1% were Senior lecturer, 32.2% were Assistant Professor, 34.5% were Associate Professor and 18.7% were full professor. In specifying work experience, 23.6% had below 5 years, 30.2% had 5-10 years, 21.6% had 11-15 years, 13.1% had 16-20 years, 7.7% had 21-25 years and 3.8% had more than 26 years.

<b>Group</b>	<b>Frequency</b>	<b>Percentage</b>
<b>HEIs Sector</b>		
Public Sector	222	50.0%
Private Sector	222	50.0%
<b>Gender</b>		
Male	338	76.1%
Female	106	23.9%
<b>Age</b>		
Under 30 years	7	1.6%
30 – 39 years	133	30.0%
40 – 49 years	189	42.6%
50 – 59 years	95	21.4%
Above 60 years	20	4.5%
<b>Marital Status</b>		
Married	350	78.8%
Divorced	19	4.3%
Separated	4	0.9%
Widowed	5	1.1%
Single	66	14.9%
<b>Educational Level</b>		
Bachelor Degree	14	3.2%
Master's Degree	38	8.6%
PhD Degree	392	88.3%
<b>Academic Rank</b>		
Lecturer	47	10.6%
Senior lecturer	18	4.1%
Assistant Professor	143	32.2%
Associate Professor	153	34.5%
Full professor	83	18.7%
<b>Work Experience</b>		
Below 5 years	105	23.6%
5-10 years	134	30.2%
11-15 years	96	21.6%
16-20 years	58	13.1%
21-25 years	34	7.7%
Above 26 years	17	3.8%

**Table 4.1: Sample Profile**

#### **4.4 Common Method Bias (Harman's single-factor test)**

Common method bias which is defined as 'variance that is attributable to the measurement method rather than to the constructs the measure represents' (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) could be problematic. The phenomenon refers to a bias in the dataset because of something external to the measures. Something external to the question may have impacted the response given. In this study, the data was collected through a single method (i.e., manual questionnaire survey) which may introduce systematic response bias that will either impact or deflate responses.

In this study, Harman's single-factor test (Hoyle, 1995) was employed to check whether common method variance was a serious problem, as this study employed a one-wave self-reported design, which means that the data of all the variables were collected at the same point in time. The findings of Harman's single-factor test revealed that the one-factor model explained 23.374 of the total variance, below the cut-off of 50%, indicating that common method variance was not a serious problem (Hoyle, 1995). The results are represented in Appendix A).

#### **4.5 Exploratory Factor Analysis (EFA)**

Exploratory factor analysis (EFA) serves the purpose of attaining data reduction or preserving their original state and character, as well as removing items that had lower factor loadings and cross-loadings. (Hair, et al., 2006). EFA was conducted in this study to examine the stability of the factor loadings of the items of latent construct variables to ensure the factorial validity of the instruments employed in the study.

The responses were examined using principal components as the extraction technique and Varimax as the orthogonal rotation method. To determine the suitability of

the data for EFA, the value of Bartlett's test of sphericity (BTS) and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were checked as the assumptions of EFA (Kaiser, 1974). The KMO tests whether the partial correlations among items are small. The KMO values must be greater than 0.60 (Blaikie, 2003). Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix, which would indicate that the factor model is inappropriate. The test of Bartlett is supposed to be significant at  $p < 0.05$  to present the adequacy of the correlations among variables and thus provide a reasonable basis for factor analysis (Williams, Brown, & Onsman, 2012).

Moreover, Scree plots and Eigen values were examined to ensure that the factor number is mainly liable for the data variation (Tabachnick & Fidell, 2007). In the case of Eigen values, For Eigen values, the Kaiser criterion value 1.00 was the determining measure to decide on the number of factors. The Variance, as illustrated by the factor result, was taken into account with an objective level of 60 per cent and/or more of its entire variance. It has also been proved to be adequate for a factor resolution in the field of social sciences. (Hair, et al., 2006). Diekhoff (1992) considered 50 per cent of the described total variance as its entry/verge.

Communality procedures were also applied as a component of the factor analysis. Communalities portray the quantity of the variance in the original variables that are considered by the factor solution. The factor solution is expected to describe half of each of the original variable's variance, at best; hence, the communality value for each of the variables should be at 0.50 or more. Consequently, for the purpose of the specification, variables with commonalities of less than 0.50 were omitted from any following analysis (Hair, et al., 2006) In assessing the Convergent validity, items were retained according to

the following criteria: 1) factor loading greater than 0.5 and 2) no cross-loading of items. In other words, items were dropped where they had a loading of less than 0.5 or where their loadings were greater than 0.5 on two or more factors (Hair et al., 2006). The reason for choosing a cut-off point of 0.5 or greater in this study was because this threshold value was considered crucial in ensuring practical significance for sample sizes of 150 and above and before the analyses proceed to the confirmatory factor analysis (Hair et al., 2006; Ledesma & Valero-Mora, 2007).

Discriminant validity refers to the extent to which factors are distinct and uncorrelated. A primary method that exists for determining discriminant validity during an EFA is to examine the factor correlation matrix. Correlations between factors should not exceed 0.7. A correlation greater than 0.7 indicates a majority of shared variance;  $0.7 * 0.7 = 49\%$  shared variance (Jackson, 1969).

The results of EFA for the twenty (20) first-order constructs and five (5) second-order constructs are represented in **Table 4.2**.

**Table 4.2: Exploratory Factor Analysis**

Latent Construct	Item	Communalities	Item Loading	BTS	KMO	Eigen Value	Variance (%)
Openness (OP)	OP1	0.787	0.887	651.688	0.734	2.375	79.166
	OP2	0.819	0.905				
	OP3	0.768	0.877				
Availability (AV)	AV1	0.668	0.817	858.598	0.828	2.883	72.082
	AV2	0.780	0.883				
	AV3	0.706	0.840				
	AV4	0.729	0.854				
Accessibility (AC)	AC1	0.879	0.938	378.372	0.500	1.759	87.933
	AC2	0.879	0.938				
Self-Awareness (SA)	SA1	0.612	0.783	686.715	0.803	2.691	67.278
	SA2	0.635	0.797				
	SA3	0.693	0.832				
	SA4	0.751	0.867				
Relational Transparency (RT)	RT1	0.725	0.851	793.811	0.829	2.829	70.735
	RT2	0.678	0.823				
	RT3	0.680	0.825				
	RT4	0.747	0.864				

Internalized Moral Perspective (IMP)	IMP1	0.665	0.815	499.899	0.781	2.451	61.269
	IMP2	0.500	0.707				
	IMP3	0.610	0.781				
	IMP4	0.677	0.823				
Balanced Processing (BP)	BP1	0.516	0.718	865.633	0.811	2.822	70.540
	BP2	0.798	0.893				
	BP3	0.778	0.882				
	BP4	0.730	0.854				
Idea Exploration (IE)	IE1	0.802	0.896	200.590	0.500	1.604	80.213
	IE2	0.802	0.896				
Idea Generation (IG)	IG1	0.747	0.864	814.182	0.722	2.460	81.990
	IG2	0.861	0.928				
	IG3	0.852	0.923				
Idea Championing (IC)	IC1	0.915	0.957	516.283	0.500	1.830	91.516
	IC2	0.915	0.957				
Idea Implementation (II)	II1	0.835	0.914	1042.883	0.731	2.597	86.568
	II2	0.912	0.955				
	II3	0.850	0.922				
Handling Emergencies and Unpredictable Situations (HEUS)	HEUS1	0.651	0.807	970.345	0.809	2.934	73.348
	HEUS2	0.815	0.903				
	HEUS3	0.799	0.894				
	HEUS4	0.669	0.818				
Handling Work Stress (HWS)	HWS1	0.734	0.857	484.668	0.718	2.222	74.074
	HWS2	0.768	0.876				
	HWS3	0.720	0.849				
Solving Problems Creatively (SPC)	SPC1	0.840	0.917	1250.183	0.843	3.150	78.751
	SPC2	0.843	0.918				
	SPC3	0.806	0.898				
	SPC4	0.661	0.813				
Learning (LE)	LE1	0.753	0.867	900.075	0.790	2.885	72.120
	LE2	0.720	0.848				
	LE3	0.697	0.835				
	LE4	0.715	0.846				
Demonstrating Interpersonal Adaptability (DIA)	DIA1	0.743	0.862	1075.856	0.845	3.071	76.783
	DIA2	0.806	0.897				
	DIA3	0.801	0.895				
	DIA4	0.722	0.850				
Efficacy (EF)	EF1	0.697	0.835	440.403	0.713	2.174	72.457
	EF2	0.733	0.856				
	EF3	0.744	0.863				
Hope (HP)	HP1	0.597	0.773	690.957	0.785	2.680	67.004
	HP2	0.721	0.849				
	HP3	0.707	0.841				
	HP4	0.656	0.810				
Resilience (RS)	RS1	0.652	0.791	312.693	0.687	2.004	66.812
	RS2	0.686	0.829				
	RS3	0.693	0.832				
Optimism (OM)	OM1	0.815	0.903	222.649	0.500	1.629	81.467
	OM2	0.815	0.903				
Inclusive Leadership (IL)	OP	0.778	0.882	799.145	0.717	2.460	81.985
	AV	0.877	0.936				
	AC	0.805	0.897				
Authentic Leadership (AL)	SA	0.856	0.925	1698.132	0.870	3.443	86.085
	RT	0.867	0.931				
	IMP	0.837	0.915				
	BP	0.883	0.940				
Innovative Work Behavior (IWB)	IE	0.500	0.706	1075.634	0.810	2.943	73.572
	IG	0.791	0.889				
	IC	0.817	0.904				

	II	0.836	0.915				
Adaptive Performance (AP)	HEUS	0.739	0.860	1709.056	0.874	3.857	77.145
	HWS	0.719	0.848				
	SPC	0.824	0.908				
	LE	0.791	0.889				
	DIA	0.784	0.886				
Psychological Capital (PC)	EF	0.726	0.852	899.979	0.805	2.875	71.886
	HP	0.837	0.915				
	RS	0.647	0.804				
	OM	0.666	0.816				

As shown in Table 4.2, a total of 66 items and 20 first-order constructs were assessed through the EFA. The commonality values of all items and first-order constructs were all above the cut-off 0.5 in the first iteration of EFA and ranged between 0.500 and 0.915.

In assessing the convergent validity, the results indicated only a single factor was identified for each of the constructs upon the given items. The factor loadings of all items on their first-order constructs and the factor loading of each first-order construct on their second-order constructs were above the threshold of 0.50 as recommended by (Hair et al., 2006), ranging between 0.706 and 0.957.

In assessing the discriminant validity, since only one factor was defined through EFA for all of the constructs, the correlations between factors and thus the discriminant validity were not applicable in this study.

Bartlett's test of Sphericity for all constructs was statistically significant at 0.001 level, below the standard significance level of 0.05 as recommended by (Williams, Brown, & Onsman, 2012). The chi-square values ranged between 200.590 and 1709.056. The resulting values of KMO ranged between 0.500 and 0.874, above the cut-off value of 0.5 as recommended by (Blaikie, 2003).

Based on the validity results, the Eigen values of all constructs exceeded the cut-off 1 as recommended by Tabachnick & Fidell, 2001, ranging between 1.604 and 3.857. The values of variance for all constructs were all above the cut-off of 50 per cent as recommended by Diekhoff (1992), and ranged between 61.269% and 91.516%. These results indicated that the study is assumed to have yielded reliable factors.

#### **4.6 Measurement Model (CFA) – Stage 1 of SEM**

The measurement model or confirmatory factor analysis (CFA) is used to find out the links between manifest or observed and latent or unobserved variables. The measurement model could therefore be said to define the manner in which latent or unobserved variables are assessed in terms of the manifest variables (Ho, 2006). Operationalization of constructs is a very important step (Hair, 2006) in the process of ensuring accuracy. Researchers have a choice of several established scales in attempting to ensure theoretical accuracy. However, despite the availability of a varied number of scales, researchers are often plagued by the problem of a lack of established scales and are thus driven to develop new measurement scales or greatly modify existing scales to accommodate new contexts. Given all these considerations, the basis for the SEM analysis is in the selection of items to measure the constructs (Hair et al., 2006).

In the CFA models, each of the constructs was assessed for their reliability and validity. Reliability is assessed using Cronbach's alpha, construct reliability (CR) and average variance extracted (AVE), whilst validity using construct, including convergent and discriminant.

This study comprised an overall measurement model. The next sub-sections discuss the development of each measurement model. The results of testing the uni-dimensionality of each construct are presented, using Smart-PLS 4.0.

Confirmatory factor analysis was used to assess the overall measurement model. The overall measurement model included all latent constructs with their indicators specified in the previous individual CFA model.

#### 4.6.1 Reliability and Convergent Validity

Table 4.2 represents the result of convergent validity Cronbach alpha and for the measurement model.

**Table 4.3: Results of Convergent Validity and Cronbach Alpha**

Latent Construct	Item	Factor Loading	AVE <sup>a</sup>	CR <sup>b</sup>	$\alpha$
Openness (OP)	OP1	0.896	0.791	0.872	0.868
	OP2	0.9			
	OP3	0.872			
Availability (AV)	AV1	0.822	0.721	0.871	0.871
	AV2	0.881			
	AV3	0.838			
	AV4	0.854			
Accessibility (AC)	AC1	0.935	0.879	0.864	0.863
	AC2	0.941			
Self-Awareness (SA)	SA1	0.783	0.673	0.841	0.837
	SA2	0.791			
	SA3	0.837			
	SA4	0.867			
Relational Transparency (RT)	RT1	0.853	0.707	0.863	0.862
	RT2	0.826			
	RT3	0.82			
	RT4	0.864			
Internalized Moral Perspective (IMP)	IMP1	0.824	0.612	0.804	0.788
	IMP2	0.681			
	IMP3	0.781			
	IMP4	0.834			
Balanced Processing (BP)	BP1	0.716	0.705	0.869	0.858
	BP2	0.893			
	BP3	0.883			
	BP4	0.856			
Idea Exploration (IE)	IE1	0.875	0.801	0.771	0.753
	IE2	0.915			
	IG1	0.862			

Idea Generation (IG)	IG2	0.927			
	IG3	0.926			
Idea Championing (IC)	IC1	0.955	0.915	0.908	0.907
	IC2	0.958			
Idea Implementation (II)	II1	0.915	0.866	0.923	0.922
	II2	0.955			
	II3	0.921			
Handling Emergencies and Unpredictable Situations (HEUS)	HEUS1	0.799	0.733	0.887	0.878
	HEUS2	0.904			
	HEUS3	0.899			
	HEUS4	0.819			
Handling Work Stress (HWS)	HWS1	0.858	0.741	0.829	0.825
	HWS2	0.883			
	HWS3	0.84			
Solving Problems Creatively (SPSYCAP)	SPSYCAP1	0.917	0.787	0.912	0.909
	SPSYCAP2	0.917			
	SPSYCAP3	0.895			
	SPSYCAP4	0.816			
Learning (LE)	LE1	0.878	0.721	0.876	0.871
	LE2	0.853			
	LE3	0.826			
	LE4	0.838			
Demonstrating Interpersonal Adaptability (DIA)	DIA1	0.864	0.768	0.899	0.899
	DIA2	0.894			
	DIA3	0.894			
	DIA4	0.852			
Table 4.2: Results of Convergent Validity and Cronbach Alpha Efficacy (EF)	EF1	0.836	0.725	0.81	0.81
	EF2	0.855			
	EF3	0.863			
	HP1	0.775	0.67	0.836	0.835
Hope (HP)	HP2	0.845			
	HP3	0.84			
	HP4	0.812			
	Resilience (RS)	RS1	0.773	0.668	0.759
RS2		0.834			
RS3		0.843			
Optimism (OM)	OM1	0.901	0.815	0.773	0.773
	OM2	0.905			
Inclusive Leadership (IL)	OP	0.882	0.82	0.891	0.89
	AV	0.936			
Authentic Leadership (AL)	AC	0.897			
	SA	0.925	0.861	0.946	0.946
	RT	0.931			
	IMP	0.915			
Innovative Work Behavior (IWB)	BP	0.94			
	IE	0.705	0.736	0.891	0.877
	IG	0.889			
	IC	0.904			
Adaptive Performance (AP)	II	0.915			
	HEUS	0.86	0.771	0.927	0.926
	HWS	0.847			
	SPSYCAP	0.908			
	LE	0.889			
Psychological Capital (PSYCAP)	DIA	0.886			
	EF	0.853	0.719	0.874	0.869
	HP	0.915			
	RS	0.798			
	OM	0.82			

$\alpha$  = Cronbach Alpha

a: AVE = Average Variance Extracted = (summation of the square of the factor loadings)/{(summation of the square of the factor loadings) + (summation of the error variances)}.

b: CR = Composite Reliability = (square of the summation of the factor loadings)/{(square of the summation of the factor loadings) + (square of the summation of the error variances)}.

As shown in Table 4.2, the results of assessing the standardized factor loadings of the model's items indicated that the standardised factor loadings of items and sub-constructs were all above 0.6, ranging between 0.681 (for IMP2) and 0.958 (for IC2).

Once the uni-dimensionality of the constructs was achieved, each of the constructs was assessed for their reliability. Reliability is assessed using average variance extracted (AVE), construct reliability (CR) and Cronbach's alpha. Table 4.2 shows that the AVE values, which reflect the overall amount of variance in the indicators accounted for by the latent construct, were above the cut-off 0.5 for latent constructs as suggested by Hair et al., 2006, ranged between 0.612 (for Internalized Moral Perspective (IMP)) and 0.915 (for Idea Championing (IC)).

The composite reliability values, which show how much the construct indicators reflect the latent construct, were higher than the 0.6 threshold that Bagozzi and Yi (1988) suggested for all latent constructs. They ranged from 0.759 for Resilience (RS) to 0.946 for Authentic Leadership (AL). The Cronbach's Alpha values, which describe the degree to which a measure is error-free, were above the threshold of 0.7 for all latent constructs as suggested by Nunnally and Bernstein (1994), ranged between 0.751 (for Resilience (RS)) and 0.946 (for Authentic Leadership (AL)).

## 4.6.2 Discriminant Validity

### 4.6.2.1 Fornell-Larcker Criterion

Table 4.4 represents the results of the Fornell-Larcker criterion to assess the discriminant validity of the measurement model for the hypothesized variables.

**Table 4.4: Fornell-Larcker Criterion**

	<b>AL</b>	<b>AP</b>	<b>IL</b>	<b>IWB</b>	<b>PSYCAP</b>
Authentic Leadership (AL)	<b>0.928</b>				
Adaptive Performance (AP)	0.430	<b>0.878</b>			
Inclusive Leadership (IL)	0.691	0.489	<b>0.905</b>		
Innovative Work Behavior (IWB)	0.485	0.457	0.457	<b>0.858</b>	
Psychological Capital (PsyCap)	0.433	0.479	0.404	0.598	<b>0.848</b>

As shown in Table 4.4, the inter-correlations between the hypothesized variables ranged between 0.404 and 0.691 which were below the threshold of 0.85 (Kline 2005). Further, as shown in Table 4.3, the analysis indicated that the value of the off-diagonal elements was smaller than the value of the square root of AVE. Therefore, it confirms that each latent construct measurement was discriminating to each order (Fornell & Larcker, 1981; Hair et al., 2014) based on the Fornell-Larcker approach.

### 4.6.2.2 HTMT Discriminant Criteria

Table 4.5 represents the results of HTMT discriminant criteria to assess the discriminant validity of the measurement model for the hypothesized variables.

**Table 4.5: Results of HTMT Discriminant Criteria**

	<b>AL</b>	<b>AP</b>	<b>IL</b>	<b>IWB</b>	<b>PSYCAP</b>
Authentic Leadership (AL)					
Adaptive Performance (AP)	0.460				

Inclusive Leadership (IL)	0.752	0.539		
Innovative Work Behavior (IWB)	0.534	0.499	0.516	
Psychological Capital (PsyCap)	0.476	0.531	0.458	0.679

As shown in Table 4.5, all the HTMT values between the hypothesized constructs were below 0.90 and ranged between 0.458 and 0.752. Therefore, it confirms that each latent construct measurement was discriminating against each other (Henseler et al., 2015).

#### 4.6.2.3 Cross Loadings

The Cross Loading Criterion specifically focuses on the assessment of discriminant validity for the measurement model. This criterion evaluates the degree to which each indicator correlates more strongly with its respective construct than with other constructs in the model, ensuring that each construct is distinct from the others. The data included in this table are critical for verifying that the measurement model aligns with the hypothesized structure of the study. As shown, each indicator's loading with its corresponding latent variable is provided, alongside its cross-loadings with other variables, with higher values indicating better convergent validity. Additionally, the cross-loadings of the indicators stipulated that the outer loading of an indicator on the associated construct was larger than all of its loadings on other constructs on each item row, as shown in Table B in the appendix. Additionally, the cross-loadings exhibited a difference of less than 0.2 to the preferred indicator across each indicator row. These results demonstrate no discriminant validity problem (Hair et al., 2011).

The table, available in the appendix, offers an in-depth look at the relationships between indicators and their constructs, which is crucial for confirming the robustness and reliability of the model. This analysis is a fundamental step in validating the measurement

model, ensuring that the constructs are well-represented and distinct from each other, thereby supporting the accuracy and validity of the overall model.

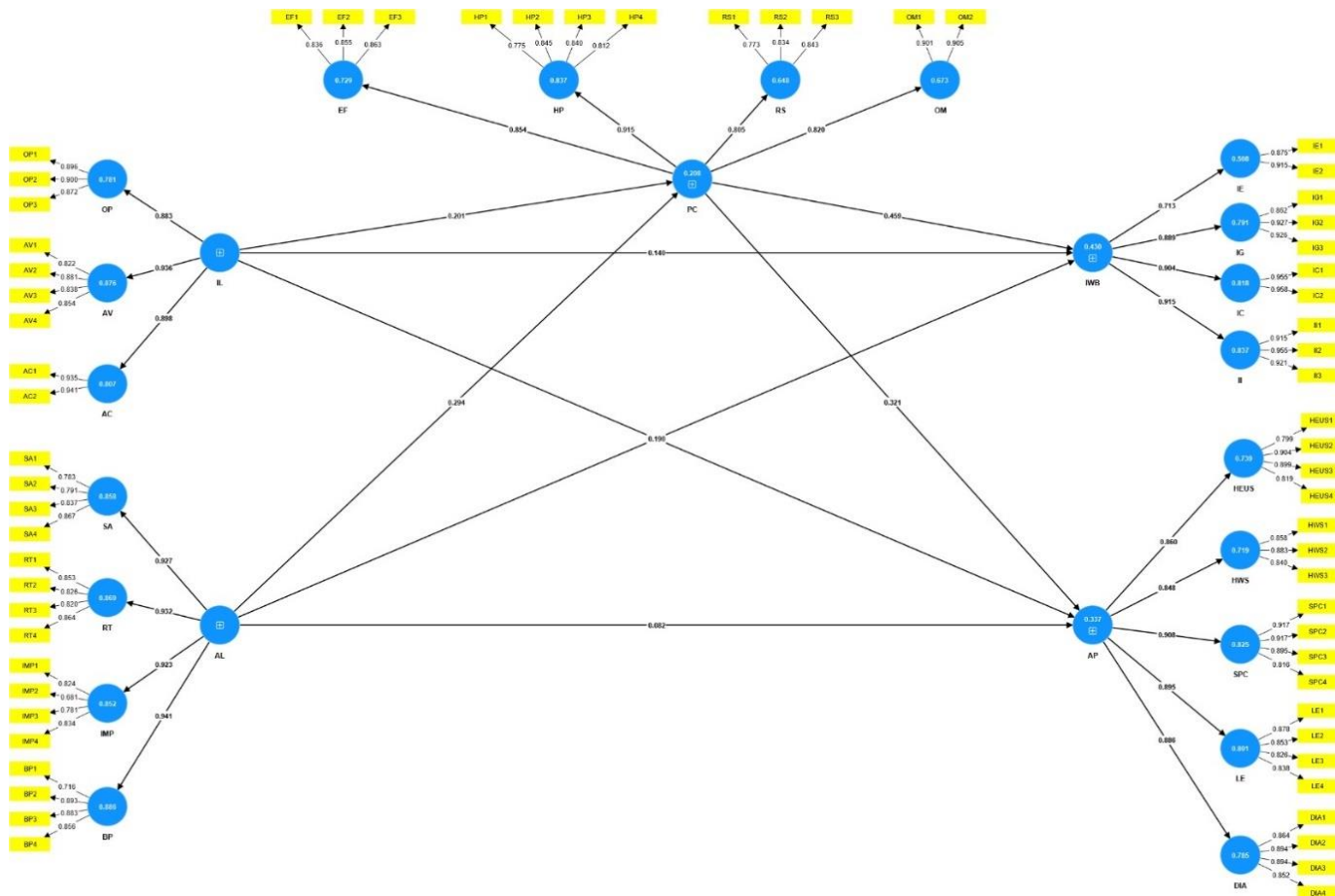


Figure 4.1: Standardized Factor Loadings for All Latent Constructs and Related Items

