



**University of
Nottingham**

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**LEADING AUTHENTICALLY-
A PROSOCIAL ENGAGEMENT MODEL FOR MIDDLE
LEVEL BUREAUCRATS IN MALAYSIA**

By:

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**Thesis submitted to the University of Nottingham
for the degree of Doctor of Philosophy in Business and
Management**

10 May 2023

DECLARATION OF ORIGINAL AUTHORSHIP

I declare that the work contained in this thesis has not been previously submitted for any degree or diploma at the University of Nottingham or any higher education within or outside Malaysia. To the best of my knowledge and belief, the thesis contains no material previously published or written by another scholar except where due reference is made.

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ABSTRACT

In Malaysia, several reports indicate that leaders in the public sector are expected to be value-driven, authentic and empower their staff to make better decisions in order to promote positive organisational behaviour. In this regard, much attention has been given to the study of specific leadership styles such as transformational leadership and servant leadership in the context of Malaysian public administration. However, there are very few studies that focus on the influence of authentic leaders on their followers and view leadership as a collaborative process. Therefore, this study examines the behaviour of middle-level bureaucrats through four factors: sustainable authentic leadership (SAL), prosocial behaviour (PSB), public service motivation (PSM) and subjective well-being (SWB). Based on self-determination theory (SDT), authentic leadership theory (ALT) and the contingency model, this study assumes that middle-level bureaucrats can engage in prosocial behaviour when they are exposed to authentic leaders, when they are motivated to serve and when they feel good. All these factors and theories are interwoven and form a model for prosocial engagement.

This study used a cross-sectional, mixed method design, including qualitative interviews to explore authentic leadership from the practitioners perspective and instrument development. Questionnaires are used for the quantitative method. The population of this study includes civil servants in Malaysia under the Administrative and Diplomatic Service (ADS) in middle-level management positions. Data were collected through face-to-face interviews with 15 senior managers, 127 respondents during the pilot study and online surveys with 398 respondents from various public sector agencies and ministries in Malaysia.

Qualitative data analysis was conducted using Nvivo, and three main themes define authentic leadership in the Malaysian context: 1) spiritual connection, 2) purposeful intention, 3) sustainable legacy. Quantitative data analysis was employed using Partial Least Square Structural Equation Modelling (PLS- SEM) via SmartPLS 4.0 analysis software. Statistical analysis include Exploratory Factor Analysis (EFA), Composite Confirmatory Analysis (CCA), CTA-PLS, IPMA, mediation and moderation analysis. The results showed that all constructs have good composite reliability values (CR) ranging from 0.7-0.9 and achieved both discriminant and convergent validity. Key findings include that perceived sustainable authentic leadership influences individuals' prosocial behaviour, that subjective well-being mediates the relationship between AL and prosocial behaviour, and that seniority moderates the well-being and prosocial behaviour of middle-level bureaucrats in the Malaysian public sector.

Overall, the results of this work recognise Sustainable Authentic Leadership (SAL) is a construct that includes self-awareness, an internalised moral perspective, balanced processing of information, and relational transparency and spirituality. In addition, this study has also established the correlation between authentic leadership and public service motivation as well as subjective well-being. In other words, sustainable authentic leadership is the predictor of all three factors – for public service motivation, subjective well-being and prosocial behaviour. Accordingly, understanding of the impact of authentic leadership approach and prosocial behaviour is enhanced. The findings demonstrate the importance of prosocial engagement and thus offer new theoretical insights and practical suggestions. Thus, this study highlights the importance of collaborative culture among employees in creating a positive workplace in the public sector.

Keyword: *Authentic leadership, prosocial behaviour, Malaysian Public Administration, middle managers*

RESEARCH OUTPUT

Proceedings

1. Ahmad, H.M., Kaliannan, M. and Mutum, D.S. (2021). Middle Managers as Authentic Leaders for the Public Sector Management: a Systematic Review. In: *YSN-ASM International Scientific Virtual Conference Abstracts*. [online] YSN-ASM International Scientific Virtual Conference (ISVC) 2021. Malaysia: ASM Science Journal. Available at: <https://www.akademisains.gov.my/asmsj/article/ysn-asm-international-scientific-virtual-conference-isvc-2021-abstracts/#>.
2. Ahmad, H.M., Kaliannan, M. and Mutum, D.S. (2022). Find Your True North: An empirical study of authentic leadership, public service motivation, well-being, and citizenship behaviour among Malaysian middle managers. In: *IRCMH 2022 Proceedings*. International Research Conference on Management & Humanities. London: London Institute of Skills Development.
3. Ahmad, H.M., Kaliannan, M. and Mutum, D.S. (2022b). Leading Authentically - a prosocial engagement model for middle managers. In: *UNM Postgraduate & Early Career Researcher Conference*. UNM Postgraduate & Early Career Researcher Conference. Malaysia: University of Nottingham Malaysia.

Papers Accepted

1. Ahmad, H.M., Kaliannan, M. and Mutum, D.S. (n.d.). Authentic leadership in a bureaucratic environment: A qualitative study. *Journal of General Management*.

Others

1. Ahmad, HM. (2021) *I, Who Carried Out the Trust*. Presented at Poster research showcase, 8 September 2021.
2. Ahmad, HM. (2021) *Authentic leaders defined*. Presented at 3MT Competition, 18 August 2021

ACKNOWLEDGEMENTS

I would like to thank Almighty Allah S.W.T. for giving me the opportunity to undertake this scholarly journey and enriching me. This is by far the most enriching and rewarding experience I have had while pursuing my PhD at the University of Nottingham Malaysia. My supervisors, Professor Maniam Kaliannan and Professor Dilip Mutum, who have constantly supported me since day one. My family, especially my dear husband Ezri and my lovely children Arif, Afwan and Arwa. Thank you for being part of this wonderful journey.

PhD is indeed my **Precious, Honourable Desire.**

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ABBREVIATION

ADS	Administrative and Diplomatic Service
AL	Authentic leadership
ALT	Authentic leadership theory
GDP	Gross Domestic Product
IKPM	Public Service Engagement Index
IKPA	Public Service Wellbeing Index
JPA	Public Service Department
JUSA	Public Sector Premium Posts
MCS	Malaysian Civil Service
MIGHT	Malaysian Industry-Government Group for High Technology
OCB	Organisational citizenship behaviour
PLS-SEM	Partial Least Square Structural Equation Modelling
PSD	Public Service Department
PSB	Prosocial behaviour
PSM	Public service motivation
PTD	Administrative and Diplomatic Officer
RMK-11	11 th Malaysia Plan
SEM	Structural Equation Modelling
SWB	Subjective well-being
SDT	Self-determination theory
SET	Social exchange theory
LMX	Leader member exchange theory
WEF	World Economic Forum

CHAPTER 1

INTRODUCTION

1.1 Preface

A key aim of this research is to build a model that explains collaboration among middle level bureaucrats at work. This thesis proposes a model of prosocial engagement, which is a tool for collaboration at work based on perceived leadership, motivation, well-being, and prosocial behaviour. While the term prosocial refers to helping behaviour, extra-role behaviour, and some form of act of kindness (Vieweg, 2018; Lee and Allen, 2002; Kohlberg, 1969), prosocial engagement could potentially become a tool for leadership development at all levels, especially in the public sector. Moreover, more efforts for leadership development should focus on real experiences and on the job training, besides formal training.

1.2 Background

We live in a world that is constantly under pressure and pushed to move forward and beyond. We see that people can either burn out or flourish. Similarly, the leadership situation requires leaders who are resilient, honest and can inspire others to change. Leadership behaviour is a recurring topic of discussion in organisational studies literature. However, in today's complex world, we have come to believe that leadership skills are no longer dependent on position, nor are they inherited. Leadership qualities can be learned and acquired. We look for leaders who can put a vision into action, who can support others and who can have an impact on another person's life.

In addition to the following discussion on leaders and their skills, traits and behaviours, we also need to look at talents or people, especially in an organisational context. Nowadays, leaders and psychologists focus on well-being at work, which is essentially about bringing one's whole self to work. A famous quote on this topic is: "Bring your whole self to work. There is no professional Monday or Friday. Everything is professional and everything is personal" (Sandberg, 2013). This quote refers to being authentic, which is a combination of our professional and personal selves. In addition to performing at work, people are searching for a sense of purpose and how to effectively perform at their best and reach their true potential. Certainly, in most cases, we tend to believe that this can be achieved by being an effective leader in the workplace.

Leadership, motivation and well-being are among the core issues in the current discussion on employee behaviour in the workplace. Many middle-level office workers face leadership conflicts at work (Balogun and Johnson, 2004), which cause stress and anxiety. According to recent studies, the 'middle-levelness' (Gjerde and Alvesson, 2019) enables these mid-level managers to gain credibility and expertise (Cooper and Kitchener, 2018) and be seen as 'agents of change' (Ancarani et al., 2020). This thesis not only highlights the importance of middle leaders in organisations, but also explores how workplace relationships can be made equally meaningful. The premise of this work draws on the existing literature on prosocial culture in the workplace, where prosocial behaviour is about helping and collaborating with others (Schott et al., 2019; Vieweg, 2018; Mitonga-Monga and Cilliers, 2016).

This thesis explores factors that promote prosocial behaviour in the context of public organisations in Malaysia, specifically looking at middle-level bureaucrats. The three factors that promote prosocial behaviour in the public sector are authentic leadership, public service

motivation and subjective well-being. All of these factors will be explored from the perspective of self-determination theory (Deci and Ryan, 2000) authentic leadership theory (Walumbwa et al., 2008) and Fiedler's contingency model (1958). Together, these factors form a model of prosocial engagement. The outcome of this study is collaborative culture in the workplace. Towards the end of the study, the main objective was to form a model of prosocial engagement for middle-level bureaucrats in Malaysia.

The development model of prosocial engagement was divided into three phases of study. First, the thesis explored the meaning of authentic leadership from the practitioner's perspective. Secondly, based on the understanding, the prosocial engagement instrument was developed. Thirdly, the prosocial engagement model was tested through survey questionnaires.

This model allowed us to see the bigger picture of the culture of collaboration in bureaucratic organisations, and it can help human resource managers in how we approach our work. In addition, studying motivation and well-being helped us understand why people give meaning to their work (Gardner et al., 2019; Day et al., 2014; Gardner, 2011). It is hoped that people who find meaning in their work are able to bring their whole selves to it. This thesis gave an alternative to motivating others without investing in formal training, but in building a culture of collaboration and changing mindsets through positive relationships.

This chapter is divided into several sections: the background of the study, the purpose of the study, the research questions, the rationale, relevance and significance of the study, followed by the definition of terms, the organisation of the thesis and summary.

1.3 Problem statement

Today's public sector challenges include transparency in public policy making, promoting ethical decision-making to combat corruption, and the ability to address diverse socio-economic needs while dealing efficiently and effectively with rapid technological advances and geopolitical challenges. Several studies have shown that future leaders are expected to be value-driven (MIGHT, 2020), authentic, possess global leadership skills (WEF, 2017) and empowered to make better decisions (Aziz et al., 2015). We need to develop the next generation of leaders in the public sector with good leadership skills.

Authentic leaders have a positive impact on the motivation of their employees by encouraging their civic behaviour in the organisation, which ultimately enhances organisational performance. Public service motivation is considered one of the most important predictors of organisational performance (Crawford et al., 2020; Leslie and Canwell, 2019; Ancarani et al. 2019). In addition to that several studies highlight public service motivation and organisational citizenship behaviour in the organisation contribute to organisational efficiency, effectiveness and equity (Podsakoff et al., 2014; Boyne, 2002; Organ, 1988). Subjective well-being helps to promote better policies and improve well-being and job satisfaction in the public sector (Sim and Diener, 2018; Pacek and Radcliff, 2008). However, many studies on leadership tend to focus on the leadership skills of senior managers rather than middle managers. Middle managers have often been seen as less strategic than top leaders, so their contribution has seemed less significant from the traditional standpoint of leadership theory (McGurk, 2009; Balogun and Johnson, 2004).

Middle leaders help to increase their employees' work engagement through various types of feedback, help and support, and the transformational style of middle leaders helps to promote

engagement and change (Ancarani et al. 2020; Anand, Vidyarthi and Rolnicki, 2018). However, research on the impact of middle leaders in organisations is still under-researched (Cooper and Kitchener, 2018; Kempster, 2018). Therefore, there should be more studies on leadership that support the role of middle managers and their influence in the organisation, especially in the context of the public sector with its hierarchical nature and complex bureaucratic environment. In Malaysia, there are few recent examples of middle managers' performance (Samah, 2020; Md Damiri, 2019; Zahir and Sumintono, 2017). These studies examined leadership styles of ADS officers such as transformational leadership (Mohd Nor, 2016; Kader Ali and Tang, 2016) change management (JPA, 2016), knowledge behaviour (Ismail, Abdullah and Abdullah, 2019) and well-being (Osman, Abdul Ghani and Alis, 2009). It is not known to what extent other leadership theories might influence people and public organisations. However, it seems that the literature on leadership in the public sector in Malaysia tends to focus on specific sectors such as health and education. This also shows that there are more studies on health and education professionals than on other government service sectors.

There is some evidence of authentic leadership behaviour at the middle management level. In these studies, employees' organisational behaviour was analysed using relationship-based theories such as Social Exchange Theory (SET), Theory of Planned Behaviour and Leader-Member Exchange (Samah, 2020; Sakthi Ananthan et al., 2019; Osman, Abdul Ghani and Alis, 2009). While most studies focus on employee performance, there is very little evidence on other positive leadership theories such as authentic leadership, other motivational theories such as PSM and well-being (Lin and Perry, 2016; van Loon et al., 2015; Yurcu et al., 2015). By focusing on motivational theories and well-being, a different outcome can potentially tailor leadership development efforts for high performing talents.

The phenomenon of leadership, performance and well-being in the Malaysian public sector reflects potential areas for development. Despite efforts to maintain the motivation of civil servants in Malaysia and improve their job performance, leadership style and performance delivery are critically scrutinised by the public and social media. Civil servants' motivation and well-being should also be an issue. Recent studies (JPA, 2021; JPA,2016, World Bank, 2018) include the Civil Service Engagement Index (IKPA) and the Civil Service Wellbeing Index (IKPM). Each of these indices contributes to the country's GDP and national productivity measure and provides information on how Malaysia is performing on a global scale through the World Competitiveness Report. The comparison between the 2015 and 2018 (JPA, 2021; JPA, 2018) results shows that employee engagement with leaders and employee well-being are not satisfactory (65-70%). Therefore, there is a need to improve leaders' perception and positive behaviour to promote collaborative culture among middle-level bureaucrats in the Malaysian public administration.

1.4 Purpose of study

This thesis explores the application of self-determination theory (SDT) and authentic leadership theory to promote collaborative culture among mid-level bureaucrats using Fiedler's contingency model. It examines the influence of perceived sustainable authentic leadership on prosocial behaviour among middle-level bureaucrats in Malaysian public administration. The population of this study includes Malaysian public sector employees who belong to the Administrative and Diplomatic Service (ADS), are administrators and perform leadership roles. This study employs mixed method, cross-sectional study design. The data collection involves two main sources. The first is a series of qualitative interview with top public sector leaders in Malaysia. The second source is online survey to middle-level bureaucrats in various

public institutions and ministries in Malaysia. The results of the survey were analysed using the partial least squares of structural equation modelling (PLS-SEM).

There are several variables used for this study. Sustainable authentic leadership (SAL) refers to a motivation-based leadership approach that favours self-awareness, an internalised moral perspective, balanced information processing, relational transparency and spiritual transcendence (Walumbwa et al., 2008). Prosocial behaviour (PSB) refers to "extra-role behaviour" that contributes to a culture of collaboration that incorporates values such as altruism, courtesy, conscientiousness, civic virtue and sportsmanship in individuals (Vieweg, 2018; Lee and Allen, 2002, Kohlberg, 1969). Public service motivation (PSM) and subjective well-being (SWB) are the mediating factors for this study. Public service motivation is defined as a set of beliefs, values and attitudes that transcend self-interest and organisational interest and are based on attraction to policy-making, commitment to the public interest, compassion and self-sacrifice (Kim, 2006; Perry, 1996). Subjective well-being is characterised as the state of a person that includes both positive and negative emotions as well as life satisfaction and authenticity (Diener et al., 2010; Wood et al., 2008). In addition, seniority was identified as a moderating variable for this study.

1.5 Research questions

The main research question is: How can an integrated model of prosocial engagement be developed to promote a culture of cooperation among Malaysian middle-level bureaucrats based on leadership, motivation, well-being, and prosocial behaviour? The research questions (RQ) for this study as follows:

RQ1: How is authentic leadership perceived by Malaysian public sector leaders?

RQ2: How can a model of prosocial engagement be developed based on authentic leadership, motivation, well-being, and prosocial behaviour?

RQ3: How is the prosocial engagement model applied by Malaysian middle-level bureaucrats?

For RQ3, there are more questions about the model.

- i) What is the relationship between perceived leadership behaviour, motivation, well-being, and prosocial behaviour amongst the middle-level bureaucrats?
- ii) Do motivation and well-being mediate the relationship between perceived leadership behaviour of middle-level bureaucrats?
- iii) Does seniority moderate the relationship between motivation, well-being, and prosocial behaviour among middle-level bureaucrats?

1.6 Research objectives

This thesis examines the application of self-determination theory (SDT) and authentic leadership theory to promote a culture of collaboration using the contingency model through sustainable authentic leadership (SAL), prosocial behaviour (PSB), public service motivation (PSM) and subjective well-being (SWB) among Malaysian middle-level bureaucrats (ADS officer). The following research objectives (RO) provide an overview:

RO1: To explore how authentic leadership is perceived by Malaysian public sector leaders.

RO2: To develop a model of prosocial engagement based on authentic leadership, motivation, well-being, and prosocial behaviour.

RO3: To explore the application of the prosocial engagement model among Malaysian middle-level bureaucrats.

1.7 Rationale and significance of study

Based on the post-positivist worldview, this study uses a mixed-method design (Creswell and Plano Clark, 2018) that includes qualitative interviews for instrument development and

questionnaires for the quantitative method, as well as a non-experimental correlational design. The population of this study includes civil servants in Malaysia who belong to the Administrative and Diplomatic Service (ADS) and hold a middle management position or are referred to as middle-level bureaucrats in this study.

Data collection includes face-to-face interviews with 15 top-level bureaucrats, 127 during the pilot study and online surveys with 398 middle-level bureaucrats from various public sector agencies and ministries in Malaysia. In the first phase, this study uses qualitative interviews to explore how top executives and middle-level bureaucrats perceive authentic leadership at work. In the second phase, this study develops an instrument based on the model of prosocial engagement. In the third phase, this study uses the prosocial engagement instrument to analyse the culture of collaboration among middle-level bureaucrats in the Malaysian public sector. Even though this is a cross-sectional study, the mixed-method approach overcame the limitation of the cross-sectional design by using different approaches to analyse the data.

This research supports a systematic way to examine authentic leadership theories, the least studied leadership theory (Alillyani, Wong and Cummings, 2018), and analyses it in the context of public administration. As mentioned earlier, this study deals with self-determination theory (Deci and Ryan, 2000), authentic leadership theory (Walumbwa et al., 2008) and contingency model (Fiedler, 1958). These theories are studied in the context of organisational studies, but focus on the micro level, i.e. the level of the individual. This justifies the need to study the behaviour of middle-level bureaucrats, their leadership style, their motivation to serve and their well-being at work.

The present study hopes to fulfil these two prophecies. First, this research topic should be seen as an original contribution to the existing body of knowledge on authentic leadership, and second, it should have practical significance for the public sector. In terms of contribution, there are two different categories of contribution: absolute and relative. An absolute contribution adds to the body of knowledge about a particular phenomenon, while a relative contribution evaluates the work in comparison to other contributions within the literature streams (Ladik and Stewart, 2008).

Given the existing gaps in research on middle managers in the public sector, it is hoped that the findings can make an important contribution to the literature. From a theoretical perspective, this study provided additional evidence for the application of self-determination theory and prosocial behaviour in public sector organisations, as well as for the AL, PSB, PSM and SWB literature, which are considered new areas in the literature on organisational behaviour in the public sector.

The contribution of this study is the development of sustainable authentic leadership as a construct for measuring authentic leadership in the public sector. Secondly, the model of prosocial engagement contributes to further understanding of middle-level bureaucrats' leadership behaviour from the perspective of self-determination theory and authentic leadership. Finally, by developing a model of prosocial engagement based on sustainable authentic leadership, public service motivation, subjective well-being and prosocial behaviour, this study has provided a basis for recommendations for the development of training designs, interventions related to employee well-being, professional development and organisational culture. This study served as an eye-opener to consider authentic leadership as an approach for

developing future leaders in the public sector and offers a better alternative to existing leadership studies such as transformational and servant leadership.

1.8 Nature of the study

In this study, authentic leadership, prosocial behaviour, public service motivation and subjective well-being were the main constructs that are also commonly used in organisational studies (Gardner et al., 2020; Alillyani, Wong and Cummings, 2018; Dinh et al., 2014). These variables provided the theoretical framework for this research. Some variables are well explored in the literature, but were less found in the public sector literature. To gain a deeper understanding of the complexity of the challenges faced by middle-level bureaucrats in the public sector, this study explores the perspectives of The Administrative and Diplomatic Service officers in Malaysia. They were selected because they have received extensive developmental exercises and leadership assessment throughout their careers. High-performing officers will be then promoted to senior positions in government. Their career planning and development has become a model for many other scheme of services in the Malaysian public administration.

1.9 Definition of terms

There are four (4) variables for this study, namely sustainable authentic leadership (SAL), prosocial behaviour (PSB), public service motivation (PSM) and subjective well-being (SWB). These operational definitions are summarised in **Table 1**.