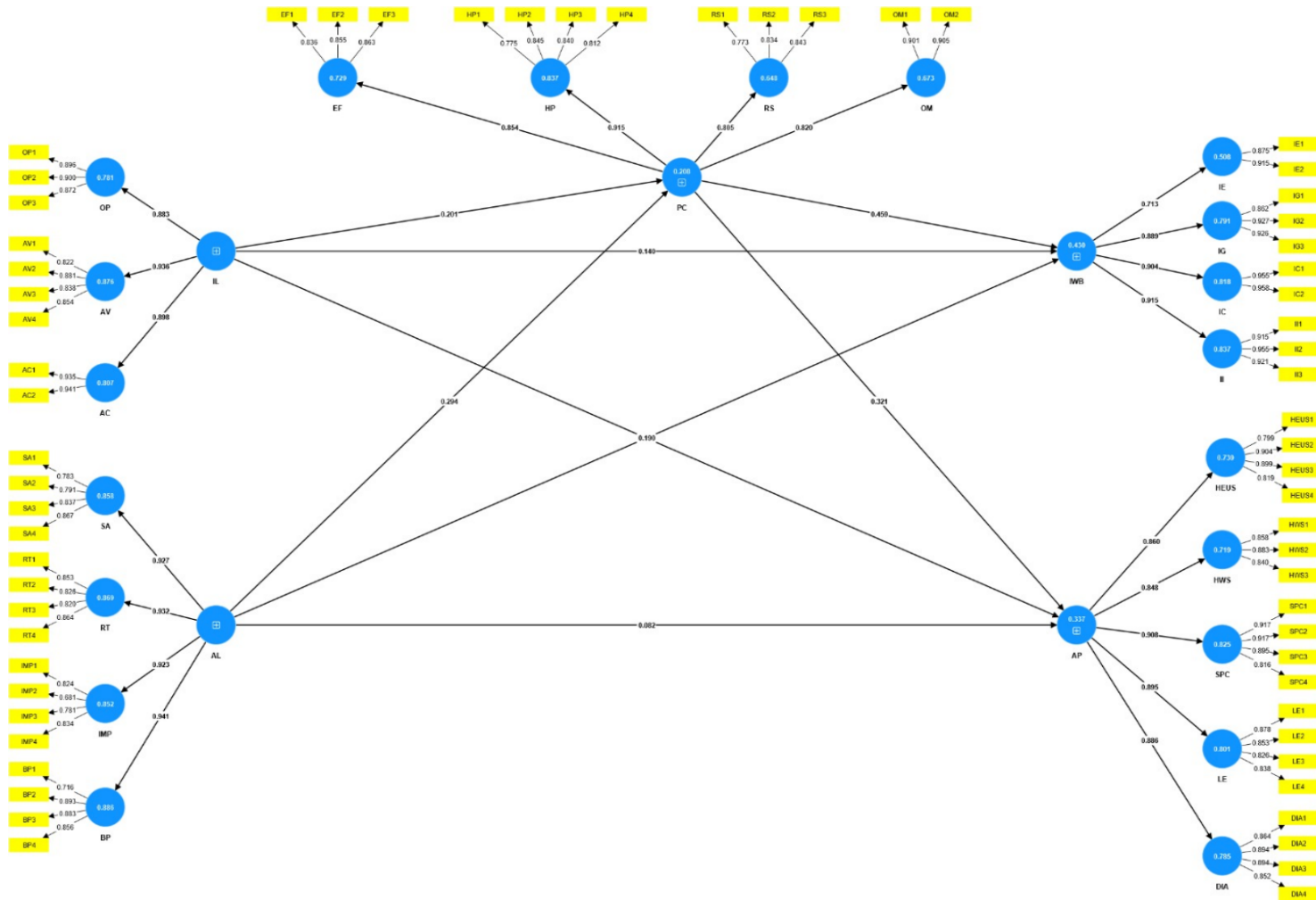


Figure 4.2: Depicts the Measurement Model with Standardized Factor Loadings for All Latent Constructs and Related Items

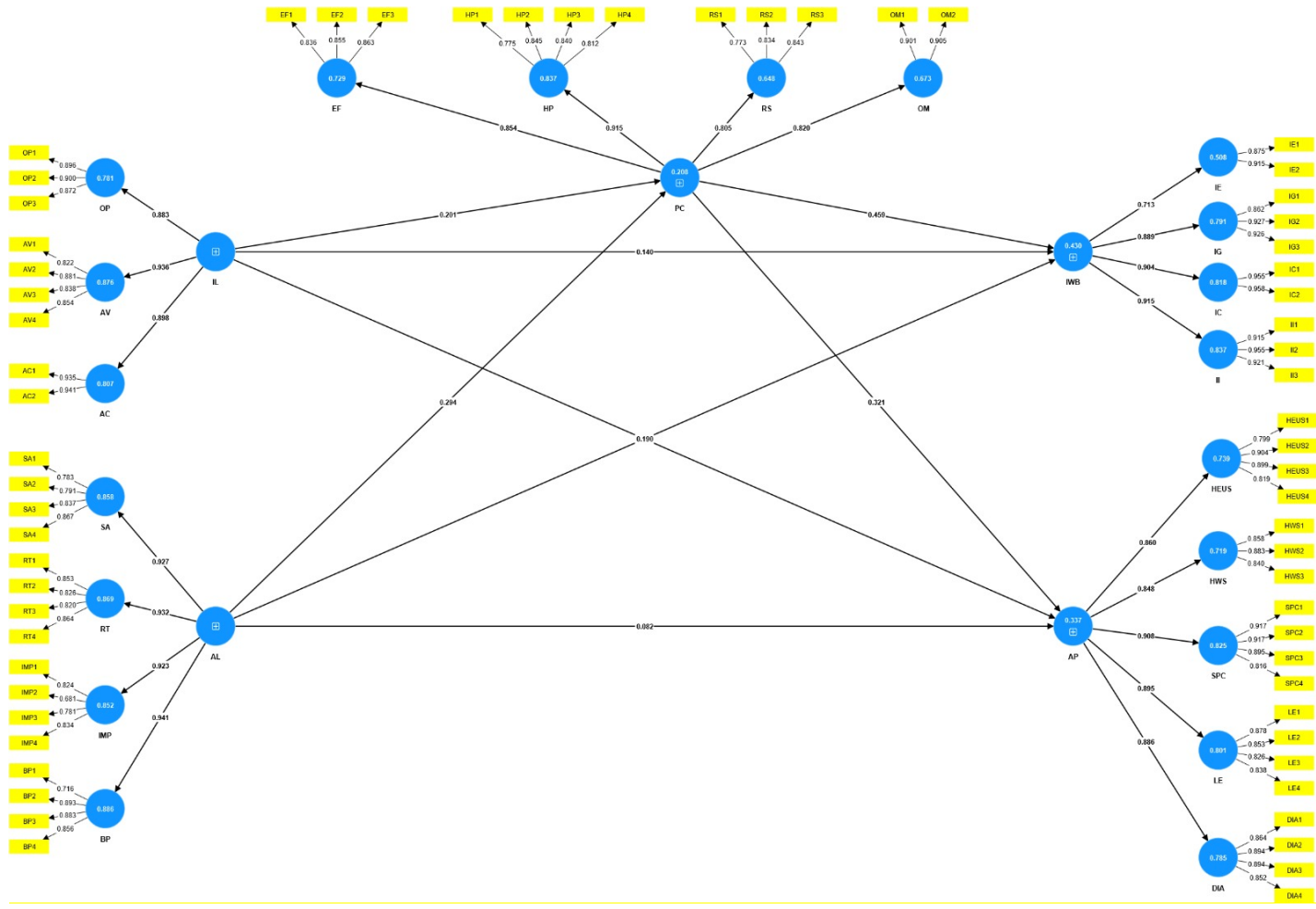


Figure 4.3: Measurement Model with Standardized Factor Loadings

#### 4.6.2 Multicollinearity between Hypothesized Variables

Multicollinearity indicates that the variables are highly inter-correlated and that small changes in the data values may lead to large changes in the estimates of the coefficients. Thus, a statistical test was run to check for multicollinearity. According to Hair et al. (2006), this was done by measuring the degree to which each independent variable is explained by the set of other independent variables. Variance inflation factor (VIF) and tolerance statistics are the two common statistical methods that can be used to assess multicollinearity. It is generally believed that any variance inflation factor (VIF) value that exceeds 5 and tolerance value below 0.10 indicates a potential problem of multicollinearity (Hair et al., 2006; Myers, 2002). Hair et al also proposed two other part process to diagnose the multi-collinearity: (1) identify all condition indices above the 30 thresholds, and (2) for all condition indices exceeding the threshold, identify variables with variance proportion above 90% (Hair, Anderson, Tatham, & Black, 1998). The summary of the multicollinearity diagnostics among the hypothesized variables is shown in **Table 4.6**.

**Table 4.6: Results of Multicollinearity Diagnostics between Hypothesized Variables**

Variables	Tolerance > 0.10	VIF < 5	Condition Index < 30	Variance Proportions				
				AL	AP	IL	IWB	PS YC AP
Authentic Leadership (AL)	0.478	2.092	13.852	0.37	0.03	0.09	0.02	0.03
Adaptive Performance (AP)	0.655	1.528	18.059	0.01	0.14	0.07	0.64	0.01
Inclusive Leadership (IL)	0.471	2.121	21.055	0.08	0.64	0.02	0.06	0.05
Innovative Work Behavior (IWB)	0.559	1.79	22.669	0.52	0.19	0.79	0.06	0.01
Psychological Capital (PsyCap)	0.577	1.734	27.95	0.02	0.01	0.03	0.22	0.9

As shown in Table 4.6, the tolerance values of all variables were above the cut-off of 0.10, and ranged between 0.471 and 0.655. Moreover, the variance inflation factor (VIF) values for all variables were below threshold 5 and ranged between 1.528 and 2.121. The result indicated that the condition index values for all hypothesized variables were below the threshold 30, and ranged between 13.852 and 27.950. Moreover, the variance proportions between the variables were all less than 0.9 and ranged between 0.001 and 0.9. These results demonstrated that there was no Multicollinearity between the hypothesized variables.

### 4.6.3 Descriptive Statistics of Latent Constructs

In this analysis, the covariance matrix method was used to calculate the descriptive function so that all of the variables could be included in the analysis. The composite scores of the variables were computed by the average of the original measurement item scores. Table 4.7 displays the means and standard deviation of the constructs, assessed on a 5-point Likert scale.

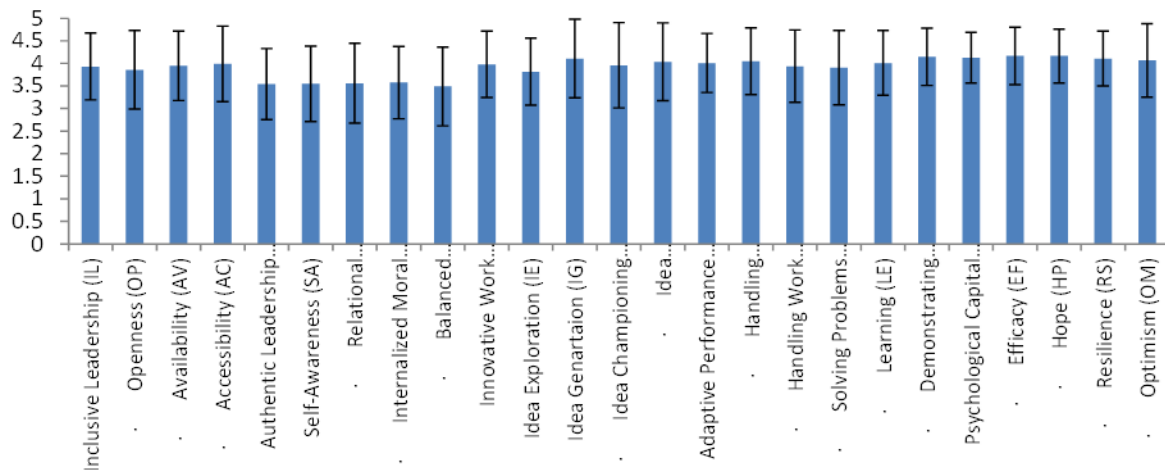
**Table 4.7: Results of Descriptive Statistic for Latent Constructs**

<b>Constructs</b>	<b>Mean (M)</b>	<b>Standard Deviation (SD)</b>	<b>Minimum</b>	<b>Maximum</b>
Inclusive Leadership (IL)	3.933	0.745	1.08	5
• Openness (OP)	3.859	0.868	1	5
• Availability (AV)	3.948	0.767	1	5
• Accessibility (AC)	3.991	0.838	1	5
Authentic Leadership (AL)	3.543	0.788	1	5
• Self-Awareness (SA)	3.548	0.832	1	5
• Relational Transparency	3.559	0.886	1	5
• Internalized Moral	3.574	0.802	1	5
• Balanced Processing (BP)	3.489	0.875	1	5
Innovative Work Behavior (IWB)	3.978	0.737	1.25	5
• Idea Exploration (IE)	3.814	0.744	2	5
• Idea Generation (IG)	4.107	0.873	1	5
• Idea Championing (IC)	3.957	0.946	1	5

• Idea Implementation (II)	4.034	0.865	1	5
Adaptive Performance (AP)	4.009	0.653	1.42	5
• Handling Emergencies	4.046	0.739	1.5	5
• Handling Work Stress	3.939	0.803	1	5
• Solving Problems	3.903	0.826	1	5
• Learning (LE)	4.012	0.717	1.25	5
• Demonstrating	4.145	0.634	2	5
Psychological Capital (PsyCap)	4.126	0.561	1.75	5
• Efficacy (EF)	4.165	0.634	2	5
• Hope (HP)	4.164	0.598	2	5
• Resilience (RS)	4.107	0.609	2	5
• Optimism (OM)	4.066	0.813	1	5

The mean was applied as a measure of central tendency, which indicated that the mean values of all variables were above the mid-point level of 3 out of a 5-point Likert scale. The phenomenon indicated that the consensus respondents' perception toward the constructs stands above the average level. The highest mean value belonged to Efficacy (EF) ( $M = 4.165$ ), followed by Hope (HP) ( $M = 4.164$ ) and Demonstrating Interpersonal Adaptability (DIA) ( $M = 4.145$ ). The lowest mean value belonged to Balanced Processing (BP);  $M = 3.489$ .

The standard deviation was applied as a dispersion index to indicate the degree to which individuals within each variable differ from the variable mean. The individual value of Idea Championing (IC) deviated the most from its mean ( $SD = 0.946$ ). This standard deviation suggested reasonably high variability in respondents' perception toward Championing (IC). In other words, the survey participants were most varying in this construct from each other. Figure 4.4 gives a good illustration of the mean of all constructs together with their standard deviations.



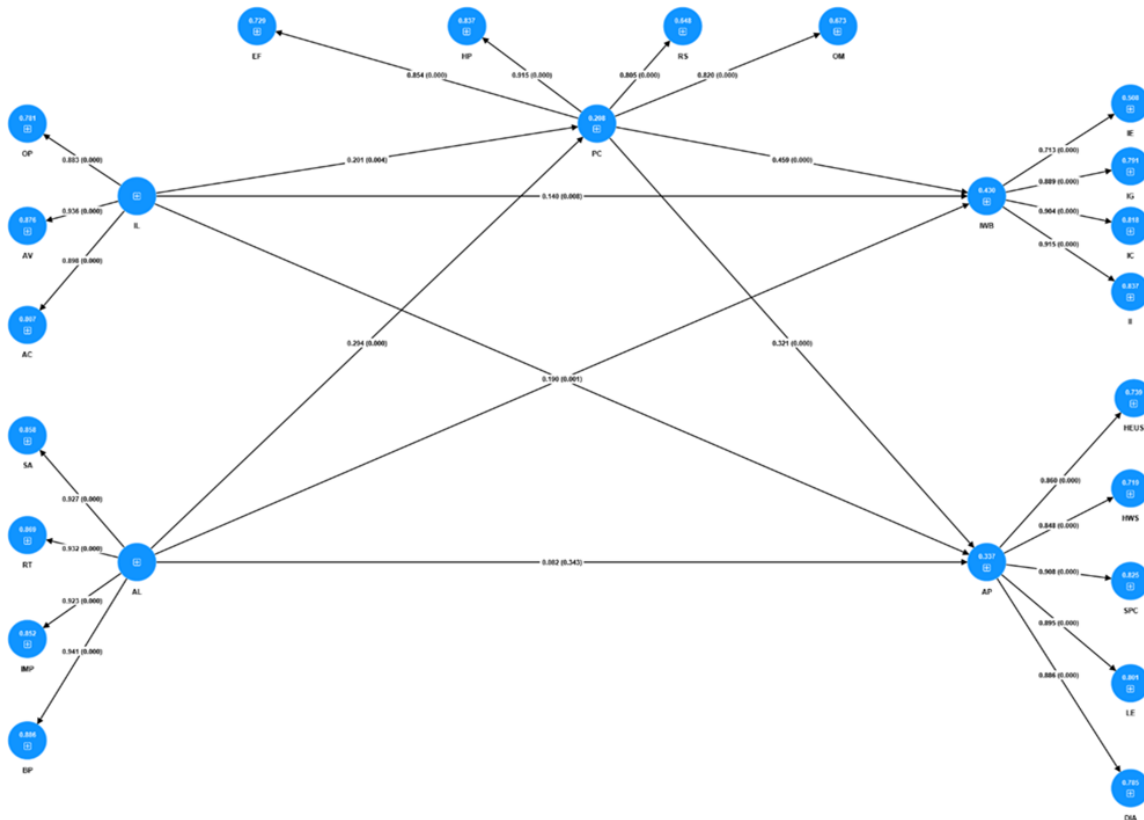
**Figure 4.4.: Means and Standard Deviation of Latent Constructs**

#### 4.7 Structural Models - Stage 2 of SEM

The structural equation model is the second main process of SEM analysis. Once the measurement model is validated, a representation of the structural model can be made by specifying the relationships among the constructs. The structural model provides details on the links between the variables. It shows the specific details of the relationship between the independent or exogenous variables and dependent or endogenous variables (Hair, et al., 2006; Ho, 2006). Evaluation of the structural model focuses firstly on the overall model fit, followed by the size, direction and significance of the hypothesized parameter estimates, as shown by the one-headed arrows in the path diagrams (Hair, et al., 2006). The final part involved the confirmation of the structural model of the study which was based on the proposed relationship between the variables identified and assessed. In this study the structural model was estimated to examine the research hypotheses, using the PLS technique and bootstrapping with 5000 replications. The next sub-sections discuss the development of the structural model to test the research hypotheses.

### 4.7.1 Examining Causal Effect Hypotheses

In the structural model, the causal, mediation and moderation effects were examined. The SmartPLS 4.0-PLS graph of the structural model for testing the causal effects of the hypothesized constructs is summarized in Figure 4.5.



**Figure 4.5: PLS Graph of Structural Model**

The values of  $R^2$  for Psychological Capital (PsyCap), Innovative Work Behavior (IWB) and Adaptive Performance (AP) were 0.208, 0.430 and 0.337 respectively, representing substantial values per suggestions by Cohen (1988). It means, for example, 43% of variations in Innovative Work Behavior (IWB) are explained by its three predictors: Inclusive Leadership (IL), Authentic Leadership (AL) and Psychological Capital (PsyCap).

The values of  $Q^2$  for Psychological Capital (PsyCap), Innovative Work Behavior (IWB) and Adaptive Performance (AP) were 0.523, 0.560 and 0.646 respectively, far greater

than zero which refers to the predictive relevance of the model as suggested by Chin (2010). In sum, the model exhibits acceptable fit and high predictive relevance.

The result indicated that the model's goodness of fit measure (GOF) was 0.491, referring to a large goodness of fit of the model as recommended by Wetzels, Odekerken-Schroder and Oppen (2009).

$$GOF = \sqrt{([1/3 * (0.208 + 0.430 + 0.337)] * [1/3 * (0.719 + 0.736 + 0.771)])} = 0.491$$

The SRMR value for the current structural model with a 95% confidence interval is 0.054, indicating an acceptable fit as it is very close to the threshold value of 0.08 (Hair et al., 2016).

The coefficient parameter estimates are then examined to test the hypothesized causal effects of the variables. The path coefficients and the results of examining hypothesized causal effects are displayed in Table 4.8.

**Table 4.8: Results of Examining Causal Effect Hypotheses**

Relationship	Path Coefficient ( $\beta$ )	Standard Deviation	t	p	95% LL-CI	95% UL-CI	f <sup>2</sup>	VIF	Hypothesis Result
IL→PsyCap	0.201**	0.071	2.848	0.004	0.063	0.34	0.027	1.913	H1 <sup>+</sup> ) Supported
IL→IWB	0.140**	0.053	2.655	0.008	0.039	0.248	0.018	1.964	H2 <sup>+</sup> ) Supported
AL→PsyCap	0.294***	0.065	4.525	0	0.166	0.418	0.057	1.913	H4 <sup>+</sup> ) Supported
AL→IWB	0.190**	0.055	3.432	0.001	0.077	0.295	0.031	2.022	H5 <sup>+</sup> ) Supported
PsyCap→IWB	0.459***	0.047	9.785	0	0.365	0.548	0.293	1.263	H6 <sup>+</sup> ) Supported
IL→AP	0.303***	0.078	3.857	0	0.145	0.457	0.070	1.964	H8 <sup>+</sup> ) Supported
PsyCap→AP	0.321***	0.071	4.509	0	0.18	0.459	0.123	1.263	H9 <sup>+</sup> ) Supported

AL→AP	0.082	0.087	0.949	0.343	-0.09	0.254	0.005	2.022	H11+) not supported
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\*p< 0.05, \*\*p< 0.01, \*\*\*p< 0.001

The following section discusses the results of path analysis concerning the causal effect hypotheses:

H1+) Inclusive Leadership (IL) has a positive effect on Psychological Capital (PsyCap)

As shown in Table 4.8, the t-value and p-value of Inclusive Leadership (IL) in predicting Psychological Capital (PsyCap) were 2.848 and 0.004 respectively. It means that the probability of getting a t-value as large as 2.848 in absolute value is 0.004. In other words, the regression weight for Inclusive Leadership (IL) in the prediction of Psychological Capital (PsyCap) is significantly different from zero at the 0.01 level. Moreover, the confidence intervals bias corrected 95% also did not show any intervals straddling a 0. The standard path coefficient was 0.201, indicating a positive relationship. It means, that when Inclusive Leadership (IL) goes up by 1 standard deviation, predicting Psychological Capital (PsyCap) goes up by 0.201 standard deviations. Furthermore, the value of  $f^2$  was 0.027, showing that the effect size of Inclusive Leadership (IL) on predicting Psychological Capital (PsyCap) was small. The results also indicated that the VIF of Inclusive Leadership (IL) in predicting Psychological Capital (PsyCap) was 1.913, less than the threshold of 3.3. Therefore, single-source bias is not a serious issue with the data and the model can be considered free of collinearity. These results demonstrated that H1 is supported;  $\beta = 0.201$ , 95%LL-CI = 0.063, 95%UL-CI = 0.34,  $t = 2.848$ ,  $p = 0.004$ ,  $f^2 = 0.027$ ,  $VIF = 1.913$ .

(H2+) Inclusive Leadership (IL) has a positive effect on Innovative Work Behavior (IWB)

The probability of getting a t-value as large as 2.665 in absolute value is 0.008 for Inclusive Leadership (IL) in the prediction of Innovative Work Behavior (IWB). The regression weight is significantly different from zero at the 0.01 level with no intervals straddling a 0. The standard path coefficient was 0.140, indicating a positive relationship. The  $f^2$  was 0.018, indicating a small effect size. The VIF was 1.964, less than the threshold of 3.3 and demonstrated free from collinearity. These results demonstrated that H2 is supported;  $\beta = 0.140$ , 95%LL-CI = 0.039, 95%UL-CI = 0.248,  $t = 2.655$ ,  $p = 0.008$ ,  $f^2 = 0.018$ , VIF = 1.964.

(H4+) Authentic Leadership (AL) has a positive effect on Psychological Capital (PsyCap)

The probability of getting a t-value as large as 4.525 in absolute value is 0.000 for Authentic Leadership (AL) in the prediction of Psychological Capital (PsyCap). The regression weight is significantly different from zero at the 0.001 level with no intervals straddling a 0. The standard path coefficient was 0.294, indicating a positive relationship. The  $f^2$  was 0.057, indicating a small effect size. The VIF was 1.913, less than the threshold of 3.3 and demonstrated free from collinearity. These results demonstrated that H4 is supported;  $\beta = 0.294$ , 95%LL-CI = 0.166, 95%UL-CI = 0.418,  $t = 4.525$ ,  $p < 0.001$ ,  $f^2 = 0.057$ , VIF = 1.913.

(H5+) Authentic Leadership (AL) has a positive effect on Innovative Work Behavior (IWB)

The probability of getting a t-value as large as 3.432 in absolute value is 0.001 for Authentic Leadership (AL) in the prediction of Innovative Work Behavior (IWB). The regression weight is significantly different from zero at the 0.01 level with no intervals

straddling a 0. The standard path coefficient was 0.190, indicating a positive relationship. The  $f^2$  was 0.031, indicating a small effect size. The VIF was 2.022, less than the threshold of 3.3 and demonstrated free from collinearity. These results demonstrated that H5 is supported;  $\beta = 0.190$ , 95%LL-CI = 0.077, 95%UL-CI = 0.295,  $t = 3.432$ ,  $p = 0.001$ ,  $f^2 = 0.031$ , VIF = 2.022.

(H6+) Psychological Capital (PsyCap) has a positive effect on Innovative Work Behavior (IWB)

The probability of getting a t-value as large as 9.785 in absolute value is 0.000 for Psychological Capital (PsyCap) in the prediction of Innovative Work Behavior (IWB). The regression weight is significantly different from zero at the 0.001 level with no intervals straddling a 0. The standard path coefficient was 0.459, indicating a positive relationship. The  $f^2$  was 0.293, indicating a medium effect size. The VIF was 1.263, less than the threshold of 3.3 and demonstrated free from collinearity. These results demonstrated that H6 is supported;  $\beta = 0.459$ , 95%LL-CI = 0.365, 95%UL-CI = 0.548,  $t = 9.785$ ,  $p < 0.001$ ,  $f^2 = 0.293$ , VIF = 1.263.

(H8+) Inclusive Leadership (IL) has a positive effect on Adaptive Performance (AP)

The probability of getting a t-value as large as 3.857 in absolute value is 0.000 for Inclusive Leadership (IL) in the prediction of Adaptive Performance (AP). The regression weight is significantly different from zero at the 0.001 level with no intervals straddling a 0. The standard path coefficient was 0.303, indicating a positive relationship. The  $f^2$  was 0.07, indicating a small effect size. The VIF was 1.964, less than the threshold of 3.3 and demonstrated free from collinearity. These results demonstrated that H8 is supported;  $\beta = 0.303$ , 95%LL-CI = 0.145, 95%UL-CI = 0.457,  $t = 3.857$ ,  $p < 0.001$ ,  $f^2 = 0.07$ , VIF = 1.964.

(H9+) Psychological Capital (PsyCap) has a positive effect on Adaptive Performance (AP)

The probability of getting a t-value as large as 4.509 in absolute value is 0.000 for Psychological Capital (PsyCap) in the prediction of Adaptive Performance (AP). The regression weight is significantly different from zero at the 0.001 level with no intervals straddling a 0. The standard path coefficient was 0.321, indicating a positive relationship. The  $f^2$  was 0.123, indicating a small effect size. The VIF was 1.263, less than the threshold of 3.3 and demonstrated free from collinearity. These results demonstrated that H9 is supported;  $\beta = 0.321$ , 95%LL-CI = 0.180, 95%UL-CI = 0.459,  $t = 4.509$ ,  $p < 0.001$ ,  $f^2 = 0.123$ , VIF = 1.263.

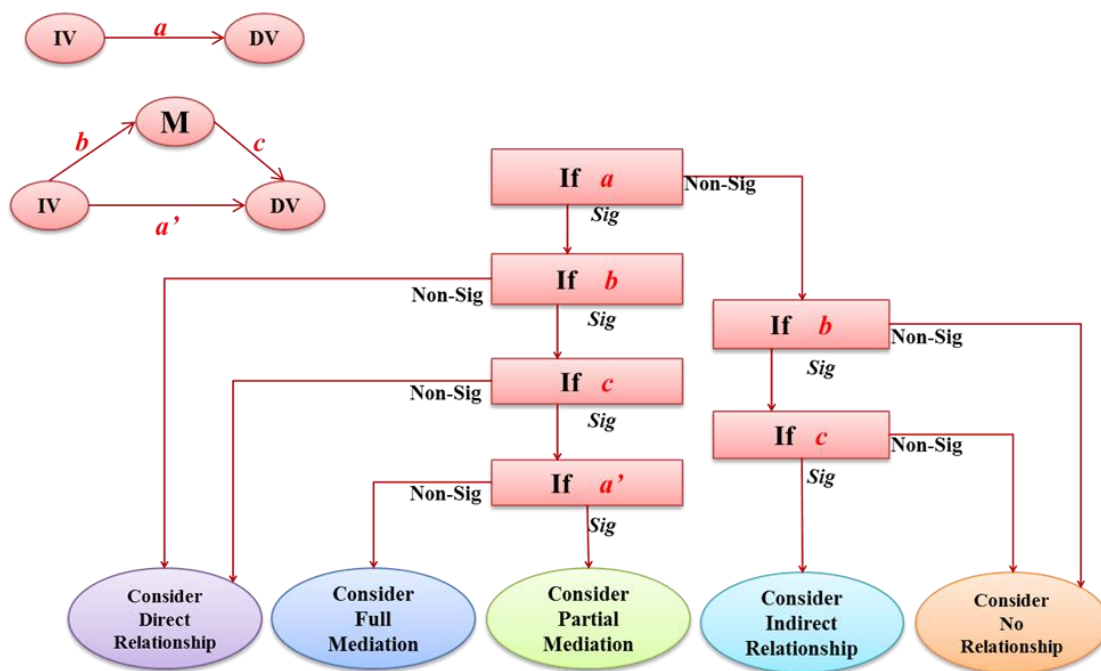
H11+) Authentic Leadership (AL) has a positive effect on Adaptive Performance (AP)

As shown in Table 4.8, the probability of getting a t-value as large as 0.947 in absolute value is 0.343 for Authentic Leadership (AL) in the prediction of Adaptive Performance (AP). The regression weight is not statistically significant because of having a t-value lower than 1.645, p-value above the standard significant level of 0.05 and also intervals straddling a 0. The standard path coefficient was 0.082, indicating a positive relationship, as opposed to the hypothesized negative direction. The effect size ( $f^2$ ), according to Hair et al. (2017), is extremely tiny, with a value of 0.005, demonstrating that there is a very small impact of Authentic Leadership (AL) on Adaptive Performance (AP). The VIF was 2.022, less than the threshold of 3.3 and demonstrated free from collinearity. Thus, H11 was not supported;  $\beta = 0.082$ , 95%LL-CI = -0.09, 95%UL-CI = 0.254,  $t = 0.949$ ,  $p = 0.343$ ,  $f^2 = 0.005$ , VIF = 2.022.

### 4.7.2 Mediation Effect Hypotheses

The mediation analysis was used to determine the mediation effect of Psychological Capital (PsyCap) as the mediating variable on the effects of Inclusive Leadership (IL) and Authentic Leadership (AL) as independent variables on Innovative Work Behavior (IWB) and Adaptive Performance (AP) as dependent variables (i.e., H3, H10, H7, H12). Furthermore, the indirect effects of the independent variables on the dependent variables through the mediating variable were also examined.

The statistics behind mediation are correlated. Mathieu and Taylor (2006) suggested a decision tree framework to test the covariance relationships among three variables: an independent variable (IV), a potential mediating variable (M) and a dependent variable (DV). The illustration of this framework is shown in Figure 4.6.



**Figure 4.6: Decision tree framework**

Source: (Mathieu and Taylor, 2006)

Based on this framework, the most important precondition that must be met to find significant mediation is that all three correlations among the three variables (paths a, b and c) must be statistically significant. If even one of these three correlations is not significant, then there would be no possibility of finding significant mediation (Baron and Kenny, 1986; Mathieu and Taylor, 2006). Upon significant relations among the three variables (paths a, b and c), once the direct effect of IV on DV in the multiple regression (path a') is not statistically significant, then the mediating variable acts as a full mediator. Otherwise, the mediation can be considered as partial mediation. In the absence of full or partial mediation, the relationships between IV and DV comprise direct, indirect or no relationship.

The Independent variable has a non-significant indirect effect on the dependent variable through a mediating variable in the absence of a significant effect in path "a" and presents significant effects in paths "b" and "c". On the other side, the independent variable has only a direct effect on the dependent variable in the presence of a significant effect in path "a" and a nonsignificant effect in path "b" or "c". There would be no relationship between the independent variable and dependent variable in the absence of a significant relationship in path "a" and then the absence of a significant relationship in path "b" or "c".

The SEM technique is claimed to be preferable to regression techniques for testing mediation because SEM permits the modelling of both measurement and structural relationships and yields overall fit indices (Garver and Mentzer, 1999).

The significance of the regression coefficients between IVs, M and DVs was examined to determine the occurrence of the mediation effects. The results of examining the mediation effect hypothesis are displayed in Table 4.9 with the standardized effects of different paths.

**Table 4.9: Results of Examining Mediation Effect Hypotheses**

<b>Path: IV→M→DV</b>	<b>Path Coefficient (β)</b>	<b>Standard Deviation</b>	<b>T-value</b>	<b>P-value</b>	<b>Hypothesis Result</b>
<b>IL→PsyCap→IWB</b>					
Total Effect of IL on IWB without PSYCAP (path a)	0.232***	0.067	3.492	0	
Direct Effect of IL on IWB with PsyCap (path a')	0.14**	0.053	2.655	0.008	
Indirect Effect of IL on IWB through PsyCap (path bc)	0.092**	0.034	2.681	0.007	H3) Supported / Partial Mediation
Effect of IL on PsyCap (path b)	0.201**	0.071	2.848	0.004	
Effect of PsyCap on IWB (path c)	0.459***	0.047	9.785	0	
<b>IL→PSYCAP→AP</b>					
Total Effect of IL on AP without PsyCap (path a)	0.367***	0.082	4.47	0	
Direct Effect of IL on AP with PSYCAP (path a')	0.303***	0.078	3.857	0	
Table 4.9: Results of Examining Mediation Effect Hypotheses					
Indirect Effect of IL on AP through PsyCap (path bc)	0.064*	0.03	2.144	0.032	H10) Supported / Partial Mediation
Effect of IL on PsyCap (path b)	0.201**	0.071	2.848	0.004	
Effect of PsyCap on AP (path c)	0.321***	0.071	4.509	0	
<b>AL→PsyCap→IWB</b>					
Total Effect of AL on IWB without PsyCap (path a)	0.325***	0.066	4.953	0	
Direct Effect of AL on IWB with PsyCap (path a')	0.19**	0.055	3.432	0.001	
Indirect Effect of AL on IWB through PsyCap (path bc)	0.135***	0.033	4.068	0	H7) Supported / Partial Mediation
Effect of AL on PsyCap (path b)	0.294***	0.065	4.525	0	
Effect of PsyCap on IWB (path c)	0.459***	0.047	9.785	0	
<b>AL→PsyCap→AP</b>					
Total Effect of AL on AP without PsyCap (path a)	0.177*	0.083	2.125	0.034	
Direct Effect of AL on AP with PsyCap (path a')	0.082	0.087	0.949	0.343	
Indirect Effect of AL on AP through PSYCAP (path bc)	0.094**	0.029	3.297	0.001	H12) Supported / Full Mediation
Effect of AL on PsyCap (path b)	0.294***	0.065	4.525	0	
Effect of PSYCAP on AP (path c)	0.321***	0.071	4.509	0	

H3) Psychological Capital (PsyCap) mediates the relationship between Inclusive Leadership (IL) and Innovative Work Behavior (IWB).

As shown in Table 4.9, the result showed that the total effect of Inclusive Leadership (IL) as IV on Innovative Work Behavior (IWB) as DV (path a) without the inclusion of Psychological Capital (PsyCap) as M was statistically significant at 0.001 level;  $\beta = 0.232$ ,  $t = 3.492$ ,  $p < 0.001$ .

The direct effect of Inclusive Leadership (IL) as IV on Innovative Work Behavior (IWB) as DV (path a') with the inclusion of Psychological Capital (PsyCap) as M was statistically significant at 0.01 level;  $\beta = 0.140$ ,  $t = 2.655$ ,  $p = 0.008$ .

As depicted in Table 4.9, the effect of Inclusive Leadership (IL) as IV on Psychological Capital (PSYCAP) as M (path b) was statistically significant at 0.01 level;  $\beta = 0.201$ ,  $t = 2.848$ ,  $p = 0.004$ .

Further, the effect of Psychological Capital (PsyCap) as M on Innovative Work Behavior (IWB) as DV (path c) was also statistically significant at 0.001 level;  $\beta = 0.459$ ,  $t = 9.785$ ,  $p < 0.001$ .

These results indicated that Psychological Capital (PsyCap) mediates the relationship between Inclusive Leadership (IL) and Innovative Work Behavior (IWB). The degree of mediation was partial since the paths a, a, b and c were all statistically significant. The phenomenon supported the hypothesis H3.

Further, the result revealed that Inclusive Leadership (IL) had a significant indirect positive effect on Innovative Work Behavior (IWB) through Psychological Capital (PsyCap);  $\beta = 0.092$ ,  $t = 2.681$ ,  $p = 0.007$ .

H10) Psychological Capital (PsyCap) mediates the relationship between Inclusive Leadership (IL) and Adaptive Performance (AP).

As shown in Table 4.9, the result indicates that Inclusive Leadership (IL) have the significant positive total effect (path a:  $\beta = 0.367$ ,  $t = 4.470$ ,  $p < 0.001$ ) and direct effect (path a':  $\beta = 0.303$ ,  $t = 3.857$ ,  $p < 0.001$ ) on Adaptive Performance (AP).

The effects of Inclusive Leadership (IL) on Psychological Capital (PsyCap) (path b:  $\beta = 0.201$ ,  $t = 2.848$ ,  $p = 0.004$ ) and Psychological Capital (PsyCap) on Adaptive Performance (AP) (path c:  $\beta = 0.321$ ,  $t = 4.509$ ,  $p < 0.001$ ) were both significant and positive.

These results indicated that Psychological Capital (PsyCap) partially mediates the relationship between Inclusive Leadership (IL) and Adaptive Performance (AP). The phenomenon supported the hypothesis H10.

Further, the result revealed that Inclusive Leadership (IL) had a significant indirect positive effect on Innovative Adaptive Performance (AP) through Psychological Capital (PSYCAP);  $\beta = 0.064$ ,  $t = 2.144$ ,  $p = 0.032$ .

H7) Psychological Capital (PsyCap) mediates the relationship between Authentic Leadership (AL) and Innovative Work Behavior (IWB).

As shown in Table 4.9, the result indicates that Authentic Leadership (AL) have the significant positive total effect (path a:  $\beta = 0.325$ ,  $t = 4.953$ ,  $p < 0.001$ ) and direct effect (path a':  $\beta = 0.190$ ,  $t = 3.432$ ,  $p = 0.001$ ) on Innovative Work Behavior (IWB).

The effects of Authentic Leadership (AL) on Psychological Capital (PsyCap) (path b:  $\beta = 0.294$ ,  $t = 4.525$ ,  $p < 0.001$ ) and Psychological Capital (PsyCap) on Innovative Work Behavior (IWB) (path c:  $\beta = 0.459$ ,  $t = 9.785$ ,  $p < 0.001$ ) were both significant and positive.

These results indicated that Psychological Capital (PsyCap) partially mediates the relationship between Authentic Leadership (AL) and Innovative Work Behavior (IWB). The phenomenon supported the hypothesis H7.

Further, the result revealed that Authentic Leadership (AL) had a significant indirect positive effect on Innovative Work Behavior (IWB) through Psychological Capital (PsyCap);  $\beta = 0.135$ ,  $t = 4.068$ ,  $p < 0.001$ .

H12) Psychological Capital (PsyCap) mediates the relationship between Authentic Leadership (AL) and Adaptive Performance (AP).

As shown in Table 4.9, the result indicates that Authentic Leadership (AL) have a significant positive total effect on Adaptive Performance (AP); path a:  $\beta = 0.177$ ,  $t = 2.125$ ,  $p = 0.034$ . After adding Psychological Capital (PsyCap) into the model, the direct effect of Authentic Leadership (AL) on Adaptive Performance (AP) turned into insignificant; path a':  $\beta = 0.094$ ,  $t = 3.297$ ,  $p < 0.001$ .

The effects of Authentic Leadership (AL) on Psychological Capital (PsyCap) (path b:  $\beta = 0.294$ ,  $t = 4.525$ ,  $p < 0.001$ ) and Psychological Capital (PsyCap) on Adaptive Performance (AP) (path c:  $\beta = 0.321$ ,  $t = 4.509$ ,  $p < 0.001$ ) were both significant and positive.

These results indicated that Psychological Capital (PsyCap) fully mediates the relationship between Authentic Leadership (AL) and Adaptive Performance (AP). The phenomenon supported the hypothesis H12.

Further, the result revealed that Authentic Leadership (AL) had a significant indirect positive effect on Innovative Adaptive Performance (AP) through Psychological Capital (PsyCap);  $\beta = 0.094$ ,  $t = 3.297$ ,  $p = 0.001$ .

#### **4.7.3 Examining Moderation Effect Hypotheses**

In this research, the moderation effects of HEIs Sector type (HS) as moderating variable on the effects of Inclusive Leadership (IL) and Authentic Leadership (AL) as independent variables (IVs) on Innovative Work Behavior (IWB) and Adaptive Performance (AP) as dependent variables (DVs) were examined (i.e., H15, H13, H16, H14 respectively). Two analysis approaches were applied in this research to examine the moderation effects: Two-Way Analysis and Multi-Group Analysis.

In Two-Way Analysis, to confirm a third variable making a moderation effect on the relationship between the IV and DV, the nature of this relationship should be changed as the values of the moderating variable change. This is in turn done by including an interaction effect in the model and checking to see if indeed such an interaction is significant or not. In applying this analysis, all predictors need to be standardised or centred to make interpretations easier afterwards and to avoid the problem of multicollinearity (Aiken & West, 1991). This was done by subtracting a measured variable from its respective mean and the result was then divided by the standard deviation of that measured variable. Having done this, the product of the centered indicator was then calculated and used as an indicator of the

latent interaction term. To determine whether the moderator effect is significant, the effect of the interaction term on the DV should be significant.

In the case where a significant moderating effect is present, a technique suggested by Aiken and West (1991) to generate plots for each interaction was applied to show the effect of the moderator in the relationship between the predictor and outcome variable. Based on Aiken and West's suggestions, the 4 cell means are required to be generated for graphing the interaction between the variables. One dichotomizes both the independent variable (low and high) and moderating variable (low and high) and crosses these levels to obtain 4 cell means. "Low" is defined as one standard deviation below the mean, and "high" is one standard deviation above the mean.

In Multi-Group Analysis, the differences in the causal effects between the Public and Private sectors were evaluated, using multi-group analysis as recommended by Henseler (2009). HEIs Sector Type (HS) can be considered as a moderator if a causal effect between the two constructs shows significantly different standardized estimates of Beta between the Public and Private sectors.

Table 4.10 represents the results of Two-Way Analysis and Multi-Group Analysis to examine the moderation effects of HEIs Sector (HS).

**Table 4.10: Results of Examining Hypothesized Moderation Effects of HEIs Sector Type (HS)**

Path	$\beta$				Multi-Group Analysis	Two-Way Interaction Analysis			Hypothesis Result
	Overall	Public <sup>a</sup>	Private <sup>b</sup>	$\Delta$ (b-a)	p	SD	t	P	
AL→IWB		0.188**	0.078	-0.111	0.294				H13) not supported
AL→PSYCAP→IWB		0.180**	0.026	-0.154**	0.006				
AL*HS→IWB	-0.191					0.104	1.836	0.066	
AL→AP		0.07	0.032	-0.038	0.780				H14) not supported
AL→PSYCAP→AP		0.077	0.041	-0.036	0.555				
AL*HS→AP	-0.017					0.152	0.115	0.908	
IL→IWB		0.045	0.440***	0.396**	0.001				H15) Supported
IL→PSYCAP→IWB		0.04	0.146**	0.106	0.099				
IL*HS→IWB	0.284**					0.106	2.671	0.008	
IL→AP		0.207*	0.453***	0.246*	0.048				H16) Supported
IL→PSYCAP→AP		0.017	0.235***	0.218**	0.001				
IL*HS→AP	0.292*					0.140	2.083	0.037	

\*p< 0.05, \*\*p< 0.01, \*\*\*p< 0.001; IL = Inclusive Leadership; AL = Authentic

Leadership, IWB = Innovative Work Behavior; AP = Adaptive Performance; PSYCAP = Psychological Capital; HS = HEIs Sector type .

The following section discusses the results of the moderation effects of the HEIs Sector (HS) concerning the above hypotheses:

(H13) HEIs Sector type (HS) moderates the relationship between Authentic Leadership (AL) and Innovative Work Behavior (IWB).

As shown in Table 4.10, the effect of Authentic Leadership (AL) on Innovative Work Behavior (IWB) was significantly positive for the public sector ( $\beta = 0.188$ ,  $p < 0.01$ ) and insignificantly positive for the Private sector;  $\beta = 0.078$ ,  $p > 0.05$ . Henseler's multi-group analysis results indicated the difference of -0.111 in the path coefficient between the public and Private sectors is not statistically significant due to having a p-value of 0.294, above the threshold of 0.05. The results indicated that the effect of Authentic Leadership (AL) on Innovative Work Behavior (IWB) in the public sector is insignificantly stronger than in the private sector;  $\Delta\beta = -0.111$ ,  $p = 0.294$ . The results of Henseler's multi-group analysis did not support the moderation hypothesis H13.

The results of Henseler's multi-group analysis also indicated that the indirect effect of Authentic Leadership (AL) on Innovative Work Behavior (IWB) via Psychological Capital (PSYCAP) for the public sector ( $\beta = 0.180$ ,  $p < 0.001$ ) was significantly stronger than Private sector ( $\beta = 0.026$ ,  $p > 0.05$ );  $\Delta\beta = -0.154$ ,  $p = 0.006$ .

The results of Two-Way Interaction indicated that the effect of the interaction of Authentic Leadership (AL) \* HEIs Sector type (HS) on Innovative Work Behavior (IWB) was not statistically significant because of having a p-value of 0.066, above the threshold of 0.05;  $\beta = -0.191$ ,  $t = 1.836$ ,  $p = 0.066$ . The results of Two-Way Interaction demonstrated that H13 is not supported.

(H14) HEIs Sector type (HS) moderates the relationship between Authentic Leadership (AL) and Adaptive Performance (AP).

As shown in Table 4.10, the effect of Authentic Leadership (AL) on Adaptive Performance (AP) was insignificantly positive for the public sector ( $\beta = 0.07, p > 0.05$ ) and insignificantly positive for the Private sector;  $\beta = 0.032, p > 0.05$ . The Henseler's multi-group analysis results indicated the difference of -0.038 in the path coefficient between the Public and Private sectors is not statistically significant due to having a p-value of 0.780, above the threshold of 0.05. The results indicated that the effect of Authentic Leadership (AL) on Adaptive Performance (AP) for the public sector is insignificantly stronger than in the private sector;  $\Delta\beta = -0.038, p = 0.780$ . The results of Henseler's multi-group analysis did not support the moderation hypothesis H14.

The results of Henseler's multi-group analysis also indicated that the indirect effect of Authentic Leadership (AL) on Adaptive Performance (AP) via Psychological Capital (PsyCap) for the public sector ( $\beta = 0.077, p > 0.05$ ) was insignificantly stronger than Private sector ( $\beta = 0.041, p > 0.05$ );  $\Delta\beta = -0.036, p = 0.555$ .

The results of the Two-Way Interaction indicated that the effect of the interaction of Authentic Leadership (AL) \*HEIs Sector type (HS) on Adaptive Performance (AP) was not statistically significant because of having a p-value of 0.908, above the threshold of 0.05;  $\beta = -0.017, t = 0.115, p = 0.908$ . The results of Two-Way Interaction demonstrated that H14 is not supported; 4123 s

(H15) HEIs Sector type (HS) type moderates the relationship between Inclusive Leadership (IL) and Innovative Work Behavior (IWB).

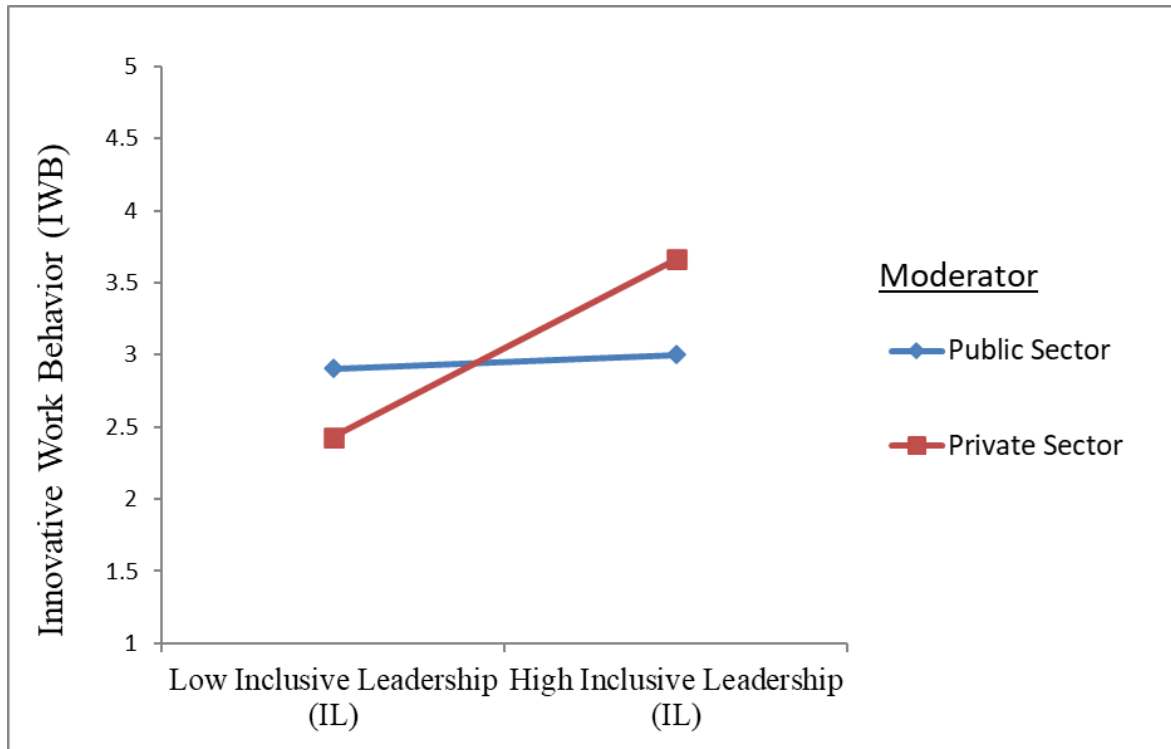
As shown in Table 4.10, the effect of Inclusive Leadership (IL) on Innovative Work Behavior (IWB) was insignificantly positive for the public sector ( $\beta = 0.045, p > 0.05$ ) and significantly positive for the Private sector;  $\beta = 0.440, p < 0.01$ . Henseler's market-group

analysis results indicated the difference of 0.396 in the path coefficient between the public and private sectors is statistically significant at 0.01 level due to a p-value of 0.001. The results indicated that the effect of Inclusive Leadership (IL) on Innovative Work Behavior (IWB) in the Private sector is significantly stronger than in the public sector;  $\Delta\beta = 0.396$ ,  $p = 0.001$ . The results of Henseler's multi-group analysis supported the moderation hypothesis H15.

The results of Henseler's multi-group analysis also indicated that the indirect effect of Inclusive Leadership (IL) on innovative work behaviour (IWB) via psychological capital (PsyCap) for the public sector ( $\beta = 0.04$ ,  $p > 0.05$ ) was insignificantly lower than the private sector ( $\beta = 0.146$ ,  $p < 0.01$ );  $\Delta\beta = 0.106$ ,  $p = 0.099$ .

The results of Two-Way Interaction indicated that the effect of the interaction of Inclusive Leadership (IL) \* HEIs Sector type (HS) on innovative work behaviour (IWB) was statistically significant because of having a p-value of 0.008, below the threshold of 0.05;  $\beta = 0.284$ ,  $t = 2.671$ ,  $p = 0.008$ . The results of Two-Way Interaction demonstrated that H15 is supported;

Figure 4.7 shows the line chart effect of inclusive leadership (IL) and innovative work behavior (IWB) for the public and private sectors.



**Figure 4.7: Effect of Inclusive Leadership (IL) and Innovative Work Behavior (IWB) for Public and Private sectors**

Figure 4.7, Effect of Inclusive Leadership (IL) and Innovative Work Behavior (IWB) for Public and Private sectors.

As shown in Figure 4.7, the two lines indicated a positive relationship between inclusive leadership (IL) and innovative work behavior (IWB). The two lines were not parallel which implied the existence of moderation effect. However, the relationship was very steeper and thus stronger for the Private sector compared to the public sector. Hence, it could be concluded that HEIs Sector type (HS) moderates the positive relationship between Inclusive Leadership (IL) and Innovative Work Behavior (IWB).

H16) HEIs Sector Type (HS) moderates the relationship between Inclusive Leadership (IL) and Adaptive Performance (AP).