Table 1 Key definitions

KEY TERMS	DEFINITION
Authentic Leadership	Authentic leadership refers to a set of characteristics such as self-awareness, an internalised moral perspective, balanced information processing, transparency in relationships and transcendent spirituality on the part of leaders working with their followers (Walumbwa et al., 2008; Sendjaya et al., 2008).
Public Service Motivation	Public Service Motivation means a set of beliefs, values and attitudes that go beyond self-interest and organisational interest and are based on attraction to policy making, commitment to the public interest, compassion, and self-sacrifice (Lee and Allen, 2002, Perry, 1996).
Prosocial Behaviour	Prosocial behaviour refers to "extra-role behaviour" that contributes to performance above and beyond expectations and includes these values such as altruism, courtesy, conscientiousness, civic virtue and sportsmanship in individuals (Vieweg, 2018).
Subjective Wellbeing	Subjective Wellbeing refers to the state of being of a person that includes both positive and negative emotions, as well as life satisfaction and authenticity (Diener et al., 2010, Wood et al., 2008)
Middle-level bureaucrats	Middle-level bureaucrats are the public administrators in the Malaysian civil service who belong to Administrative and Diplomatic Service. They are commonly referred to as the Administrative and Diplomatic Officers (ADO). In this study, the focus is on middle-level bureaucrats. They work in various ministries and agencies of the federal government (JPA, 2022).

1.10 Organisation of the thesis

This thesis is structured as follows: This chapter provides an overview of the research, including its main components such as theories and variables for the study. It also briefly introduces the reader to the research questions and theoretical framework and discusses the significance of the study. *Chapter 2* looks in more detail at summarising related literature on authentic leadership, prosocial behaviour, public service motivation, subjective well-being and some theories relevant to this study. In this chapter, the researcher examines, among other things, how AL, PSB, PSM and SWB are studied as constructs in the leadership literature and in public administration. The researcher also provides an introductory section on the Malaysian public service to inform readers of the context of this study.

Subsequently, *Chapter 3* then informs readers about the research philosophy and paradigm, as well as the research design. This chapter also discusses the research framework, followed by the theoretical framework of the study. It also covers the research methodology and design, including the reasons why the chosen design can answer the problem statement and research questions compared to other approaches. In terms of methodology, emphasis is placed on the three (3) phases of data collection that were used in the study.

Chapter 4 then discusses the first phase of the study, which is qualitative data analysis based on face-to-face interviews with public administration leaders. The researcher uses qualitative content analysis with NVivo to identify the main themes for the study. Consequently, these themes help in the development of a model of prosocial engagement in *Chapter 5*. In this chapter, the model of prosocial engagement is presented as a relevant tool to measure the

culture of collaboration in the public sector. The pre-test and pilot test were conducted and reported.

Subsequently, Chapter 6 presents the results of the survey based on a quantitative analysis with PLS-SEM. This chapter discusses the application of the model of prosocial engagement based on findings for middle-level bureaucrats. The final chapter, *Chapter 7*, then summarises all the discussions based on the findings from the three phases of the study. Finally, a conclusion is drawn based on the actual findings. In addition, this final chapter presents the limitations of the study and some recommendations for future studies.

1.11 Summary

This chapter has presented the conceptual basis of the thesis. It informs about four key variables namely AL, PSB, PSM and SWB from the theoretical perspective of SDT, authentic leadership and contingency model. This study proposes a model of prosocial engagement that promotes collaborative culture in the workplace. Overall, this study uses a cross-sectional mixed method design. Data were collected in three phases using qualitative and quantitative methods. Results were analysed using NVivo for the qualitative data and SmartPLS for the quantitative data. Further background information on previous studies was discussed in the next chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The overarching theme rigorously discussed in the public service is the intense and relentless pace of change and disruption leading to new service demands, and the importance of managing public perceptions through good governance, high integrity, and transparency. These challenges require public sector leaders to understand the changes in their worldview. They also need to anticipate the emerging challenges while providing cost-effective solutions in this pressing environment without compromising the needs of the people and the legitimacy of societal demands. For example, the idea of transformational leadership has been developed in many literatures, which was expected to work as a fair and sustainable model, as this model starts from high ethical and moral standards, is value-based, inspires the ‘*whole*’ being, moves towards a collaborative network and has a more sustainable worldview that embraces humanity. The personal qualities of transformational leadership are also not a sufficient descriptor of transformational leadership behaviour among followers (Yukl, 2013). However, the limitation of transformational leadership is that the preceding discussion seems to focus on leadership at the top, which has limited impact on highly motivated individuals such as the middle level.

The leadership paradigm is changing. Established leadership models are unable to capture the challenges of leadership in the public sector and the dynamics that take place in today's world (Ancarani et al., 2020; Murphy et al. 2017; Van Wart, 2013), while most research on leadership is largely conceptual and cannot adequately address the complexity at different levels of the

system (Litcthenstein and Plowman, 2009). Leaders with strong moral characters are now sought in both the private and public sectors and authentic leadership is the leadership philosophy that exudes positive behaviour as well as moral character development.

The need for authentic leadership stems from the challenges faced by public sector employees in dealing with public scrutiny, political pressures, and citizens' expectations of public organisations. The concept of authentic leadership was introduced as a form of values-based leadership as a scholarly response to the development of ethical and moral leaders. (Walumbwa et al., 2008; Gardner et al., 2005). Interest in authentic leadership has increased significantly over the last decade and many studies have shown that authentic leadership is associated with positive organisational performance, follower attitudes and behaviours (Day et al., 2014; Gardner et al., 2011; Walumbwa et al., 2008). Adding another perspective to the literature on public sector leadership would reduce the chance of being marginalised (Ancarani et al, 2020; Van Wart; 2013), especially when it comes to finding guidance on motivating public sector employees.

The development of authentic leadership has been proposed as a strategy to overcome unethical leadership behaviours (Crawford et al., 2020; Gardner et al., 2011). The need for authentic leadership arises in response to the challenges faced by public sector employees in dealing with public scrutiny, political pressures, and citizens' expectations of public organisations. Authentic leadership becomes a prerequisite for organisational behaviour and motivation in the public service to enhance organisational performance (Podsakoff et al., 2009; Podsakoff et al., 2000). While public service motivation has been studied in the private sector, examining the relationships with leadership, job satisfaction and commitment, there is little evidence of the dynamic interaction between these relationships in public organisations. Interestingly, public

sector employees score higher (de Geus et al., 2020; Ritz et al., 2014; Cailier, 2014; Vandeenabeele, 2007). Rainey (2014) explains that leadership, motivation, and culture are important to overcome challenges in the public service. Further research to uncover leadership and employee characteristics will provide a better understanding of managing talent in the public sector.

This chapter discusses the theories relevant to this research. It provides a background to the existing body of knowledge, highlights gaps and sets out some important areas in terms of variables related to the main theories. It is divided into a few sections, such as the theoretical background and the review of previous literature. There is also a section on the overview of Malaysian public administration to give a better understanding of the scope of this study.

2.2 The definition of leadership

According to Burns (1978), leadership is a phenomenon that was widely observed but least understood. Even though many scholars (Northouse, 2021, Yukl, 2013, Bass and Avolio, 1994) tried to define this concept, leadership is a fluid concept, and it is based on different context and people's understanding about issues. Among the most common definition are a few such as, leadership is a process between individuals to achieve common goals (Northouse, 2021), based on how followers perceived them (Bass and Avolio, 1994) and an engagement process based on motivation and morality (Burns, 1978). The scholars (Johnsen, 2018; Banks et al., 2016) noticed a trend from inspirational to aspirational leadership. Evidently, these observations focused on the leader's behaviour as possible moral framework to solve ethical crisis.

The issue of positive behaviours, morality, and ethics (Kaptein, 2017; Sendjaya et al., 2008) are not central to discussion till recently and the discussion of leadership seems to cover more on techniques rather than wisdom. To move away from transactional and transformational style that is prevalent in public sector leadership literature, there is a need to further evaluate other leadership constructs that is built upon the concepts of morality. This literature review suggests framing authentic leadership in the context of middle-level bureaucrats leadership behaviour in the public administration and considering its impact from employees' perception of their leader's authentic leadership. These insights would assist recruitment, selection, and promotion of middle managers to reap the benefits of authentic leadership in public organisations.

2.3 Authenticity and Leadership

Authenticity is not a new concept, in fact, it has been introduced as early as in Ancient Greek times, in which Aristotle defines authenticity as “being true to oneself” (Algera and Lips-Wiersma, 2012; Kernis, 2003; Harter, 2002). Walumbwa et al. (2008) introduced the definition of authenticity so that it can be measured adequately. However, with the recent retracted papers on authentic leadership calls for attention and a careful reconsideration of authenticity (Crawford et al., 2020; Tomkins and Nicholds, 2017). Newman (2019) explore the three broad kinds of authenticity which as historical, categorical and values. People with authentic moral values are considered more responsible leaders, as they uphold responsibility and sustainability (Freeman and Auster, 2011). Notably, authenticity has a strong foundation for authentic leadership theories.

Among the biggest concerns about the construct development of authentic leadership is how the scholars has attempted to define the concept of authenticity itself (Crawford et al., 2020; Newman, 2019). It is possible to argue that in the era of modern psychology, theories of human

behaviour are largely based on empirical, non-biased scientific approach and based on unbiased observation. However, that scenario might be true in Western context, and the dilemma between non- Western scholars lies within their traditional beliefs of faith, culture, and societal norms. For example, in Islam, it is believed that a person can be morally responsible person due to some spiritual factors. The more spiritually attached the person is, the more self-aware the person become to continue as living being. Similarly, the Bhavagad Gita suggests it is better to live imperfectly than to live based on imitation of someone else's being and, in the Bible, while Man proposes, God disposes. So, the concept of 'knowing one true self' exist in many cultures and faiths around the world. The moment we divorce ethics, morality from managing people, it can be reduced to only politics which means less wisdom is managing people, societies, and the government (Mahazan et al., 2017).

2.4 Theoretical background

Two motivation-based theories were selected for this study. Self-determination theory (Deci and Ryan, 2000) is the main theory guiding the development of the research framework. Another theory, authentic leadership theory (Walumbwa et al., 2008), supports the main theory. It is hoped that by approaching the problem from these theories, a better understanding of how middle managers can use motivation to enhance their organisational performance and improve workplace well-being.

2.4.1 Self-determination theory

Self-determination theory (SDT) provides a good starting point to examine the impact of leaders on their followers at work. SDT is a well-known motivation-based theory developed

by Deci and Ryan (2000) and widely used in applied psychology, organisational behaviour studies and management. In behavioural research, SDT assumes that people are motivated to grow and change and become self-determined when their needs for competence, connection and autonomy are met (Deci and Ryan, 2000). SDT in organisations offers insights into qualities associated with self-determined functioning (Chen, Chen and Xu, 2018) and personal values or values shared by members of the organisation (Andrews, 2016). Recently, SDT in leadership motivation shows growth in career goals (Deci and Ryan, 2020) however, as people have different expectations, and their needs and aspirations are becoming more sophisticated, better instruments are needed to capture various motivations.

SDT is primarily premised on the concept of intrinsic motivation (Ju et al., 2019) whereby human beings are innately motivated to be competent in interactions with their environment. This innate motivational force (Deci and Ryan, 2000) complements the human drives that provide the energy to be competent and self-determining. Decharms and Carpenter (1968) early ideas explain that the need for self-determination is based on the desire for control over one's own destiny. Later, however, some scholars (Xu and Chen, 2016; Roche and Haar, 2013) found that the pursuit of competence is characterised by an interest that is not based on rewards or contingencies. The concept of self-determination, which is based on intrinsic motivation, thus assumes the freedom to initiate one's own behaviour.

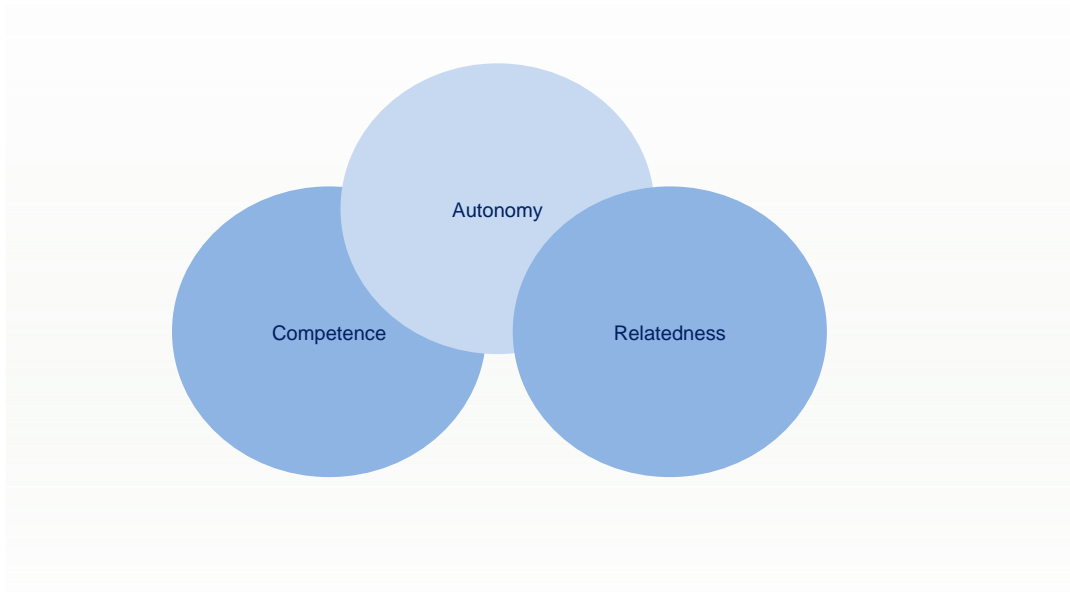


Figure 1 Self-determination theory, Source: Adapted from Deci and Ryan (2000)

Self-determination has thus been conceptualised through empirical research and contributes to a more detailed explanation of volition, intentionality and will (Ju et al., 2019; Xu and Chen, 2016). Deci and Ryan (2000) define self-determination as a quality of human functioning where behaviour is supported by environmental forces, leading this research to further explore the relationship between leader and follower to support the idea that the person is more self-determined. In explaining SDT, it was pointed out that the three conceptualisations of the elements need to be considered: Competence, Relatedness and Autonomy (Chen, Chen and Xu, 2018) (see **Figure 1**). In the public sector, public service motivation is one of the examples of a motivation-based construct developed based on SDT (Xu and Chen, 2016; Ju et al., 2018). One study found organisational citizenship behaviour in the private sector addresses employee motivation/voluntarism in a similar way to public service motivation (Steen, 2006).

Existing theories of SDT have a significant relationship with employee silence (Ju et al., 2019), motivation for a career in public service (Chen, Chen and Xu, 2018), influence on public values (Andrews, 2016), predicting people's behaviour (Gilal et al., 2019), promoting sincere and

altruistic motivation in the public sector (Xu and Chen, 2016), organisational citizenship behaviour and well-being (Roche and Haar, 2013). Some studies (Ju et al., 2019; Bordei et al., 2019; Gilal et al., 2019; Perry et al., 2015) show limited studies linking SDT to prosocial behaviour and leadership in the context of the public sector. The comparison between the few recent studies is shown in **Table 2**. Briefly, this table provides a compilation of the most recent studies of self-determination theory (SDT) application in the public sector. This also includes the methodology used, most papers are review-based articles and motivation is one of the most widely researched variables.

In the context of this study, perceived authentic leadership is expected to influence prosocial behaviour (PSB) as SDT helps to shed light on the conditions that promote better organisational performance, foster positive organisation, and focus on quality work life. The SDT also enables the researcher to capture different motivations for a career in public service through the public service motivation (PSM). In addition, the SDT helps to provide a theoretical basis for explaining correlations between authentic leadership (AL) and PSB and links PSM to correlates of attitude. Therefore, this study also examines how the different motives are related to employees' PSB and SWB.

Table 2 SDT studies in the public sector

Author	Methodology	SDT application in the public sector						
		Employee silence	Motivation	Public values	Wellbeing	Work behaviour	Leadership	Learning
Ju et al. (2019)	Quantitative Survey	x						
Bordei et al. (2019)	Case study						x	
Chen et al. (2018)	Quantitative Survey		x					
Gul Gilal (2018)	Literature Review					x		
Xu and Chen (2016)	Literature Review		x					
Andrews (2015)	Literature Review			x				
Roche and Haar (2013)	Quantitative Survey				x	x		
Tangaraja et al (2015)	Literature Review		x					
Hew et al. (2017)	Quantitative Survey							x
Perry et al. (2015)	Literature Review		x	x				

2.4.2 *Positive leadership theories*

Studies on leadership theories is insufficient to cultivate effective leadership development because human development is a complex process. Related leadership studies (Northouse, 2021; Yukl, 2013, Avolio and Gardner, 2005, George, 2003) suggest these approaches which involve 1) understanding personality and 2) behavioural approach. Typically, leadership training was conducted as leadership intervention (Avolio and Gardner, 2005) but this strategy is limited to short-term development. Challenges in leadership studies are multi-level 1) construct development 2) traits and characteristics driven 3) lacks real solution (Gardner et al., 2020; Day et al., 2014; Gardner, 2011) before it can be applied in practical settings. Ultimately, it seemed like many still struggle to find long-term development initiatives.

Based on observation, trends that shaped existing leadership studies were performance oriented (Schedlitzki and Edwards, 2018; Dinh et al., 2014) and relational phenomenon (Wang et al., 2012). As for common theoretical approaches functionalist (Eva et al., 2019) and positivist perspective (Gardner et al., 2020) were applied. However, in the future, scholars need to consider new ways and perspective to further understand the complexities of leadership studies. While the future of leadership studies remains relational, symmetrical, diverse, and contextual (Vandeenabeele, 2013) it must be further supported by rigorous levels of analysis (Gardner et al., 2020; Antonakis and Day, 2018) 1) individual 2) group and 3) organisation to justify leadership as a process. New trends in leadership studies today also include critical approaches (Schedlitzki and Edwards, 2018) such as studying from various lenses such as feminist, post-structuralist, discursive arts, and aesthetics as a new way of understanding human complex behaviour. Based on this notion, leadership could be understood from multiple theories and

approaches, and each framework provide contextual understanding to specific groups or organisations in the study.

There are several approaches to study leadership. These approaches include the traits approach, the skills approach, the style approach, and the situational approach (Northouse, 2021). The earliest theory of leadership is the Great Man Theory in 1900 and this theory explains leaders must have specific traits and characteristics to lead an entity or organisation (see Kirkpatrick and Locke, 1991; Stodgill, 1948). Relevant model that explains traits leadership approach is The Five Factor Personality Model or the Big 5, which asserts extraversion, neuroticism, openness, conscientiousness, and agreeableness are the most important qualities for leadership (Judge et al., 2002).

Next, skill-based model by Mumford and his colleagues was introduced to challenge the traits approach, based on the premise that skills can be learned developed among individuals unlike personalities are rather fixed qualities (Northouse, 2021; Mumford et al., 2000) and Katz in (Yukl, 2013) suggests administrative skills can be developed at various levels, depending on level of management and the model then was developed to explain combination of individual attributes, skills and competencies will produce leadership outcome. Style approaches on the other hand, deals with task-oriented and people-oriented approach usually how leaders behave with his followers while performing a particular task and situational approaches explain 4 leadership styles such as delegating, supporting, coaching, and directing based on specific situation (Hershey and Blanchard, 1969). This leads the scholars to introduce contingency theory to expand on both situational and style approaches in postulating leadership effectiveness. The other also include path-goal theory which explain how leaders motivate their

follower to reach certain goals (House, 1971). All these theories are similar in explaining leader behaviour contributes to leadership effectiveness.

However, much contemporary leadership theories derive from positive psychology (Eger and Mandal, 2015) which promotes positive attitude and behaviour also contributes to high performance, positive organisation, and better well-being (Tov and Diener, 2013). These theories include transformational leadership, charismatic leadership, servant leadership, ethical, spiritual, and authentic leadership theories (Gardner et al., 2020; Banks et al., 2016; Dinh et al., 2014).

Lemoine, Hartnell and Leroy (2019) provides an integrative review to understand leadership effectiveness using moral approaches and analyses over 300 peer reviewed articles of ethical, authentic and servant leadership. The articles highlight some of the important early works of moral leadership includes these scholars for respective theories, ethical leadership (Brown et al., 2005), authentic leadership (Gardner et.al, 2011, Walumbwa et al., 2008) and servant leadership (Liden et al., 2014; Wayne et al., 2011). Numerous criticisms of these theories include insufficient theoretical development, construct redundancy, questionable measurement, and similar outcomes (Lemoine, Hartnell and Leroy, 2019; Hoch et al., 2016; Banks et al., 2016). Although some replication of studies might assist in providing explanation to the theory, the nature of redundancy for each construct calls for concern.

However, these works provide researchers a firm background on even though these theories shared similar moral/ethical behaviour dimension, but each theory are distinctive in its own characteristics, theoretical dimension and yield different outcomes. (Shakeel, Mathieu Kruyen and Van Thiel, 2019; Lemoine, Hartnell and Leroy, 2019; Eva et al., 2019; Hoch et al., 2016). For example, conceptually, ethical leadership focuses on normative standards while authentic

leadership is built upon self-awareness and self-concordance and servant leadership is stakeholder oriented (Kaptein, 2019; Shakeel, Mathieu Kruijen and Van Thiel, 2019; Eva et al., 2019; Ling et al., 2017). Banks et al., 2016 suggests high correlation between authentic leadership and transformational leadership reflects the outcome of good leadership. This is because authentic leadership derives for moral dimensions of transformational leadership. Therefore, more research is needed for authentic leadership to distinguish itself from transformational leadership theory and this may contribute to different findings about antecedent and outcomes if moral perspective of the leader becomes the basis on discussion.

Although these theories shared facets of similarities, consolidation of all theories to form one single moral dimension leadership theories would potentially risk the leadership studies field by itself, as oversimplification cannot solve more complex phenomena. Rather these theories need more robust theory development and empirical measurement (Lemoine, Hartnell and Leroy, 2019; Hoch et al., 2016; Banks et al., 2016) can be revisited to reduce abstract component that contributes to subjective interpretation. These contemporary leadership theories refute old notions that morality in leadership is unimportant as leadership behaviour positively impacts desirable organisational outcomes (Lemoine, Hartnell and Leroy, 2019; Banks et al. 2016). Therefore, future leadership must be based on moral concepts at some point.

Another example was Hoch (2018) argues that servant leadership is more promising leadership approach as it capable of explaining wide range of outcomes while other theories can be useful to predict specific outcomes. In the meta-analysis between ethical, authentic and servant leadership and noticed several conceptual overlaps in these theories while comparing it with transformational leadership theory. From the practical perspective, although each theory is

conceptually distinctive, but high associations between the correlations are the evidence of construct redundancy among these theories to augment transformational leadership. This potentially led to significant collinearity and suppression problems which eventually provide less contribution to the body of knowledge (Banks et al., 2018; Banks et al., 2016). Instead of continuous comparative studies on leadership, future studies should focus on a combination of various models to include new dimensions based on alternative theories to produce different outcomes. **Table 3** discusses key characteristics of positive leadership theories. Some of the positive leadership theories found in the literature are transformational leadership, charismatic leadership, servant leadership, spiritual leadership, and authentic leadership. This table provides a summary of leadership theories based on its definitions, distinctive role of a leader, and follower, its theoretical foundations, and relevant models.

2.4.3 The authentic leadership agenda

The early development of authentic leadership was conceptualised in different ways. One point of view suggests ‘authenticity’ is about knowing your true-self and acting according to that true-self (Kernis, 2003, Harter, 2002). Later authenticity was further defined with four components: self-acceptance, unbiased processing, consistent action with true self and a relational orientation (Yammarino et al., 2008; Avolio et al., 2005; Luthans and Avolio, 2003). The combination of these two definitions provides a backdrop for more comprehensive definition, in which authentic leadership positively influenced follower’s behaviour by enhancing which self-awareness, internalised moral perspective, balanced processing of information and relational transparency and fostering positive development (Walumbwa et al., 2008).

Authentic leadership in comparison with transformational leadership (Banks et al., 2016) and servant leadership (Eva et al., 2019) has an explicit moral dimension and fosters positive outcomes but there are limited studies that reviews authentic leadership theories. These studies include a narrative review of authentic leadership theories since its early development, another strand of research highlights the antecedents, consequences, and mechanisms of authentic leadership empirically (Peus et al., 2011; Gardner et al. 2011;) while Dinh et al. (2014) discusses current theoretical trends and changing perspective of leadership research.

Avolio's work dominate the field of authentic leadership and authentic leadership development (Walumbwa et al., 2010; Avolio & Gardner, 2005; Gardner, Avolio, & Walumbwa, 2005). The authentic leadership is a multi-dimensional construct originally rooted from the moral perspective of transformational leadership theory was redefined and expanded into four components of self-awareness; internalised moral perspective; relational transparency; and

Table 3 Key characteristics of positive leadership theories

Leadership theories	Transformational Leadership	Charismatic Leadership	Servant leadership	Spiritual Leadership	Authentic leadership
Definition	The ability to get people to want to change and to lead change.	Followers make attributions of heroic or extraordinary leadership abilities when they observe certain behaviours.	Helping others to accomplish shared objectives by facilitating individual's development, empowerment and collective work that is consistent with health and long-term welfare of the followers. "Service to the followers", "way of life", "life-long journey" (Greenleaf, 1977)	How leaders can enhance intrinsic motivation of followers by creating conditions that increase their sense of spiritual meaning in the work. (Fry, 2003) Spirituality does not mean religiosity, but spiritual values exist in major religions	A pattern of leader behaviour that draws upon and promotes both psychological capacities and positive ethical climate, to foster greater self-awareness, internalized moral perspective, relational transparency, and balanced processing on the part of leaders working with followers, fostering positive development (Walumbwa et al., 2008)
Role of Leader	To inspire the followers and drive organisational change	To inspire the follower	To serve the follower and encourage personal development	To inspire the follower	To develop relationship with the follower and based on moral foundation and inspirational
Role of Follower	To pursue the organisational goals	To pursue the organisational goals	To cultivate positive culture and well-being	To increase commitment and contribution to work	To develop relationship with the leader and actively contribute to the organisation
Nature of Theory	Normative	Normative	Normative	Normative	Normative
Underpinning Philosophies/ Theories/ Model	Social Exchange Theory Path-Goal Theory Full-Range Leadership Model Participative Decision Making	The Big Five Personality Attribution Theory	No specific model to describe except Spear (1995) introduced 10 essential characteristics of servant leadership	Intrinsic Motivation Model Cultural Dimension Theory	Positive Organisational Behaviour, PsyCap, LMX, Attachment Theory, Social Exchange Theory, Authentic Leadership Development Model

balanced processing. As a construct, the predictors of AL include psychological capital, self-monitoring (Gardner et al., 2011), self-knowledge and self-consistency (Peus et al., 2012) and structural empowerment, but this only reflects the healthcare sector (Alillyani, Wong and Cummings, 2018). The outcomes of AL can be categorised into four major ones such as behavioural, attitudinal, leader-related, and performance-oriented and well-being. For example, AL yields positive in terms of behavioural outcomes such as extra- effort, organisational citizenship behaviour, voice, creativity while several attitudinal outcomes are job satisfaction, organisational commitment, and turnover intention (Alillyani, Wong and Cummings, 2018, Al Sahi Al Zaabi, Ahmad and Hossan, 2016) however, these also suggest that the weight of AL studies focused largely on outcomes rather than its antecedents (Banks et al. 2016; Gardner et al., 2011).

Over the years, much greater emphasis on AL studies seems to revolve around application of theory rather than the development of theory (Iszzat White and Kempster; 2019; Diddams and Chang; 2013). Authentic Leadership was measured using different types of scales such as MLQ, ALQ and ALI (Gardner et al.; 2011). The development of scales is partly to contribute to the key goal of conceptualising the theory of authentic leadership development (Crawford et al., 2020). As such more work is needed in the area, such as incorporating authentic leadership principles in training programmes, development programmes like coaching to continue its conceptual refinement for organisations to move forward in developing their talents.

Researchers believe authentic leadership cannot be development through training but more of life experience (Avolio, 2005; Shamir and Eilam, 2005; Sparrowe, 2005) however a recent study suggested that the best intervention for training would be group coaching (Fusco et al.,

2016). Several scholars challenged the definition of authentic leadership due to its existing criticism as a loose construct and lack empirical evidence (Diddams and Chang, 2013; Alvesson and Einola, 2009). This includes introducing the concept of radical authentic leadership to shift leader-oriented focus to conditions where all member within the organisation can behave authentically (Algera and Lips- Wiersma, 2012). In addition to that, several papers on AL were retracted due to miscalculation of data and its statistical analyses (Zhang et al., 2013; Peterson et al., 2012; Walumbwa et al., 2010). This suggests there is still plenty of room for development for AL to ensure enough empirical research suggest AL can significantly influence leadership process and organisational outcomes.

2.4.4 The Contingency Model

This model is well researched in organisational studies. It was introduced by Fred Fiedler in 1958 and is one of the theories that can be applied to explain effective leadership as it is highly contextual. Previous studies on this theory have found that its application is valid in close-knit teams as opposed to large teams. (Vidal et al., 2017). This theory helps explain leader-member relationships (Vidal et al., 2017), highlight specific aspects that may be critical to successful leader-follower relationships (Keen et al., 2020) and helps psychologists understand the human condition in the workplace (Eva et al., 2019).

When this theory was originally introduced, it was commonly referred to as the contingency theory of leadership (Yukl, 2010) the theory remained popular in the public sector literature during the introduction of the New Public Management (NPM) paradigm (Siddique, 2018; Suharyanto and Lestari, 2020; Van Mart, 2013), but is slowly declining as new leadership theories emerge in the literature. Even though NPM was regarded as a reform model (Xavier,

2016) but other scholars believed that it was a flawed model (Minogue, 2001) because existing organisational and individual problems cannot be solved (Meije, 2016) and only emphasised on organisational performance (Siddique, 2018). Recently Covid-19 crises called for a contextual approach to leadership with the demands of good governance, ethical decision-making, and morally grounded leadership (Keen et al., 2020; Dirani et al., 2020; Eva et al., 2019), making this theory relevant to the discussion. This model potentially offers insight into task-oriented and relationship-oriented leaders.

The model consists of three main elements, namely leadership style, situational variables and the relationship between style and situation (citation). If the leader is relationship-oriented, he or she is excellent at creating synergy among team members to achieve organisational goals. If, on the other hand, the leader is task-oriented, he or she uses his or her organisational skills to achieve the goals efficiently. Criticisms of this model include that it is not the best option for organisational transformation, that there are no new developments in the literature and that it only works when analysing specific situations (Shala et al., 2021).

However, this model would help explain relationship dynamics and identify what kind of leadership is most effective in certain situations. This model provides a framework for this study to develop a model of prosocial engagement based on leadership styles, situational variables and the relationship between styles and situations.

2.5 Related studies on middle managers

As mentioned in Chapter 1, the middle-level bureaucrats were chosen as the scope of study. This calls for discussion about relevant literature related to middle-managerial studies. In the following section, this thesis focuses on several papers on middle managers in the public sector

to provide a context for this study. This also provide a background why middle managers were central to the discussion.

Leadership in the public sector requires leadership at all levels, particularly due to the hierarchical nature of bureaucratic structures in government (Leslie and Canwell, 2019; OECD, 2019, Murphy et al., 2017). Within this hierarchical structure, middle managers had to take responsibility as both leaders and managers. Several studies highlight that middle managers are a significant asset to the organisation as they drive change and have credible expertise in their roles, despite being 'sandwiched' between the needs of their manager and the leadership of their subordinates (Ancarani et al., 2019; Cooper et al., 2019; Balogun and Johnson, 2003). Understanding this burden, they are often misunderstood and rarely seen as leaders. In addition, studies on middle managers are generally sparse and underdeveloped (Ancarani et al., 2019; Cooper et al., 2019; Kempster and Gregory, 2017) and even more limited in the public sector.

Work on middle managers was initiated by Burns in the mid-1950s and further developed by Bass (Gjerde and Alvesson, 2020). The study of middle managers covers various aspects such as work experiences at the middle level, problems and challenges of middle managers, perceptions of employees and supervisors, their role and influence on the organisation, their learning and development initiatives, including leadership and management styles (Sudirman et al., 2020; Gjerde and Alvesson, 2020; Ancarani et al., 2019; Cooper et al., 2019; Kempster and Gregory, 2017; Balogun and Johnson, 2003).

To further understand the behaviour of middle managers, several articles on generational studies pointed out salient points for observation. For example, each generation exhibits different characteristics as well as different core values and experiences (Gottfredson, Wright

and Heaphy, 2020). The study of generational leadership has been employed in various perspectives such as theoretical, empirical, and applied psychology (Rudolph, Rauvola and Zacher, 2018; Miller et al., 2013; Gibson et al., 2009). Studying generational differences allows impactful understanding about difference between age groups behaviours at work (Rudolph, Rauvola and Zacher, 2018), uncover how generations such as millennials perceived different leadership styles (Parry and Urwin, 2011) and help to manage career expectations (Miller et al., 2013) that can assist future leadership development. Managing behavioural similarities and differences at work is important for leaders, so that the team can collaborate, and this ultimately strengthen relationship and allow everyone to understand each other.

Due to changing nature of the workforce and external challenges due to globalisation, socio-economic demands and more complex public expectations and the rise of digital and technology era, (INSEAD, 2017), factors that are contributing to effective leadership reflect multiple dimensions. Middle managers are the new generations entering the workforce but slowly rising to become leaders, this creates tensions and conflicts in the workplace (Gottfredson, Wright and Heaphy, 2020). Furthermore, middle managers in today's workforce are the millennials (Rudolph, Rauvola and Zacher, 2018; DeVaney, 2015) and they became important in the organisation as because they are digital natives, creative, solution focused, socially conscious and team oriented (Chow and Hassan, 2019; Anderson, Baur, Griffith and Buckley, 2017). This supports the practitioners view about millennials that they are resourceful and dynamic group (Manpower Group, 2016; INSEAD, 2017; Nair, 2012). These perceptions indicate that this category of people in the workforce are unique and might have some extra advantages.

Despite that, some studies offer interesting concepts associated with middle managers, such as mediocrity when it comes performance evaluation (Gjerde and Alvesson, 2020), in leadership potential they are regarded as vulnerable, ambiguous, and insecure (Huy, 2002). In contrast, some research has also shown that middle managers are a significant asset to the organisation (Balogun and Johnson, 2003), are credible and legitimate experts in their roles (Cooper et al., 2019) and play a significant role as agents of change in managing tasks, people and during the policy implementation process (Ancarani et al., 2020). These mixed perceptions are evident in several studies, hence the pattern for middle managers behaviour remain in question.

In public sector, some of the leadership dilemmas are more unique due its context. For example, bureaucrats in the middle were 'stuck' (Cooper et al., 2019) in the hierarchical structure, therefore most of the time, their energy were used in the balancing act i.e balancing strategies prescribed by the leader and leading the implementation with their respective subordinates (Sudirman et al., 2020; Ancarani et al., 2020; Cooper et al., 2019). Moreover, the complexity of the bureaucracy is found to burden these managers. Such complexity was described in numerous situations for example in performance management, task planning, role transitioning (Anicich and Hirsch; 2017). The lack of knowledge and experience can cause anxiety and stress among them.

Leadership styles among middle managers in the public sector remains a question. Currently, the leadership literature focuses on the leader rather than leadership development (Gardner et al., 2020), evidently in the public sector. Notably, leadership research in the public sector tends to focus on the leadership role of the senior management team (Ancarani et al., 2019) and is more empirical and descriptive (Sudirman et al., 2020; Anicich and Hirsch; 2017). These

findings provided a backdrop to the complex hierarchical nature of bureaucratic systems in public administration.

This is because public administration in most parts of the world consists of different sectors, services, and reporting structures (Murphy et al., 2017; Van Mart; 2003). Several studies indicate that managers in the public sector face the challenge of balancing their leadership role and management responsibilities (Ancarani et al., 2019, Cooper et al., 2019; Kempster and Gregory, 2017). However more recent findings shows that middle managers are vital to organisational performance due to their proactive motivation (Mustafa et al., 2022). These findings indicate that more studies are needed to understand and leverage on middle managerial leadership qualities to produce high impact performance.

2.5.1 Middle managers as leaders

Middle managers have the big potential to play leadership roles within their existing positions. This is supported by the fact that bureaucratic nature of civil service is complex (Ancarani et al., 2020; Van Mart, 2013) therefore requires leadership at all levels in the public sector (Kempster and Gregory, 2017). The existing culture of deference or ‘cuckoo clock syndrome’ (e.g., the more senior person speaks first in a meeting) has resulted in junior civil servants being undervalued and under-utilised (Leslie and Canwell, 2010). However, middle managers should be viewed as positive agents in the organisation. Evidently, Ancarani et al. (2020) suggest that middle managers help to increase their staff's work engagement through various types of feedback, help and support, and another recent finding highlight that their transformational style helps to promote engagement and change. Their contribution as leaders within their respective roles might transpire better collaboration at work.

Middle leaders have often been seen as less strategic than top leaders, so their contribution has seemed less significant from the traditional leadership theory point of view. However, using more modern theories such as the relationship-based approach (Levitats and Gadot, 2020), leadership-as-practice (LAP), (Kempster and Gregory, 2017), leader-member exchange (Gjerde and Alvesson, 2020) and using motivation as part of the conceptual framework (Mustafa et al., 2022). Notably, through these scarce but important literatures, middle leaders have strong potential in nurturing effective relationships in complex work environments.

While the real dilemma for middle managers is leadership conflict (Mustafa et al., 2022), balancing the needs of their leader (Kempster and Gregory, 2017) and ensuring that the execution of the task that should be done by their employee meets expectations (Ancarani et al., 2020), they are also expected to excel as high performers. Their professional background requires specific expertise, including technical skills in the intended role and some general management and people skills. McGurk (2009) suggests that middle managers need a combination of traditional management skills and contemporary leadership styles to build capacity and skills for more important leadership roles in the future.

Despite several articles were published about leadership challenges about middle managers (Ancarani et al., 2020; Gjerde and Alvesson, 2020; Kempster and Gregory, 2017), there are a few evidence that support the role of middle managers are important in collaborative culture in the public sector. For example, the professional role of middle managers helps in policy implementation and working level (Cooper et al., 2019); shifting middle managers mindset promotes better workplace mental health (Otocky and Turner, 2020), strategic assets for mediation (Gattenby et al., 2014) and promoters of engagement (Ancarani et al., 2020). Further

studies are needed to support this evidence to understand if these findings only applicable to the public sector and can be extended to other agencies similar in nature.

In addition to middle manager development as future leaders, some articles discuss the impact of training for this group. Regarding leadership development (Sudirman et al., 2020; Gjerde and Alvesson, 2020), that advanced leadership training designed for senior managers has not allowed for innovation between the middle and lower levels, but instead has produced a top-bottom approach (Sudirman et al., 2020) that has generally shaped leadership styles in the public sector. Therefore, to change this dynamic, training for middle managers needs to be developed. Their role and influence need to be further explored so that we can better understand their contribution and this knowledge can form a better basis for leadership research in the public sector.

2.6 History of Malaysian Public Administration

Following the discussion on middle managers, this section provided a better context to the study. Briefly, it discusses public administration in Malaysia including its history and overview of the schemes in the public sector. Subsequently, this section as provides a comprehensive background about the Administrative and Diplomatic Service (ADS) who were the middle-level bureaucrats in this study. Related policies on leadership development were also provided.

2.6.1 General overview

The Malaysian Public Administration employs 1.7 million civil servants (EPU, 2021) and, under Article 132 of the Federal Constitution, comprises the federal civil service, the state civil service including local government, education, health, the judiciary, the legal service, the

police, and the armed forces (Abdullah, 2004). The size of the workforce has become the subject of scrutiny (World Bank, 2019) considering different countries define their public services differently. In the era of the digital world, we have seen machines slowly replacing the work of humans, and this has impacted economies and the private sector worldwide.

There is no doubt that working in the public sector offers a wide range of career opportunities to many people. The core role is to provide services to the public, in many areas such as education, health, transport, business, social development and infrastructure. As we enter the new millennium, the public service has also expanded to include a broader range of services that include digitalisation, security, and engagement with the global world community. Public service is the heart of nation-building (Awang et al., 2019; MIGHT, 2017). Nation building is a daunting task that requires passion, perseverance, and absolute accountability. The latest World Competitiveness Report 2019 ranked Malaysia as the 22nd most competitive economy among 63 countries (IMD, 2019), indicating the country's commitment and openness in facilitating business and shaping its economic strength in the region. However, another recent report on government effectiveness (World Bank, 2019) has shown that the performance of the Malaysian civil service has been somewhat stagnant, partly due to its own strict open-data policies and bureaucratic structure (Leoi and Chung, 2019).

There are 21 service classifications in the Malaysian Civil Service under the New Remuneration Scheme (JPA, 2020; JPA, 2009). Each of these service classifications represents different types of civil service. The Administrative and Diplomatic Service officers (Abdullah, 2004) for example, received extensive developmental exercises and attended various leadership assessment throughout their careers (INTAN, 2022). High-performing civil servants are then promoted to lead senior executive positions in government, such as heads of

departments, agencies, and secretaries-general. These positions are commonly referred to as the Public Sector Premier Posts or *Jawatan Utama Sektor Awam* (JUSA).

However, in Malaysia, the literature on public leadership is fragmented and only analyses the specific context, making it difficult to generalise to a wider population. Few studies worth mentioning. For example, one study analysed the relationship between servant leadership and organisational commitment from the Malaysian perspective with the mediating role of trust in the public sector (Ramli and Mat Desa, 2014), while studies on authentic leadership only focus on service-oriented fields such as nursing, health and education in the public sector and examine their relationship with organisational commitment, organisational behaviour and other social psychological constructs such as trust, commitment and justice (Ahmad and Kong, 2018; Zainal Abidin, 2017; Yasir and Mohammad, 2016; Opatakun et al., 2013; Hassan and Ahmed, 2011).

In terms of prosocial behaviour studies, researchers have examined the effects of transformational leadership on prosocial behaviour in some recent studies (Awang et al., 2019; Zainal Abidin, 2017), but other forms of leadership, such as authentic leadership, are a relatively new topic in the public sector leadership literature, so this is a promising area for further research. Although authentic leadership has often been studied in nursing, healthcare and education, these areas are similar in public administration (Ahmad and Kong, 2018; Opatakun et al., 2013), as they are all part of the service and social sector and are very dependent on human resources.

2.6.2 *The Administrative and Diplomatic Officer*

Malaysia's public administration is the result of centuries of historical, socio-cultural, and institutional experience. Prior to British colonial rule, Malaysia (Malaya) had an elaborate feudal administrative structure commonly known as '*Adat Temenggong*' (JPA, 2007; Abdullah, 2004). The Sultan was both the head of administration and the head of government. British colonial rule introduced a modern administration based on a professional civil service. (JPA, 2007). Today, the governance has changed due to the Constitutional Monarchy system (PPTD, 2022) in Malaysia. The governance structure of today has allowed the civil servants to assist the political masters in performing executive powers in the government.

The history of Malay administration begins when Malay aristocrats were assigned new positions in the professional civil service, where they were appointed to the Council of State, with the system adopting the colonial British system, governed with Malay traditional administrative elements. In 1910, the administration established the Malay Administrative Service (MAS) after Malay elites demanded that Malays be exposed to the demands of modern administration and the British had to constantly recruit Malays for administration. Thus, in 1912, the Malay College Kuala Kangsar (MCKK) was established as an elite boarding school for Malay aristocrats to provide a steady supply of Malays for administration (JPA, 2008).