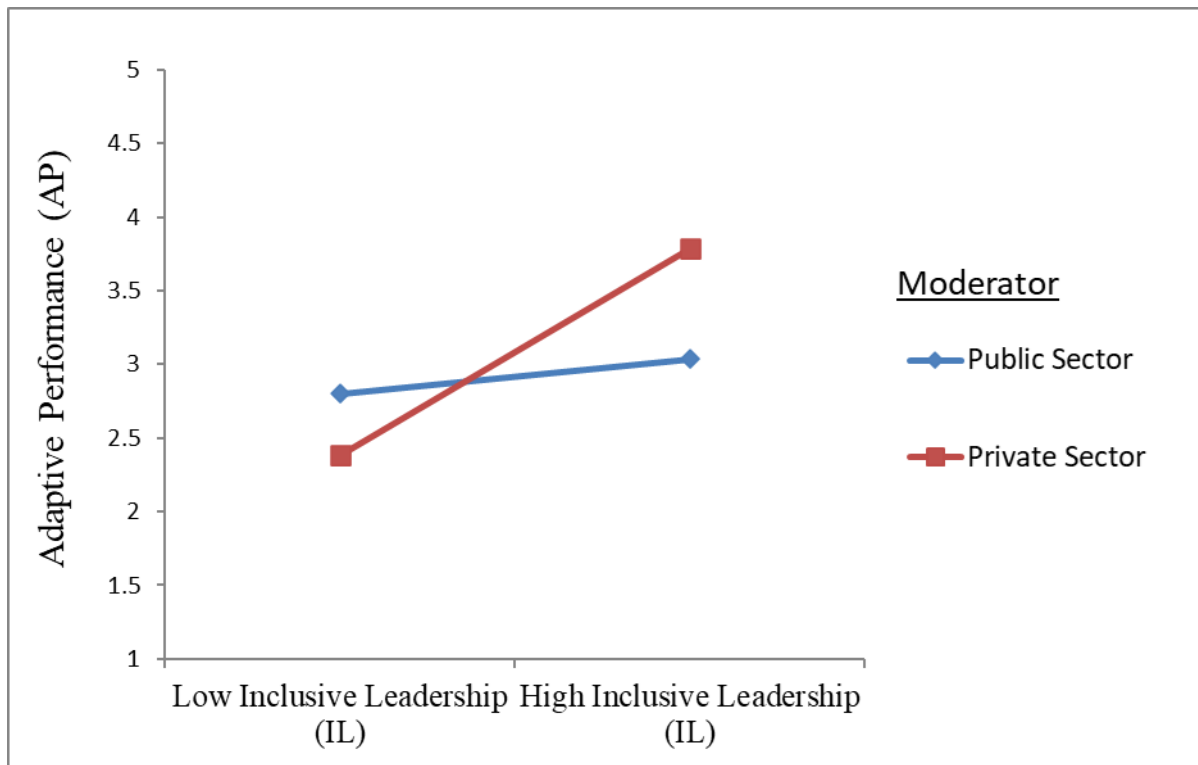
As shown in Table 4.10, the effect of Inclusive Leadership (IL) on Adaptive Performance (AP) was significantly positive for the Public sector ( $\beta = 0.207, p < 0.05$ ) and significantly positive for the Private sector;  $\beta = 0.453, p < 0.01$ . Henseler's multi-group analysis results indicated the difference of 0.246 in the path coefficient between Public and Private sectors is statistically significant at 0.05 level due to a p-value of 0.048. The results indicated that the effect of Inclusive Leadership (IL) on Adaptive Performance (AP) in the Private sector is significantly stronger than in the public sector;  $\Delta\beta = 0.246, p = 0.048$ . The results of Henseler's multi-group analysis supported the moderation hypothesis H16.

The results of Henseler's multi-group analysis also indicated that the indirect effect of Inclusive Leadership (IL) on Adaptive Performance (AP) via Psychological Capital (PSYCAP) for Public sector ( $\beta = 0.017, p > 0.05$ ) was significantly lower than Private sector ( $\beta = 0.235, p < 0.001$ );  $\Delta\beta = 0.218, p = 0.001$ .

The results of Two-Way Interaction indicated that the effect of the interaction of Inclusive Leadership (IL) \* HEIs Sector (HS) on Adaptive Performance (AP) was statistically significant because of having a p-value of 0.037, below the threshold of 0.05;  $\beta = 0.292, t = 2.083, p = 0.037$ . The results of Two-Way Interaction demonstrated that H16 is supported;

Figure 4.7 shows the line chart effect of Inclusive Leadership (IL) and Adaptive Performance (AP) for the Public and Private sectors.

Figure 4.8, Effect of Inclusive Leadership (IL) and Adaptive Performance (AP) for Public and Private sectors.



**Figure 4.8: Effect of Inclusive Leadership (IL) and Adaptive Performance (AP) for Public and Private sectors**

As shown in Figure 4.8, the two lines indicated a positive relationship between Inclusive Leadership (IL) on Adaptive Performance (AP). The two lines were not parallel which implied the existence of moderation effect. However, the relationship was very steeper and thus stronger for the private sector compared to the public sector. Hence, it could be concluded that HEIs Sector (HS) moderates the positive relationship between Inclusive Leadership (IL) and Adaptive Performance (AP).

#### 4.8 Comparative Tests

##### 4.8.1 Independent Sample T-test

In this study, a parametric comparative test, namely the Independent Sample T-test was used to examine the mean difference of hypothesized latent constructs between the

dichotomous groups of HEIs Sector (i.e., public sector and private sector) and Gender (i.e., male and female).

Before conducting the T-test, it should be determined whether the variances within the two populations being compared have equal variance or not. Hence, Levene’s test was conducted as an assumption of the T-test to determine the homogeneity of variances. The p-value higher than 0.05 level demonstrates that the obtained differences in sample variances were likely to have occurred based on random sampling from a population with equal variances. Thus, the null hypothesis of equal variances was accepted for the non-significant p-values. Conversely, the equal variance cannot be assumed for the significant p-values. The null hypothesis (p-value > 0.05) for the Independent Sample T-test demonstrates the mean value of the dependent variable would not significantly differ between the comparison groups. Table 4.11 shows the results of Levene’s test of equality of variance and Independent Sample T-test to examine the hypothesized constructs' mean differences between the groups of Groups of HEIs Sector and Gender.

Table 4.11, Results of Levene’s test and Independent Sample T-test for the Groups of Gender.

**Table 4.11: Results of Levene’s test and Independent Sample T-test for the Groups of Gender**

Variable	Levene’s test		Mean (M)			Independent Sample T-test		
	F	p	Group 1	Group 2	ΔM	T	df	P
<b><u>HEIs Sector</u></b>			Public	Private				
Inclusive Leadership (IL)	11.269**	0.001	3.743	4.123	0.380***	5.551	417.519	0

Table 4.11: Results of Levene’s test and Independent Sample T-test for the Groups of Gender

Authentic Leadership (AL)	0.055	0.815	3.397	3.689	0.293***	3.977	442	0
Innovative Work Behavior (IWB)	11.441**	0.001	3.882	4.074	0.192**	2.765	412.3	0.006
Adaptive Performance (AP)	14.826***	0	3.903	4.114	0.211**	3.445	403.05	0.001
Psychological Capital (PSYCAP)	5.934*	0.015	4.089	4.163	0.074	1.395	432.853	0.164
<b>Gender</b>			Male	Female				
Inclusive Leadership (IL)	0.006	0.94	3.918	3.978	-0.059	- 0.715	442	0.475
Authentic Leadership (AL)	0.779	0.378	3.527	3.593	-0.066	- 0.748	442	0.455
Innovative Work Behavior (IWB)	0.432	0.511	3.978	3.976	0.002	0.025	442	0.98
Adaptive Performance (AP)	0.006	0.94	3.998	4.043	-0.046	- 0.626	442	0.532
Psychological Capital (PSYCAP)	0.139	0.709	4.117	4.153	-0.036	-0.58	442	0.562

N=444;  $\Delta$  = mean difference; df = degree of freedom; \* P< 0.05; \*\* p<0.01; \*\*\* p<0.001

As shown in Table 4.11, the results of Levene's test indicated that the equality of variance was not assumed for Inclusive Leadership (IL), Innovative Work Behavior (IWB) and Adaptive Performance (AP) between the groups of HEIs sector as their p-values were less than the standard significance level of 0.05. The equality of variance was assumed for the other constructs between the groups of HEIs sector and Gender because of having p-values above 0.05.

The results of the Independent Sample T-test indicated that the mean value of Inclusive Leadership (IL) for the Private sector (M = 4.123) was significantly higher than the Public sector (M = 3.743) because of having a p-value of 0.000, below the threshold of 0.05;  $\Delta M = 0.380$ ,  $T(47.519) = 5.551$ ,  $p < 0.001$ .

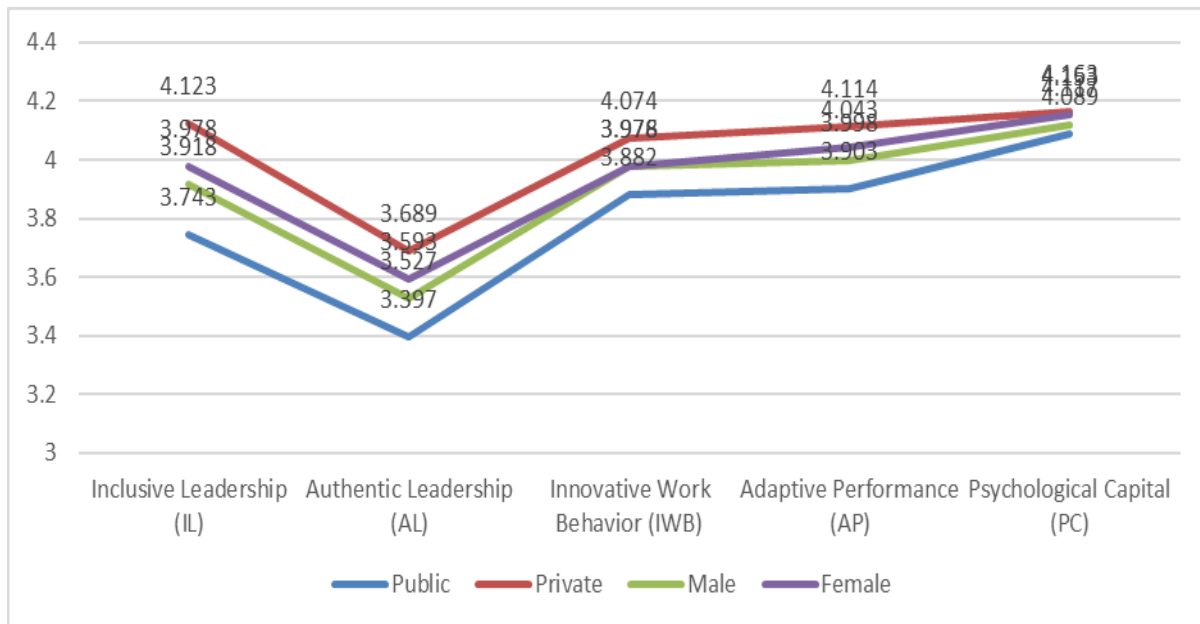
The mean value of Authentic Leadership (AL) for the Private sector ( $M = 3.689$ ) was significantly higher than the public sector ( $M = 3.397$ );  $\Delta M = 0.293$ ,  $T(442) = 3.977$ ,  $p < 0.001$ .

The mean value of Innovative Work Behavior (IWB) for the Private sector ( $M = 4.074$ ) was significantly higher than the public sector ( $M = 3.882$ );  $\Delta M = 0.192$ ,  $T(412.3) = 2.765$ ,  $p = 0.006$ .

The mean value of Adaptive Performance (AP) for the Private sector ( $M = 4.114$ ) was significantly higher than the Public sector ( $M = 3.903$ );  $\Delta M = 0.211$ ,  $T(403.05) = 3.445$ ,  $p = 0.001$ .

The mean value of Psychological Capital (PSYCAP) for the private sector ( $M = 4.163$ ) was insignificantly higher than the Public sector ( $M = 4.089$ ) because of having a p-value 0.164, above the threshold of 0.05;  $\Delta M = 0.074$ ,  $T(432.583) = 1.395$ ,  $p = 0.164$ .

The results also indicated that the mean values of the constructs did not significantly change between males and females because of having p-values above the threshold of 0.05. Figure 4.9 represents the line chart of the mean values of the latent constructs between public and private sectors as well as between males and females.



**Figure 4.9: Line Chart of The Mean Values of The Latent Constructs between public sector, private sector, Male and Female**

#### 4.8.2 One-Way Welch/ANOVA Test

The one-way test was carried out as a comparative parametric test in this study. The One-Way Welch/ANOVA procedure produces a one-way analysis of variance for a quantitative dependent variable by a single independent variable. Therefore, the one-way Welch/ANOVA test was run to compare the mean value of all the hypothesized latent constructs in this study between the groups of Age, Academic Rank, Work Experience and Educational Level.

**Table 4.12: Results of Levene's test for testing Equality of Variance**

Construct	Age		Academic Rank		Work Experience		Educational Level	
	LS	p	LS	p	LS	p	LS	P
Inclusive Leadership (IL)	0.643	0.632	1.315	0.256	1.362	0.237	4.237*	0.015
Authentic Leadership (AL)	0.753	0.557	0.653	0.66	0.231	0.949	3.317*	0.037
Innovative Work Behavior (IWB)	3.265*	0.012	3.776**	0.002	1.58	0.164	8.253***	0
Adaptive Performance (AP)	0.728	0.573	2.799*	0.017	1.607	0.157	4.024*	0.019
Psychological Capital (PSYCAP)	1.241	0.293	3.214**	0.007	0.833	0.527	1.372	0.255

\* P< 0.05; \*\* p<0.01; \*\*\* p<0.001; LS = Levene's Statistic

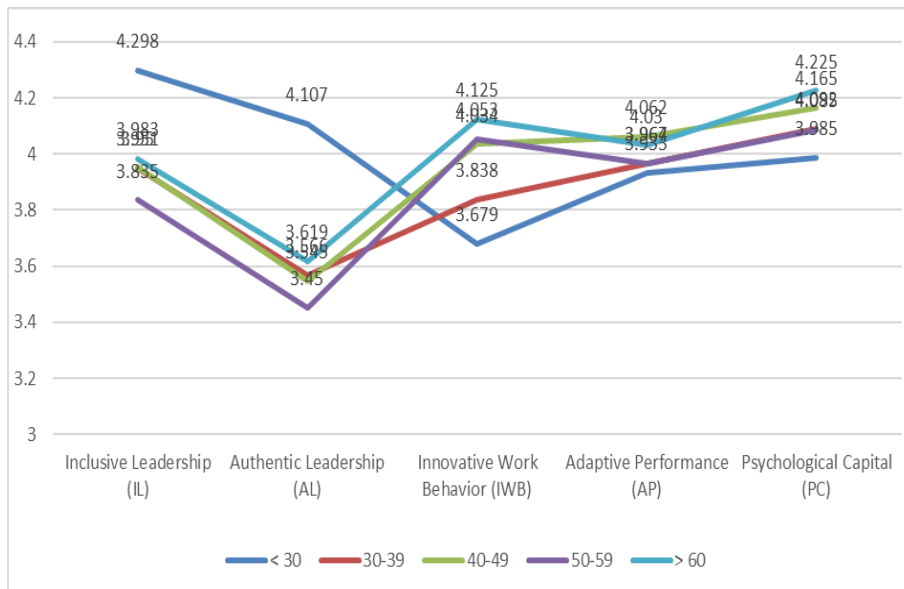
The variance was not assumed for Innovative Work Behavior (IWB) between the groups of Age, Academic Rank and Educational Level because of having a p-value below the threshold of 0.05. The equality of variance was also not assumed for Adaptive Performance (AP) between the groups of Academic Rank and Educational Level. The equality of variance was not assumed for Inclusive Leadership (IL) and Authentic Leadership (AL) between the groups of Educational Level. The results of Levene's test also indicated that equality of variance was not assumed for Psychological Capital (PSYCAP) between the groups of Academic Rank. Therefore, the Welch test was used to examine the differences in the mean values for this construct between the aforementioned groups. The equality of variance was assumed for the other constructs between the groups of age, Academic Rank, Work Experience and Educational Level. Therefore, One-way ANOVA was used as the comparison test. Table 4 .13 represents the results of One-Way ANOVA and the Welch test for examining the mean differences of the constructs between the groups of age.

**Table 4.13: Results of One-Way ANOVA for the Groups of Age**

Construct	Mean					F	df	P
	< 30	30-39	40-49	50-59	> 60			
Inclusive Leadership (IL)	4.298	3.950	3.951	3.835	3.983	0.897	4, 439	0.466
Authentic Leadership (AL)	4.107	3.566	3.545	3.450	3.619	1.305	4, 439	0.267
Innovative Work Behavior (IWB) <sup>a</sup>	3.679	3.838	4.034	4.053	4.125	1.931	4, 36.62	0.126
Adaptive Performance (AP)	3.933	3.964	4.062	3.967	4.030	0.586	4, 439	0.673
Psychological Capital (PSYCAP)	3.985	4.092	4.165	4.085	4.225	0.743	4, 439	0.563

Df = degree of freedom; a = Welch Test; \* P< 0.05; \*\* p<0.01; \*\*\* p<0.001;

As shown in Table 4.13, the results of One-Way ANOVA and Welch test demonstrated no significant difference in the mean values of the constructs between the groups of age because of having p-values above 0.05. Figure 4.9 represents the line chart of the mean values of the latent constructs between the groups of age.



**Figure 4.10: Effect of Inclusive Leadership (IL) and Adaptive Performance (AP) for Public and Private sectors**

Figure 4.10, Line Chart of The Mean Values of The Latent Constructs between the groups of Age

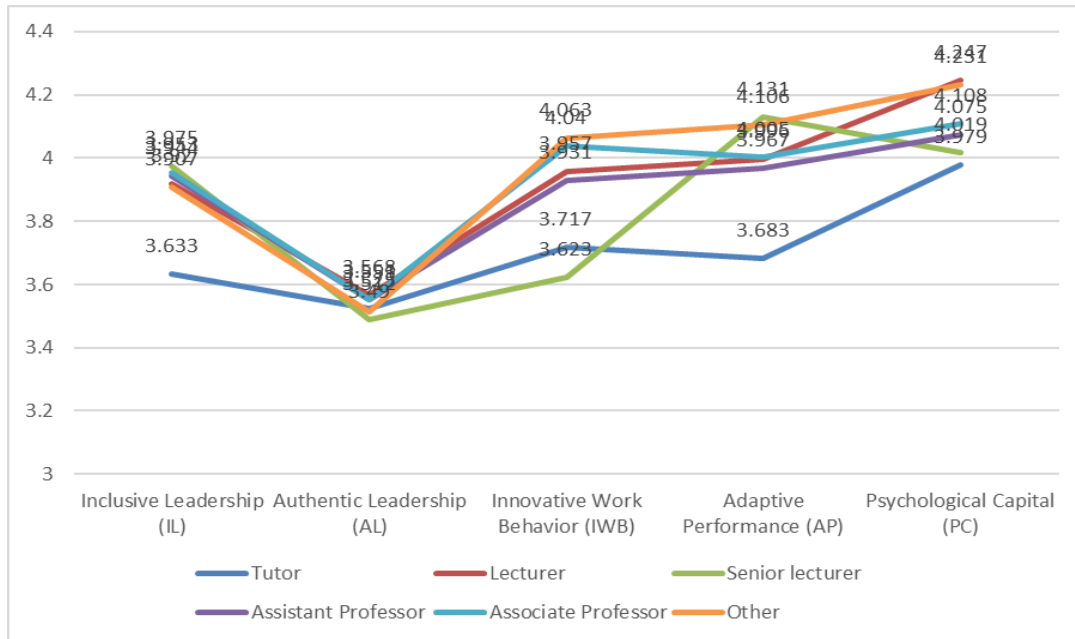
Table 4.14 represents the results of One Way ANOVA and Welch Tests for examining the mean differences of the constructs between the groups of Academic Rank.

**Table 4.14: Results of One Way ANOVA & Welch Tests for the Groups of Academic Rank**

Construct	Mean						F	df	p
	Tutor	Lecturer	Senior lecturer	Assistant Professor	Associate Professor	Full professor			
Inclusive Leadership (IL)	3.633	3.920	3.975	3.944	3.953	3.907	0.382	5, 438	0.861
Authentic Leadership (AL)	3.525	3.568	3.490	3.551	3.553	3.512	0.058	5, 438	0.998
Innovative Work Behavior (IWB) <sup>a</sup>	3.717	3.957	3.623	3.931	4.040	4.063	1.334	5, 57.4	0.263
Adaptive Performance (AP) <sup>a</sup>	3.683	3.996	4.131	3.967	4.005	4.106	0.907	5, 58.9	0.483
Psychological Capital (PSYCAP) <sup>a</sup>	3.979	4.247	4.019	4.075	4.108	4.231	1.498	5, 57.835	0.204

Df = degree of freedom; a = Welch Test; \* P< 0.05; \*\* p<0.01; \*\*\* p<0.001;

As shown in Table 4.14, the results of One Way ANOVA and Welch test demonstrated no significant difference in the mean values of the constructs between the groups of Academic Rank because of having p-values above 0.05. Figure 4.10 represents the line chart of the mean values of the latent constructs between the groups of Academic Rank.



**Figure 4.11: Line Chart of The Mean Values of The Latent Constructs between the groups of Academic Rank.**

Table 4.15 represents the results of One Way ANOVA and Welch Tests for examining the mean differences of the constructs between the groups of Work Experience.

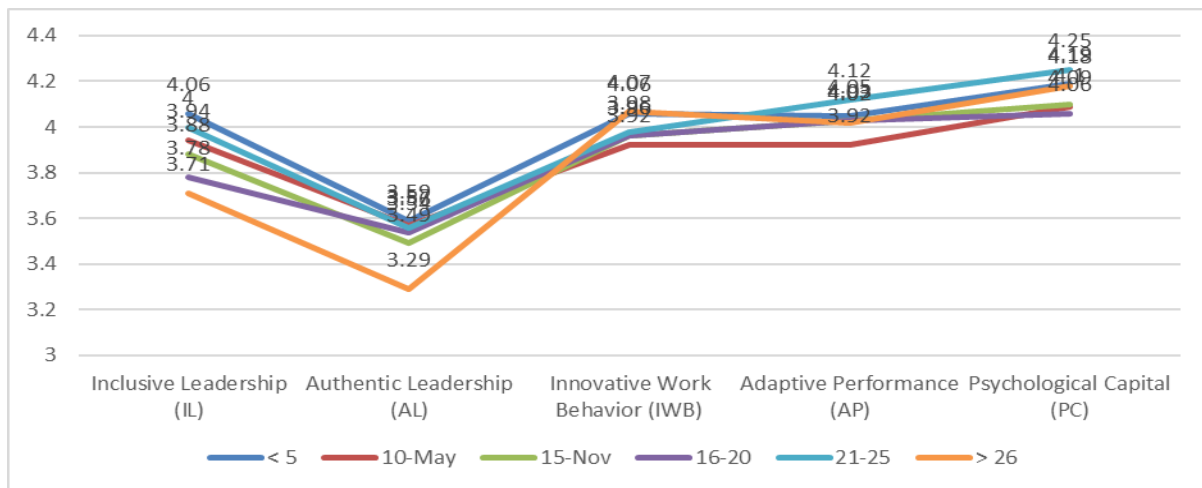
Table 4.15, Results of One Way ANOVA & Welch Tests for the Groups of Work Experience

**Table 4.15: Results of One-Way ANOVA & Welch Tests for the Groups of Work Experience**

Construct	Mean						F	df	P
	< 5	5-10	11-15	16-20	21-25	> 26			
Inclusive Leadership (IL)	4.06	3.94	3.88	3.78	4.00	3.71	1.59	5, 438	0.161
Authentic Leadership (AL)	3.59	3.57	3.49	3.54	3.56	3.29	0.587	5, 438	0.71
Innovative Work Behavior (IWB)	4.06	3.92	3.96	3.96	3.98	4.07	0.451	5, 438	0.813
Adaptive Performance (AP)	4.05	3.92	4.03	4.03	4.12	4.02	0.815	5, 438	0.54
Psychological Capital (PSYCAP)	4.19	4.09	4.10	4.06	4.25	4.18	0.981	5, 438	0.429

Df = degree of freedom; \* P< 0.05; \*\* p<0.01; \*\*\* p<0.001.

As shown in Table 4.15, the results of One Way ANOVA and Welch test demonstrated no significant difference in the mean values of the constructs between the groups of Work Experience because of having p-values above 0.05. Figure 4.11 represents the line chart of the mean values of the latent constructs between the groups of Work Experience.



**Figure 4.12: Line Chart of The Mean Values of The Latent Constructs between the Groups of Work Experience.**

Table 4.16 represents the results of One Way ANOVA for examining the mean differences of the constructs between the groups of Educational Level.

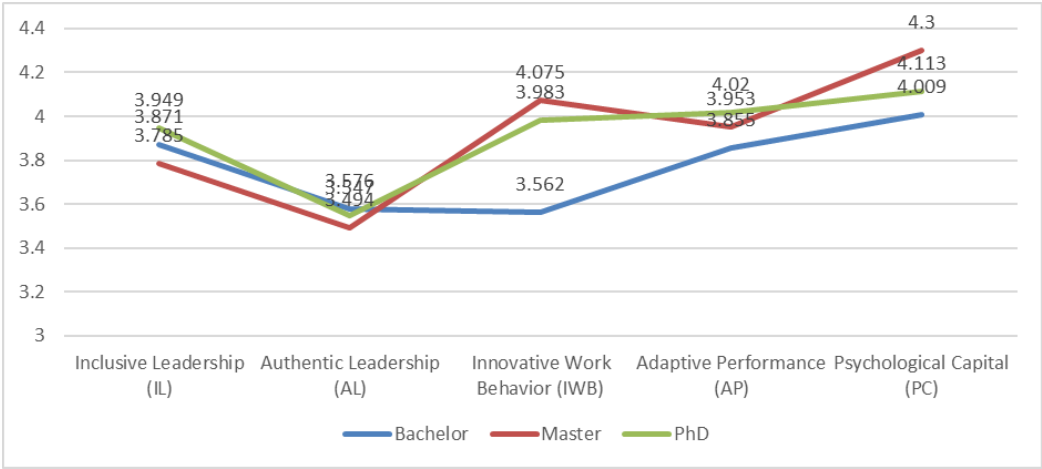
**Table 4.16: Results of One Way ANOVA for the Groups of Educational Level**

Construct	Mean			F	df	P
	Bachelor	Master	PhD			
Inclusive Leadership (IL) <sup>a</sup>	3.871	3.785	3.949	0.646	2, 26.993	0.532
Authentic Leadership (AL) <sup>a</sup>	3.576	3.494	3.547	0.093	2,27.578	0.912
Innovative Work Behavior (IWB) <sup>a</sup>	3.562	4.075	3.983	0.961	2,27.024	0.395
Adaptive Performance (AP) <sup>a</sup>	3.855	3.953	4.020	0.298	2,27.034	0.745
Psychological Capital (PSYCAP)	4.009	4.300	4.113	2.253	2, 441	0.106

Df = degree of freedom; a = Welch Test; \* P< 0.05; \*\* p<0.01; \*\*\* p<0.001.

As shown in Table 4.16, the results of One Way ANOVA showed no significant difference in the mean values of the constructs between the groups of Educational Level because of having p-values above 0.05.

Figure 4.13 represents the line chart of the mean values of the latent constructs between the groups of Educational Level.



**Figure 4.13: Line Chart of The Mean Values of The Latent Constructs between the groups of Educational Level.**

**4.9 Summary of Findings**

Table 4.17 presents the summary of the findings of the hypothesis testing. The findings helped to justify and explain the theoretical framework developed. Out of 13 hypotheses tested, 13 hypotheses were accepted. Similarly, 3 hypotheses were not statistically supported, thus, they were rejected. The results were aligned with the past literature and discussed in detail in the next sections.

**Table 4.17 Summary of Hypotheses Findings**

Tested Hypotheses	Results
<b>Direct relation</b>	
IL→PsyCap	H1 <sup>+</sup> ) Supported
IL→IWB	H2 <sup>+</sup> ) Supported
AL→PsyCap	H4 <sup>+</sup> ) Supported
AL→IWB	H5 <sup>+</sup> ) Supported
PsyCap→IWB	H6 <sup>+</sup> ) Supported
IL→AP	H8 <sup>+</sup> ) Supported
PsyCap→AP	H9 <sup>+</sup> ) Supported
AL→AP	H11 <sup>+</sup> ) Not supported
<b>Mediation Effect Hypotheses PSYCAP</b>	
IL→PsyCap→IWB	H3) Supported / Partial Mediation
IL→PSYCAP→AP	H10) Supported / Partial Mediation
AL→PsyCap→IWB	H7) Supported / Partial Mediation
AL→PsyCap→AP	H12) Supported / Full Mediation
<b>Moderation Effect Hypotheses-Sector type</b>	
AL*HS→IWB	Not supported
AL*HS→ AP	Not supported
IL*HS→IWB	Supported
IL*HS→ AP	Supported

#### 4.10 Summary

In this research, data analysis was conducted in two major phases. The first phase involved a preliminary analysis of the data. This process is crucial to ensure that the data adequately meets the basic assumptions of using SEM. As a result, the items of each construct were adequately loaded on their constructs through EFA and also no serious problems of common method variance and multicollinearity between the constructs were detected.

The second phase applied the two stages of SEM. The first stage included the establishment of a CFA measurement model for the latent constructs in the research. After

confirming the uni-dimensionality, reliability and validity of the constructs in the first stage, the second stage developed to test the research hypotheses by developing the structural model.

Accordingly, a structural model was developed to examine eight hypothesized causal effects (i.e., H1, H2, H4, H5, H6, H8, H9 and H11), four mediation effect hypotheses (i.e., H3, H7, H10 and H12) and four hypothesized moderation effects (i.e., H13, H14, H15, H16). These were done by conducting the path analysis using SMART-PLS 4.0 and testing the significance of the path coefficients for each hypothesized path.

The results of path analysis indicated that Inclusive Leadership (IL) and Authentic Leadership (AL) have significant positive effects on Psychological Capital (PSYCAP) and Innovative Work Behavior (IWB). Psychological Capital (PSYCAP) had also significant positive effects on Innovative Work Behavior (IWB) and Adaptive Performance (AP). The results also indicated that Inclusive Leadership (IL) has a significant positive effect on Adaptive Performance (AP) while the effect of Authentic Leadership (AL) on Adaptive Performance (AP) was not found as statistically significant. Therefore, hypotheses H1, H2, H4, H5, H6, H8 and H9 were supported while hypothesis H11 was rejected. The mediation analysis results indicated that Psychological Capital (PSYCAP) partially mediates the effects of Inclusive Leadership (IL) on Innovative Work Behavior (IWB) and Adaptive Performance (AP). The results also indicated that Psychological Capital (PSYCAP) partially mediates the effect of Authentic Leadership (AL) on Innovative Work Behavior (IWB) while fully mediates the effects of Authentic Leadership (AL) on Adaptive Performance (AP). Therefore, all proposed mediation hypotheses H3, H7, H10 and H12 were supported. The results of the moderation analysis indicated that the effects of Inclusive Leadership (IL) on

Innovative Work Behavior (IWB) and Adaptive Performance (AP) were significantly stronger for the private sector compared to the public sector. Therefore, HEIs Sector type (HS) moderates these effects, providing support for H15 and H16. The results of the independent sample t-test indicated that the mean values of Inclusive Leadership (IL), Authentic Leadership (AL), Innovative Work Behavior (IWB) and Adaptive Performance (AP) for the private sector were significantly higher than the public sector. No significant differences in the mean values of the constructs were found between males and females. The results of One Way ANOVA and Welch tests also indicated that the mean values of the constructs were not significantly changed between the groups of Age, Academic Rank, Work Experience and Educational Level. Figure 4.14 depicts the model of findings, including standard coefficients of the research hypotheses.

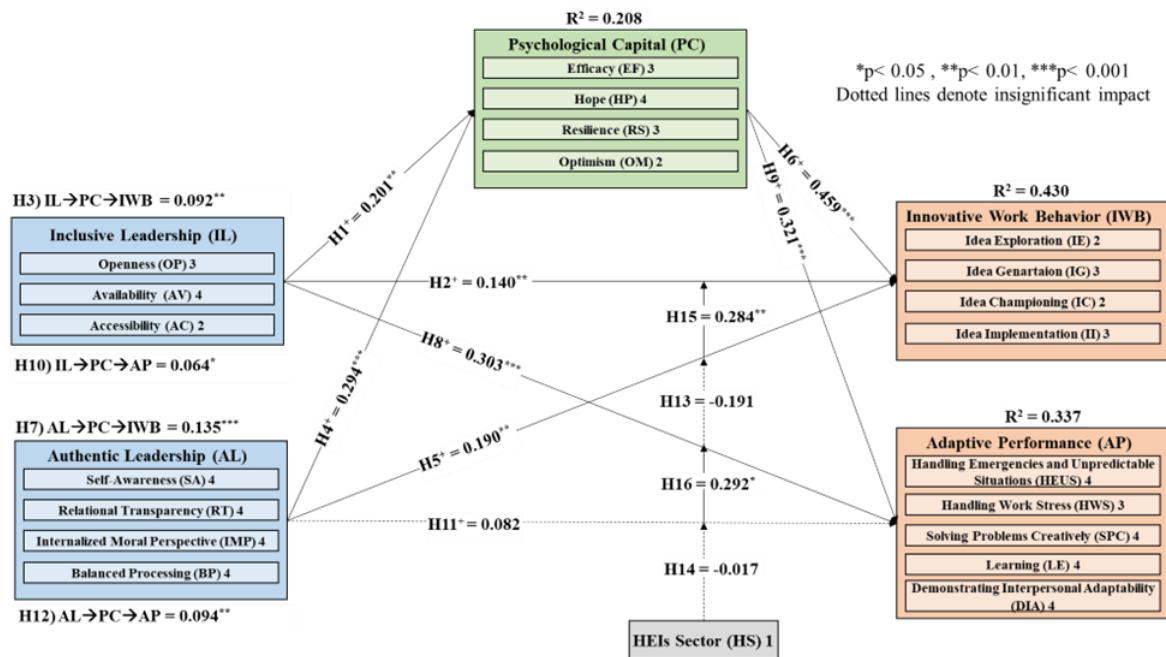


Figure 4.2: Model of Finding

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Overview**

In the previous chapter, the findings of this study were presented. The objective of this chapter is to discuss the results of the study in the context of the research questions, hypotheses and literature review. The chapter is organized into four major parts. The first section discusses the summary of the results. Based on the results' pattern, the second session discusses the findings in light of the tested hypotheses and literature review. The third section discusses the implications of the current findings. The fourth section presents the limitations of this study. The fifth section future research directions. Finally, the fifth section discusses the conclusion of the study.

#### **5.2 Recapitulation of Study Findings**

This study attempted to determine the relationship between the independent variables (inclusive leadership, authentic leadership) and the dependent variables (innovative work behavior and adaptive performance), with psychological capital as a mediating variable in higher education institutions in Jordan. The study is cross-sectional in nature. The data were collected from all faculty staff working in public and private Jordanian higher education institutions in the north-central and south regions of the kingdom.

This study was also set up to accomplish the following particular objectives.

- i.** To examine the effect of IL and AL on PsyCap in public and private higher education institutions in Jordan.
- ii.** To examine the effect of IL and AL on IWB in public and private higher education institutions in Jordan.
- iii.** To examine the effect of PsyCap on IWB and AP in public and private higher education institutions in Jordan.
- iv.** To evaluate the effect of IL and AL on AP in public and private higher education institutions in Jordan.
- iv.** To assess the mediating effect of PsyCap on the relationship between leadership (IL and AL) styles and IWB in public and private higher education institutions in Jordan.
- v.** To assess the mediating effect of PsyCap on the relationship between Leadership styles (IL and AL) and AP in public and private higher education institutions in Jordan.
- vi.** To assess the moderating effect of the HEIs sector on the relationship s between Leadership styles (IL and AL) and IWB in public and private higher education institutions in Jordan.
- vii.** To assess the moderating effect of the HEIs sector on the relationship between Leadership styles (IL and AL) and AP in public and private higher education institutions in Jordan.
- viii.** To evaluate the effect of IL and AL on IWB in public and private higher education institutions in Jordan.

### **5.3 Discussion of Results**

The discussion in this chapter is organized around hypotheses testing results and findings as presented in the research framework. The following section provides a discussion based on the research questions and objectives of the study.

#### **5.3.1 Discussion on Direct Effect**

The ensuing sections shall discuss the findings on multiple regressions between five variables under study namely innovative work behaviours, adaptive performance, psychological capital, inclusive leadership and authentic leadership and answer research questions 1, 2, 3 and 4.

#### **Research Question 1**

The first research question states, “What is the influence of inclusive leadership and authentic leadership on psychological capital in public and private higher education institutions in Jordan?” The first question is dealt with in hypotheses H1, and H4 where the findings of which were compared to prior literature.

**H1:** Inclusive leadership has a positive influence on psychological capital.

The first objective of the study was to investigate the relationship between inclusive leadership and psychological capital in Jordanian universities. While the findings suggest a positive relationship between inclusive leadership and psychological capital, it is noteworthy that this link reaches statistical significance ( $\beta = 0.201$ ,  $t = 2.848$ ,  $p = 0.004$ ). Therefore, the results do provide empirical support for the link between inclusive leadership and psychological capital in higher education. In short, these results mean that inclusive leadership do reliably predict psychological capital in Jordanian universities.

More specifically, in Ain, Baig, and Afaq's (2023) study, the authors revealed that inclusive leadership has a positive and significant effect on the psychological capital among specific higher secondary schools of Azad Jammu & Kashmir. Moreover, inclusive leadership was identified as among the primary antecedents of psychological capital in South China universities (Dai & Fang, 2023). In another related study, Zhou (2018) examined the relationships between inclusive leadership and psychological capital. They revealed a significant inclusive leadership- psychological capital among financial intermediation employees in southwest China. Also, Fang, Chen, Wang, and Chen (2019) revealed a positive influence of inclusive leadership on psychological capital in enterprise employees of Zhejiang. Inclusive leadership was also reported to have a positive significant influence on psychological capital in the Umrani, Bachkirov, Nawaz, Ahmed, and Pahi (2024) study.

An inclusive leader is more willing to communicate with and hear from the subordinates, and attach importance to their involvement, which can facilitate the arousing of their initiative. Therefore, this research has further verified the critical role that inclusive leadership plays in the enhancement of employees' psychological capital and solidified the theory "Social exchange theory can be intervened and developed" of Blau (1964).

**H4:** Authentic leadership has a positive influence on psychological capital.

The study aimed to assess the link between authentic leadership and psychological capital in Jordanian universities. The results revealed a notable and positive relationship between authentic leadership and psychological capital ( $\beta = 0.294$ ,  $t = 4.525$ ,  $p = 0.000$ ). This outcome highlights authentic leadership as a robust predictor capable of positively influencing and enhancing psychological capital. Authentic leadership in this study has been operationalized in terms of all external evaluation practices also known as authentic

leadership at the program and institutional level. Authentic leadership in higher education has several purposes, such as ensuring: compliance with standards, accountability and transparency, and quality improvement (Corriveau, 2020). Considering the positive role of authentic leadership, this study also signifies the positive implications of authentic leadership on psychological capital in the context of Jordanian universities.

This result is consistent with previous studies that examined authentic leadership in higher education (Abbas, Saud, Suhariadi, Usman, & Ekowati, 2022; Soares & Lopes, 2020; Srivastava, Mani, Yadav, & Joshi, 2020). Al-Jaradat, Khasawneh, Abu-Alruz, and Bataineh (2020), have stated that authentic leadership exists and supports Jordanian higher education. Similarly, (Novitasari, Siswanto, Purwanto, & Fahmi, 2020; Purwanto, Asbari, Hartuti, Setiana, & Fahmi, 2021; Rego, Sousa, Marques, & e Cunha, 2012) postulated that authentic leadership is a significant influence on psychological capital. Thus, researchers can conclude that authentic leadership has a positive relationship with psychological capital.

In the context of Jordanian universities, authentic leadership significantly impacts the psychological capital of faculty members by fostering an environment where self-efficacy, hope, optimism, and resiliency can thrive. Authentic leaders, through their self-awareness, transparency, and ethical behavior, inspire confidence and a positive outlook among faculty, encouraging them to undertake innovative projects and adopt new teaching methods. By setting realistic yet challenging goals, these leaders instil hope and foster a culture of optimism that motivates faculty to strive for continuous improvement and creativity. Moreover, by demonstrating effective coping strategies and openly communicating about challenges, authentic leaders build resiliency within their teams, enabling faculty to adapt and excel despite changes and difficulties. This empowering

environment not only enhances individual performance but also contributes to the overall academic and administrative excellence of Jordanian higher education institutions.

## **Research Question 2**

The second research question states, “What is the influence of inclusive leadership and authentic leadership on innovative work behavior in public and private higher education institutions in Jordan?” This research question is aligned with the findings of H2, and H5 which are presented and discussed in this section, and further compared with findings from relevant literature.

**H2:** Inclusive leadership has a positive influence on innovative work behavior.

This study was to examine the link between inclusive leadership and innovative work behavior in Jordanian universities. The results revealed a substantial and positive association between inclusive leadership and innovative work behavior ( $\beta = 0.140$ ,  $t = 2.655$ ,  $p = 0.008$ ). This emphasizes the significant influence of inclusive leadership on the innovative work behaviour of universities in Jordan. Furthermore, it implies that as the inclusive leadership levels of university faculty rise, so does the overall innovative behaviour of universities in the country.

Based on the outcome of the generated model, the path of inclusive leadership and innovative work behavior is significant and positive. The hypothesis is supported. The finding is in line with the findings of other authors (Javed, Fatima, Khan, & Bashir, 2021; Mansoor, Farrukh, Wu, & Abdul Wahab, 2021; Sürücü, Maslakçı, & Şeşen, 2023) in various context of organizations such as banking, universities, travel services and health service. For instance, Aboramadan, Dahleez, and Farao (2022) found that inclusive leadership is related

positively to innovative work behavior in Palestinian higher education institutions. Thompson and Matkin (2020), also identified inclusive leadership as one of the main behavioural factors which influence innovative behaviour in higher education institutions. Other than that, Javed, Khan, and Quratulain (2021) also found that inclusive leadership positively affect innovative work behaviour in small capitalized textile firms in Pakistan. Overall, this reveals that inclusive leadership was found one of the important predictors of innovative work behavior in most of the education sector, especially universities.

In Jordanian universities, inclusive leadership significantly enhances innovative work behavior among faculty by fostering an environment of mutual respect, acceptance, and collaboration. Inclusive leaders actively seek out and value diverse perspectives, enabling faculty to feel recognized and appreciated for their unique contributions. This supportive and open atmosphere encourages faculty members to step outside conventional work routines, voice their ideas, and challenge the existing standards and status quo without fear of negative repercussions. By building strong, quality relationships that emphasize social exchanges over economic ones, inclusive leaders empower faculty to attain the creative freedom necessary for innovation. Consequently, this relational dynamic not only stimulates individual creativity and risk-taking but also drives collective advancement in academic practices and the overall excellence of Jordanian higher education institutions.

**H5:** Authentic leadership has a positive influence on innovative work behavior.

The relationship between authentic leadership and innovative work behaviour is found statistically significant at a 95 per cent confidence interval ( $\beta=0.190$ ,  $t =3.432$ ,  $p$ -values=0.001) significance at  $p<0.05$ , which indicated support for H5. This result is consistent with previous studies that examined authentic leadership in Jordanian higher

education Al-Jaradat et al. (2020) have stated that faculty members and leaders in Jordanian universities need to improve their understanding of how authentic leadership affects the innovative work behaviour of their employees and reframe their views concerning techniques for motivating them. Similarly, Purwanto et al. (2021) postulated that authentic leadership significant influence on innovative work behaviour. Thus, it can be conclude that authentic leadership has a positive relationship with innovative work behavior.

The findings of this study demonstrate that authentic leadership plays a significant role in persuading employees' innovative work behavior in Jordanian higher education. This result was supported by many previous studies on authentic leadership and innovative work behavior. The majority of the studies found that authentic leadership was a vital component that can lead to innovative behaviour (Grošelj, Černe, Penger, & Grah, 2020; Javed, Khan, et al., 2021; Korcu & Kaya, 2023). Based on this, it can be said that authentic leaders in Jordanian universities can increase and grow faculty satisfaction and confidence. Faculty satisfaction with the behaviour of leaders creates a positive reciprocal relationship between faculty and their leaders, as well as among faculty members. This reciprocity fosters positive behaviours, such as motivation to improve performance and the development of innovative behaviours. This is evident in this study, where authentic leadership in Jordanian universities leads to innovative behaviours such as improving methods of task execution, generating new work ideas or techniques to enhance quality, finding alternative solutions to problems, attracting the support of other organizational members for new methods or innovations, applying these innovations in the academic environment, and potentially commercializing the results of these innovations.

### Research Question 3

The third research question states, “What is the influence of psychological capital on innovative work behavior and adaptive performance in public and private higher education institutions in Jordan?” Accordingly, this study formulated hypotheses H6 and H9 to determine the answer to the above query, and the results are discussed and compared with previous studies.

**H6:** Psychological capital has a positive influence on innovative work behavior.

The current research has hypothesized that have a positive relationship between psychological capital and innovative work behavior. First of all, it is empirically proven that psychological capital has an important impact on innovative work behaviour in the Jordanian sector (Al Daboub, Al-Madadha, & Al-Adwan, 2024). Our experiment verifies that there are significant differences in the relationships between psychological capital and innovative work behaviour.

The relationship between psychological capital and innovative work behaviour is found statistically significant at a 95 per cent confidence interval ( $\beta=0.459$ ,  $t=9.785$ ,  $p\text{-values}=0.000$ ) significance at ( $P>0.01$ ) Since this result is positive as well as significant at 1%, it can be concluded the relationship is supported at 0.05 level hence there exists a positive relation between psychological capital and innovative work behaviour in Jordanian public and private universities at 0.01 level, Which indicated support for H6. This result is consistent with previous studies that examined psychological capital in Jordanian universities (Al-Tahat et al., 2020; Altahat & Atan, 2018; Harahsheh, Houssien, Alshurideh, & Mohammad, 2021). Similarly, (Karimi, Ahmadi Malek, Yaghoubi Farani, & Liobikienė, 2023; Kumar, Upadhyay, Yadav, & Goyal, 2022; Mishra, Bhatnagar, Gupta, & Wadsworth,

2019; Purwanto et al., 2021) postulated the psychological capital significant influence on innovative work behaviour. Thus, it can be conclude that psychological capital has a positive relationship with innovative work behavior. Also, universities that pay attention to high psychological capital to improve the employees' innovative work behaviour and morale may recognize the long-term benefits of corporate success, and productivity.

In Jordanian universities, it is evident that faculty who feel confident in their potential to develop are motivated to demonstrate that potential, thereby exhibiting innovative behaviour. When faculty members believe in their ability to handle challenges, this confidence encourages them to develop their skills further and generate new ideas to address tasks effectively. This dynamic fosters an environment where psychological capital plays a crucial role; as faculty with higher psychological capital are more likely to engage in innovative work behavior. In essence, the greater the psychological capital within faculty members, the more they are inclined to exhibit behaviors that enhance innovation and improve overall academic and administrative performance in Jordanian higher education institutions.

**H9:** Psychological capital has a positive influence on adaptive performance.

The proposed relationship between psychological capital and adaptive performance in private and public higher education institutions in Jordan is found statistically significant at a 95 per cent confidence interval ( $\beta=0.321$ ,  $t=4.509$ ,  $p\text{-values}=0.000$ ) significance at  $p<0.01$ , which indicated support for H9. This result is consistent with previous studies that examined psychological capital in higher education (da Costa, Pinto, Martins, & Vieira, 2021; Mutonyi, 2021). For instance, Luo et al. (2022) have demonstrated that psychological capital contributes to a precise prediction of adaptive performance in the hotel sector. Thus,

it can be concluded that psychological capital has a positive relationship with adaptive performance and it will help employees to work in higher education in Jordan. Research in the area of human resource management has generally supported the idea that the implementation of practices encouraging employees' psychological capital and adaptive performance can generate a significant advantage for organizations. Employees' psychological capital and adaptive performance were largely examined within the work domain because of the importance of having motivated and committed employees to promote university performance.

In Jordanian universities, psychological capital acts as a critical psychological resource reservoir for faculty members. It provides them with the mental and emotional tools needed to cope with challenges, adapt to changes, and perform effectively in demanding academic and administrative situations. Faculty members with higher psychological capital are more likely to exhibit increased resilience, enhanced problem-solving abilities, and a positive attitude when facing obstacles or uncertainties. This psychological strength enables them to contribute more effectively to their institutions, fostering an environment where innovation and continuous improvement thrive.

#### **Research Question 4**

The fourth research question queries, "What is the influence of inclusive leadership and authentic leadership on adaptive performance in public and private higher education institutions in Jordan?" This research question is aligned with the findings of H8, and H11 which are presented and discussed under this section, and further compared with findings from relevant literature.

**H8:** Inclusive leadership has a positive influence on adaptive performance.

Inclusive leadership was investigated concerning adaptive performance in Jordanian private and public higher education institutions in Jordan. To that end, This study developed Hypothesis H8, which states that “There is a significant association between inclusive leadership and adaptive performance.” The outcome of the PLS-SEM bootstrapping analysis shows a positive significant association between inclusive leadership and adaptive performance, at ( $\beta=0.303$ ,  $t\text{-value}=3.857$ ,  $p\text{-values}=0.000$ ) significance at  $P<0.01$ . Since this result is positive and significant at 1%, it can be concluded that a positive relationship exists among the variables. In other words, inclusive leadership is positively and significantly related to adaptive performance in private and public higher education institutions in Jordan, which indicated support for H8. This result is consistent with previous studies that examined inclusive leadership in private and public higher education institutions in Jordan (Al-Khateeb, Ayasrah, & Beirat, 2023; Shaqra, 2021). For instance, (Ain et al., 2023; Bataineh et al., 2022; Qurrahtulain, Bashir, Hussain, Ahmed, & Nisar, 2022; Yu, 2020) have demonstrated that inclusive leadership contributes to a precise prediction of adaptive performance. Thus, researchers can conclude that inclusive leadership has a positive relationship with adaptive performance and it will help universities to succeed in Jordan.

In Jordanian universities, inclusive leadership significantly enhances adaptive performance among faculty members by creating an environment where open communication, mutual respect, and collaborative problem-solving are prioritized. Inclusive leaders actively encourage faculty to freely express new ideas and perspectives, making them feel valued and involved in the decision-making process. This supportive atmosphere enhances faculty members' interest in their roles and motivates them to adapt more readily to changing circumstances and challenges. When faculty perceive their leaders as approachable and collaborative rather than controlling, they are more likely to engage in

behaviours that go beyond standard operating procedures, thereby improving their ability to adapt and perform effectively. Consequently, the presence of inclusive leadership fosters a culture of flexibility and innovation, ultimately leading to higher adaptive performance within Jordanian higher education institutions.

**H11:** Authentic leadership has a positive influence on adaptive performance.

To test the relationship between authentic leadership and adaptive performance, this study develops Hypothesis H11, which states that “There is a positive significant association between authentic leadership and adaptive performance”. The results of the PLS-SEM bootstrapping approach point out a positive significant association between authentic leadership and adaptive performance at ( $\beta=0.082$ ,  $t=0.949$ ,  $p\text{-values}=0.343$ ) which is greater than the assumed value of 0.05 level. Thus, it can be concluded that the difference between authentic leadership and adaptive performance is not significant. This implies that authentic leadership does not matter much in determining adaptive performance in private and public higher education institutions in Jordan. Hence, the hypothesis is not supported. This is consistent with some previous studies that there is no relationship to authentic leadership in the services sector (Kaya & Karatepe, 2020).

However, Kim & Yoon's (2021) study shows a positive relationship between authentic leadership and the adaptive performance of institution members. The study covered a sample of 348 individuals from public institutions in Korea, cultural differences play a significant role in shaping leadership effectiveness and employee adaptability. As in Korea the cultural emphasis on collectivism, hierarchical respect, and conformity to group norms may create an environment where authentic leadership, characterized by transparency, ethical behaviour, and genuine interactions, is highly valued and reciprocated

by employees. This leads to enhanced trust and motivation, thereby positively influencing adaptive performance. In contrast, Jordanian culture, although also rooted in collectivism, may place a stronger emphasis on maintaining traditional hierarchical structures and authority. This cultural nuance might lead to a different interpretation and reception of authentic leadership, where the emphasis on directness and transparency could potentially disrupt established norms and cause discomfort or resistance among employees, thereby not significantly enhancing adaptive performance.