In 1922, amidst a slump in the global economy and the resulting austerity measures, the British government saw an opportunity to employ more Malays in the civil service. The British Retrenchment Commission recommended that more Malays be employed in the civil service. There was a ratio of Malays to indigenous non-Malays in the civil service, which later gave rise to the elite Malayan Civil Service (MCS), and a combination of these people later became

part of the higher bureaucracy as doctors, lawyers, and technical officials. The Malays were more common in administrative leadership (PPTD, 2022).

Since then, the history of the Malaysian civil service has evolved considerably. Many schemes of service have been introduced since then, but what is certain is that the role of administration in the civil service has also been recognised professionally. It was first established by the British as the Malayan Civil Service. After the country's independence in 1957, it was renamed the Malayan Civil Service and merged with the Malayan Foreign Service in 1967 to form the Malaysian Home and Foreign Service. The name was changed from MCS to the Administrative and Diplomatic Service or *Perkhidmatan Tadbir dan Diplomatik* in 1971 to reflect its larger and more significant role in the civil service. Historically, a unique feature of the scheme was that various academic disciplines can be accepted as primary entry requirements for the Administrative and Diplomatic Officer to reflect the nature of the work as a generalist. In the 1960s and 1970s, many liberal arts graduates were appointed to as ADS officers in the Malaysian public administration. (PPTD, 2022; JPA; 2007), Today, the demographic profile of ADS officers also features various Malaysian ethnicities and races such as Malays, Chinese, Indians, Sarawakian and Sabahan descents who reflects the multi-cultural society of Malaysia.

The generalist nature of ADS was also reported in the 1966 Esman-Montgomery Report (Abdullah, 2004) a report that formed the basis for Malaysian public sector policy, administrative reforms, and human resource development. This recognised the role of ADS (PPTD, 2022) as generalists to enable the scheme to work with other professionals in the civil service who are specialists. Apart from serving in Malaysia, ADS officers also can serve abroad, in private sector institutions or in global institutions around the world through attachment, secondment and cross-fertilisation programmes.

2.6.3 Current policies relating to leadership development

ADS officers received extensive developmental exercises and leadership assessments throughout their careers (INTAN, 2022). High-performing officers are then promoted to senior executive positions in government. After entering the service as a junior officer (M41), one can progress to middle management positions (M44, M48, M52, M52) and eventually be promoted to senior executive positions in government as *Jawatan Utama Sektor Awam* (JUSA). They are appointed as head of departments, divisions and up to the head of ministries as Secretary General. (JPA, 2019). The career path is shown in **Figure 2**.

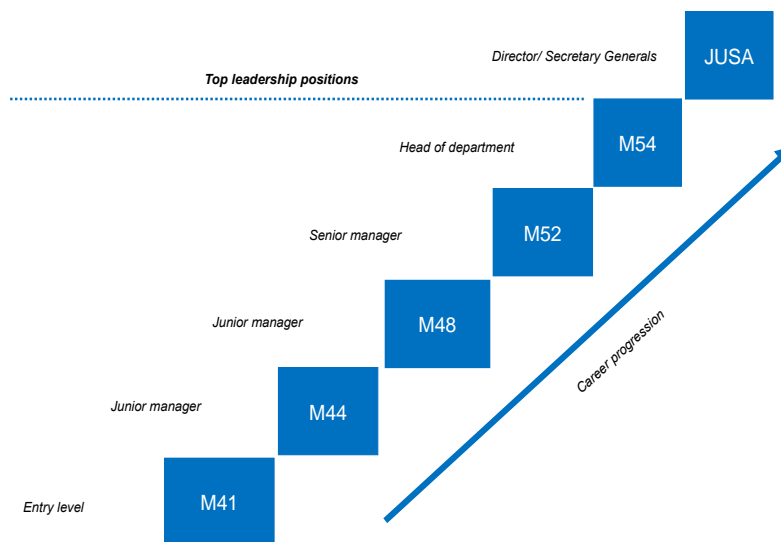


Figure 2 Career progression for ADS officers, Source: Adapted INTAN (2022)

Apart from career advancement, the Public Service Department (JPA), as the central agency which oversees human resource for all civil servants, is responsible for formulating guidelines for leadership development. Several circulars have been introduced, such as the Public Service Human Resource Training Policy in 2005 (JPA, 2005), which focuses on the key fundamentals of self-development and is based on the spirit of lifelong learning that focuses on attitude, skills,

and knowledge. Each ministry and agency are responsible for planning the education and training of its staff and 10% of the annual budget should be spent for this purpose. In addition, under the Blue Ocean Leadership principle, (MIGHT, 2017), the JPA has mandated its public service training department, the National Institute of Training and Development (INTAN), to conduct leadership programmes for ADS officers such as Junior Leadership Assessment Programme (J- LEAP), Executive Leadership Assessment Programme (E- LEAP), Middle Managers Leadership Assessment Programme (M- LEAP), Advanced Leadership Assessment Programme (A- LEAP) and Advanced Leadership and Management Programme (ALMP) (JPA, 2017). Human capital development is at the core of nation building as expressed in the 11th Malaysia Plan or Rancangan Malaysia ke-11 (RMKe-11). JPA uses the foresight approach to human resource planning and scenario planning as a tool to shape a future-ready public service (EPU, 2019; MIGHT, 2017).

2.7 Review of literature

This section discusses several variables used in this study and how they have been studied by scholars and researchers. These variables include authentic leadership (AL), prosocial behaviour (PSB), public service motivation (PSM) and subjective well-being (SWB). The discussion also highlights gaps in the literature, debates, and their relevance to this study.

2.7.1 Authentic leadership

i. Definition of authentic leadership

AL derives from positive psychology theory. According to Luthans (2002), positive psychology focuses on positively oriented strengths and psychological skills in people that can

be measured, developed, and effectively managed to improve workplace. It is an emerging discipline that focuses on what is good about human psychology to make life meaningful for most people. (Eger and Mandal, 2015; Tov and Diener, 2013). AL is also linked to the perspective of positive organisational behaviour (POB) which offers an alternative to the use of resources when the organisation should harness people's strengths, vitality and resilience and discover their true potential to sustain high performance organisations and expectations (Muchiri et al., 2019).

The definition of authentic leadership was discussed by a few scholars. Harter (2002) and Kernis (2003) believe that authentic leaders behave according to their true self. However, few literatures suggest authentic leadership is not only about individual personality (Erickson, 1994) but interpersonal process within leaders (Eagly, 2005) and requires developmental process (Yammarino et al., 2008, Shamir and Eilam, 2005) that proposed four components of authentic leadership that involves acceptance of self, action consistent with true self and value openness in personal relationships (Avolio and Gardner, 2005). However, this definition lacks empirical validation. Walumbwa et al. (2008) later proposed authentic leadership as a pattern of leader behaviour based on strong ethics and psychological qualities which was widely used in empirical studies of AL.

ii. The dimensions of authentic leadership

The work of Avolio dominates the field of authentic leadership and the development of authentic leadership (Avolio and Gardner, 2005; Gardner et al., 2010). Authentic leadership is a multidimensional construct that originated in the moral perspective of transformational leadership theory and has been redefined and expanded into four components: Self-awareness, internalised moral perspective, relational transparency, and balanced processing (Gardner et

al., 2019; Walumbwa et al., 2008). The dimensions of AL were illustrated in the diagram below. Authentic leadership was measured with different types of scales such as the Multifactor Leadership Questionnaire (MLQ) (Antonakis, 2007) when it was introduced earlier. In 2008, Walumbwa and his colleagues developed the Authentic Leadership Questionnaire (ALQ) to measure the dimensions of AL. Figure 3 shows the dimensions of AL.

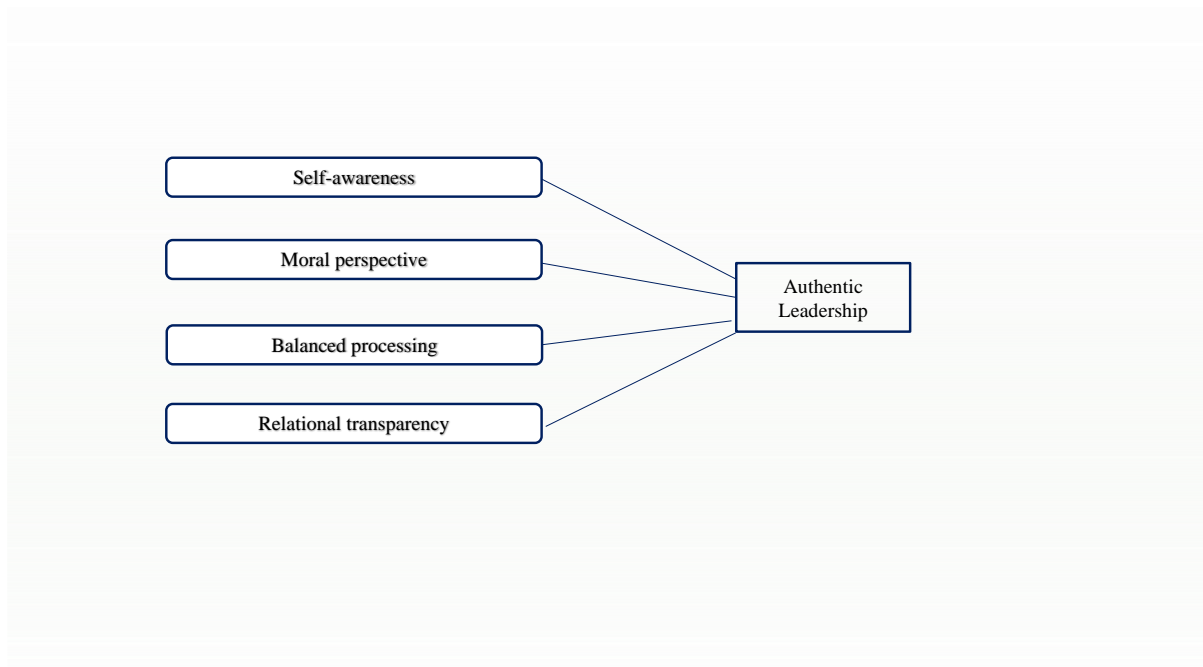


Figure 3 Authentic leadership dimensions

Source: Walumbwa et al. (2008)

iii. Measuring authentic leadership

Over the years, studies of AL have placed much more emphasis on the application of theory than on the development of theory (Iszzat White and Kempster; 2018; Diddams and Chang; 2013). Authentic leadership has been measured using different types of scales such as MLQ, ALQ and ALI (Gardner et al.; 2011). The development of scales contributes in part to the main goal of conceptualising authentic leadership development theory (Crawford et al., 2020). The continuous debates about AL construct indicate the outcome of AL is still under progress.

Therefore, further work of AL outcome and impact is needed, such as incorporating principles of authentic leadership into training programmes (Avolio, 2011) development programmes such as coaching (George, 2007) and continue the conceptual refinement (Crawford et al., 2020).

Researchers believe that authentic leadership cannot be developed through training, but rather through life experience (Avolio, 2005; Shamir and Eilam, 2005; Sparrowe, 2005). However, a recent study suggests that the best intervention for training would be group coaching (Fusco et al., 2016). While several scholars have challenged the definition of authentic leadership, criticising it as a loose construct and lacking empirical evidence (Diddams and Chang, 2013; Alvesson and Einola, 2009), only a few attempts were made to suggest new elements of AL such as the introduction of the concept of radical authentic leadership as collective leadership where members can behave authentically (Algera and Lips- Wiersma, 2012). Very few studies looked in the practical aspects of AL such as development coaching and specific training programmes with self-awareness component (Johnsen, 2018; George, 2007). Future studies should advance the practicality of AL so that it can be widely applied in the workplace.

Based on these arguments, several observations were made. Firstly, the construct of authentic leadership needs further investigation. This lack of clarity of the construct and theoretical rigour makes it a less desirable area of research compared to other established leadership theories. Several scholars have attempted to pursue this idea, for example, by proposing a fifth element to the existing dimension and redefining authenticity (Crawford et al., 2020; Alvesson and Einola, 2019; Iszatt-White and Kempster; 2019; Ibarra, 2015). Secondly, new elements of AL were found, for example, the spirituality scale as another dimension to measure leadership (Riggio et al., 2010; Sendjaya, 2007; Fry, 2005). This scale has several properties that assess

authenticity. See **Table 4** for a summary of Cronbach's alpha values in previous work validating the ALI.

Table 4 Summary of AL instruments

Variables	Number of items	Cronbach's Alpha (Recorded literature)		
Authentic Leadership Inventory (ALI)	Items	16	14	14
Adapted source		Neider and Schrisheim (2011)	Novaes et al. (2018)	Coxen et al. (2016)
Context		Undergrads with work experience (US)	Public and private sector workers in Brazil	Public sector in Africa (healthcare)
Self-awareness	4	.74	.86	.74
Relational Transparency	4	.81	.86	.86
Internal Moral Perspective	4	.83	.79	.85
Balanced Processing	4	.85	.91	.90
Spirituality	Items	4	40	19
Adapted source		Sendjaya (2007)	Fry (2005)	Riggio et al. (2010)
Religiousness	1	.73	.95	.94
Interconnectedness	1	.87	.95	.94
Sense of Mission	1	.73	.95	.92
Wholeness	1	.87	.95	.92

iv. Authentic leadership in the public sector

Recently, the scholars have attempted to study authentic leadership in public settings and although the literature is scarce and fragmented, some development in education management, nursing and public health including military setting and public administrators were observed in China and Korea (Alillyani et al., 2018; Hirst et al., 2016; Yeşilkaya and Aydın, 2016; Walumbwa et al., 2010, Valsania et al., 2012). Kellis and Ran (2012) proposed new public

leadership theories should incorporate a combination of transformational, authentic, and distributive leadership in its principles.

The recent studies have shown scholars investigate the dynamic of authentic leader-follower relationships through hypothesising AL with other established constructs such as job satisfaction, employee engagement, organisational commitment, and performance (Alillyani et al., 2018; Hoch et al., 2018). However, construct redundancy between other leadership theories remains a problem (Lemoine et al., 2019; Hoch et al, 2018). Therefore, this calls for more research to distinguish AL from other theories (Crawford et al., 2020; Banks et al., 2016; Tonkin, 2013). Several papers that analyse leader's authentic personality predicts team perception of authentic leadership (Mehmood et al., 2019; Liang, 2017). Therefore, leaders-follower relationship should be further investigated from the perspective of AL theory, aiming to contribute to beyond organisational performance but also employee well-being, motivation, and satisfaction. Authentic leadership provides an interesting perspective on empowering followers within their existing roles without having to occupy leadership positions.

Public sector managers are experiencing multitude of challenges that includes increasing citizen expectations, providing services with speed and lower costs and external geopolitical challenges globally that affects locally therefore suggest leadership at all levels are required in the public sector (Leslie and Canwell, 2019, OECD, 2019) however the literature are largely conceptual and could not adequately address the complexity at various levels in the system (Litcthenstein and Plowman, 2009). Established leadership models are not successful in encapsulating public sector leadership challenges and its dynamics that is happening in today's world (Murphy et al. 2017).

The interest for authentic leadership has proliferate substantially in the past ten years and many studies has shown that authentic leadership is linked to positive organisational performance, followers' attitudes, and behaviours (Crawford et al., 2020; Gardner et al., 2019; Day et al., 2014). Adding more perspective in the field of public sector leadership literature especially in finding guidance how to motivate employees in the public sector Ancarani et al, 2020; Van Wart; 2013). Authentic leadership development has been proposed as a strategy to overcome unethical leadership behaviours (Crawford et al., 2020; Gardner et al., 2019). More so, this theory also needs further refinement of its construct and explored within various context both public and private sectors. More improvement in terms of its scale development can potentially assist organisation in development psychometric leadership profile based on the principles of morality and authenticity and this would enhance the development of authentic leadership development and leader development programmes in the public sector.

2.7.2 *Prosocial behaviour*

i. Definition of prosocial behaviour

Prosocial behaviour is a form of moral behaviour that essentially promotes positive social relationships, such as helping, cooperating, comforting, sharing, and donating. According to Kohlberg (1969), the predictors of prosocial behaviour are moral judgement, moral elevation, and moral identity. In the early days of prosocial behaviour theory, scholars debated whether it was a type of motivation or a form of moral behaviour and this is related to human nature. Essentially, human beings can have opposite characteristics, such as good or bad, selfish, or selfless, egoistic, or altruistic. However, in the context of organisational behaviour, prosocial behaviour was significant with several qualities such as altruism, conscientiousness, courtesy, and sportsmanship (Lee and Allen, 2002).

Prosocial leaders have higher performance ratings, aware of their personal reputation and strive for better life. (Vieweg, 2018; Mitonga-Monga and Cilliers, 2016). Vieweg (2018) Several studies examined the relationship between prosocial behaviour and motivation (such as extrinsic and intrinsic). For example, material rewards would reduce intrinsic motivation in young children, but they are effective in motivating young people to perform at their jobs. (Lutchenberg et al., 2015; Warneken and Tomasello, 2009). Intrinsic motivation was also related to the desire to help others and is primarily driven by personal fulfilment and religious expression (Gilal et al., 2018; Lutchenberg et al., 2015; Cho and Perry, 2012).

Several leadership theories such as transformational, authentic, servant and spiritual leadership correlated with altruistic component of prosocial behaviour (Vieweg, 2018; Steffen et al., 2016; Reed et al., 2011). Authentic leaders lead with transparency and an internalised moral perspective (Steffen et al., 2016). However, only one literature was found (Steen, 2006) to link leaders' or followers' motivation with their own prosocial behaviour. Apart from leadership, several studies point to the relationship between prosocial behaviour and well-being, motivation for public service motivation, organisational citizenship behaviour, organisational culture (Schott and Ritz., 2017; Martela and Ryan, 2015, Davilla and Finkelstein, 2013; Pacek and Radcliff, 2008). There are positive associations between prosocial behaviour and these variables, but each study looks at these variables individually. Future studies should include leadership, motivation, prosocial behaviour, and subjective well-being into one model, this study can further analyse the different motives that drive employees to engage in positive behaviour.

ii. The dimensions of prosocial behaviour

Prosocial behaviour has been conceptualised as organisational citizenship behaviour (OCB), such as i.e., a set of discretionary workplace behaviours that go beyond basic job requirements and are often described as behaviours that go beyond the call of duty (Bateman and Organ, 1983). Later, the definition was expanded to include individual behaviour that is discretionary in the formal reward system but promotes organisational functioning (Organ, 1988). Other synonyms include "extra-role behaviour" (Katz, 1964) and "organisational spontaneity" that "contributes to performance above expectations" (Kim, 2006).

There are many variations of the dimensions of OCB, more than 30 different forms have been identified (Podsakoff et al., 2000). Studies on this topic have contributed to the psychological and social environment in the workplace. There are more than 40 measures of OCB, but the most used scales for the public sector include William and Anderson (1991), Lee and Allen (2002), Smith et al. (1983), Podsakoff et al. (1990) and Organ (1988), as highlighted by deGeus et al., (2020). Podsakoff and colleagues (2000) define seven dimensions of OCB (altruism, organisational compliance, sportsmanship, organisational loyalty, individual initiative, civic virtue, and self-development), but most studies in the public sector tend to use the five dimensions of altruism, courtesy, civic mindedness, conscientiousness, and sportsmanship (Yesilkaya and Aydin; 2016; Cun, 2012; Kim; 2012; Lee and Allen, 2002). See Figure 4 for prosocial behaviour dimensions. See **Figure 4** for Lee and Allen's definition of prosocial behaviour.

According to Podsakoff et al. (2014), there appears to be insufficient literature examining the mediators and moderators of OCB. Researchers in this field must also strive to understand the mediators and moderators of OCB, given the variability estimates and the importance of OCB outcomes in explaining group performance.

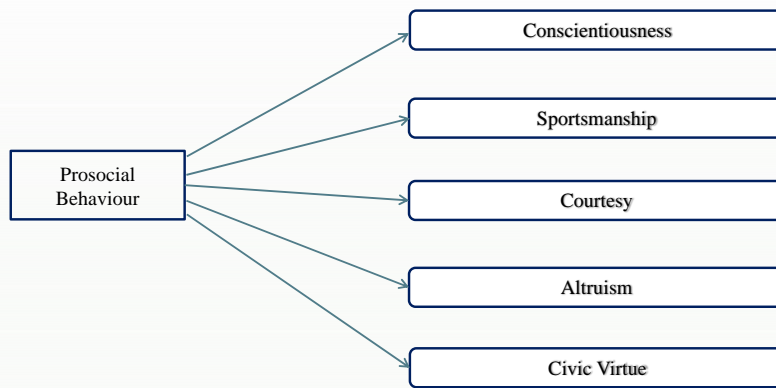


Figure 4 Prosocial behaviour dimensions

Source: Adapted from Lee and Allen (2002)

iii. Measuring prosocial behaviour

As mentioned earlier, there are more than 40 measures on prosocial behaviour, but the most used scales for the public sector include William and Anderson (1991), Lee and Allen (2002), Smith et al. (1983), Podsakoff et al. (1990) and Organ (1988), as highlighted by deGeus et al., (2020). Previous studies on prosocial behaviour examined the interaction of OCB with other organisation-related factors.

Most studies examined the relationships at the individual rather than group or organisational level. For example, Kim (2006) conducted a study to test behavioural patterns that may predict

certain outcomes in a Korean setting. In this study, public service motivation (PSM) is used to examine its influence of prosocial in the public sector. Another study also examines the impact of PSM on interpersonal OCB through peer support (Pandey et al., 2008). One study examines the norms, values, and ethos of public service in the UK public sector in relation to OCBO and OCBI.

Interestingly, these two forms of OCB yield different results. OCBI is positively related to organisational norms and values but has no influence on OCBO. This indicates that some values may contribute to individuals' helpful behaviour, but that some values are not useful in contributing to organisational performance (Rayner et al., 2012). Another study in the Israeli health sector suggests that work attitudes mediate OCB in shaping overall civic behaviour (defined as political involvement, community engagement, altruism, and faith) (Cohen and Vigoda-Gadot, 2000). See **Table 5** for a summary of Cronbach's alpha values in previous work validating OCB. What is common in the public sector literature is the tendency to use shorter scales of OCB (Kim, 2006) to analyse OCB's interaction with other work-related variables.