Another justification could be related to the organizational and systemic factors within higher education institutions in Jordan. These institutions may face structural and bureaucratic constraints that impede the effectiveness of authentic leadership. For example, rigid administrative practices, limited autonomy, and resource constraints could stifle the adaptive capabilities of employees, irrespective of the leadership style. In contrast, higher education institutions in other countries like China may have more flexible and innovative administrative practices, allowing authentic leadership to effectively influence and enhance adaptive performance. Therefore, the structural rigidity and bureaucratic hurdles in Jordanian universities may undermine the potential positive impact of authentic leadership on adaptive performance, leading to a non-significant relationship.

This finding indicates that a lack of authentic leadership, characterized by insufficient self-awareness, transparency, and ethical behaviour, fails to create an environment where faculty feel supported and empowered to adapt effectively to new challenges and roles. Faculty members devoid of authentic leadership may lack the confidence and morale needed to handle dynamic academic and administrative demands, resulting in inconsistent and potentially lower adaptive performance. Consequently, this

inconsistency in adaptive performance highlights the critical drawbacks of inadequate authentic leadership, undermining the resilience and responsiveness of the academic workforce in Jordanian higher education institutions, ultimately leading to a diminished ability to meet evolving educational standards and institutional goals.

### **5.3.1 Discussion on Mediating Effects of Psychological Capital**

The following sections shall deliberate on the findings in ascertaining the role of psychological capital in mediating the relationship of inclusive leadership, authentic leadership, innovative work behavior and adaptive performance.

#### **Research Question 5**

The fifth research question states, “Does psychological capital mediate the relationship between inclusive leadership, authentic leadership and innovative work behaviour in Jordan's private and public higher education institutions?” This study addressed the above research question by formulating hypotheses H3, and H7, and under this subsection, the results of the testing of the hypotheses are presented, discussed and compared to those reported in prior literature on innovative work behaviours.

H3: Psychological capital mediates the relationship between inclusive leadership and innovative work behaviours.

The current research has hypothesized that psychological capital may have a positive mediating effect on the relationship between inclusive leadership and innovative work behaviours. Employee's psychological capital is an important variable in the determination of innovative work behaviours. The relationship shows the coefficient of direct effect to be 0.140 with a P-value of 0.008 ( $p < 0.01$ ) while the coefficient of indirect effect to be 0.201 with a P-value of 0.004 ( $p < 0.01$ ) for testing this mediating hypothesis is partial mediation.

Thus, it can be concluded that psychological capital between inclusive leadership and innovative work behaviours is significant. This implies that psychological capital does matter much in determining innovative work behaviors in private and public higher education institutions in Jordan. Hence, the hypothesis is accepted. This is consistent with some previous studies that there is a relationship between inclusive leadership in the services sector with innovative work behaviours (Çetinkaya & Yeşilada, 2022; Fang et al., 2019; Xiang, Chen, & Zhao, 2017).

Thus, psychological capital as a collectively owned positive psychological state plays an important mediating role between inclusive leadership and employees' innovative behaviour in Jordanian universities. Innovative behavior is not only stimulated by the objective external environment but also motivated by subjective factors of individuals or collectives. The sense of innovative self-efficacy has a significant positive impact on individual innovative behaviour and can predict such behaviour. Psychological empowerment affects employees' innovative behaviour by influencing their internal and external motivation. Employees' self-efficacy and ability to work stimulate their intrinsic motivation, and those with high self-efficacy show greater confidence and have more innovative behavior. Employees in Jordanian universities tend to innovate actively if they perceive themselves in a fair, friendly, and innovative organizational climate. Highly activated positive emotions promote innovative behaviour, while low-activated positive emotions are not related to innovative behaviour. Besides, when employees have hope in mind, they more easily predict their leader's instructions or guidance for them and may turn those into innovative thoughts and behaviours. Finally, when encountering challenging situations that require leadership effects to maintain employees' resilience, successful resilience could lead employees in Jordanian universities to generate innovative thinking

based on inclusive leaders' words or helpful actions, as they can gain different experiences and reflections from challenging situations they would not encounter in routine practice. In summary, the four dimensions of psychological capital can each be examined as mediators that intervene in the influence of inclusive leadership on innovative behaviour in Jordanian universities.

H7: Psychological capital mediates the relationship between authentic leadership and innovative work behaviours.

The current research has hypothesized that psychological capital may have a positive mediating effect on the relationship between authentic leadership and innovative work behaviours. Employees' psychological capital is an important variable in the relationship between authentic leadership and innovative work behaviors in private and public higher education institutions in Jordan. The relationship shows the coefficient of direct effect to be 0.190 with a P-value of 0.001 ( $p < 0.01$ ) while the coefficient of indirect effect to be 0.294 with a P-value of 0.000 ( $p < 0.01$ ). For testing this mediating this hypothesis is partial mediation. Thus, it can be concluded that psychological capital between authentic leadership and innovative work behaviours is significant. Hence, the hypothesis is not supported. This is consistent with some previous studies that there is a relationship to psychological capital in the services sector (Novitasari et al., 2020; Purwanto et al., 2021; Zhang et al., 2024; Zubair & Kamal, 2017).

Based on the things above, Psychological capital may have a positive mediating effect on the relationship between authentic leadership and innovative work behaviours in Jordanian universities. Authentic leadership, characterized by transparency, ethics, and consistency, fosters a supportive environment that enhances the psychological capital of

employees, which includes self-efficacy, hope, resilience, and optimism. When employees perceive their leaders as authentic, this positively influences their psychological state, leading to increased confidence, motivation, and a sense of purpose. These attributes of psychological capital, in turn, stimulate innovative work behaviours as employees feel more empowered and supported to take risks and think creatively. Consequently, in the context of Jordanian universities, fostering psychological capital through authentic leadership can significantly enhance employees' capacity for innovation, contributing to overall work performance and satisfaction.

### **Research Question 6**

The sixth research question states, "Does psychological capital mediate the relationship between inclusive leadership, authentic leadership and adaptive performance in private and public higher education institutions in Jordan?" This study addressed the above research question by formulating hypotheses H10 and H12, and under this subsection, the results of the testing of the hypotheses are presented, discussed and compared to those reported in prior literature on intention to adaptive performance.

**H10:** Psychological capital mediates the relationship between inclusive leadership and adaptive performance.

The current research has hypothesized that psychological capital may have a positive mediating effect on the relationship between inclusive leadership and adaptive performance. Employee's psychological capital is an important variable in the determination of adaptive performance. The relationship shows the coefficient of direct effect to be 0.321 with a P-value of 0.004 ( $p < 0.01$ ) while the coefficient of indirect effect to be 0.064 with a P-value of 0.032 ( $p > 0.05$ ). For testing this mediating of this hypothesis is partial mediation. Thus, it

can be concluded that psychological capital between inclusive leadership and adaptive performance is significant. This implies that psychological capital does matter much in determining adaptive performance in private and public higher education institutions in Jordan. Hence, the hypothesis is accepted. This is consistent with some previous studies that there is a relationship between inclusive leadership in the services sector with adaptive performance (Ain et al., 2023; Krauter, 2018).

This, in turn, elevates expectations regarding Jordanian universities' capacity to adapt effectively. A heightened sense of belonging empowers employees to effectively navigate changes and embrace innovation within the universities. Moreover, inclusive leadership in Jordanian universities demonstrates support by tolerating mistakes, a practice that boosts employees' psychological capital. This, in turn, instils confidence in employees, affirming their competence to accomplish innovative tasks and goals within the academic environment without reservation.

**H12:** Psychological capital mediates the relationship between authentic leadership and adaptive performance.

The current research has hypothesized that psychological capital may have a positive mediating effect on the relationship between authentic leadership and adaptive performance. Employee's psychological capital is an important variable in the determination of adaptive performance. The relationship shows the coefficient of direct effect to be 0.082 with a P-value of 0.343 ( $p < 0.05$ ) while the coefficient of indirect effect to be 0.094 with a P-value of 0.001 ( $p < 0.05$ ) for testing this mediating for this hypothesis is full mediation. Thus, it can be concluded that psychological capital between authentic leadership and adaptive performance is significant. This implies that psychological capital does matter much in

determining adaptive performance in private and public higher education institutions in Jordan. Hence, the hypothesis is accepted.

In contrast to the study's expectations, the impact of authentic leadership on adaptive performance was found to be more significant than the impact of inclusive leadership on adaptive performance. It is essential to consider that this study focused on the perceptions of academic employees in universities regarding their supervisors' leadership styles. Employees may have varying perceptions of when their supervisors exhibit authentic leadership versus inclusive leadership. This discrepancy in impact could be attributed to some employees feeling that the assistance, guidance, and support provided by authentic leaders were insufficient for advancing their careers within the university setting. In other words, these employees may have found the career development guidance from authentic leaders to be more practical and beneficial compared to that of inclusive leadership.

### **5.3.2 Discussion on Moderating Effects of HEIs Sector**

The following sections shall deliberate on the findings in ascertaining the role of the HEIs sector in moderating the relationship of inclusive leadership, authentic leadership, innovative work behavior and adaptive performance.

#### **Research Question 7**

The seventh research question states, “Does the HEIs sector moderate in the relationship between inclusive leadership, authentic leadership and innovative work behaviour in private and public higher education institutions in Jordan?” to address this question and achieve the study objectives, this study proposed H15 and H13. Under this subsection, the results from the hypothesis test are presented, discussed and compared with those of prior studies dedicated to examining innovative work behaviour.

**H15:** HEIs sector type private and public moderate in the relationship between inclusive leadership and innovative work behavior.

The current research has hypothesized that the HEIs sector may have a positive moderating effect on the relationship between inclusive leadership and innovative work behavior. Employees' HEIs sector is an important variable between inclusive leadership and innovative work behavior. It was found that the p-value was 0.008 which is less than the assumed value of 0.01 level. Thus, it can be concluded that the HEIs sector between inclusive leadership and innovative work behavior is significant. This implies that inclusive leadership in the HEIs sector does matter much in determining the innovative work behavior in private and public higher education institutions in Jordan. Hence, the hypothesis is supported.

Therefore, it can be inferred that inclusive leadership significantly influences innovative work behavior when considering the context of HEIs in Jordan. These results highlight the crucial role of inclusive leadership practices within the HEIs sector in shaping and fostering innovative work behaviours among employees (Bao, 2024). By supporting the hypothesis, the study underscores the importance of promoting inclusive leadership approaches to drive innovation within higher education institutions in Jordan (Alkhodary, 2023).

The results of the research suggest that the presence of inclusive leadership within Higher Education Institutions (HEIs) in Jordan has a tangible impact on fostering innovative work behaviour among employees (Al-Mashaikhya, 2022). The significant moderating effect of the HEIs sector on the relationship between inclusive leadership and innovative work behavior underscores the importance of organizational context in shaping these dynamics. This implies that a supportive and inclusive leadership style within the HEIs

sector plays a vital role in influencing employees' ability and willingness to engage in innovative practices (Gbobaniyi, 2024). By acknowledging the significance of the HEIs sector in facilitating such relationships, organizations can prioritize the development and promotion of inclusive leadership strategies to drive innovation and cultivate a culture of creativity within the higher education landscape in Jordan.

**H13:** HEIs sector is moderate in the relationship between authentic leadership and innovative work behavior.

The current research has hypothesized that the HEIs sector type private and public may have a positive moderating effect on the relationship between authentic leadership and innovative work behavior. Employees' HEIs sector type is not an important variable between authentic leadership and innovative work behavior. It was found that the p-value was 0.066 which is greater than the assumed value of 0.05 level. Thus, it can be concluded that the HEIs sector between authentic leadership and innovative work behavior is not significant. This implies that authentic leadership in the HEIs sector does not matter much in determining the innovative work behavior in private and public higher education institutions in Jordan. Hence, the hypothesis is not supported.

The study findings suggest that within the HEIs sector type private and public in Jordan, there is no significant moderation by the organizational context on the correlation between authentic leadership and innovative work behavior among employees. This implies that how authentic leadership influences innovation within private and public higher education institutions in Jordan is not heavily dependent on the sector (Elrehail, Emeagwali, Alsaad, & Alzghoul, 2018). The results hint that factors beyond leadership style and sector specifics may have a greater influence on driving innovative behaviours among employees.

The study's indication of authentic leadership's limited impact on fostering innovation in HEIs in Jordan highlights the intricate nature of leadership impacts and stresses the importance of considering a range of contextual factors when examining how leadership styles relate to employee behaviours.

### **Research Question 8**

The eight research question states, “Does HEIs sector type public and private moderate in the relationship between inclusive leadership, authentic leadership and adaptive performance in private and public higher education institutions in Jordan?” to address this question and achieve the study objectives, this study proposed H16 and H14. Under this subsection, the results from the hypothesis test are presented, discussed and compared with those of prior studies dedicated to examining adaptive performance.

H16: HEIs sector type private and public moderate in the relationship between inclusive leadership and adaptive performance.

The current research has hypothesized that the HEIs sector may have a positive moderating effect on the relationship between inclusive leadership and adaptive performance. Employees' HEIs sector is an important variable between inclusive leadership and adaptive performance. It was found that the p-value was 0.037 which is less than the assumed value of 0.05 level. Thus, it can be concluded that the HEIs sector between inclusive leadership and adaptive performance is significant. This implies that inclusive leadership in the HEIs sector does matter much in determining the adaptive performance in private and public higher education institutions in Jordan. Hence, the hypothesis is supported. These findings suggest that fostering adaptive performance among employees in HEIs goes beyond individual leadership qualities, emphasizing the importance of considering the broader

organizational environment in shaping desired behaviours (Ali, Wang, & Johnson, 2020; Kaltiainen & Hakanen, 2022). By recognizing the pivotal role of the HEIs sector in influencing leadership outcomes, organizations can leverage this knowledge to tailor leadership initiatives and create a supportive context that facilitates adaptive performance and enhances overall organizational success within the higher education sector in Jordan (Yeyinmen, 2016).

**H14:** HEIs sector type private and public moderate in the relationship between authentic leadership and adaptive performance.

This study proposed that HEIs sector type has a moderating effect on the authentic leadership-adaptive performance relationship, considering that the HEIs sector is an important variable when determining adaptive performance. However, based on the obtained results, the p-value exceeded the 0.05 level at 0.908 and thus, the hypothesis is rejected. In other words, this study revealed that the HEIs sector type has no moderating effect on the authentic leadership-adaptive performance relationship. HEIs sector type does not matter when determining the relationship between authentic leadership and adaptive performance.

The absence of a moderating impact of the HEIs sector type on the correlation between authentic leadership and adaptive performance could stem from various factors. One potential explanation is that the unique organizational culture within HEIs in Jordan may not strongly interact with authentic leadership approaches to influence adaptive performance among employees (Jamali, Bhutto, Khaskhely, & Sethar, 2022). Another possibility is that individual variances, team dynamics, or external factors beyond the immediate organizational context could exert a more significant influence on shaping adaptive behaviours, thereby minimizing the perceived role of the HEIs sector as a

moderating element (Mukaram, Rathore, Khan, Danish, & Zubair, 2021). Furthermore, the results might indicate that the operational framework of the HEIs sector in Jordan does not substantially amplify or modify the impact of authentic leadership on adaptive performance, suggesting a necessity for further investigation into the intricate organizational dynamics and leadership implications specific to higher education institutions in Jordan (Al-Husseini, El Beltagi, & Moizer, 2021).

### **5.3.2 Comparative between Private and Public Higher Education Institutions in Jordan**

In analysing the comparative tests between private and public universities, it became apparent that significant variations exist in certain key constructs. Through the Independent Sample T-test, it was evident that private universities tended to exhibit higher mean values in constructs like inclusive leadership, authentic leadership, innovative work behaviour, and adaptive performance when compared to public universities. These differences suggest potential disparities in leadership approaches and adaptive capabilities between the two sectors of higher education.

Contrary to the significant differences observed in some constructs, the comparison also revealed instances where constructs such as psychological capital did not exhibit noteworthy variations between private and public universities. This indicates that aspects related to psychological well-being and personal resources might be quite similar across both types of institutions. While specific constructs differed significantly, others showed a level of consistency, emphasizing the nuanced nature of comparisons between private and public universities.

Moreover, the outcomes of the One Way Welch/ANOVA tests, which compared mean values among different groups based on factors like age, academic rank, work experience, and educational level, mostly did not show substantial differences. This suggests that factors such as age, academic position, professional experience, and educational attainment might not strongly impact the studied constructs across university contexts. The findings underscore the complexity of identifying influential variables within university environments and point to potential factors beyond demographics that affect these constructs.

#### **5.4 Implications of Study**

The findings of the present study have several important implications for: organizational management or practice and theory development. The implications are, therefore, discussed one after the other in the following three different sections.

##### **5.4.1 Theoretical Implications**

In higher education, Social Exchange Theory (SET) theory offers a valuable framework for examining the intricate interplay of leadership styles (inclusive leadership, authentic leadership), psychological capital, and innovative work behavior, and their combined influence on adaptive performance. The present study delves deeper into this theoretical landscape, thoroughly investigating how these fundamental factors align with SET principles.

Consequently, the first theoretical implication of this study is to expand current knowledge by integrating inclusive leadership, authentic leadership, innovative work behaviour, and adaptive performance, psychological capital within a single investigation,

guided by the robust Social Exchange Theory (SET), Self-Determination Theory (SDT), and Authentic Leadership Theory.

Its main objective is to advance scholarly comprehension of how to strategically leverage university resources such as inclusive leadership, authentic leadership, and psychological capital to foster innovative work behavior and adaptive performance. This research not only deepens our understanding of these resources individually but also emphasizes their intricate interplay, thereby extending the applicability of SET theory in higher education.

Second, although the effect of leadership styles concerning innovative work behavior, and adaptive performance has been examined in many studies, those studies examined leadership styles individually. In this study, leadership styles have been operationalized in terms of two leadership styles (inclusive leadership, and authentic leadership), to examine the combined effect of both leadership styles concerning innovative work behavior, and adaptive performance in the context of HEIs in Jordan. Previous researchers have clarified that both leadership styles are equally important; and should therefore be followed to improve innovative work behavior, and adaptive performance (Fu, Ye, & Xu, 2020; Santoso, Zuniawan, Wijayanti, & Hadi, 2020). Therefore, this study is perhaps the first study to examine the direct relationship between leadership styles (both in terms of inclusive leadership, and authentic leadership) and innovative work behaviour, higher education performance, and indirectly through psychological capital.

Third, there is little or no evidence that previous studies have examined the effect of psychological capital (of faculty members) on innovative work behavior, and adaptive performance in the context of HEIs in Jordan. Instead, much of the previous work has

focused on employee psychological capital in qualitative studies or concerning performance. Despite this, the role of faculty members is widely accepted around the world, due to their involvement in providing a wide range of educational services, including teaching, learning; assessment; and research. In addition to these traditional responsibilities, faculty members in the Jordanian higher education system have been assigned some additional roles such as serving on various committees, administrative responsibilities, and conducting sustainability of academic programs as part of AASB and others. Besides, faculty members are also subjected to several other challenges, such as improving student satisfaction and increasing research productivity at both the individual and departmental levels. To cope with these challenges the psychological capital of faculty members matters a lot. Consequently, the present study has identified and bridged the gap in the existing literature by examining the relationship between inclusive leadership, authentic leadership, innovative work behavior, and adaptive performance directly and indirectly through psychological capital in the context of Jordanian higher education.

Fourth, many studies have shown that psychological capital plays an important role in influencing and improving innovative work behavior, and adaptive performance (Luo, Tsai, Chen, & Gao, 2021; Luo et al., 2022; Paul V & Devi N, 2018), however, only a handful of studies investigated psychological capital as a mediator (Ain et al., 2023). But there is no evidence from previous literature that researchers have examined psychological capital as a mediator in the relationship between inclusive leadership, authentic leadership, innovative work behavior, and adaptive performance. Thus, the present study filled this theoretical gap by investigating the mediating effect of psychological capital on leadership styles, innovative work behavior, and adaptive performance in the context of HEIs in Jordan.

Last, this study also adds value to the existing body of knowledge by operationalizing the HEIs sector as moderating between the variables. The current researcher has identified through a theoretical lens and by conducting an extensive review of the literature. To date, there is no evidence in the previous literature that researchers have operationalized the HEIs sector in this area, specifically in Jordan. As a result, this study has closed this gap by operationalizing the HEIs sector in terms of innovative work behavior, and adaptive performance in the context of HEIs in Jordan.

#### **5.4.2 The Expansion of the Social Exchange Theory**

Social Exchange theory (Blau, 1964) is one of the theoretical foundations which caters to address various organizational processes and aspects. SET highlights the proponent that a series of "interdependent" interactions take place which are contingent on actions. It emphasizes that these—reliant transactions result in a high potential relationship. SET provides an underlying conception for various organizational phenomena such as leadership style, psychological capital, and other factors.

Among other theories, SET is one theory that provides a base for innovative work behavior, and adaptive performance to explain employee organization exchange relationships. This study endeavours to identify the various antecedents that lead towards innovative work behavior, and adaptive performance along with the notion of social exchange theory as its base. As the practice of SET in the context of organizational behaviour is based on the exchange principle, it accounts for the rule of reciprocity (Liaquat & Mehmood, 2017). Thus, it leads to a consensus that employee relationship with the organization is based on an aspect of reciprocity, and it is this exchange nature relationship which could determine the intrinsic or extrinsic behaviour of an employee towards his organization.

Employees are one of the most important stakeholders of an organization as they play an essential role in its success or failure. SET states that there exists an exchange relationship among individuals, stating that an employee reciprocates in terms of their perception and performance concerning treatment and information received from the organization. Similarly, when employees of an organization feel that their organization is involved in their well-being and socially responsible activities, then returns could be achieved from employees through their positive attitudes and extra-role behaviours.

### **5.4.3 The Perspective of Theories in this Study**

Social exchange theory is a popular theory that has been applied in innovative work behavior and adaptive performance studies. This study expanded the social change theory first by applying it in the hospitality industry. Further, the study expanded the traditional social exchange theory by regarding the interactions between coworkers as social exchange processes.

The findings of this study also supported the expansion of the social exchange theory, as each type of social exchange was the significant indicator for that particular innovative work behavior and adaptive performance that directs to the specific source of social exchange. Therefore, the way of treating the academic staff interaction process as a social exchange process expanded the social exchange theory and is very meaningful to higher education institutions.

The findings from this study advance the trait theory of leadership because they address an under-researched setting where leadership practice is critical to employees in private and public universities. The results of this study provide much-needed insight into the relationship between leadership styles innovative work behavior, and adaptive

performance of higher education academic staff in private and public universities. Knowledge from this study could aid the development of evidence-based leadership practice and provide the foundation for future intervention research, including leadership education and development.

The findings of this study have extended the social exchange theory, social exchange theory (SET), self-determination theory (SDT), and authentic leadership theory. Social exchange theory (Blau, 1964) suggests that for relationships to thrive, parties in the relationships must have the feeling of mutual benefits from each other. Using the social exchange theory, therefore, this study has been able to establish that certain behavior factors create in employees feelings of ownership of the university that subsequently lead them to innovative work behavior and adaptive performance. The study confirms the university academic staff behaviours include the following: (1) genuine leadership care and concern for employees in times of difficulty, or unpleasant experience – emotional healing; (2) concern for the development of the community – creating value for the community; (2) concern for employees’ learning and solving job-related problem for career success – conceptual skills; (4) concern for employees’ personal growth, development and success – helping subordinates grow and succeed; as well as (5) considering the employees’ interest first before anything else – putting subordinates first.

More technically, the positive and significant relationships among universities’ academic behaviours innovative work behavior, and adaptive performance are consistent with social exchange theory. When a leader offers positive supportive service, an implied psychological capital for future reciprocation on the followers’ side is activated. The academics then act in discretionary ways that benefit individuals and the university. Such

reciprocation forms the basis for more genuine concern for the welfare and personal development of the followers from the leader. Hence, continuous supportive exchanges between the leader and academics are created. The findings of this study have, therefore, validated and extended social exchange theory (1964) by portraying employee innovative work behavior, and adaptive performance through the mechanics of inclusive leadership, authentic leadership, and psychological capital. Theoretically, this validation is significant because it has extolled the relevance of social exchange theory (1964) by explaining contemporary employee exchange relationships. More specifically, the findings show that enhanced fair social exchange relations, as originally described in the social exchange theory, between employees create a feeling of psychological satisfaction among the workers, which ultimately influences employee innovative work behavior and adaptive performance.

#### **5.4.4 Managerial Implications**

In practical terms, this study offers valuable insights into bridge theory and real-world application. It equips educational leaders and decision-makers with actionable knowledge rooted in the SET perspective. Specifically, it provides practical guidance on strategically utilizing resources such as inclusive leadership, and authentic leadership, to foster psychological capital and boost innovative work behavior, and adaptive performance. It identifies specific resources to leverage, offers resource allocation recommendations, and suggests methods to cultivate a psychological capital that maximizes these resources, ultimately optimizing innovative work behavior, and adaptive performance in a dynamic educational context.

First, the study provides empirical evidence for the validity of the research framework being tested based on primary data collected from private and public universities in Jordan. Given the establishment of new public and private universities in Jordan over the

last two decades, fierce competition in terms of attracting new students and retaining current students has developed between universities. Thus, there is a fear among various segments of society that this will jeopardize the quality of higher education in Jordan; thus, it will further worsen the already poor performance of Jordanian universities. In such a competitive environment, all stakeholders, especially university leadership, should focus on the effective implementation of accreditation standards; improving the motivation of faculty members; and developing psychological capital in their respective universities to improve the innovative work behavior and adaptive performance of Jordanian universities. This study will make a significant contribution in terms of practical implications for the application of these predictors in the context of higher education to improve university performance.

Second, the study provides empirical evidence that inclusive leadership and authentic leadership play a significant role in building psychological capital and improving innovative work behavior, and adaptive performance in the context of Jordanian universities. However, the effective implementation of accreditation standards in many universities is a major concern for higher education authorities in Jordan. Therefore, HEC and university leaders should ensure the allocation of the necessary resources for the establishment of QECs; the appointment of qualified and competent QA personnel; and the effective implementation of the quality standards as proposed by HEC and other relevant accreditation bodies/councils.

Third, the study provides empirical evidence underscoring the profound impact of leadership styles, both directly and indirectly through the cultivation of psychological capital, on innovative work behavior, and adaptive performance in Jordanian universities. Faculty psychological capital carries significant implications for university leadership, the faculty itself, and students due to their integral roles in delivering quality education. This

motivation affects key areas such as teaching, research, and service, and a lack thereof can lead to reduced academic quality and overall university effectiveness. Notably, the financial constraints facing Jordanian universities are exacerbating this decline in staff motivation, particularly among faculty. Therefore, it is crucial for university leadership to implement intrinsic and extrinsic motivational strategies to engage faculty in fostering a culture of excellence, ultimately enhancing innovative work behavior, and adaptive performance in Jordanian universities.

Last, this study also makes an important contribution in terms of practical implications for university leadership to promote psychological capital in their respective universities. Almost all the universities in Jordan claim to provide world-class education to their students, but only a few register their place among the best universities in the world. This is certainly due to a lack of quality aptitude that resulted in weak or ineffective implementation of quality standards. The role of psychological capital has already been established in previous studies, while the present study also provides empirical evidence that psychological capital is an important predictor and mediator concerning inclusive leadership, authentic leadership, innovative work behavior, and adaptive performance in the context of Jordanian universities.

## **5.5 Limitations of Study**

Since this study only includes data from the context of HEI in its sample, its findings are more applicable to that specific sector. So, more research is needed to determine if the findings of this study are supported by similar findings in other contexts, such as banking and hotels. As far as location goes, this research focuses on underdeveloped nations and uses Jordan as an example. As a result, it is possible that the findings are not applicable

beyond the other countries due to cultural variations. The model's validity will increase if it is applied to other locations, nationalities, and cultural contexts; nevertheless, this could provide unexpected results.

Since the sampling unit in this study was faculty members, there is a possibility that faculty members may have overrated their responses. There's the possibility the findings will change if another population is chosen. Finally, this study uses close-ended questions in the questionnaire even with the advantages of this type of question. However, it may not be able to collect detailed information and opinions from the participants as they are limited to certain options.

Because of these considerations, there is potential for future research to expand upon and deepen our understanding of the topic.

## **5.6 Direction for Future Research**

Given the findings and limitations of this study, few recommendations could guide future researchers to go beyond what has been done so far. These recommendations are given in the following sections.

First, since this study was conducted in public and private sector universities in Jordan. Therefore, future researchers could carry out a comparative study between universities in Jordan and other countries such as Palestine, or Malaysia. This will allow future researchers to compare the performance of Jordanian universities in all aspects with universities in other countries that have better reputation, performance and ranking in world university rankings. This will also provide an opportunity to validate the results of this study on a broader spectrum.

Second, since the sampling unit in this study was faculty members, there is a possibility that faculty members may have overrated their responses. Therefore, future researchers could include other stakeholders such as administrative managers in their studies to gain a more realistic view of the performance of Jordanian universities.

As mentioned earlier, one of the limitations of this study is the use of close-ended questions in the questionnaire, and hence, future studies can include open-ended questions to provide avenues for respondents to provide their opinions and suggestions freely to enrich the study findings. Respondents may also provide their suggestions in the last part of the questionnaire to provide optimum quality questionnaires in future studies. Furthermore, despite the appropriate variance explained for innovative work behavior, and adaptive performance, other determinant variables like turnover as evidenced in prior studies ethical leadership, organizational empowerment, and emotional intelligence (Azizah & Harsono, 2023; Gerçek, 2023; Jena & Goyal, 2022).

Finally, this study used a cross-sectional research approach to data collection that only provides a preview of the results and there might be a possibility of the diverse nature of the results if carried out in some other time period. Therefore, future researchers may have the opportunity to collect data by adopting a longitudinal approach, which will give them a deeper insight, a profound knowledge of the subject and a clear understanding of each variable in the study. Lastly, it is also recommended that future studies include the direct and indirect effects between the variables to examine the moderating effects between them. For example, future studies could focus on the moderating effect of job characteristics between leadership style and adaptive performance, and the mediating effect of employee

engagement between transformational leadership and innovative work behavior. This would furnish a deeper understanding of the variable's relationships.

## **5.7 Conclusion**

In sum, the proposed hypotheses in this study were all supported except for one direct hypothesis. The results specifically found inclusive leadership, authentic leadership, and psychological capital to positively influence innovative work behaviour, also; inclusive leadership, and psychological capital to positively influence adaptive performance indicating that a positive leadership style in the minds of the employees at a university would provide them greater psychological capital towards it. The results showed psychological capital mediate between inclusive leadership, authentic leadership, innovative work behavior, and adaptive performance in Jordan indicating that employees in private and public universities stay a long time working there. Concerning this, the social exchange theory and practice have their basis in the actual benefits that employees as well as psychological capital via their relationships, with the objective being to develop and maintain innovative work behavior, and adaptive performance. Nevertheless, achieving successful relationships is quite challenging and, in this context, the present thesis contributes significantly to human resources literature by bringing forward a model that empirically examines the employees' perspectives among Jordanians of their relationship with private and public university management. Also; the HEIs Sector moderation between inclusive leadership, innovative work behavior, and adaptive performance.

Arising from these findings, the university management should appreciate the fact that innovative work behavior and adaptive performance are low-cost and effective remedies towards improving much-needed performance because the majority of universities face

continuous financial deficits. It is hoped that with the findings and recommendations from this study, management of private and public universities could take proactive actions to strengthen innovative work behaviour, and adaptive performance levels among its workforce as it has proven that through these elements of inclusive leadership, authentic leadership, and psychological capital, innovative work behaviour, and adaptive performance level can be fortified and enhanced. Private and public universities must be able to create and sustain the occurrence of innovative work behaviour, and adaptive performance as proper implementation and solid support by the workforce, the public complaints towards the level of education quality and delivery can gradually be diminished and shall turn universities to be the main driving force behind the economic and social growth of its locality.

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## APPENDIX

### Appendix A: Common Method Bias (Harman's single-factor test).

Component	Total Variance Explained			Extraction Sums of Squared Loadings		
	Total	Initial Eigenvalues % of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	23.374	35.416	35.416	23.374	35.416	35.416
2	6.401	9.699	45.114			
3	4.854	7.355	52.469			
4	2.694	4.082	56.551			
5	2.257	3.420	59.971			
6	1.357	2.056	62.027			
7	1.262	1.913	63.939			
8	1.242	1.882	65.821			
9	1.040	1.576	67.397			
10	.984	1.490	68.887			
11	.888	1.345	70.232			
12	.837	1.269	71.501			
13	.821	1.243	72.744			
14	.781	1.184	73.928			
15	.761	1.153	75.081			
16	.695	1.053	76.134			
17	.664	1.006	77.140			
18	.637	.965	78.104			
19	.602	.912	79.016			
20	.600	.909	79.925			
21	.587	.889	80.814			
22	.564	.854	81.668			
23	.529	.801	82.469			
24	.517	.784	83.253			
25	.483	.731	83.984			
26	.472	.716	84.700			
27	.469	.710	85.410			
28	.444	.673	86.084			
29	.432	.654	86.738			
30	.409	.619	87.357			
31	.394	.596	87.953			
32	.389	.590	88.543			

33	.369	.559	89.102			
34	.363	.551	89.653			
35	.357	.541	90.194			
36	.348	.528	90.722			
37	.332	.504	91.225			
38	.323	.489	91.714			
39	.311	.472	92.186			
40	.305	.462	92.648			
41	.288	.437	93.084			
42	.282	.427	93.511			
43	.274	.416	93.927			
44	.271	.410	94.337			
45	.258	.391	94.728			
46	.244	.370	95.098			
47	.237	.360	95.457			
48	.227	.343	95.801			
49	.221	.334	96.135			
50	.214	.325	96.460			
51	.201	.305	96.764			
52	.199	.302	97.066			
53	.190	.288	97.354			
54	.185	.281	97.635			
55	.170	.258	97.893			
56	.166	.251	98.144			
57	.162	.245	98.389			
58	.149	.226	98.615			
59	.144	.219	98.833			
60	.139	.211	99.044			
61	.135	.205	99.249			
62	.117	.177	99.426			
63	.109	.165	99.590			
64	.099	.150	99.740			
65	.091	.138	99.878			
66	.080	.122	100.000			

Extraction Method: Principal Component Analysis.

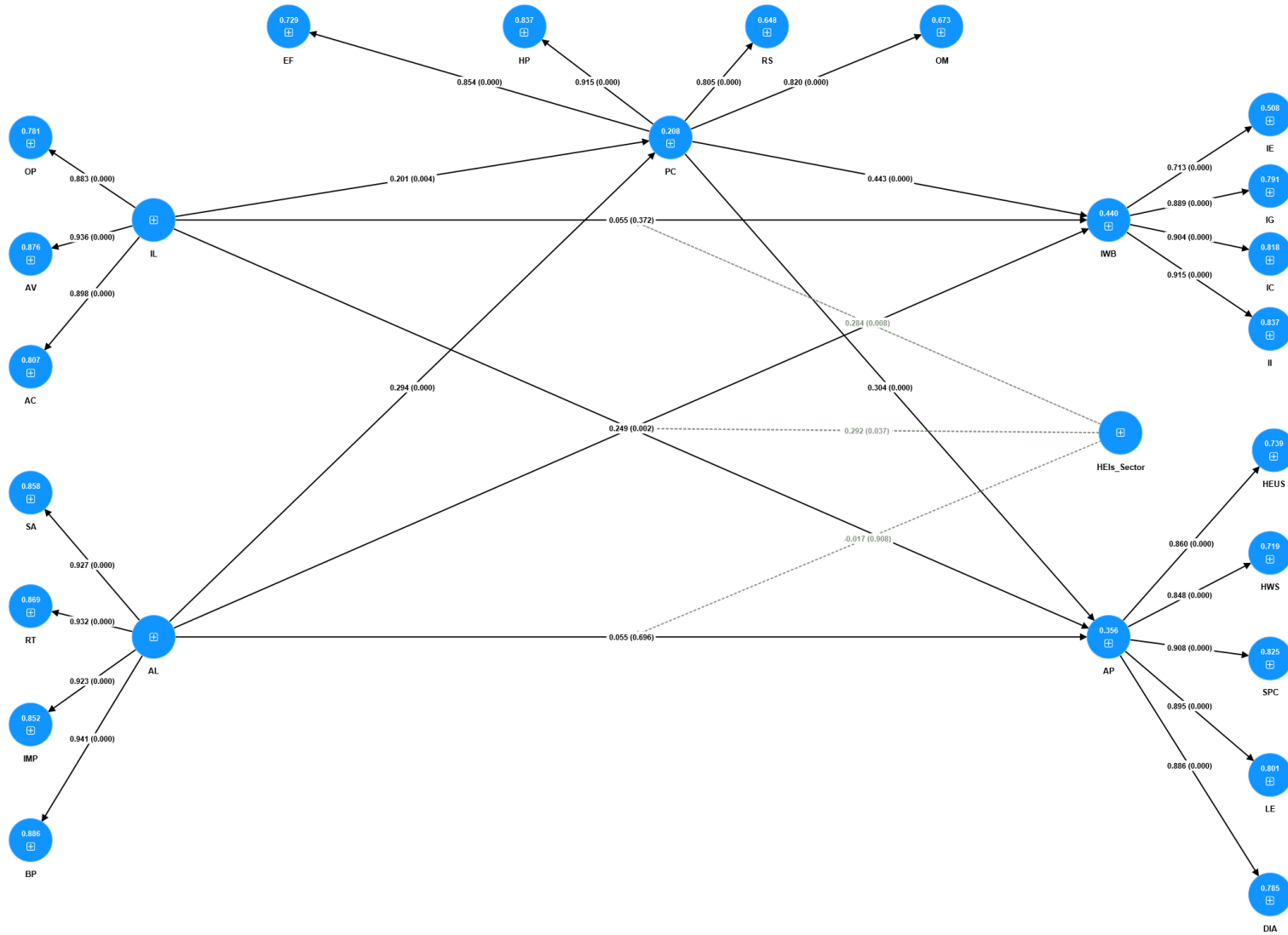
## Appendix B: Results of Cross Loading Criterion

	AC	AL	AP	AV	BP	DIA	EF	HEUS	HP	HWS	IC	IE	IG	II	IL	IMP	IWB	LE	OM	OP	PSYCAP	RS	RT	SA	SPSYCAP
AC	1.000	0.607	0.433	0.788	0.559	0.368	0.341	0.391	0.320	0.378	0.357	0.294	0.397	0.376	0.897	0.530	0.416	0.380	0.379	0.653	0.375	0.226	0.617	0.566	0.395
AC1	0.935	0.551	0.400	0.717	0.502	0.329	0.292	0.365	0.287	0.352	0.328	0.255	0.362	0.353	0.822	0.477	0.380	0.353	0.341	0.579	0.336	0.217	0.566	0.517	0.368
AC2	0.941	0.588	0.413	0.762	0.547	0.362	0.348	0.369	0.315	0.357	0.342	0.298	0.383	0.352	0.862	0.519	0.401	0.360	0.371	0.649	0.368	0.207	0.591	0.546	0.372
AV	0.787	0.662	0.455	1.000	0.641	0.391	0.311	0.402	0.320	0.380	0.365	0.300	0.373	0.406	0.936	0.587	0.422	0.436	0.354	0.752	0.358	0.218	0.643	0.609	0.393
AV1	0.632	0.509	0.291	0.822	0.506	0.268	0.147	0.279	0.179	0.219	0.264	0.188	0.279	0.284	0.797	0.426	0.299	0.291	0.279	0.700	0.211	0.110	0.500	0.475	0.226
AV2	0.650	0.627	0.418	0.881	0.612	0.335	0.294	0.366	0.306	0.368	0.355	0.232	0.344	0.396	0.804	0.566	0.391	0.408	0.339	0.643	0.338	0.194	0.587	0.577	0.364
AV3	0.683	0.543	0.434	0.838	0.502	0.391	0.313	0.385	0.307	0.358	0.302	0.293	0.314	0.363	0.773	0.494	0.370	0.395	0.281	0.581	0.339	0.240	0.538	0.509	0.381
AV4	0.714	0.567	0.409	0.854	0.550	0.343	0.313	0.340	0.303	0.352	0.317	0.319	0.331	0.336	0.805	0.508	0.376	0.393	0.302	0.623	0.333	0.204	0.559	0.503	0.371
BP	0.550	0.940	0.377	0.632	0.999	0.311	0.352	0.325	0.338	0.304	0.413	0.364	0.384	0.391	0.652	0.818	0.451	0.369	0.411	0.589	0.390	0.214	0.846	0.832	0.342
BP1	0.261	0.665	0.234	0.351	0.716	0.198	0.183	0.196	0.199	0.172	0.279	0.316	0.268	0.280	0.348	0.561	0.329	0.244	0.245	0.332	0.218	0.102	0.550	0.601	0.211
BP2	0.526	0.838	0.315	0.573	0.893	0.240	0.331	0.254	0.293	0.288	0.346	0.295	0.308	0.312	0.611	0.729	0.366	0.312	0.382	0.564	0.356	0.198	0.773	0.733	0.288
BP3	0.501	0.835	0.330	0.556	0.883	0.257	0.318	0.289	0.298	0.261	0.354	0.254	0.348	0.341	0.583	0.746	0.381	0.322	0.346	0.526	0.349	0.216	0.747	0.742	0.316
BP4	0.561	0.813	0.386	0.642	0.856	0.350	0.352	0.353	0.344	0.300	0.406	0.355	0.363	0.378	0.648	0.704	0.437	0.358	0.406	0.556	0.386	0.203	0.769	0.713	0.333
DIA	0.367	0.361	0.886	0.392	0.314	1.000	0.428	0.674	0.423	0.665	0.368	0.232	0.343	0.424	0.415	0.329	0.402	0.806	0.377	0.372	0.457	0.327	0.356	0.342	0.743
DIA1	0.308	0.356	0.783	0.314	0.310	0.864	0.383	0.577	0.405	0.593	0.331	0.219	0.318	0.377	0.345	0.328	0.365	0.724	0.337	0.320	0.417	0.289	0.348	0.333	0.668
DIA2	0.337	0.287	0.764	0.355	0.250	0.894	0.342	0.587	0.368	0.568	0.311	0.166	0.294	0.343	0.376	0.254	0.328	0.684	0.344	0.334	0.398	0.304	0.287	0.284	0.620
DIA3	0.295	0.307	0.785	0.362	0.268	0.894	0.347	0.612	0.349	0.569	0.348	0.234	0.312	0.408	0.364	0.272	0.383	0.720	0.304	0.332	0.370	0.259	0.303	0.298	0.651
DIA4	0.352	0.312	0.773	0.346	0.270	0.852	0.435	0.591	0.357	0.603	0.297	0.193	0.277	0.358	0.373	0.300	0.331	0.697	0.338	0.319	0.419	0.295	0.307	0.281	0.667
EF	0.342	0.387	0.460	0.313	0.359	0.427	1.000	0.361	0.719	0.349	0.487	0.344	0.448	0.518	0.353	0.350	0.527	0.439	0.580	0.308	0.853	0.584	0.388	0.351	0.444
EF1	0.290	0.321	0.377	0.306	0.315	0.331	0.836	0.305	0.602	0.289	0.361	0.282	0.337	0.380	0.323	0.277	0.398	0.369	0.491	0.285	0.716	0.498	0.315	0.292	0.365
EF2	0.297	0.343	0.374	0.245	0.326	0.329	0.855	0.281	0.598	0.284	0.458	0.287	0.464	0.504	0.298	0.308	0.505	0.367	0.513	0.272	0.725	0.467	0.344	0.301	0.384
EF3	0.287	0.324	0.425	0.251	0.273	0.437	0.863	0.341	0.639	0.322	0.419	0.311	0.332	0.431	0.281	0.309	0.436	0.387	0.476	0.229	0.739	0.531	0.330	0.303	0.385
HEUS	0.392	0.378	0.860	0.403	0.328	0.675	0.363	1.000	0.394	0.698	0.339	0.197	0.397	0.466	0.440	0.384	0.415	0.696	0.339	0.403	0.414	0.308	0.356	0.342	0.719
HEUS1	0.291	0.288	0.648	0.296	0.243	0.510	0.251	0.799	0.311	0.517	0.211	0.127	0.324	0.320	0.332	0.298	0.292	0.513	0.310	0.319	0.348	0.317	0.268	0.263	0.516
HEUS2	0.356	0.369	0.780	0.367	0.329	0.614	0.325	0.904	0.357	0.597	0.337	0.183	0.376	0.445	0.406	0.370	0.399	0.643	0.300	0.381	0.367	0.261	0.344	0.331	0.671
HEUS3	0.382	0.333	0.805	0.402	0.287	0.640	0.349	0.899	0.356	0.680	0.324	0.191	0.358	0.440	0.429	0.332	0.389	0.651	0.290	0.384	0.365	0.239	0.325	0.299	0.675
HEUS4	0.303	0.302	0.700	0.306	0.258	0.537	0.311	0.819	0.324	0.588	0.276	0.167	0.295	0.379	0.328	0.312	0.332	0.563	0.263	0.285	0.339	0.247	0.274	0.276	0.586
HP	0.322	0.377	0.444	0.324	0.343	0.420	0.721	0.393	1.000	0.323	0.468	0.353	0.488	0.542	0.353	0.334	0.543	0.416	0.696	0.317	0.915	0.672	0.378	0.349	0.395
HP1	0.204	0.262	0.342	0.195	0.247	0.325	0.634	0.261	0.775	0.299	0.356	0.262	0.337	0.375	0.218	0.224	0.390	0.292	0.459	0.197	0.716	0.543	0.259	0.250	0.330
HP2	0.248	0.324	0.369	0.293	0.293	0.336	0.552	0.351	0.845	0.261	0.380	0.317	0.431	0.442	0.300	0.313	0.460	0.359	0.580	0.275	0.748	0.550	0.304	0.299	0.308

HP3	0.270	0.296	0.406	0.229	0.251	0.406	0.602	0.359	0.840	0.283	0.389	0.318	0.422	0.468	0.273	0.254	0.469	0.382	0.579	0.246	0.768	0.587	0.317	0.281	0.349
HP4	0.326	0.346	0.339	0.336	0.326	0.313	0.573	0.316	0.812	0.217	0.404	0.261	0.405	0.486	0.358	0.300	0.458	0.331	0.653	0.314	0.761	0.524	0.354	0.310	0.306
HWS	0.377	0.346	0.847	0.381	0.308	0.664	0.351	0.700	0.325	1.000	0.285	0.142	0.281	0.352	0.408	0.347	0.315	0.637	0.305	0.353	0.351	0.203	0.325	0.314	0.743
HWS1	0.329	0.303	0.729	0.323	0.271	0.553	0.323	0.655	0.325	0.858	0.222	0.124	0.280	0.306	0.352	0.306	0.277	0.545	0.341	0.308	0.348	0.187	0.279	0.276	0.600
HWS2	0.380	0.314	0.777	0.386	0.281	0.643	0.323	0.614	0.265	0.883	0.279	0.152	0.252	0.326	0.407	0.308	0.298	0.609	0.233	0.342	0.292	0.167	0.309	0.280	0.694
HWS3	0.259	0.276	0.679	0.270	0.240	0.516	0.254	0.531	0.243	0.840	0.235	0.086	0.188	0.275	0.288	0.281	0.235	0.485	0.206	0.256	0.259	0.170	0.249	0.252	0.627
IC	0.357	0.444	0.411	0.365	0.414	0.368	0.485	0.339	0.467	0.286	1.000	0.508	0.738	0.817	0.391	0.411	0.904	0.404	0.477	0.339	0.525	0.351	0.434	0.392	0.409
IC1	0.348	0.446	0.384	0.354	0.417	0.352	0.477	0.313	0.438	0.255	0.955	0.483	0.697	0.756	0.380	0.419	0.853	0.374	0.478	0.329	0.507	0.329	0.438	0.390	0.388
IC2	0.336	0.403	0.403	0.343	0.376	0.351	0.452	0.335	0.456	0.292	0.958	0.488	0.714	0.807	0.368	0.368	0.877	0.399	0.435	0.319	0.497	0.342	0.393	0.361	0.394
IE	0.293	0.364	0.220	0.301	0.359	0.224	0.339	0.193	0.350	0.139	0.499	0.998	0.514	0.509	0.309	0.342	0.705	0.213	0.342	0.250	0.387	0.292	0.347	0.300	0.202
IE1	0.242	0.299	0.147	0.250	0.305	0.144	0.262	0.149	0.285	0.106	0.384	0.875	0.390	0.401	0.250	0.279	0.576	0.123	0.247	0.189	0.307	0.255	0.289	0.233	0.130
IE2	0.284	0.355	0.252	0.290	0.339	0.262	0.348	0.199	0.344	0.145	0.515	0.915	0.536	0.515	0.306	0.336	0.692	0.263	0.372	0.262	0.390	0.268	0.334	0.308	0.236
IG	0.398	0.432	0.412	0.374	0.385	0.342	0.443	0.396	0.488	0.280	0.738	0.523	1.000	0.763	0.425	0.391	0.889	0.420	0.512	0.386	0.532	0.360	0.431	0.401	0.368
IG1	0.322	0.334	0.383	0.290	0.301	0.342	0.392	0.350	0.423	0.263	0.557	0.532	0.862	0.636	0.338	0.295	0.753	0.408	0.464	0.310	0.470	0.320	0.332	0.312	0.315
IG2	0.423	0.417	0.360	0.387	0.372	0.287	0.370	0.375	0.428	0.251	0.681	0.444	0.927	0.692	0.432	0.378	0.809	0.343	0.456	0.365	0.467	0.331	0.420	0.386	0.325
IG3	0.336	0.418	0.379	0.336	0.368	0.305	0.441	0.352	0.474	0.249	0.755	0.454	0.926	0.741	0.383	0.384	0.850	0.393	0.471	0.370	0.507	0.327	0.415	0.386	0.359
II	0.375	0.422	0.494	0.405	0.392	0.423	0.515	0.466	0.542	0.352	0.818	0.516	0.763	1.000	0.431	0.383	0.915	0.483	0.537	0.390	0.588	0.393	0.427	0.374	0.449
II1	0.325	0.387	0.437	0.356	0.372	0.358	0.480	0.420	0.498	0.304	0.791	0.455	0.694	0.915	0.379	0.344	0.847	0.430	0.488	0.349	0.547	0.383	0.389	0.340	0.411
II2	0.375	0.413	0.468	0.396	0.376	0.397	0.485	0.446	0.509	0.337	0.761	0.494	0.741	0.955	0.425	0.391	0.870	0.464	0.524	0.386	0.554	0.354	0.423	0.356	0.415
II3	0.349	0.378	0.476	0.380	0.344	0.430	0.473	0.435	0.506	0.341	0.729	0.492	0.694	0.921	0.399	0.334	0.835	0.456	0.487	0.353	0.540	0.358	0.381	0.346	0.428
IMP	0.520	0.915	0.409	0.575	0.810	0.330	0.347	0.385	0.333	0.347	0.407	0.341	0.389	0.377	0.584	0.998	0.441	0.377	0.340	0.492	0.384	0.285	0.800	0.797	0.359
IMP1	0.489	0.778	0.326	0.527	0.671	0.249	0.296	0.299	0.268	0.313	0.375	0.284	0.381	0.350	0.540	0.824	0.406	0.274	0.320	0.450	0.340	0.276	0.707	0.708	0.300
IMP2	0.289	0.559	0.299	0.307	0.443	0.258	0.212	0.297	0.229	0.257	0.213	0.190	0.228	0.215	0.315	0.681	0.246	0.288	0.165	0.259	0.240	0.209	0.468	0.458	0.216
IMP3	0.345	0.713	0.305	0.403	0.658	0.243	0.267	0.285	0.259	0.240	0.334	0.276	0.312	0.263	0.396	0.781	0.344	0.283	0.260	0.328	0.294	0.206	0.595	0.599	0.286
IMP4	0.507	0.808	0.352	0.563	0.754	0.287	0.309	0.325	0.285	0.277	0.344	0.315	0.290	0.351	0.579	0.834	0.378	0.338	0.315	0.505	0.327	0.200	0.730	0.724	0.319
LE1	0.411	0.384	0.846	0.447	0.337	0.717	0.424	0.684	0.359	0.645	0.445	0.248	0.404	0.518	0.472	0.353	0.478	0.878	0.341	0.426	0.411	0.267	0.379	0.369	0.801
LE2	0.314	0.327	0.762	0.359	0.286	0.709	0.391	0.589	0.372	0.556	0.305	0.193	0.334	0.404	0.368	0.323	0.365	0.853	0.305	0.327	0.409	0.319	0.320	0.290	0.657
LE3	0.272	0.386	0.701	0.347	0.369	0.615	0.310	0.549	0.362	0.462	0.318	0.185	0.369	0.368	0.350	0.351	0.365	0.826	0.322	0.334	0.348	0.175	0.350	0.360	0.593
LE4	0.280	0.280	0.718	0.323	0.267	0.693	0.359	0.526	0.325	0.484	0.291	0.121	0.315	0.335	0.341	0.251	0.315	0.838	0.342	0.325	0.357	0.182	0.252	0.264	0.588
LE_	0.376	0.406	0.889	0.434	0.372	0.802	0.435	0.690	0.416	0.630	0.401	0.219	0.420	0.478	0.451	0.376	0.449	0.999	0.387	0.417	0.447	0.272	0.383	0.380	0.776
OM	0.380	0.423	0.397	0.354	0.415	0.377	0.579	0.339	0.695	0.303	0.477	0.351	0.512	0.537	0.416	0.347	0.550	0.385	1.000	0.399	0.820	0.510	0.415	0.401	0.334
OM1	0.373	0.400	0.372	0.343	0.405	0.343	0.519	0.336	0.602	0.320	0.429	0.295	0.441	0.500	0.407	0.311	0.490	0.322	0.901	0.391	0.733	0.470	0.396	0.385	0.310
OM2	0.314	0.363	0.345	0.296	0.345	0.338	0.527	0.276	0.653	0.227	0.432	0.339	0.482	0.469	0.345	0.315	0.503	0.373	0.905	0.329	0.747	0.451	0.354	0.339	0.294