Table 5 Summary of OCB instruments

Variables	Number of items	Cronbach's Alpha (Recorded literature)		
Organisational Citizenship Behaviour	24		16	16
Adapted source		Podsakoff et al (1990)	Lee and Allen (2002)	Junaidah et al (2018)
Context		Private sector employee in US, Canada & Europe	Nurses and their co workers	Nurses in public hospital in Malaysia
Altruism	4	.85	.83	.75
Courtesy	4	.85	.83	.83
Conscientiousness	4	.85	.83	.81
Civic virtue	4	.82	.88	.83
Sportsmanship	4	.70	.88	.90

iv. Prosocial behaviour in the public sector

In contrast to the development of prosocial behaviour in general, research on prosocial behaviour in the public sector was limited. Some reviews (deGeus et al; 2020; Osman, Abdul Ghani and Alis, 2019; Ocampo et al; 2017) inform the application of prosocial behaviour in the form of OCB in public administration. These studies indicate that organisational citizenship behaviour, helping behaviour or prosocial behaviour were studied in different cultures, which suggest its application across cultures and sectors (deGeus et al., 2020; Osman, Abdul Ghani and Alis, 2019; Chul Shim and Faerman, 2017).

Due to the complex nature of government organisations, existing studies indicate that OCB has been studied in local government structures rather than at the national government level (Chul Shim and Faerman, 2017; Jiao et al., 2011). Moreover, the service sector was common among private sector researchers, e.g., in marketing and communications, while the public sector literature focuses on education, defence and healthcare (de Geus et al., 2020; Ocampo et al., 2017; Podsakoff et al., 2014) which was service-oriented too. Most studies were conducted in the US and the UK, while several studies in Asia include China, Korea, and Israel. (Chul Shim and Faerman, 2017; Pandey et al., 2008; Kim, 2006; Cohen and Vigoda- Gadot, 2000). In Asia, there are only 20 recent studies on OCB and only 8 studies in Malaysia (Osman, Abdul Ghani and Alis, 2019).

To date, a systematic review of OCB in the public sector has recently been published (deGeus et al., 2020) and a historical review highlights the theoretical development of OCB including the dimension of OCBI and OCBO that differentiates the behaviours that benefit individuals and their organisation, including the mediating and moderating effects of OCB (Podsakoff et

al., 2014). A narrative review by Ocampo et al. (2017) highlights that to develop a better understanding of OCB as a concept, the researcher must consider demographic profiles and cultural backgrounds in addition to organisational factors in understanding about OCB. Osman, Abdul Ghani and Alis (2019) provide an overview of how OCB can be applied in the Asian context. These studies indicate a growing interest in linking individual factors to the organisational environment. Furthermore, based on these reviews, the researcher concludes that most studies examine the relationship at the individual level.

2.7.3 Public service motivation

i. Definition of public service motivation

Public Service Motivation is defined as individual responses to motives that are unique to public institutions and organisations (Perry and Wise, 1990). Several studies report that PSM is higher in the public sector than in the private sector (Abdelmotaleb and Saha, 2018; Ritz et al, 2016; Rayner et al, 2013) because employees value intrinsic rewards more and PSM also takes the form of OCB and CSR in private sector organisations (Abdelmotaleb and Saha, 2018). PSM has been defined more broadly as beliefs, values and attitudes that go beyond self-interest and organisational interest have been considered as motivating factors (Vandenabeele, 2007).

PSM is a motivational concept and Perry (1996) introduced a measurement scale based on four dimensions: Attraction to Policymaking, Commitment to the Public Interest, Compassion and Self-Sacrifice. Studies have shown that PSM is an important predictor of organisational performance (Brewer and Seldon, 2000). Individuals with high levels of PSM exhibit higher levels of organisational commitment and social altruism and show role-based attitudes and behaviours such as organisational commitment and work engagement (Rayner et al., 2013;

Brewer, 2003; Crawson, 1997). Understanding PSM and organisational behaviour brings positive outcomes as it has practical implications. Several recent studies on PSM therefore establish a link between Organisational Citizenship Behaviour (OCB) (see Kim, 2006; Pandey et al. 2008; Gould et al., 2013) and Rayner et al. (2013) claims that public service ethos has a significant impact on OCBI. PSM is also identified as one of the antecedents of OCB and the relationship between these two variables is helping OB researchers to develop a better understanding of the factors that influence outstanding performance of public servants.

ii. The dimensions of public service motivation

PSM is based on four dimensions: Attraction to policymaking, Commitment to the public interest, Compassion and Self-sacrifice (Kim et al., 2013; Perry, 1996). These dimensions have been tested over time in various studies of public service literature (Gould et al., 2013; Kim, 2006; Pandey et al.2008). PSM is useful in identifying the reasons that lead a person to volunteer, as it provides an indicator of how a set of beliefs, values and attitudes have been measured. The practical implications of this measurement are for future career placement and promotion. Kim (2006) explains that some dimensions such as attraction to policymaking and commitment to the public interest correlate well with prosocial behaviour, suggesting that these were seen as career achievements. Public sector employees with high levels of PSM are considered committed, high performers and promote high performing organisations in the public sector (Lin and Perry, 2016; Gould-William et al., 2013; Kim, 2005). **Figure 5** shows public service motivation dimensions.

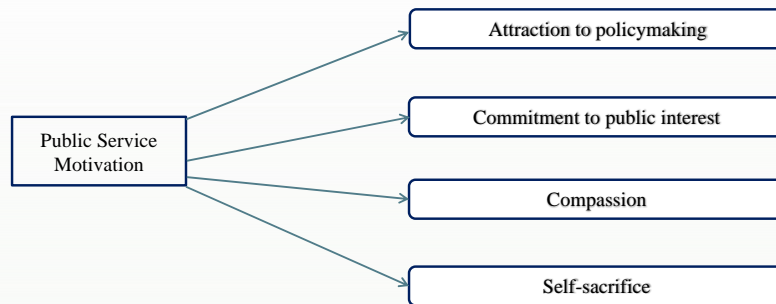


Figure 5 Public service motivation dimensions

Source: Adapted from Kim (2009)

iii. Measuring public service motivation

Ideally, measuring PSM in individuals can provide a perspective on how these individuals are motivated to contribute to society (Van Loon et al., 2015) and can be useful in recruiting new employees and must also encourage other existing employees in the system. This study reviews several studies that use the same dimension but differ in the number of indicators (Battaglio and Gelgec, 2016; Kim et al., 2009; Perry, 1996). The summary of Cronbach's alpha values in previous work validating the PSM is presented in **Table 6**.

Table 6 Summary of PSM instruments

Variables	Number of items	Cronbach's Alpha (Recorded literature)		
Public Service Motivation	Items	24	12	14
Adapted source		Perry (1996)	Kim et al. (2009)	Battaglio and Gelgec (2016)
Context		US public sector officials	Korean public sector	Turkish public sector
Attraction to policy making	4	.86	.68	.77
Commitment to public interest	4	.88	.86	.81
Compassion	4	.90	.73	.70

iv. *Public service motivation studies in the public sector*

PSM studies were popular among organisational management scholars as this concept supports the core interest of public organisations and provide a good framework for policy makers and practitioners. PSM studies in the public sector have largely used quantitative methods based on surveys and examined their impact at the organisational or macro level (Peretz, 2020; Bakker, 2015). However, more studies are needed at the micro and managerial levels, which should focus on understanding outcomes (Osborne, 2017; Bakker, 2015). Very few studies have been conducted to understand positive organisational behaviour and employee engagement (Crawford et al., 2020; Bakker et al., 2014; Lavigna, 2013). Based on these studies, future studies should continue to investigate the role of PSM in leadership and organisational studies in the public sector.

2.7.4 *Subjective wellbeing*

i. *Definition of subjective wellbeing*

Scholars and scientists in psychology have tried to define well-being in many ways. This study examines the different types of well-being in the literature. For sociologist Ruut Veenhoven, well-being is related to the overall quality of life (Eger and Maridal, 2015). It is also seen as the philosophy of achieving a 'good life' through positive and negative experiences and emotions that lead to an authentic life (Sutton, 2020; Seligman, 2002).

Well-being is considered an important concept in positive psychology studies, along with happiness and satisfaction. Positive psychology studies include a wide range of positive concepts such as positive emotions, positive character, and positive institutions/organisations (Eger and Maridal, 2015, Fisher, 2014; Diener et al., 2010; Seligman, 2002). Indeed, positive psychology drives humanistic psychologists such as Maslow, Seligman, Deci, Ryan, Ryff and Diener to focus on exploring components for a meaningful and happier life to reach people's potential.

Well-being in life is defined in two categories: 1) Hedonic Well-being and 2) Eudaemonic Well-being. Hedonic well-being refers to valuing pleasurable experiences and feelings, while eudaemonic well-being refers to engaging in self-actualising behaviours that are meaningful and promote growth (Fisher, 2014; Ryan and Deci, 2000). It is important to understand the different elements between hedonic and eudaemonic well-being, as some concepts of well-being have been introduced later that emanate from these two terms.

The term hedonism comes from the ancient Greek philosopher. Epicurus introduced a new concept called Epicureanism. According to this philosophy, one must pursue one's own pleasure and avoid pain to achieve the highest good. This contrasts with Aristotle's concept of eudaimonia, which argues that satisfaction and a meaningful life can be achieved by living

virtuously and knowing one's 'daimon' or true nature to be an authentic person (Eger and Maridal, 2015; Fisher, 2014; Tor and Diener, 2013).

Although both concepts share a similar goal of living a quality life, the two perspectives are different. Some criticisms of the hedonistic perspective are that human value has been reduced to the pursuit of pleasure and the eudaemonistic perspective has taken centre stage with the development of many studies on well-being such as Ryff's (1989) psychological well-being (PWB) and authentic happiness (Seligman, 2002). On the other hand, subjective well-being. SWB was explored by Diener et al. (2010), which comes from the hedonistic well-being perspective. Refer to **Table 7** for well-being concepts in the literature.

ii. The dimensions of subjective wellbeing

Subjective well-being was introduced by Sen (1999) as a mechanism for assessing one's experiences of self-development through self-report. It includes personal experiences, emotions and quality of life based on social and economic indicators. **Figure 6** illustrates the most common dimensions of subjective well-being based on emotions and experiences. We have seen the other dimensions of subjective well-being translated into the Flourishing Scale (Diener et al., 2010) and work well-being (Fisher et al., 2014, Baker, 2011, Pacek and Radcliff, 2008). The Flourishing Scale includes positive and negative emotions and life satisfaction (Diener et al., 2010). This measurement scale helps to determine the quality of individual well-being depending on the context of the study. It can also be measured with behavioural constructs to understand why certain factors are more important, especially in work environments.

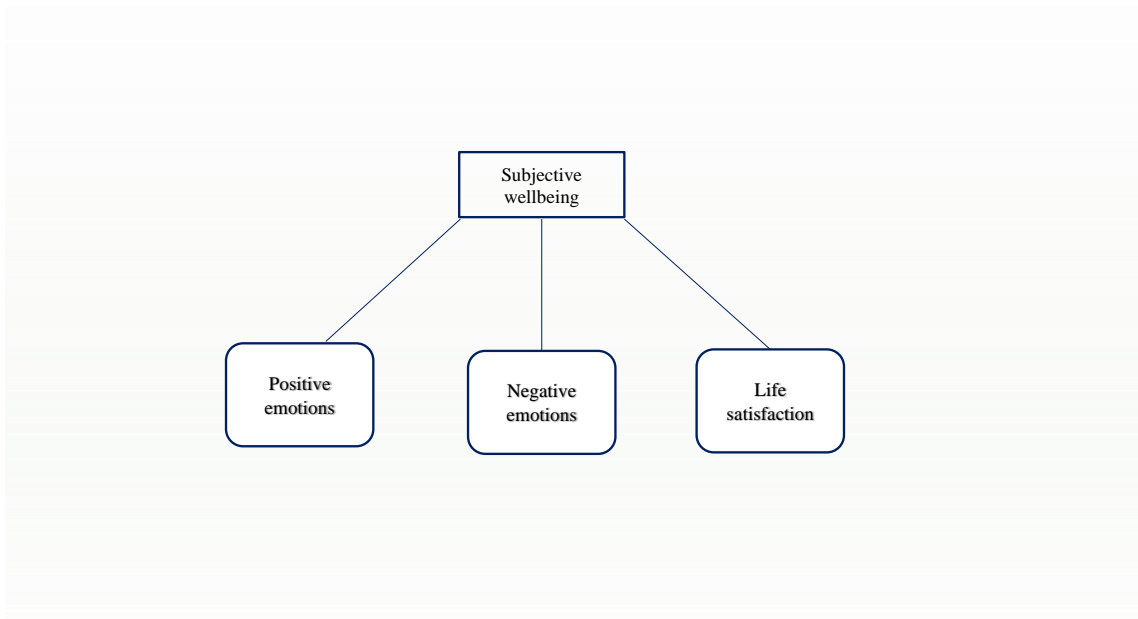


Figure 6 Subjective well-being dimensions,

Source: Adapted from Diener et al. (2010)

ii. Measuring subjective wellbeing

The evolution of well-being has given researchers the opportunity to develop a variety of scales to measure well-being. This study examined several scales used to measure subjective well-being. In the earlier studies of subjective well-being, it was measured as a single construct (Andrews and Withey, 1976) and then evolved into a combination of several items in a scale such as the Life Satisfaction Scale (Diener et al., 1985) and the Positive and Negative Affect Scale (PANAS) by Watson et al. (1988) to measure emotions. Most of these scales have been used in psychological and organisational studies to examine how people evaluate their experiences at work or in life in general. Diener's work continues to drive the development of SWB and its measurement. The Flourishing Scale and SPANE were later introduced as shorter scales to measure positive and negative emotions and life satisfaction (Diener et al., 2018; Diener et al., 2010). For a summary of Cronbach's alpha values in previous work validating some well-being scales, see **Table 8**.

Table 7 Summary of well-being instruments

Variables	Comparison		
Items	8	10	20
Adapted source	Diener et al. (2010)	Wood et al. (2008)	Watson (1988)
Name	Flourishing scale	Authenticity scale	PANAS scale
Dimensions	2	2	2
Cronbach alpha	.70	.78	.75
Context	US higher education/ teachers	US universities	US universities

The longest debate on the measurement of SWB also revolved around its validity and reliability in different cultures of the world. This is because SWB is a self-report measure, and some might be sceptical that people do not tell the truth when they self-report and interpret the questions asked differently in different cultures. However, SWB measures (Diener et al., 2018, Diener et al., 2009), when measured with other constructs, may predict more interesting theories and associations and be a more valid instrument than a single SWB construct.

Table 8 Wellbeing concepts in the literature

Well-being concepts	Meaning	Related theories	Dimensions	Scale	Related works
Hedonic well-being	Evaluation of present emotions and experiences to live happy life	Maslow's Hierarchy of Needs	<ul style="list-style-type: none"> • Positive emotions • Negative emotions • Life satisfaction 	Happiness scale Depression instrument	Diener et al. (2010)
Eudemonic well-being	Engaging in self-actualising behaviour that promotes growth, meaning to living and pleasant life	Ryan and Deci's Self-determination theory	<ul style="list-style-type: none"> • Personal growth • Self-esteem • Autonomy • Environmental mastery • Positive relationship 	Life satisfaction scale Self-esteem scale	Ryan and Deci (2000) Seligman (2002)
Social well-being	Focus on social relationships that covers inner growth, autonomy, and self-realisation	Ryan and Deci's Self-determination theory	<ul style="list-style-type: none"> • Social acceptance • Social actualisation • Social coherence • Social contribution • Social integration 	Social well-being global scale	Fisher (2014)
Evaluative well-being	Global, contemplation, long-term assessment, a state of wellbeing that is reflecting of one's quality of life	Global quality of life concept	<ul style="list-style-type: none"> • Emotion • Mood • Sensory 	PANAS scale	Eger and Mandal (2015)
Affective well-being	A person's present experienced state of well-being	Quality of life concept	<ul style="list-style-type: none"> • Emotion • Mood • Sensory 	Quality of Life Instrument	Eger and Mandal (2015)
Cognitive well-being	Self-evaluation of life that is related to life satisfaction	Aristotle's virtuous behaviour	<ul style="list-style-type: none"> • Positive emotions • Negative emotions • Life satisfaction 	Life satisfaction scale	Tov and Diener (2013)
Emotional well-being	A combination of one's positive and negative emotions	Aristotle's virtuous behaviour	<ul style="list-style-type: none"> • Positive emotions • Negative emotions • Life satisfaction 	SPANE scale	Tov and Diener (2013)
Psychological well-being	A set of psychological functioning that has positive attitude and self-determination, having life and goals directed to personal growth	Seligman's Positive Psychology	<ul style="list-style-type: none"> • Personal growth • Self-esteem • Autonomy • Environmental mastery • Positive relationship • Life purpose 	Psychological well-being scale	Ryff et al. (2007) Ryff et al. (1989)
Subjective well-being	A person's particular experience of his own quality of life measured by social and economic indicators	Maslow's Hierarchy of Needs	<ul style="list-style-type: none"> • Positive emotions • Negative emotions • Life satisfaction 	Flourishing scale SPANE scale	Eger and Mandal (2015) Diener et al. (2010) Sen (1999)

iv. Subjective wellbeing in the public sector

Studies on subjective well-being in the public sector have been applied in many contexts. For example, the construct of subjective well-being (SWB) has also been used in large-scale panel or government efforts to measure the well-being of people around the world. However, these studies usually use single items for the population. Some examples include (Cheung and Lucas, 2014; Lucas and Donellan, 2002), which test the validity of the single-item SWB with other measures and predict a high reliability of .70 for life satisfaction. Similarly, if two data sets of life satisfaction measures were measured, one with a single construct and another with a multiple item construct, then little loss of validity between the two measures is predicted.

Other studies in the public sector continue to address the question of how certain factors relate to SWB. For example, the question of how income leads to happiness requires an understanding of the multiple relationships between income and cultural considerations. A meta-analysis by Tay et al. (2018) proposed a framework for understanding the relationship between income and SWB. While basic psychological needs are important, motivational factors such as status and resources are considered important components to measure. While this study argues that higher income does not necessarily predict a happier person, several studies prove the opposite (Pacek et al, 2019, Pischke, 2011; Frey and Stutzer, 2000). These findings could be useful in studying the spending and consumption habits of a particular community or society. This leads to an increase in premium wages in the public sector, which also promotes the increase in wages in the private sector (Pacek et al., 2019). Similarly, if SWB were analysed to identify intrinsic and extrinsic motivation at the workplace, this might assist in providing better support and development for the employee in the organisation.

Several other studies highlight the benefits of SWB for policy. SWB can be used as an indicator of a social construct and can help shape economic, health, environmental and social policies (Sim and Diener, 2018). Another study suggests that the size of government plays a role in why some public sector workers are happier than others (Pacek and Radcliff, 2008). This is because a larger government would contribute to more initiatives for the benefit of citizens.

While existing studies link SWB to behaviour, health and other outcomes, there appears to be little research on how the specific components of SWB (positive emotions, negative emotions and life satisfaction) influence specific work behaviours such as OCB and PSM, particularly in the public sector (van Loon et al., 2015; Yurcu et al., 2015). An interesting comparative study between private and public sector banks shows that SWB scores can be increased in an organisation if the culture and work performance can be improved (Sharma and Joci, 2016). Most studies on SWB tend to focus on culture rather than performance (Diener et al., 2018, Sharma and Joci, 2016).

2.7.5 Relationships between variables

All variables were introduced and discussed in depth in 2.7.4. Subsequently, this section covers previous studies that provides connection between the variables. These prior studies were useful in the process of hypothesis development which will be discussed in **Chapter 6**.

i. Authentic leadership and prosocial behaviour

Authentic leadership is considered a positive contextual factor that contributes to a positive influence on performance (Yesilkaya and Aydin, 2016; Hsieh and Wang, 2015). Over the years, authentic leadership has been studied together with organisational citizenship behaviour.

Perceived authentic leadership of managers is positively related to employees' OCB and promotes employees' helping behaviour (Walumbwa et al. 2010; Avolio, 2005). Al Sahi Al Zaabi, Ahmad and Hossan (2016) examined the relationship between authentic leadership, work engagement and organisational citizenship behaviour and found that authentic leadership increases work engagement and organisational citizenship behaviour. An important study compares authentic leadership with transformational leadership and concludes that authentic leadership outperforms transformational leadership in predicting group and organisational performance in terms of OCB (Banks et al., 2016). From these studies, there is a need to continue further investigation on the application of AL in the context of OCB in the public sector.

In addition to this, the construct has already been investigated with prosocial studies in non-Western contexts such as Korea, China, Spain, UAE, and Turkey (Yesilkaya and Aydin, 2016; Hsieh and Wang, 2015; Valsania et al., 2012). Most of these studies suggest a significant impact on employees' OCB. However, these studies lack mechanisms on how AL can be developed in the workplace and what other variables might be useful to strengthen the relationship between AL and OCB. The homogeneous nature of these studies also means that further studies are needed to confirm the relationship between AL and OCB in different settings. Therefore, following a study by on OCB predictors (Al Sahi Al Zaabi, Ahmad and Hossan, 2016), this study focuses on investigating AL as predictor to work behaviours.

ii. Authentic leadership and public service motivation

Kellis and Ran (2012) find that different leadership approaches work best in the public sector to explain successful or unsuccessful organisational outcomes. They argue that transactional

leadership may no longer be effective given the complex, changing environment in the public sector and that people respond positively to a value-based leadership approach. However, they do not specify which leadership theories are associated with successful organisational outcomes. Following Yesilkaya and Aydin (2016), this study will continue to focus on examining the relationship between AL and OCB but introduce PSM as variables that can strengthen the relationship between these two constructs. It is hoped that the study of authentic leadership and PSM can explain successful organisational outcomes.

iii. Authentic leadership and subjective well-being

One of the earliest studies on AL and well-being comes from Ilies et al. (2005), in which the study reveals that authentic leadership behaviour has a direct impact on follower well-being. It highlights several components such as self-awareness, authentic behaviour, and transparency as important criteria for leading others. In a recent work by Adams et al. (2020), authentic leadership promotes integration in teams and measures of authenticity, well-being and engagement improve organisational performance (Sutton, 2019).