OP	0.653	0.607	0.440	0.749	0.595	0.371	0.307	0.400	0.315	0.352	0.339	0.255	0.385	0.390	0.882	0.504	0.402	0.418	0.397	1.000	0.365	0.209	0.597	0.577	0.394
OP1	0.671	0.589	0.439	0.735	0.568	0.382	0.285	0.400	0.305	0.362	0.285	0.258	0.351	0.346	0.844	0.490	0.361	0.403	0.398	0.896	0.355	0.213	0.594	0.558	0.385
OP2	0.532	0.530	0.413	0.633	0.531	0.341	0.309	0.362	0.291	0.332	0.349	0.216	0.365	0.372	0.758	0.436	0.384	0.404	0.336	0.900	0.328	0.165	0.503	0.514	0.377
OP3	0.536	0.498	0.321	0.628	0.489	0.265	0.224	0.305	0.244	0.242	0.273	0.204	0.312	0.323	0.750	0.417	0.327	0.307	0.324	0.872	0.290	0.180	0.494	0.465	0.288
RS	0.224	0.274	0.314	0.221	0.211	0.320	0.581	0.304	0.667	0.200	0.339	0.282	0.349	0.386	0.240	0.278	0.397	0.277	0.497	0.211	0.798	0.997	0.265	0.269	0.282
RS1	0.179	0.151	0.171	0.175	0.096	0.188	0.408	0.159	0.467	0.107	0.151	0.159	0.210	0.227	0.189	0.153	0.219	0.164	0.329	0.164	0.582	0.773	0.158	0.157	0.138
RS2	0.162	0.266	0.330	0.195	0.213	0.292	0.515	0.343	0.588	0.212	0.348	0.232	0.285	0.373	0.200	0.275	0.365	0.280	0.394	0.185	0.680	0.834	0.242	0.260	0.326
RS3	0.213	0.260	0.269	0.170	0.213	0.311	0.506	0.240	0.586	0.171	0.342	0.313	0.375	0.349	0.201	0.258	0.401	0.236	0.515	0.165	0.703	0.843	0.258	0.247	0.224
RT	0.617	0.931	0.411	0.643	0.852	0.355	0.386	0.354	0.377	0.324	0.434	0.350	0.429	0.427	0.682	0.808	0.479	0.384	0.414	0.596	0.427	0.270	1.000	0.811	0.386
RT1	0.517	0.802	0.343	0.550	0.701	0.283	0.281	0.311	0.250	0.298	0.353	0.261	0.355	0.344	0.583	0.719	0.385	0.299	0.307	0.517	0.304	0.195	0.853	0.722	0.322
RT2	0.558	0.784	0.324	0.555	0.739	0.287	0.323	0.284	0.276	0.242	0.333	0.308	0.323	0.343	0.595	0.649	0.379	0.299	0.358	0.503	0.335	0.176	0.826	0.693	0.309
RT3	0.467	0.743	0.346	0.503	0.695	0.306	0.314	0.276	0.352	0.259	0.385	0.288	0.359	0.356	0.518	0.634	0.407	0.337	0.332	0.439	0.369	0.248	0.820	0.611	0.336
RT4	0.533	0.805	0.371	0.554	0.730	0.321	0.384	0.323	0.394	0.295	0.390	0.320	0.412	0.394	0.601	0.721	0.444	0.360	0.399	0.550	0.436	0.296	0.864	0.705	0.333
SA	0.567	0.925	0.400	0.606	0.831	0.341	0.350	0.340	0.347	0.311	0.392	0.307	0.399	0.372	0.644	0.805	0.429	0.377	0.402	0.578	0.404	0.272	0.811	1.000	0.385
SA1	0.492	0.723	0.307	0.483	0.652	0.262	0.244	0.261	0.236	0.232	0.343	0.262	0.323	0.294	0.538	0.601	0.356	0.284	0.342	0.489	0.288	0.151	0.640	0.783	0.305
SA2	0.399	0.710	0.285	0.421	0.612	0.247	0.296	0.234	0.286	0.217	0.280	0.258	0.261	0.247	0.448	0.621	0.303	0.271	0.293	0.397	0.334	0.262	0.608	0.791	0.273
SA3	0.495	0.798	0.378	0.568	0.715	0.315	0.312	0.332	0.310	0.318	0.344	0.231	0.367	0.366	0.579	0.731	0.384	0.354	0.315	0.509	0.354	0.262	0.709	0.837	0.345
SA4	0.471	0.803	0.344	0.516	0.745	0.294	0.298	0.290	0.309	0.255	0.318	0.255	0.357	0.313	0.546	0.690	0.363	0.330	0.363	0.496	0.352	0.222	0.703	0.867	0.338
SPSYCAP	0.394	0.397	0.908	0.395	0.345	0.744	0.444	0.718	0.395	0.745	0.409	0.209	0.366	0.448	0.434	0.362	0.424	0.783	0.333	0.395	0.431	0.286	0.386	0.386	1.000
SPSYCAP1	0.397	0.371	0.849	0.376	0.322	0.685	0.416	0.681	0.381	0.713	0.374	0.201	0.396	0.448	0.417	0.334	0.420	0.738	0.344	0.361	0.415	0.261	0.375	0.354	0.917
SPSYCAP2	0.362	0.370	0.818	0.344	0.324	0.666	0.441	0.640	0.362	0.672	0.393	0.188	0.322	0.420	0.390	0.324	0.392	0.699	0.327	0.357	0.409	0.249	0.365	0.363	0.917
SPSYCAP3	0.291	0.337	0.795	0.339	0.285	0.638	0.362	0.650	0.326	0.619	0.353	0.196	0.334	0.400	0.356	0.302	0.380	0.686	0.259	0.339	0.354	0.249	0.317	0.347	0.895
SPSYCAP4	0.349	0.329	0.759	0.342	0.292	0.651	0.353	0.577	0.331	0.638	0.330	0.156	0.248	0.320	0.380	0.325	0.312	0.656	0.252	0.345	0.351	0.255	0.310	0.303	0.816

## Appendix C: Structural Model -Moderating



## Appendix D: Survey

### **The Mediating Role of Psychological Capital on the influence of Authentic and Inclusive Leadership Styles on Innovative Work Behaviour and Adaptive Performance in Jordanian Higher Education Institutions**

Dear Respondent,

I am a Ph.D. candidate at Faculty of Economy and Business, Universiti of Malaysia Sarawak (UNIMAS), Sarawak. I am currently conducting a study which examine the impact of authentic and inclusive leadership styles on innovation work behavior and adaptive performance and the moderating role of the psychological capital among academic staff in public and private higher education institutions in Jordan .The objective of this research is to enrich the body of knowledge in the field higher education by determining the effect of inclusive and authentic leadership styles on innovative work behaviour and adaptive performance among the mediating role of psychological capital of academic staff in public and private universities.

Your assistance in filling out the linked questionnaire is crucial to the study's accomplishment.

Please do not skip any of the questions as some of them appearing to the redundant with a purpose. All your responses will be held strictly confidential. Under no circumstance will your answers be made available to anyone except the research. And, your answers will only be used in an aggregated and anonymous fashion in all future reports.

Thank you very much for your kind consideration and valuable contribution in this respect. If you have any questions about this project, feel free to contact Enas Kamel AlZoubi at [17010164@siswa.unimas.my](mailto:17010164@siswa.unimas.my) or 00962798505250

Sincerely yours,

Enas AL-Zoubi

**Effect of Authentic and Inclusive Leadership Styles on Innovative work  
behaviour and Adaptive Performance in Jordanian Higher Education  
Institutions: The mediating role Psychological Capital**

The objective of this research is to enrich the body of knowledge in the field higher education by determining the effect of inclusive and authentic leadership styles on innovative work behavior and adaptive performance among the mediating role of psychological capital of academic staff in public universities.

Please do not skip any of the questions as some of them appearing to the redundant with a purpose. All your responses will be held strictly confidential. Under no circumstance will your answers be made available to anyone except the research. And, your answers will only be used in an aggregated and anonymous fashion in all future reports.

- Please indicate to what extent you agree with the following statement (1 = Totally disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Totally agree).

**SECTION 1: RESPONDENT'S PERSONAL BACKGROUND INFORMATION**

Please indicate the name of your university .....

- **Age:** below 30   30-39   40-49   50-59   60 or above
- **Gender**   Male   Female
- **Highest Education Level:** Master's degree   PhD degree
- **Marital Status :** Single   Married   Divorced   Widowed
- **Academic Rank:** Instructor   Assistant Professor   Associate Professor   Professor
- **Work experience** How long have you worked at this organization?  
 below 5   5-10 years   11-15 years   16-20 years   21-25 years   more than  
25 years

**SECTION 2:**

The following items describe the leadership of your supervisor. Please indicate to what extent you agree with the following statement by circling the appropriate number on the rating scale provided. Please note that the term ‘leader’ means your immediate or direct supervisor.”

**1.1 Inclusive leadership**

No.	Please indicate to what extent you agree with the following statements	Totally disagree 1	Disagree 2	Neutral 3	Agree 4	Totally agree 5
	<b>In my department :</b>					
1.	My leader is open to hearing new ideas from me.					
2.	My leader is focus to new opportunities to improve work processes.					
3.	My leader is open to discuss the desired goals to achieve them.					
4.	My leader is available for consultation.					
5.	My leader is consistently present and involved with the team.					
6.	My leader my manager is available for professional questions I would like to consult with him/her .					
7.	my leader is ready to listen to my requests .					
8.	My leader encourages me to access him/her on emerging issues.					
9.	My leader is accessible for discussing emerging problems.					

**1.1 Authentic leadership 4 Dimensions :** (S) = Self-Awareness, (R) = Relational Transparency, (M) = Internalized Moral Perspective, and (B) = Balanced Processing

Please indicate to what extent you agree with the following statements		Totally disagree 1	Disagree 2	Neutral 3	Agree 4	Totally agree 5
<b>In my department :</b>						
1.	My leader solicits feedback for improving his/her dealings with others. (S)					
2.	My leader clearly states what he/she means. (R)					
3.	My leader shows consistency between his/her beliefs and actions.(M)					
4.	My leader asks for ideas that challenge his/her core beliefs.(B)					
5.	My leader describes accurately the way that others view his/her abilities. (S)					
6.	My leader admits mistakes when they occur. (R)					
7.	My leader uses his/her core beliefs to make decisions. (M)					
8.	My leader carefully listens to alternative perspectives before reaching a conclusion.(B)					
9.	My leader shows that he/she understands his/her abilities.(S)					
10.	My leader openly shares information with others. (R)					
11.	My leader resists pressures on him/her to do things contrary to his/her beliefs. (M)					
12.	My leader objectively analyzes relevant data before making a decision.(B)					
13.	My leader is clearly aware of the impact he/she has on others.(S)					

14.	My leader expresses his/her ideas clearly to others. (R)					
15.	My leader is guided in his/her actions by internal moral standards.(M)					
16.	My leader encourages others to voice opposing points of view. (B)					

**2.1 The following items describe your innovative work behavior.**

No.	Please indicate to what extent you agree with the following statements	Totally Disagree 1	Disagree 2	Neutral 3	Agree 4	Totally agree 5
	<b>In my department :</b>					
1.	I pay attention to issues that are not part of my daily work.					
2.	I wonder how things can be improved .					
3.	I search out new working methods, techniques or instruments.					
4.	I generate original solutions for problems.					
5.	I find new approaches to execute tasks.					
6.	I make important institutional members enthusiastic for innovative ideas.					
7.	I attempt to convince people to support an innovative idea.					
8.	I systematically introduce innovative ideas into work practices.					
9.	I contribute to the implementation of new ideas.					
10.	I put effort in the development of new thing.					

**2.2 The following items describe your Adaptive performance.**

**5 Dimensions** ( Handling emergencies and unpredictable situations, Handling work stress, Solving problems creatively, Learning, Demonstrating interpersonal adaptability)

Please indicate to what extent you agree with the following statements	Totally disagree	Disagree	Neutral	Agree	Totally agree
<b>In my department:</b>					
1. I keep focused on the situation to react quickly. (Handling emergencies and unpredictable situations)					
2.I quickly take effective action to solve the problem. (Handling emergencies and unpredictable situations)					
3.I examine available options and their implications to choose the best solution. (Handling emergencies and unpredictable situations)					
4.I easily change plans to deal with the new situation. (Handling emergencies and unpredictable situations)					
5.I stay calm under circumstances where I have to take many decisions at the same time.					
6.I seek solutions by talking to more experienced colleagues.					
7.My colleagues often ask me for advice in difficult circumstances because I keep cool.					
8.I try to develop new methods for solving atypical problems.					
9.I rely on a wide variety of information to find an innovative solution to the problem.					

Please indicate to what extent you agree with the following statements	Totally disagree	Disagree	Neutral	Agree	Totally agree
<b>In my department:</b>					
1. I keep focused on the situation to react quickly. (Handling emergencies and unpredictable situations)					
2.I quickly take effective action to solve the problem. (Handling emergencies and unpredictable situations)					
3.I examine available options and their implications to choose the best solution. (Handling emergencies and unpredictable situations)					
4.I easily change plans to deal with the new situation. (Handling emergencies and unpredictable situations)					
5.I stay calm under circumstances where I have to take many decisions at the same time.					
6.I seek solutions by talking to more experienced colleagues.					
7.My colleagues often ask me for advice in difficult circumstances because I keep cool.					
8.I try to develop new methods for solving atypical problems.					
9.I rely on a wide variety of information to find an innovative solution to the problem.					
10.I try to avoid following established ways of addressing problems to find an innovative solution.					
11. My colleagues take advice from me for generating new ideas and Solutions.					

**3. The following items describe Psychological Capital:**

<b>NO.</b>	<b>Please indicate to what extent you agree with the following statements</b>	<b>Totally disagree 1</b>	<b>Disagree 2</b>	<b>Neutral 3</b>	<b>Agree 4</b>	<b>Totally agree 5</b>
	<b>In my department:</b>					
1.	I feel confident analyzing a long-term problem to find a solution.					

1.	I feel confident contributing to discussions about the institution's Strategy.					
2.	I feel confident presenting information to a group of colleagues.					
3.	If I should find myself in a jam at work, I could think of many ways to get out of it.					
4.	Right now, I see myself as being pretty successful at work.					
5.	I can think of many ways to reach my current work goals.					
6.	At this time, I am meeting the work goals that I have set for myself.					
7.	I can be "on my own," so to speak, at work if I have to					
8.	I usually take stressful things at work in stride.					
9.	I can get through difficult times at work because I've experienced difficulty before.					
10.	I always look on the bright side of things regarding my job.					
11.	I'm optimistic about what will happen to me in the future as it pertains to work.					

**Thank you for taking part in our study**  
**Enas K. Al-Zou'bi**  
**UNIMAS**

يرجى الإشارة إلى مدى موافقتك على العبارة التالية (1 = غير موافق تمامًا، 2 = غير موافق، 3 = محايد، 4 = وافق، 5 = موافق تمامًا).

### الجزء الأول: المعلومات الأساسية الشخصية للمستجيب:

- اسم المؤسسة التعليمية:
- الكلية:
- الحالة الاجتماعية:  اعزب  متزوج  أرمل  مطلق  منفصل
- العمر:  أقل من 30  من 30-39  من 40-49  من 50-59  أكثر من 60
- الجنس:  أنثى  ذكر
- المستوى التعليمي:  درجة البكالوريوس  الماجستير  الدكتوراه
- الرتبة الأكاديمية:  محاضر  محاضر أول  أستاذ مساعد  أستاذ مشارك  بروفيسور
- الخبرة العملية منذ متى وأنت تعمل في هذه المؤسسة التعليمية؟  
 أقل من 5  5-10 سنوات  11-15 سنة  16-20 سنة  21-25 سنة  أكثر من 25 سنة

### الجزء الثاني: يصف العناصر التالية قيادة مشرفك

المذكور أدناه هي العديد من البيانات التي يمكن استخدامها لتعكس تصنيف القيادة لك. يرجى الإشارة إلى مدى موافقتك على العبارة التالية من خلال وضع دائرة حول الرقم المناسب على مقياس التصنيف المقدم. يرجى ملاحظة أن مصطلح "القائد" يعني المشرف المباشر أو المباشر عليك."

### 1.1 القيادة الشاملة

دور القيادة الشاملة في وحدتك:

يرجى وضع الإشارة (√) واحد في الفراغ الذي تكون فيه البيانات التالية صحيحة بالنسبة لك، وذلك باستخدام مقياس الاستجابة التالي:

موافق بشده	موافق	محايد	لا وافق	لا وافق بشده
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الرقم	السؤال	أوافق بشده 1	أوافق 2	محايد 3	لا وافق 4	لا وافق بشده 5
1	في قسمي، قائدي منفتح لسماع أفكار جديدة مني.					

## 1.2 القيادة الأصيلة

دور القيادة الأصيلة في وحدتك:

يرجى وضع الإشارة (√) واحد في الفراغ الذي تكون فيه البيانات التالية صحيحة بالنسبة لك، وذلك باستخدام مقياس الاستجابة التالي:

موافق بشده	موافق	محايد	لا اوافق	لا اوافق بشده
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الرقم	السؤال	أوافق بشده 1	أوافق 2	محايد 3	لا اوافق 4	لا اوافق بشده 5
1	في قسمي، يطلب مديري التخذية الراجعة لتحسين تعاملته مع الآخرين.					
2	في قسمي، يصرح قائدي بالفعل ما يعنيه.					
3	في قسمي، يبرهن قائدي بأن معتقداته تتوافق مع تصرفاته.					
4	في قسمي، يطلب قائدي أفكارًا تتحدى معتقداته الأساسية.					
5	في قسمي، يدرك قائدي بدقة كيف ينظر الآخرون إلى قدراته.					
6	في قسمي، يعترف قائدي بالأخطاء التي تحدث بالعمل.					
7	في قسمي، يصنع قائدي قراراته بناء على قيمه الداخلي.					
8	في قسمي، يصغي قائدي باهتمام قبل التوصل لوجهات النظر المختلفة قبل التوصل إلى استنتاجات.					
9	في قسمي، يظهر قائدي أنه يفهم قدراته.					
10	في قسمي، يقوم قائدي بمشاركة المعلومات بشكل علني مع الآخرين.					
11	في قسمي، يقاوم قائدي الضغوط التي تمارس عليه للقيام بأشياء تتعارض مع معتقداته.					
12	في قسمي، يحلل قائدي البيانات المتعلقة بالموضع بشكل حيادي قبل اتخاذ القرار.					
13	في قسمي، يدرك قائدي كيف تؤثر تصرفاته على الآخرين.					
14	في قسمي، يعبر قائدي عن أفكاره للآخرين بشكل واضح.					
15	في قسمي، يسترشد قائدي في أفعاله بالمعايير الأخلاقية الداخلية.					
16	في قسمي، يشجع قائدي كل فرد منا للتعبير عن وجهة نظره.					

### 1.3 السلوك الابتكاري

المذكورة أدناه هي العديد من البيانات التي يمكن استخدامها لتعكس تصنيف السلوك الابتكاري، سيتم التعامل مع جميع الردود بأقصى قدر من السرية .  
يرجى وضع التشاره (√) واحد في الفراغ الذي تكون فيه البيانات التالية صحيحة بالنسبة لك، وذلك باستخدام مقياس الاستجابة التالي:

موافق بشده	موافق	محايد	لا اوافق	لا اوافق بشده
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الرقم	السؤال	أوافق بشده 1	أوافق 2	محايد 3	لا اوافق 4	لا اوافق بشده 5
1	في قسمي، اعطى اهتماما بالأمر التي ليست جزءاً من عملي اليومي.					
2	في قسمي، أسأل كيف يمكن تطوير الأعمال في عملي.					
3	في قسمي، أبحث عن أساليب، تقنيات أو أدوات عمل جديدة.					
4	في قسمي، اعمل على إيجاد حلول للمشاكل.					
5	في قسمي، أجد أساليب جديدة لتنفيذ المهام.					
6	في قسمي، أقوم بتحميس الاعضاء المهمين على تبني الأفكار المبتكرة.					
7	في قسمي، أحاول اقتناع الأعضاء على دعم الأفكار المبتكرة.					
8	في قسمي، أقوم بإدخال الأفكار المبتكرة بشكل منهجي في ممارسات العمل.					
9	في قسمي، أساهم في تطبيق الأفكار الجديدة.					
10	في قسمي، اضح مجهودي في تطوير الأشياء الجديدة.					

## 1.4 الأداء التكيفي

المذكورة أدناه هي العديد من البيانات التي يمكن استخدامها لتعكس تصنيف الأداء التكيفي لك، سيتم التعامل مع جميع الردود بأقصى قدر من السرية. يرجى وضع الإشارة (√) واحد في الفراغ الذي تكون فيه البيانات التالية صحيحة بالنسبة لك، وذلك باستخدام مقياس الاستجابة التالية:

موافق بشده	موافق	محايد	لا اوافق	لا اوافق بشده
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الرقم	السؤال	أوافق بشده 1	أوافق 2	محايد 3	لا اوافق 4	لا اوافق بشده 5
1	احافظ على تركيزي على المواقف التي أواجهها لأعطي ردا سريعا.					
2	أأخذ إجراءات فعالة بشكل سريع لحل المشكلة في قسمي.					
3	أقوم بدراسة الخيارات المتاحة وآثارها لاختيار الحل الأفضل.					
4	أقوم بتخيير خططي بسهولة للتعامل مع الوضع الجديد.					
5	أحافظ على هدوئي في ظل الظروف التي يتعين فيها اتخاذ العديد من القرارات في نفس الوقت.					
6	أبحث عن الحلول من خلال التحدث مع زملائي الأكثر خبرة.					
7	يطلب مني زملائي النصيحة عادة في الظروف الصعبة لأنني أحافظ على هدوئي.					
8	أحاول تطوير أساليب جديدة لحل المشكلات غير النمطية.					
9	أعتمد على مجموعة واسعة من المعلومات لإيجاد حل مبتكر للمشكلة.					
10	أحاول تجنب اتباع الطرق المعتادة لمعالجة المشكلات وذلك لإيجاد حل مبتكر.					
11	ياخذ مني زملائي في العمل بنصيحتي لتوليد أفكار وحلول جديدة.					
12	أبحث في عملي عن الابتكار لتحسين أساليب العمل.					
13	أأخذ خطوات لتنمية مهاراتي في العمل سواء داخل مؤسستي او خارجها مهاراتي.					
14	أتوقع حدوث تغييرات في وظيفتي من خلال المشاركة في المهام التي تساعدني في التعامل مع التغيير.					
15	أبحث دائما عن الفرص (مثل التدريب والتفاعل مع الزملاء وما إلى ذلك) التي تساعدني على تحسين أدائي الوظيفي.					
16	أقوم دائما بتخيير طريقي في العمل بناءً على التغذية الراجعة والاقتراحات التي اتلقيها من الآخرين.					
17	أقوم دائما بتطوير علاقات إيجابية مع الأشخاص الذين أفاعل معهم أثناء القيام بعملهم لأن ذلك يساعدني على أداء عملي بشكل أفضل.					
18	أتعلم طرقاً جديدة للقيام بعملهم من أجل التعاون مع زملائي بشكل أفضل.					
19	أحاول أخذ وجهات نظر الآخرين بعين الاعتبار حتى يمكنني من التفاعل معهم بشكل أفضل.					

## 1.5 رأس المال النفسي

2 المذكورة أدناه هي العديد من البيانات التي يمكن استخدامها لتعكس تصنيف رأس المال النفسي لك، سيتم التعامل مع جميع الردود بأقصى قدر من السرية. يرجى وضع الإشارة (√) واحد في الفراغ الذي تكون فيه البيانات التالية صحيحة بالنسبة لك، وذلك باستخدام مقياس الاستجابة التالية:

3

موافق بشده	موافق	محايد	لا اوافق	لا اوافق بشده
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الرقم	السؤال	أوافق بشده 1	أوافق 2	محايد 3	لا اوافق 4	لا اوافق بشده 4
1	أشعر بالثقة في تحليل مشكلة طويلة الأمد لإيجاد حل.					
2	أشعر بالثقة أثناء المساهمة في المناقشات التي تدور حول استراتيجية المؤسسة.					
3	أشعر بالثقة في تقديم المعلومات إلى مجموعة من الزملاء.					
4	إذا وجدت نفسي في مأزق في العمل، فيمكنني التفكير في طرق عديدة للخروج منه.					
5	في الوقت الحالي، أرى نفسي ناجحًا جدًا في العمل.					
6	يمكنني التفكير في طرق عديدة للوصول إلى أهداف عملي الحالية.					
7	في هذا الوقت، أحقق أهداف العمل التي حددتها لنفسي.					
8	يمكنني أن أكون "بمفردي"، إذا جاز التعبير، في العمل إذا اضطررت لذلك.					
9	أتعامل عادة مع الأمور المجهدة في العمل بسرعة.					
10	يمكنني اجتياز الأوقات الصعبة في العمل لأنني مررت بمواجهة الصعوبات من قبل.					
11	أنظر دائمًا إلى الجانب المشرق من الأمور المتعلقة بعمل.					
12	أشعر بتفاؤل في مستقبلي المهني في العمل.					

انتهى الاستبانة  
خالص الشكر لمشاركتكم