Well-being is defined by happiness and satisfaction (Eger and Maridal, 2015) and the study of happiness is becoming increasingly important in explaining how people are happy at work. These findings are the main reason why well-being at work is important alongside skills and competencies.

iv. Subjective wellbeing and prosocial behaviour

Much research has been conducted on subjective well-being and prosocial behaviour in recent years and studies have shown that SWB has a positive impact on OCB (Yurcu et al., 2015), but there are still few studies in the public sector. Kamerade and McKay (2015) highlight that volunteers have higher subjective well-being scores than others working in the private sector. SWB also promotes several positive traits such as sportsmanship and citizenship, despite being paid less. Based on these findings, it would be interesting to explore the relationship between these variables in another similar voluntary context, such as public sector employees.

v. Public service motivation and prosocial behaviour

PSM is positively related to individual characteristics that are conducive to organisational performance. Previous studies on PSM and OCB have helped researchers explain efficiency, effectiveness, and equity (Petrovsky, 2009; Kim, 2006; Boyne, 2006a and Organ, 1988). PSM is the antecedent of OCB (Ritz et al, 2016) and an important predictor of organisational performance (Brewer and Selden, 2000). Research also suggests that organisational restructuring and anti-corruption activities are suggested management practises that can be emulated by managers to increase PSM among employees (Ritz et al., 2016).

Previous studies have recorded PSM as a predictor of interpersonal citizenship behaviour, a moderate relationship between OCB and job satisfaction, and a moderate relationship between HRM practises and employee well-being (Pandey, et al., 2008; Ingrams et.al, 2018 and Mekuria, 2016). However, in another recent study by de Geus et al. (2020), PSM is argued to be a mediator of OCB. Therefore, this study examines PSM as a moderating variable that strengthens the relationship between AL and OCB. This also supports Tonkin (2013) in understanding the impact of PSM on authentic leadership followers.

Other studies examine the interaction of OCB with other organisation-related factors. Most studies examined the relationships at the individual rather than group or organisational level. For example, Kim (2006) conducted a study to test behavioural patterns that may predict certain outcomes in the Korean setting. In this study, public service motivation (PSM) is used to examine its influence on OCB in the public sector. Public employees with high levels of PSM are important to improve OCB in government, in this case employees show high work engagement.

2.7.6 Public leadership studies

(Leslie and Canwell, 2019; OECD, 2019) argues that the literature on leadership in the public sector is largely conceptual and has not been able to adequately address the complexity at different levels of the system (Litthenstein and Plowman, 2009). The established leadership models are not able to capture the challenges of leadership in the public sector and the dynamics that exist in today's world. (Murphy et.al, 2017) Studies of leadership in the public sector are generally faced with conflicting results and a lack of consensus on "what to measure and how to measure it" (Chapman et.al, 2016, p113).

Vogel and Masal (2015) present four general approaches to the study of public leadership effectiveness (i.e., a functionalist, a behavioural, a biographical and a reformist approach). Among the four approaches, the behavioural approach seems to receive more attention as it allows scholars to integrate other fields such as social psychology to provide a deeper understanding and reduce the fragmentation of the literature on public leadership. Many types of leadership in the public sector have been extensively discussed in policy and community settings. However, little attention has been paid to public administration and established models

should be used to examine the role of leadership in contextual performance (Ritz et.al, 2014). More studies are needed in the public sector not just to categorise leadership approaches, but the type of leadership approached that works in different context are equally important to understand the complexity of its leadership challenges.

Several studies emphasise the influence of leaders' behaviour on their followers and establish positive relationships with commonly studied variables such as job satisfaction, organisational commitment (W. Zhu et al., 2011), public service motivation and performance in public service.

It is argued that much research literature on leadership focuses on leader development rather than leadership development. The evolving perspective of leadership research, particularly in the context of public administration, has moved towards a broader conceptualisation of public leadership that needs to consider more actors and levels of analysis, processes and contexts, shared dimensions, and an emphasis on citizens (Van Wart, 2013). The convergence of public leadership and leadership studies is important at this juncture because of the changing role in managing complexity and changing public expectations. Rather than looking at how leader traits, characteristics and behaviours affect followership, leadership should be analysed from a relational point of view by examining the relationship between leaders and followership to achieve better leadership quality in groups, organisations, and systems.

In addition, many research articles tend to discuss issues and variables in a piecemeal fashion because they have been conducted using a cross-sectional method, which is usually helpful in explaining correlations between variables but does not necessarily reflect causality and impact. It is suggested that more leadership studies should include longitudinal studies to explain

behavioural or attitudinal changes over time, as well as qualitative studies to gain an enriched perspective of different individuals who might reflect groups, cultures, and organisations (Gardner et al., 2020, deGeus et al., 2020; Van Wart, 2013).

2.7.7 Expectations about public sector leaders

In several reports that discuss the challenges of public sector leaders in the 21st century, we have observed a few issues in common worldwide such as, the declining trust for the government, the lack of engagement and communication skills, continuous disruption of technology, and quick solutions to socio-economic issues. The new normal post Covid-19 pandemic also demands the public sector officials to continuously innovate and be quick in decision making. Putting extra challenges aside, among strikingly similar issues among the top leaders are managing people. Their leadership challenges are getting more complicated to get people to stay motivated on the job, to perform exemplary delivery service, adopt new skillsets and driving the change. (OECD, 2019; McKinsey, 2019; WPP, 2019; CCL, 2014).

Public sector leadership studies in general faced inconsistency in findings and lack of consensus on measurement (Chapman et.al, 2016). One interesting paper by Orazi et.al (2013) suggests leaders in the public sector should behave as transformational leaders however, most research is recommended to analyse different leadership styles that are needed based on how the public sector organisations operate. More recently, there is a limited number of observations concerning leadership training and development are effective for public sector talents and civil servants are still trapped with traditional approaches in leadership training such as attending face-to-face courses and workshops, role playing and simulations that support transformational leadership development in organisations (Seidle et al., 2016, Orazi et.al,

2013). Having said that, the public sector leadership development provides a potential area for improvement and a promising area of study. This is because, leadership scholars and researcher can continue to test positive leadership theories in various settings.

2.8 Summary

In this chapter, some theoretical foundations such as SDT, Positive Leadership and the Contingency Model were discussed. Authentic leadership, prosocial behaviour, motivation for public service and subjective well-being are the main factors selected for this study. This chapter has shown that although these variables have been studied in the literature, there are few studies in the public sector. To contribute to the existing literature on leadership, new approaches and perspectives are needed to produce new results. The literature review captures several variables that are related to prosocial engagement. Therefore, as variables and concepts were discussed, this could potentially lay the foundation of prosocial engagement model as new approach to explore interaction between leaders and middle-level bureaucrats at work and how this process helps to promote cooperation and positive behaviour.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This study addresses the question of how middle-level bureaucrats are perceived as leaders and how authentic leadership traits influence the motivation, prosocial behaviour, and well-being of public sector employees. This chapter therefore explains the research design and methodology. It illustrates the basic framework of the study by introducing the researcher's philosophical assumptions, outlining the approach to the study through the research design, and explaining the research methods, including data collection and management, and the rationale for data analysis techniques.

3.2 Research methodology

In academic research, most researchers are familiar with the three research approaches (a) qualitative method, (b) quantitative method and (c) mixed method. Accordingly, a research framework must encompass philosophical worldviews, research designs and relevant research methods (Creswell and Plano Clark, 2018). Therefore, understanding of research is imperative. Essentially, research is a process of asking questions and seeking answers. However, at a deeper level, it involves systematic exploration, well-structured questions, the acquisition of new information and the re-evaluation of old information (Bertrand and Hughes, 2017). Methods are the actual techniques used to gather evidence, such as surveys and experiments (Balnaves et al., 2009).

As leadership research has evolved over time, the changes have largely been due to social, economic, political, and institutional influences in the workplace (Crawford et al., 2020; Avolio et al., 2019; Gardner et al., 2011). Changes have also been influenced by the development of leadership models such as transformational leadership, ethical leadership and, more recently, authentic leadership (Banks et al., 2016). These changes require researchers to seek innovative ways of conducting research and improving research design so that a better understanding of human nature can be gained.

Historically, quantitative research dominated the first part of the 20th century and was widespread in the natural sciences such as biology, chemistry, physics, and geology (Balnaves et al., 2009). This type of research was concerned with the study of things that could be measured and observed, and therefore measurements were made objectively so that they could be repeated and replicated by other researchers. Quantitative approaches rely on statistical designs or mathematical analysis to collect and analyse data (e.g., surveys, experiments). Questions are often about how many, how often, how much, and the answers are often found in the relationship that exists between the elements of a topic. It is often used when much is known about a topic and there is a need to better predict and specify causes and effects (Kayrooz and Trevitt, 2017; Balnaves et al., 2009; Alasutaari, 1995).

Over time, researchers are becoming increasingly interested in studying the social sciences, for example in the fields of sociology, anthropology, and psychology. These studies are concerned with the study of human behaviour and the social world in which humans live. They have also found that human behaviour is difficult to measure with numbers. Some things cannot be explained numerically, only rationally. Quantitative research allows us to understand what and how, but it cannot really explain why. This leads to a new methodology, the qualitative

approach (Creswell and Plano Clark, 2018). This is a text-based or non-mathematical analysis and interpretation of information. It aims to determine the who, what, when why and how of certain phenomena. It arises to measure human attitudes and behaviours. This type of approach also allows the researcher to be close to the individual's perspective as they can delve into the details of the data through interviews, focus groups and observation (Kayrooz and Trevitt, 2017; Balnaves et al., 2009; Jensen, 2002). A researcher can decide whether to conduct quantitative or qualitative research depending on the research interest.

3.2.1 The philosophical worldview

Before deciding on a particular research method, it is important for the researcher to think about the research paradigm or worldview. The philosophical worldview represents a set of beliefs that guide the researcher's actions (Guba, 1990). Some scholars refer to it as research worldview (Creswell and Plano Clark, 2018) or research paradigm (Neuman, 2014), but it essentially has the same meaning. Creswell and Plano Clark (2018) highlight four broad ideas of philosophical worldview: positivist, constructivist, transformative and pragmatist.

Ontology refers to the study of being and in this context focuses on the study of the field of leadership. Before the advent of AL, scholars applied the concepts of transformational leadership to explain the leadership process among top leaders. However, transformational leadership limits the discussion of leadership at all levels in the public sector organisation due to its complex hierarchical structure (Ancarani et al., 2020; Van Wart, 2013). Because of this focus, established leadership models have failed to capture the challenges of public sector leadership and the dynamics in today's world (Murphy et al. 2017), while most research on

leadership is largely conceptual and does not adequately address the complexity at different levels of the system (Litcthenstein and Plowman, 2009).

The development of AL has been proposed as a strategy to overcome unethical leadership behaviour (Crawford et al., 2020). The Authentic Leadership Questionnaire (ALQ) and the Authentic Leadership Instrument (ALI) have been developed and widely used in the literature (Neider and Schriesheim, 2011; Walumbwa et al., 2008). These instruments measure authentic leadership as a relationship process between leader and followers based on the key components of honesty, transparency, and authenticity.

Despite the development of authentic leadership as a theory, the following critical issues can be observed in the literature: i) There is still confusion about whether authentic leadership is defined as a process or as a trait of a person (Crawford et al., 2020), although it is considered ii) Multilevel theory (Day et al., 2014; Algera and Lips-Wiersma, 2012) involving multiple stakeholders (i.e. leaders, followers, peers) and the existing definition has a iii) ambiguous distinction between authenticity as a leader or as an individual (Crawford et al., 2020 ; Alvesson and Einola, 2019; Day et al., 2014; Suddaby, 2010). The epistemology of leadership and authenticity is still quite unclear, so looking at a different kind of worldview might create new perspectives.

This study was influenced by the post-positivist approach. This approach was recognised as a scientific method where causes are likely to determine the effects or outcomes of a particular phenomenon or situation. Scholars such as Comte, Mill and Durkheim have influenced the development of this theory (Creswell and Plano Clark, 2018). The post-positivist approach is based on empirical observation and measurement. What is special about this approach is that

it is suitable for both qualitative and quantitative research and that there is an element of prior use of the theory (Creswell and Plano Clark, 2018). Therefore, mixed methods design in this study is based on the post-positivist foundation.

In addition, this approach complements why this research was based on theory building. Theory testing is about experimentation and change, for example variables can be reduced during a statistical procedure. Theory building goes deeper, qualitative, interpretive methods were used, such as document review, case studies and longitudinal studies. The reason for this design was that AL is a poorly defined construct and further theory development initiatives were needed.

3.2.2 The qualitative approach

A researcher may consider the qualitative method as complementary to quantitative methods in the sense that it provides explanations for complex phenomena, but it is also useful in developing or establishing conceptual foundations or theories and in recommending hypotheses to explain phenomena (Bryman et al., 2014; Jensen, 2002). Furthermore, the value of any qualitative research is to provide valid results, which are only possible after extensive investigation.

The challenge with qualitative methods is that they are highly theoretical and sometimes individual. The results cannot be representative of a population as is the case with quantitative methods. The scope is sometimes too narrow, and observations may require a high degree of interpretation. There is a possibility of data overload, so more time is needed to interpret the results. There is a problem in explaining the validity and reliability of the information due to

the element of subjectivity. Also, since the researcher must be deeply involved in the research, there is a possibility of bias in explaining a phenomenon. (Mahoney and Goertz, 2006).

3.2.3 The quantitative approach

A quantitative approach helps to illuminate the findings because opinions can be systematically measured through a specific research strategy such as a survey (Ibrahim, 2020; Creswell and Plano Clark, 2018). A survey provides a quantitative, numerical description of trends, attitudes, or opinions of a population. A survey is also a method in which the researcher explores the topic through a series of questions to respondents. Surveys are popular with social scientists because they help to uncover certain trends in attitudes and behaviour. The results of the survey can be generalised to a population. (Beins, 2013). Survey-based research is often evaluated using statistical analysis. Following the post-positivist worldview, statistics offers a better understanding of the human world through estimates and predictions of probabilities, and we can use statistical results to make arguments.

Quantitative approaches offer a sophisticated, precise, and credible approach to research, but use traditional statistical and mathematical methods to measure results conclusively. They allow for reproducibility and a low level of error, a high degree of precision and basically answer the question of validity and reliability of a study (Kayrooz and Trevitt, 2017) but are not very meaningful and cannot provide deeper explanations of a phenomenon. Both quantitative approaches and qualitative approaches have their own advantages and limitations. Therefore, a mixed methods approach can be used to balance the limitations of each approach.

3.2.4 *The mixed-method approach*

Future studies of leadership need to include an understanding of the local context so that we can better understand how leaders and followers interact. Qualitative research methods are often combined with quantitative methods, but leadership research is largely quantitative (Gardner et al., 2011). There are many ways to improve leadership research methods. For example, focus groups can be combined with surveys, as is already widely used in marketing research. This strategy has also been referred to as multi-method, multi-strategy, mixed methods (Bryman et al., 2014).

Although Bryman et al. (2014) argues that combining methods is not necessarily better because it has implications for the research design, (Kayrooz and Trevitt, 2005) believe that it can strengthen the study. Researchers can use three main ways of combining quantitative and qualitative methods: Facilitation, Triangulation and Complementarity (Jensen, 2002). Facilitation means addressing both methods in sequence. For example, before conducting a quantitative survey, a researcher first conducts a qualitative 'pilot study'. Triangulation is one of the most popular methods to address aspects of validity and reliability. It is a strategy used to gain multiple perspectives on the same phenomenon using experiments and observations. Complementarity is the least common and most challenging method because it combines different approaches to different aspects of the same research questions.

Due to the competing nature of quantitative and qualitative approaches, a researcher needs to consider very carefully which method is most appropriate for their research. In this study, a mixed-methods design was chosen to combine both methods. The reason for this method is to provide a complete picture of the phenomenon of prosocial behaviour in the workplace. In

addition to the questionnaires that shed light on what mid-level bureaucrats think, feel, and behave at work, the interviews told us why such behaviours are considered important according to self-determination theory. Therefore, triangulation is necessary so that validity and reliability can also be considered.

3.3 Research design

This section explains the research design of the study. It includes the research framework, data sources, methodological approaches, methods for data collection and analysis, population, and sampling.

3.3.1 Introduction

A research design essentially comprises a framework for data collection and data analysis (Bryman et al., 2014). What constitutes a good research design is a solid understanding between (a) the type of research (basic or applied), (b) the mode of enquiry (inductive or deductive), and (c) the research methods (qualitative, quantitative, or mixed methods) (Creswell and Plano Clark, 2018). A researcher must be able to develop a robust design to create something new in their own research. In the social sciences, there are some types of designs that are commonly used by researchers, such as cross-sectional, longitudinal, experimental, case study and comparative. It is generally considered that the cross-sectional design is the simplest design as it reveals patterns/associations between variables and is useful for researchers who want to explore the relationship between different factors based on the research topic.

Research design is very important as it is considered the heart of your research and it is the design that will determine the outcome of any study. Bryman et al. (2014) highlights that

reliability, replication and validity are considered quality criteria in social research. These criteria go hand in hand with certain assessments. Replication means that the research can be replicated by others, which also means that researchers must be thorough and transparent in their procedures. However, replications are rare in social research.

3.3.2 Research framework

Previously In **Chapter 1**, the main research objective is to develop an integrated prosocial engagement model to boost collaborative working environment among Malaysian mid-level bureaucrats based on leadership, motivation, wellbeing, and prosocial behaviour. There were three main questions for this thesis. Research questions (later addressed as RQ) were as follows:

RQ1: How is authentic leadership perceived by Malaysian public sector leaders?

RQ2: How can a model of prosocial engagement be developed based on authentic leadership, motivation, well-being, and prosocial behaviour?

RQ3: How is the prosocial engagement model applied by Malaysian middle-level bureaucrats?

A good theory means that concepts can be measured in an investigation. A theory generally describes the interrelationship between several concepts and the purpose of theory building is to predict or explain the real world (McShane and Von Glinor, 2017). Therefore, it must not only have concepts that can be measured, but also have value to society. Based on these key ideas, several theories and models were considered for this study, such as self-determination theory (Ryan and Deci, 2000), authentic leadership theory (Walumbwa et al., 2008) and the contingency model (Fiedler, 1958). SDT explained the intrinsic motivation of individuals,

while ALT explained the characteristics and behaviour of leaders and the contingency model explained the relationship process.

The outcome of this model was a collaborative working environment in the public sector. Based on the Contingency Model, this thesis looked at what condition applies when mid-level bureaucrats (later will be addressed as ADS officers) behave while working together with their subordinates and team members. Together, the framework explores, motivation as needs, their self-evaluation on their state of well-being, perceived authentic leadership as the leadership style and prosocial engagement as the output. **Figure 7** illustrates the research framework.

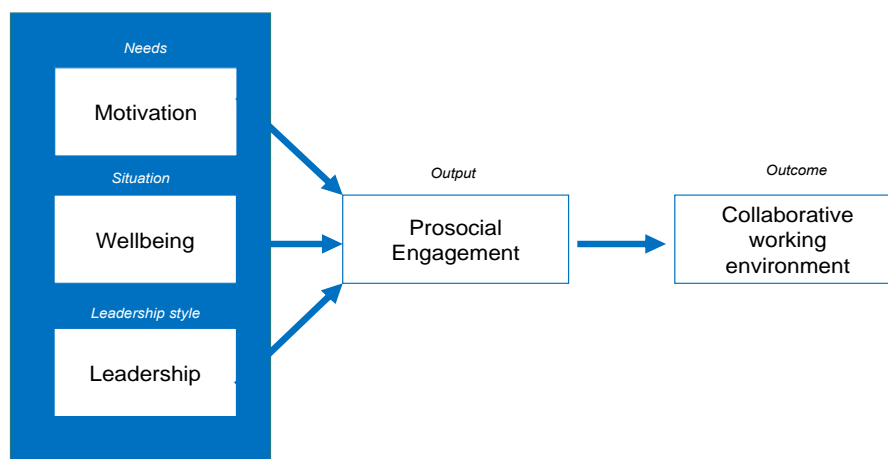


Figure 7 The research framework

Source: Adapted from Deci and Ryan (2000), Walumbwa et al. (2008) and Fiedler (1958)

Based on the research questions, there are different data collection methods were required to perform this study. To answer the first question, the qualitative approach was employed through structured interviews. This approach was suitable to explore perceptions, values, and beliefs of a group of people. Next, this research framework was further developed into

theoretical framework so that it could be operationalised. This addressed RQ2 and RQ3 in this thesis. For these questions, the quantitative approach was employed. Based on the leadership phenomenon discussed in RQ1, the data collection was aimed at finding out the big picture of mid-level bureaucrats' leadership behaviour in the public sector by taking a cross-section of the ADS population. This also mean that the data collection was done once in the duration of study, because it was the most economical and feasible way for the time being.

This study proposed that when the employee perceived their leaders as authentic, it increases their motivation to work in the public sector. When they are highly motivated at work, they are more likely to perform extra-role behaviours that will positively influence others and benefit the organisation. In other words, authentic leadership would provide an indirect influence on employee extra role behaviour through their motivation to work. Similarly, when the employee perceived their leaders as authentic, it increases their wellbeing at work. When they are highly satisfied, they are more likely to perform extra-role behaviour that benefits the organisation.

Therefore, based on these assumptions, a theoretical framework was developed. Positive organisational behaviour was demonstrated through *authentic leadership (AL)*, *prosocial behaviour (PSB)*, *public service motivation (PSM)* and *subjective wellbeing (SWB)*. AL is the independent variable (IV) and PSB as the dependent variable (DV). PSM and SWB are both mediating variables (MV). Seniority level is the moderating variable. **Figure 8** below shows the representation.

It is important to note that leadership, motivation, extra role behaviour and wellbeing cannot be observed directly as variables. Each has its own dimension and specific characteristics. Next, these variables were operationalised into four main constructs. AL construct represents

the leadership variable, PSB constructs represents the organisational behaviour, PSM represents motivation and SWB represents ADS officers' wellbeing. It is expected the perceived AL to positively influence the employees' PSB via PSM and SWB. It should be noted that all these constructs are multidimensional constructs. There are 58 items for this framework which indicates that this framework is the constructs are multidimensional.

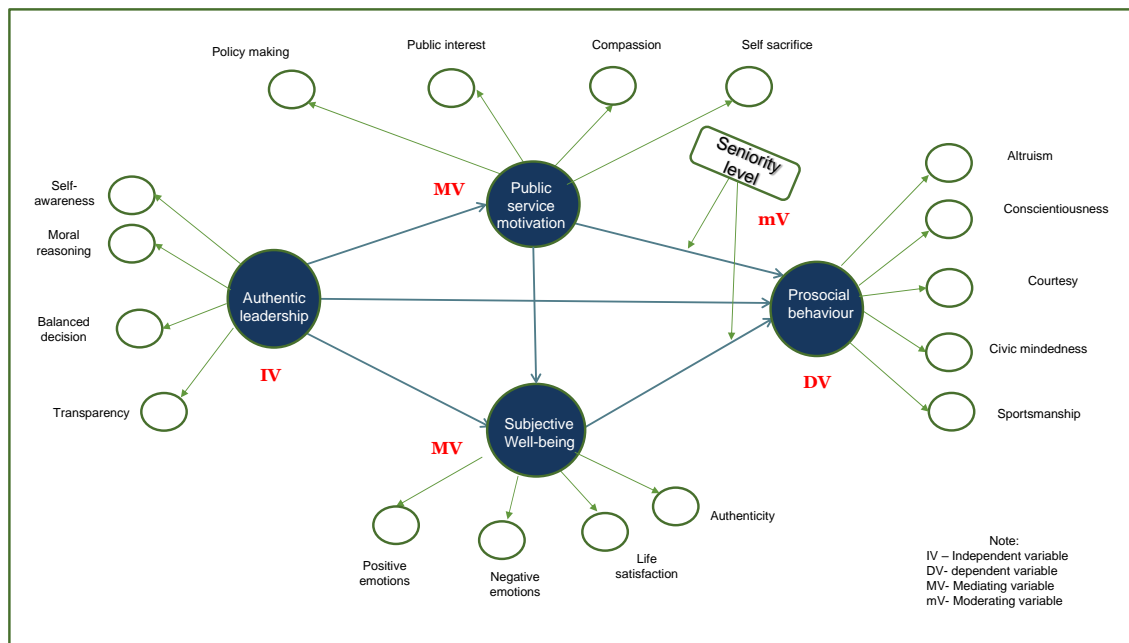


Figure 8 The theoretical framework

Source: Adapted from Deci and Ryan (2000), Walumbwa et al. (2008) and Fiedler (1958)

An extensive literature review was carried out and explained in **Section 2.7** in **Chapter 2**. Some related literature on the variables such as AL, PSB, PSM and SWB were discussed. All these variables are defined from the perspective of SDT and positive leadership theory.

3.3.3 *Methodological approaches*

Based on the post-positivist worldview, a mixed method approach was used in this study. Previous studies on AL (Crawford et al., 2020; Avolio et al., 2019; Gardner et al., 2011) used a single method to collect data. Therefore, it was difficult to reach a credible conclusion. Although the existing studies on leadership and organisation indicate that a quantitative approach seems to be the most widely used research method (Gardner et al., 2020, deGeus et al., 2020; Van Wart, 2013), theoretical research has been found to include multiple levels of analysis, suggesting that there is a disconnect between quantitative and theoretical research. As this topic is still relatively new in Malaysia, a mixed-methods approach is most appropriate and could be useful in the initial stages AL development in this country. The advantage of using a research approach with multiple strategies allows the researcher to gain a better understanding of the problem and increase the credibility of the findings (Bryman et al., 2014). Therefore, it was important to consider more than one method for data collection.

The three research questions reflect the three phases of data collection in this study. Each questions used different strategies of research methodologies. The first phase of study examined how authentic leadership has been defined in the Malaysian public sector. The interview explored how authentic leadership was understood, or at least observed and interpreted, among leaders who were already in strategic decision-making positions. The qualitative content analysis approach was used to analyse the data. In the second study, a prosocial engagement scale was developed based on the interview results, drawing on existing literature and new findings. This included a series of focus group discussions and expert interviews, as well as an evaluation of the scale using exploratory factor analysis (EFA). The third study examined the application of the model of prosocial engagement among mid-level

bureaucrats of ADS. A quantitative survey was conducted aimed at exploring the relationship between variables. This study included correlational analysis using extended PLS-SEM analysis.

In terms of the method of data collection, only primary data was considered for the main findings, while some surveys and reports were used to give context to the study. In terms of methodological approaches, the mixed method approach helps the researcher to gain a better understanding of the phenomenon of leadership and the behaviour of middle managers at work. This enhances the discovery and deepening of the study (Bryman et al., 2014).

3.3.4 Methods

As mentioned previously, the most appropriate method was the mixed method approach. This was because while such an approach can explore the relationship between related variables, it can also contribute to a new understanding of a leadership phenomenon at work. Therefore, this requires several methods for investigation. A combination of qualitative and quantitative methods was employed to for data collection. Each method was carefully selected based on the samples and sources chosen for this study. The reason for this is that this study was conducted in different phases and needs to be conducted in a phased manner so that the researcher can move to the next phases accordingly.

In the first phase, the qualitative interview was chosen because the participants were selected based on certain criteria. Furthermore, the participants were selected because they represent the leaders in the Malaysian public sector and interview method is the best approach to capture the views and experiences of the participants. This is not possible with a survey approach.

During the pre-test, focus group discussion was used so that the experts could review the instrument. In pilot test and field work, the survey questionnaires method was used to get opinion from the larger group of study. The different methods of data collection are listed in

Table 9.

Table 9 Methods of data collection

Phases of study	Method of data collection	Justifications
First phase	Qualitative interviews	To obtain useful information about leadership and authenticity from the practical perspectives
Second phase	Focus group discussion	To ensure the scale achieve face validity and content validity
	Survey questionnaires	To test the feasibility of the study, to measure the validity and reliability of the instrument
Third phase	Survey questionnaires	To obtain insights from the sample of the study for further analysis and discussion

The first research question was addressed to explore definition from the perspective of Malaysian public sector. This alternative definition of authentic leadership has practical implications for other scholars and a potential contribution of AL. For this study in particular, the definition can help in developing a new tool for authentic leadership for the Malaysian public sector. Therefore, the researcher explored the definition through qualitative interviews with the top leaders in the Malaysian public sector.

The participants were selected from the top level of the Malaysian administration for several reasons. First, the leaders have many years of experience in leading various agencies and ministries of the government. Second, their views and opinions offer insights from a higher authority, especially on issues of leadership. Third, they are better able to articulate their

professional experiences from coaching and mentoring, including exposure to different leadership approaches, than the younger generation of leaders. The qualitative interviews offered better depth than other approaches, such as a written interview or focus group discussion, because we wanted to capture an in-depth discussion of the topic under study. If some new elements were discovered that were not present in the existing instrument, further pre-test and pilot test were required to develop the questionnaires.

Pre-tests and pilot tests (Sekaran, 2013) are useful for researchers before the actual data collection begins. In the pre-test phase, focus group discussions were conducted for the purpose of scale development. The statements in the instrument were revised to fit the respondents. This process justified the need to modify the instrument and adapt it to the local context. For example, the order of the questionnaires - demographics first, questions second - was changed to "questions first, demographics second" to reduce the number of incomplete questionnaires, to increase participants response rate.

Since a questionnaire was used in this study, pretesting of the questionnaires used needs to be considered to ensure that the questions are clearly understood by the respondents and possible bias can be reduced. Lack of understanding of pretesting also leads to poor data quality (Sekaran, 2013). Pre-test was appropriate for this study as previous studies on leadership in Malaysia have used other leadership instruments such as the MLQ (Antonakis and House, 2003). Since authentic leadership is a relatively new topic in Malaysia, this step would be most appropriate. In addition, this supports the objectives of the pre-test where the focus is on the correct wording of the questions and the arrangement of the questions and instructions are clear to the respondents (Ramayah, 2013).

3.3.5 *Population and sampling*

Sampling is one of the most important components in research design. In fact, "even the most sophisticated statistical methods cannot compensate for poorly designed samples" (Sarstedt et al., 2017, p.10). The most ideal sampling method for social science research would be probability sampling, but there is a vast majority of research that uses non-probability sampling (Hulland et al., 2017; Sarstedt et al., 2017; Rowley, 2014). Probability sampling is used when the research needs to generalise to the target population. Therefore, the respondents in the sample must reflect the target population. This method uses simple random sampling or systematic sampling to create an equal chance for everyone to be selected.

On the other hand, not all researchers have good access to data and the research usually has limitations, such as geographical boundaries, different population groups or an unknown size of a population. Therefore, non-probability sampling through random sampling, quota sampling or snowball sampling has sometimes been used, which are more suitable for field research and can also provide valid and meaningful results to test the proposed theoretical assumptions (Memon et al., 2017; Rowley, 2014).

A researcher needs to carefully study the population and develop a strategy to access the data. In doing so, Aguinis, Hull and Bailey (2019) highlight that there are two important considerations in sampling, namely representativeness (reflecting the observations) and generalisability (reflecting the findings). Representativeness means that the observation must represent the characteristics of the population, either specific or global representativeness, which is difficult to achieve. Generalisability simply refers to how the results can be

generalised to the sample or population. The following diagram summarises important concepts in sampling.

For example, the purpose of this study was about developing a model of prosocial engagement in public administration. The application of this model is specific to the middle-level bureaucrats in the Malaysian public administration. There are various schemes in the Malaysian public administration, but only the Administrative and Diplomatic Service (ADS) officers were chosen to best represent the middle-level bureaucrats' category. As the mixed method approach is used in this study, different data sets were used to add to the discussion on this topic. The first research strategy uses a qualitative method requiring face-to-face interviews as sources. The sources for the interview were the top leaders of the ADS scheme who hold senior leadership positions in various ministries and agencies of the Malaysian public administration. They were selected because they already held leadership roles and have expectations of leadership behaviour and development for future leaders.

SAMPLING

IMPORTANT CONCEPTS

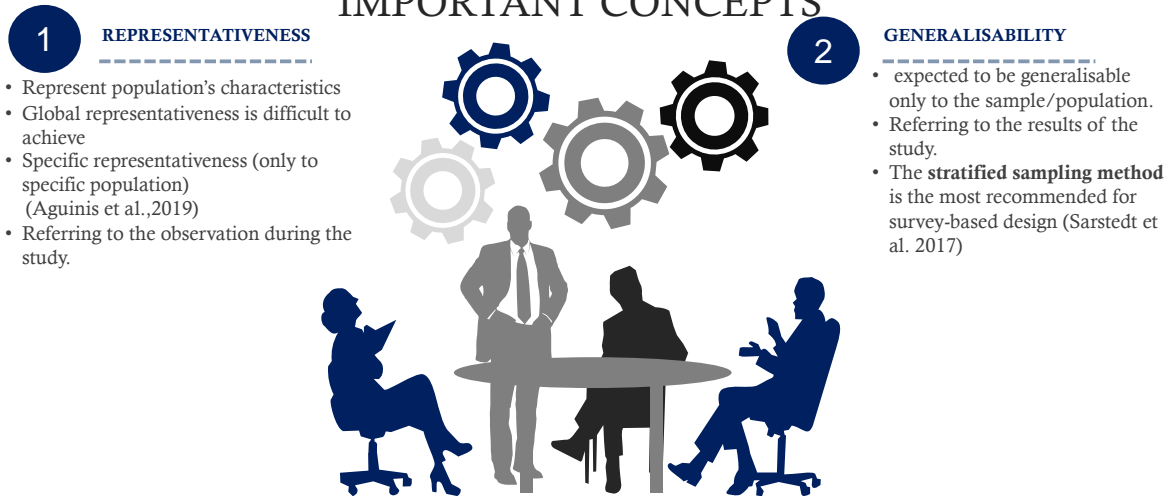


Figure 9 Important concepts in sampling

Sources: (Aguinis, Hull and Bailey, 2019; Sarstedt et al., 2017)

Therefore, the results of this study represent the characteristics of the target group ADS. Most importantly, the interpretation of their leadership experiences and expectations shaped the meaning of authentic leadership and this further supports the development of the prosocial engagement model as a leadership development tool in the Malaysian public administration. The method of recruitment was a non-probability, purposive sampling whereby participants were selected for this study based on certain selection criteria (**detailed in Chapter 4**) because they are knowledgeable and qualified to speak about their leadership experiences. A small number of participants were needed, initially a minimum of 15 to a maximum of 25 participants or until no new insights emerge from the discussion. It is also important to note that “the number of cases is relatively unimportant in qualitative studies” (O'Donoghue, 2007, p.60).

The second strategy, which takes a quantitative approach using questionnaires, requires a sample that represents the population of ADS. The sample for this study therefore consists of middle-level bureaucrats. Sample size is important in quantitative studies to reduce sampling error (White, 2011). For this reason, the ADS would be more suitable to represent the middle-level bureaucrats for the results to be statistically significant and lead to meaningful findings (Sarstedt et al., 2017).

In terms of sample size, there are a few ways to determine the sample size in a quantitative study, such as the 10-fold rule (Hair et al., 2016), the r-squared method (Hair et al., 2014) and the Monte Carlo method (Kock and Hadaya, 2016). In the absence of a sampling frame, a non-random purposive sample was used for recruitment, where the characteristics and selection criteria for the ADS officials were developed in this study and their participation was voluntary. Further discussion of the sampling strategy is provided in Chapter 6). The findings of this study represent this middle category of ADS and cannot be generalised to the entire population of middle-level bureaucrats in the Malaysian public administration. The considerations for sampling were illustrated in **Figure 10**.

CONSIDERATIONS ABOUT SAMPLING

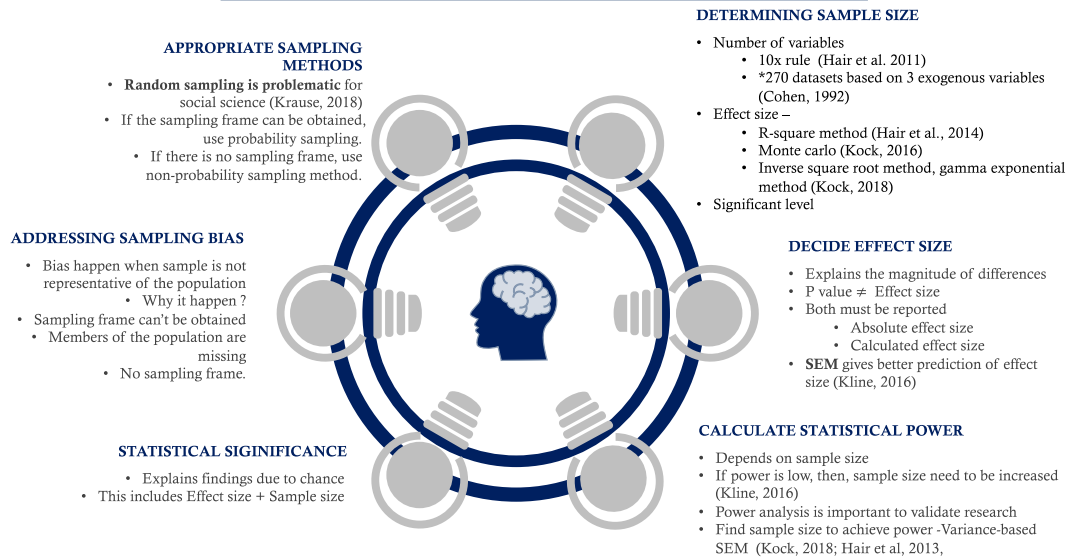


Figure 10 Considerations about sampling

Sources: Kock and Hadaya, 2016; Krause, 2018; Kline, 2016; Hair et al., 2014; Hair et al., 2011, Cohen, 1992

3.3.6 Data analysis methods

There are three data analysis methods chosen for this study. In the first phase, qualitative content analysis was used. The exploratory factor analysis was used for pilot test and PLS-SEM analysis was used for the field work data. The methods of analysis are listed below.

Table 10 Methods of analysis

Phases of study	Method of analysis	Justifications
First phase	Qualitative content analysis	Provides an understanding of themes about leadership and authenticity based on Malaysian context from the leaders.
Second phase	Exploratory factor analysis	Scale validation process
Third phase	PLS-SEM analysis	Path analysis relationships and hypotheses testing

i. Qualitative content analysis

In this study, qualitative content analysis was conducted following the interpretivist approach which states that data can be used in words. The themes that emerge from the discussion (interview) can create patterns and meanings (Nowell et al., 2017). This approach is suitable for gaining insights and understanding the patterns in the data. It is also possible to make an interpretation of the findings based on the views of the participants. Furthermore, from the Malaysian perspective, it is possible to identify important elements and characteristics that are unique to authentic leadership theory.

Subsequently, the interview questions were developed from the perspective of SDT and AL. This approach is also considered inductive as themes are related to the data (Nowell et al., 2017). Through the literature to date, there are some potential areas for the development of an internal compass based on these theories (Assor et al., 2020; Seco and Teixeira, 2018). It is hoped that through the Malaysian perspective, the thesis can provide a better foundation for the concept of authentic leadership from the public sector context.

ii. Exploratory factor analysis

Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are statistical procedures used to reduce many variables in a model to a smaller number of factors (Kline, 2015). This procedure is important when the variables that are to form a construct are not properly defined. In addition to the wide use of EFA and CFA in social science research, there is much confusion in conducting EFA or CFA to evaluate a measurement model.

EFA is not a theory-driven but a data-driven technique that helps researchers explain how many factors or indicators are present in a construct. EFA is based on correlation statistics from software, i.e., no hypotheses are tested. In this phase of the study, the researcher intends to develop a new measurement model for the construct of authentic leadership based on the results of the previous interviews. According to experts, researchers should not misuse EFA and CFA by conducting the analysis with the same data set (Kline, 2015; Hair et al., 2010). A comparison between EFA and CFA are listed in **Table 11**.

Table 11 Comparison between EFA and CFA

EFA	CFA
<ul style="list-style-type: none"> • EFA was performed using SPSS • Investigate measured variables relating to theoretical constructs • To explore the importance of items • To remove redundant items in the question for field study 	<ul style="list-style-type: none"> • CFA was performed using Smart-PLS • To explore correlations among a set of measured variables • To measure goodness of fit – how well the data fit the hypothesised relationship

In this study, it was more appropriate to conduct EFA because there is an additional element or dimension that the researcher wanted to add to the existing Authentic Leadership Scale (ALI). Therefore, the researcher needs to know more about the factor structure. To this end, the EFA is conducted using SPSS to further explore the dimensionality of these items before proceeding with the PLS-SEM method in the next phase of study. **Figure 11** illustrates the data analysis employed for this study. In the first step, EFA was conducted. Next Descriptive statistics explain the demographic profile of the sampling and PLS-SEM analysis was employed to see how data corresponds to the statistical model.

Requirement for reporting
*based on (Field, 2018)

1. How to address bias?
2. Detect bias created by outliers.
3. Run normality test

Recommended, but optional Additions:

1. Exploratory Factor Analysis (if proposing new instrument or new dimension).

PHASE 2

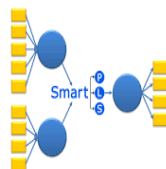


- Assessment :**
- Measure of Central Tendency
 - Measure of Variability

Descriptive statistics

IBM SPSS 26

PHASE 3



- Assessment :**
- Measurement Model
 - Structural Model

Structural Equation Modelling

Smart-PLS 4.0

Why use PLS-SEM?

- theory development and prediction.
- maximize the explained variance of the endogenous latent constructs (Hair, 2014)

Minimal Requirements for SEM paper (*publication strategy)
*based on (Hair et al., 2017; Gefen et al., 2011)

1. Why use PLS?
2. Explain why delete measurement items?
3. Mean, standard deviation, correlation, CR, AVE, validity, Path coefficient(t-value), R square

Recommended, but optional Additions:

1. Common method bias analysis
2. Non-response bias analysis
3. Why use first order or second order
4. Cross-validation
5. Collinearity

Figure 11 Data analysis for this study

iii. Structural Equation Modelling

Structural equation modelling (SEM) is a multivariate statistical technique that can be used in various social science research areas, including leadership and management research. SEM comes in two variants, which can be called covariance-based SEM (CB-SEM) and variance-based SEM (PLS-SEM). Both variants can handle complex models with more than three variables in one model and examine the relationship between the variables simultaneously. SEM is considered the second-generation multivariate statistical method (Hair et al., 2017).

Recently, this method has become very popular among social scientists as it combines path analysis, multiple regression, and factor analysis. The difference between the first- and second-generation techniques is that SEM could test multiple regressions simultaneously (Wong et al., 2019). The first-generation technique was used to perform confirmatory analysis, which means that the relationship between variables is based on prior theories and concepts. However, the limitation of the first generation is that it cannot be used for explanatory analysis when a

researcher wants to investigate the relationship between two or more theories and concepts in a research model. Therefore, CB-SEM and PLS-SEM fill this gap.

According to Hair et al. (2011), there are several criteria for selecting techniques that are appropriate for your research. These criteria include the research objectives, measurement model specification, structural model, data properties and algorithm, and model evaluation. Further explanation of the criteria can be found in **Table 12**.

For example, when research is aimed at testing theories, CB-SEM is preferred, while for developing and exploring theories, PLS-SEM is recommended. Based on these considerations, the technique PLS-SEM was used to support the aim of this research and to further develop authentic leadership and variance in constructs. Smart-PLS 4.0 is the software that was used to conduct PLS-SEM. It is a new technology that has a graphical interface that is easy to draw, intuitive, can perform multiple analyses simultaneously. It also focuses on prediction; it produces estimates that maximise the variance explained. The PLS-SEM approach is considered robust and can handle both reflective and formative constructs in a statistical model.

Table 12 Criterion for selecting PLS-SEM/CB-SEM based on Hair et al. (2011)

Criteria	PLS-SEM	CB-SEM
Research Goals	<ul style="list-style-type: none"> • If the goal is identifying key driver or predict the key constructs • If the goal is to explore a theory and an extend a structural theory 	<ul style="list-style-type: none"> • If the goal is to test a theory or compare with an alternative theory
Measurement Model Specification	<ul style="list-style-type: none"> • If the formative constructs are part of the structural model 	<ul style="list-style-type: none"> • If co-variance error requires additional specification
Structural Model	<ul style="list-style-type: none"> • If the structural model involves a complex model with many variables 	<ul style="list-style-type: none"> • If the model is non recursive
Data characteristics and algorithm	<ul style="list-style-type: none"> • If the sample size is small • If the data is not normally distributed 	<ul style="list-style-type: none"> • If the data exactly meet CB-SEM assumption
Model Evaluation	<ul style="list-style-type: none"> • If the latent variable scores are required in subsequent analysis 	<ul style="list-style-type: none"> • If global goodness fit is required • If a test for measurement model invariance is required

Thus, if both reflective and formative constructs are to be considered in a theoretical model, the PLS-SEM analysis is most appropriate. To analyse the measurement model, this study uses the analysis PLS-SEM with the SmartPLS software. The research framework requires an advanced statistical analysis procedure in SmartPLS. According to Sarstedt et al. (2019), the best method for assessing formative and reflective constructs that have a higher-order component (HOC) is either the embedded approach or the two-step approach. This procedure provides information about the quality of the measurement model before the structural model is tested (Hair et al. (2017). Ramayah et al. (2018) also highlights that building a framework based on the HOC model helps to address problems with discriminant validity.

Next, this study must decide either PLS-SEM or CB-SEM analysis for the field work data. There are several considerations for selecting SEM analysis techniques. In this research, PLS-SEM was considered for several reasons:

- a. the purpose of this research is exploratory and is an extension of the existing structural theories of SDT and authentic leadership
- b. PLS- SEM can measure both formative and reflective constructs in a structural model. This study includes both formative and reflective constructs (AL is formative while PSM, OCB and SWB are reflective constructs).
- c. A complex model that includes latent variables should consider PLS-SEM to best explain the variance of the endogenous (latent) constructs. In this study, there are four latent variables with a total of 58 indicators.

iv. PLS-SEM analysis

In data analysis, it is crucial for the researcher to select the most appropriate statistical techniques based on the research model. Normally, models that consist of more than two variables and contain latent constructs are considered complex statistical models. Therefore,

these models must use a multivariate analysis technique. Researchers have used structural equation modelling (SEM) for this purpose, and there are two types of common techniques such as CB-SEM and PLS-SEM (Ramayah et al., 2018; Hair et al., 2017; Hair et al., 2014).

PLS-SEM has the following advantages compared to CB-SEM: PLS-SEM is a new technology with a graphical interface (easy to draw, intuitive, can perform multiple analyses simultaneously). It focuses on prediction; it produces estimates that maximise explained variance. The PLS-SEM approach is considered robust and can handle both reflective and formative constructs.

On the other hand, CB-SEM has its own limitations as it can only handle reflective constructs and models (Hair et al., 2017). While PLS-SEM provides a solution for non-normal data that solves the problem of model complexity and can handle small samples. The bootstrapping procedure allows to predict a larger population. In contrast, CB-SEM is much more complex as it assumes data with a normal distribution, involves multiple data manipulations and fitting measures. Most importantly, this analysis requires a large dataset.

Therefore, the analysis PLS-SEM is most appropriate when both reflective and formative constructs are included in a theoretical model. To analyse the measurement model, this study uses the PLS-SEM analysis with SmartPLS software. The research framework requires an advanced statistical analysis procedure in SmartPLS. According to Sarstedt et al. (2019), the best method for assessing formative and reflective constructs that have a higher order component (HOC) is either the embedded approach or the two-step approach. This procedure provides information about the quality of the measurement model before the structural model

is tested (Hair et al. (2017). Ramayah et al. (2018) also highlights that building a framework based on the HOC model helps to address problems with discriminant validity.

On another note, the research framework involves examining multiple constructs in a theoretical model. This means it involves an integration of a lot of statistical approaches called multivariate analysis. This study performed PLS- Structural Equation Modelling (SEM) for the analysis. PLS- SEM analysis is used for hypotheses testing, mediation, indirect effects, measure group differences which were all the intended analysis to be performed for this study.

3.4 Data collection and management

Since there are three phases of study, data collection process was managed accordingly. The following table describes the data collection phase.

Table 13 Data collection phases

Phases of study	Date	Duration	Participants	Method
Phase 1	April 2020	1 month	15 leaders	Structured interviews
Phase 2	May 2020	2 weeks	10 experts	Focus group discussion
	Aug- Sept 2020	2 months	128 mid-level bureaucrats	Survey
Phase 3	Dec – Jan 2021	2 months	398 mid-level bureaucrats	Survey

The next diagram summarised the entire data collection process.

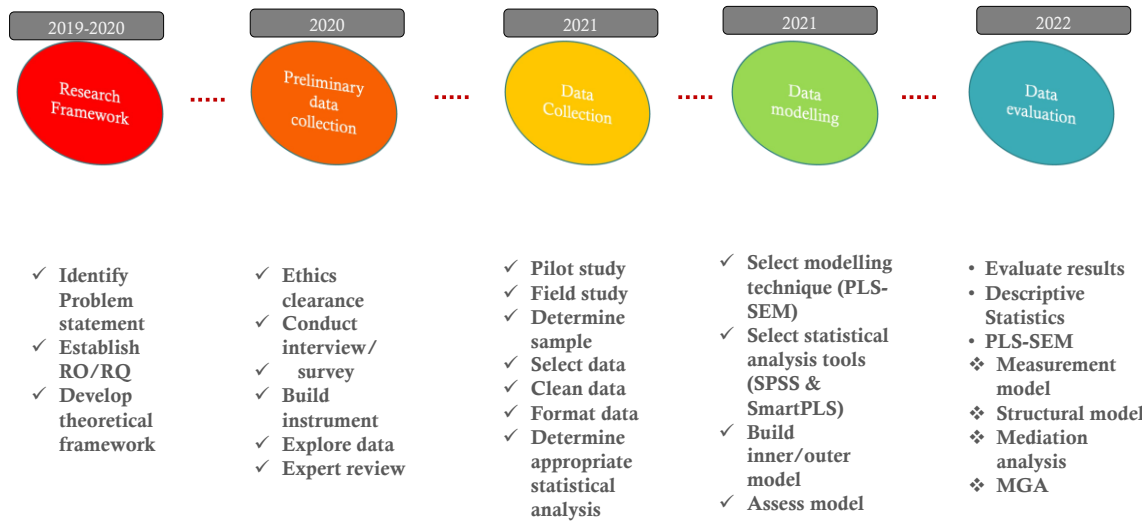


Figure 12 Data collection process

3.5 Validity

Validity is divided into two types a) construct validity and b) criterion validity. Construct validity refers to the extent which a measured variable can measure the conceptual variable (Stangor, 2015). Face validity, content validity, convergent validity and discriminant validity are ways to assess validity (Creswell and Plano Clark, 2018; Devellis, 2017; Stangor, 2015). To ensure face validity and content validity was addressed, the researcher did back translation of scales and expert review to validate the instrument. After that, convergent validity and discriminant validity were addressed during the preliminary data analysis based on pilot study findings. More explanation about this were addressed in the next chapter.

3.8 Reliability

Reliability is related to the results of the study whether it is repeated in different settings. In quantitative studies, reliability is also concerned with internal consistency especially when a

researcher applies certain scales to measure specific variables. (Stangor, 2015). Therefore, based on previous studies, the Cronbach alpha value was examined in related scales. The details are shown in Chapter 2, under item 2.7. These scales have been used in organisational studies, both in public and private sector. The researcher considered the scale measurement that has a strong Cronbach alpha value and were used in public sector settings.

3.9 Ethical procedures

Ethical procedures must be observed during the data collection phases. The University of Nottingham has established 5 core principles of ethical research: 1) maximising benefit, 2) minimising harm, 3) respecting autonomy, 4) fairness and accountability, and 5) integrity and transparency. These core principles serve as a code of conduct for researchers to protect research, minimise risk and avoid harm, especially when research involves human subjects. This study followed the policies and ethical procedures of Nottingham University Business School (NUBS). All documents were submitted digitally and reviewed by the ethics committee.

Two ethics applications were submitted, one for the qualitative study and another for the quantitative study. After obtaining ethical approval from the university in March 2020, (**see Appendix**), permission was sought and supported by the Public Service Department (PSD) via email (**see Appendix**). The PSD is the gatekeeper that provides access to participants in the study. Participation in this study is voluntary and the identity of participants was kept anonymous and confidential. Each participant was provided with an informed consent form which included a summary of the study, the selection criteria and the tasks expected of them. Participants must give their consent so that they know what they are expected to contribute to this study and so that they understand the nature of this study.

To protect the anonymity and confidentiality of the participants, there were no identifying characteristics in the data that would have allowed the researcher to know whose data she was examining, and the data were anonymous. No one other than the researcher had access to this information. In the results, the names of all participants were not disclosed, only their opinions became the subject of discussion. Each participant was addressed with codes, for example P1 represent participant number 1, and P2 represent participant number 2 and so on.

In the survey form, participants were not required to provide any personal information other than their age, gender, position, and academic qualification, such as their name and place of work. So, this information was not included in the questionnaire. In this way, the researcher has taken some measures to maintain confidentiality. Participants were informed that their participation was completely voluntary, which means that they have the right to withdraw their participation without giving a reason. Furthermore, they were assured that they would not suffer any harm to their health, safety, or stress by participating in the survey.

As this survey was conducted in Malaysia, the Personal Data Protection Act 2010 (MIGHT, 2017) was observed. This act protects the personal data of individuals by not presenting data or information in a form that reveals the respondent. In this case, personal data such as names, positions and ministry must be protected as work-related information. Sensitive data such as health status, political affiliation or religious beliefs are irrelevant to the study. Therefore, no potentially identifying characteristics other than names and positions are used in this study. Ethical procedures were followed accordingly in this study.

3.10 Summary

Briefly, this chapter discussed several important points related to research design and methodology. From the discussion, this thesis used mixed methods and a cross-sectional study design. The three phases of data collection were organised to align with the research questions. The research framework consists of four main variables such as AL, PSB, PSM and SWB and was studied from SDT, ALT and the contingency model perspective. In the next chapter, each phase of studies presents more detailed discussion and findings.

CHAPTER 4

THE PERCEPTION OF AUTHENTIC LEADERSHIP

4.1 Introduction

This chapter explains the first phase of the study, which focused on the preliminary interviews with public sector leaders in Malaysia. Most importantly, this chapter addresses the first research question of the thesis. The findings complement the conceptualisation of authentic leadership in the Malaysian context. It begins with the background of the definition and problems associated with authentic leadership and why further development is important based on the specific context. It then explains the framework, sample and analysis procedures and discusses the findings. The findings were used for the second phase of the study, which consists of developing tools for the model of prosocial engagement.

4.2 Authentic leadership and its theoretical development

AL has been defined from an intrapersonal, interpersonal, and developmental perspective (Northouse, 2019). In the earliest development of this concept, it was defined from an intrapersonal perspective that focused on a leader's self-knowledge, self-regulation, and self-concept (Shamir and Eilam, 2005). From an interpersonal perspective, AL focuses on the relational process that results from the two-way interaction between leader and follower (Eagly, 2005). Another widely used term for AL is developmental perspective, which is defined by four main components: Self-Awareness, Moral Perspective, Balanced Processing and Relational Transparency (Walumbwa et al., 2008).

These definitions provide the springboard for the theoretical development of AL, which follows the practical approach based on real-life examples, case studies, training, and development (George et al, 2007; George 2003) and the theoretical approach leading to the definition of the construct and its characteristics (Neider and Schriesheim, 2011; Walumbwa et al, 2008, Gardner et al, 2005). Although AL has been applied in various settings, very few examples have been found in the public sector, for example in health and education (Lemoine, Hartnell and Leroy, 2019; Wong, 2019; Aliyyani, Wong and Cummings, 2018). Today, no consensus was made to the definition related to authentic leadership in the public sector.

Therefore, using self-determination theory and authentic leadership theory, this study explores the authenticity and autonomy components of authentic leadership in the context of the public sector in Malaysia. Malaysia, a Southeast Asian country selected for this study, provide an interesting perspective from a non-Western country's point of view.

4.3 Qualitative interview

In this phase, the preliminary study, the qualitative interview was chosen because the participants were selected based on certain criteria. Furthermore, the participants were selected because they represent the leaders in the Malaysian public sector and interview method is the best approach to capture the views and experiences of the participants. This is not possible with a survey approach as their thoughts were best captured through conversations. This section discusses the design of the study.

4.3.1 Setting

This study focused on the perception of senior managers in the Malaysian public administration. In Malaysia, these top positions or their nomenclature are referred to as JUSA or *Jawatan Utama Sektor Awam*, which stands for Premium Positions in Public Sector. They are considered the highest executive position or rank for public administrators in the Malaysian government. Heads are responsible for the administration of the ministries and play a very important role. In the ministries, for example, the senior management level consists of directors or undersecretaries and is headed by the secretaries-general. Together, they account for less than 1% of the 1.6 million civil servants in the Malaysian public administration.

The hierarchical structure of the Malaysian public administration is led by the JUSA, which is supported by the Professionals and Management category, managerial and support staff. Middle managers perform managerial and administrative functions, but also play a leadership role in the functions. This study explored senior and middle managers' views of how they perceived authentic leadership. Their views and leadership experiences are critical to understanding the complexity of public administration in Malaysia.

Malaysia is a progressive Islamic state in the Asian region. The style of leadership and governance has always been based on local and religious foundations. Some of the successful ethical campaigns promoted among Malaysian civil servants are "Clean, Efficient and Trustworthy" (*Bersih, Cekap, Amanah*) - to avoid corruption in the public sector, "*Islam Hadhari*" - Islamic values in governance, "Shared Prosperity Vision" (*Wawasan Kemakmuran Bersama*) and "Malaysian Family" (*Keluarga Malaysia*) (INTAN, 2020; IIM, 2019; JPA, 2016). In addition, Malaysia's Human Development Index (HDI) is considered above average

in East Asia and the Pacific region with a score of 0.810 (Human Development Report, 2020). The HDI is a measure of healthy living, access to knowledge and a decent standard of living. This country is a good example of a developing country with a decent quality of life and strong cultural and religious foundations. It is hoped that the results of the study will contribute to the existing literature on leadership and lead to a better understanding of the leadership skills of future leaders in the public sector.

4.3.2 Design

This study used a qualitative thematic approach derived from a post-positivist philosophy. Content analysis was appropriate for this study as it was useful in the initial stages of the research. However, the researcher must first decide whether this approach supports data-driven or theory-driven approaches (Boyatzis, 1998). This study is a theory-driven approach that further elaborates on the theories chosen for this research such as self-determination theory and positive leadership. This approach is also considered an inductive approach as themes are related to the data (Nowell et al., 2017). Based on previous literature on these theories, gaps were found, particularly in the public sector. In this study, themes within these theories are further sought so that the theories can be refined and applied in the Malaysian setting

As there are few studies in the context of AL in Malaysia (Ahmad and Kong, 2018; Opatokun et al., 2013; Hassan and Ahmad, 2011), the analysis was useful in providing richer findings for the next phase of the study and this guide was used to make some changes and improvements to the research instrument. The findings of this study contribute to the development of an authentic leadership tool that was distributed to a group of mid-level bureaucrats through

survey questionnaire in the third phase of the study. Questions used in this study are listed in **Table 14.**

Table 14 Interview questions

Topic	Questions
Leadership	<ol style="list-style-type: none"> 1. What makes authentic leadership relevant today? 2. Describe your early leadership experience. 3. What do you learn from your mentor? 4. How do you feel about middle managers as leaders?
Authenticity	<ol style="list-style-type: none"> 1. What authenticity means to you? 2. How do we develop authentic leaders? 3. How can middle managers be more authentic? 4. What values are important in authentic leadership?

4.3.3 Sampling and recruitment

This study explored senior and middle managers' views of how they perceived authentic leadership. Therefore, two separate samples were used, the sample was divided into two categories. The first sample consists of 25 top leaders and senior managers, the second sample consists of mid-level managers. All of them were the ADS officers in the Malaysia public sector.

Sample

1

For the first sample, semi-structured interviews were conducted with 25 executives and senior managers in various ministries in Malaysia. In qualitative analyses, it is common to use

between 1 and 30 informants (Fridlund and Hildingh, 2000); however, the sample size for this study is limited to 15 informants due to the research question to ensure a sufficient level of trust (Bengtsson, 2016). Initially, five participants were contacted through the researcher's network. All participants agreed to participate in 45-minute in-depth interviews. Additional participants were recruited on the recommendation of leaders who met the same criteria as the participants.

The interviews aim to elicit themes and additional insights related to authentic leadership from a public sector perspective. According to Sarstedt et al. (2017), non-probability sampling can be considered when the sampling frame cannot be achieved. Therefore, we opted for a purposive sampling method to select participants based on certain characteristics and to ensure that they represent the views of "thought leaders" in the field of leadership. Some of the key selection criteria for this survey were: 1) senior leaders in the highest position ministries or agencies, 2) at least 5 years of professional experience in top management or a senior executive role. The response rate was 60%; a total of 15 people were interviewed who had been selected in a snowball sampling method representing the top management. The characteristics of the participants are listed in **Table 15**.

As for the criteria of the participants, they were top leaders in the public sector organisations in the Malaysian civil service with an average of 20 years of professional experience and more than ten years in senior positions in various ministries and agencies. Their professional experience includes leading international negotiations, serving in private sector institutions, diplomatic missions and managing government agencies and ministries. The sample was predominantly male (60%). Most (64%) had at least a postgraduate degree, while 34% had both a master's and a doctorate.

Table 15 Profile of participants

Characteristics	η	Percentage %
Gender		
Male	10	66
Female	5	34
Age		
30-39	2	13
40-49	4	27
50-59	10	60
Professional experience		
15-19 years	2	13
20-24 years	3	20
25 + years	10	60
Highest academic qualification		
Bachelor's degree	0	0
Masters	10	66
PhD	5	34
Role within the organisation		
Top management	8	53
Senior management	5	34
Middle management	2	13
Total participants	15	

Sample 2

The second sample was participants from middle management in the Administrative and Diplomatic Service (ADS) scheme in the Malaysian public administration. There are currently about 5,000 civil servants working at the middle managerial level in various ministries and agencies in Malaysia. Although the sampling frame was set, not everyone is accessible to participate in a large-scale survey. Therefore, as suggested by (Aguinis, Hill and Bailey, 2019; Sarstedt et al., 2017), the non-probability, stratified sampling was chosen to select participants. The criteria for participants were that they had been in the ministries for more than 5 years, were currently in a mid-level position, and were in a leadership role. An online survey tool,

Qualtrics, was used to document their responses. The characteristics of the participants are shown in **Table 16**.

Table 16 Profile of participants

Characteristics	n	Percentage %
Gender		
Male	60	47
Female	67	53
Age		
30-39	40	31
40-49	75	59
50-59	12	10
Professional experience		
15-19 years	80	63
20-24 years	47	37
25 + years	0	0
Highest academic qualification		
Bachelor's degree	50	39
Masters	77	60
PhD	15	1
Role within the organisation		
Top management	0	0
Senior management	10	8
Middle management	117	92
Total participants	127	

In terms of the criteria of the participants, most of them belong to middle management level in the public sector organisations in the Malaysian civil service and have an average of 15-19 years of work experience. The sample was predominantly female ($n= 67$). Most (70%) had a postgraduate degree.

4.3.4 *Data collection*

a) Sample 1

Interviews were conducted with the leaders in the Malaysian public administration. These leaders (hereafter referred to as participants) provided some valuable insights from practitioner and expert perspectives on key issues in public administration and the challenges faced by leaders in the public sector. In addition, the participants were asked to discuss some issues related to authentic leadership, prosocial behaviour, and public service motivation in the interview.

b) Sample 2

In addition to the in-depth interviews, middle managers participated via an online survey. This survey collected their demographic data as well as open-ended questions about their opinions of their leaders and their own leadership experiences. The survey was developed using a software called Qualtrics. There were 300 questionnaires distributed online through social media platforms such as Facebook and WhatsApp groups. The feedback from this survey helps to develop the measurement tool for the field research. 127 respondents were able to answer the survey. The questionnaires consist of ideas about authentic leadership, followed by open-ended questions about leadership issues and challenges from their perspective.

4.3.5 *Data analysis*

A qualitative data analysis was performed that involved steps of systematic coding and categorising, identifying patterns classified into themes to generate meaningful and useful insights from the qualitative data (Tracy, 2010; Boyatzis, 1998). Some qualitative methods include grounded theory, phenomenology, and thematic analysis (Creswell and Plano Clark, 2018; Nowell et al., 2017). In addition, qualitative data analysis can complement the

quantitative data in the next phase of the study (Creswell, 2018; Nowell et al., 2017; Braun and Clarke, 2006; Koch, 2006; Lincoln and Guba, 1985).

The interview data were transcribed and facilitated using *NVivo*, the qualitative analysis. The quantitative data was also recorded based on frequencies and percentages classified in the thematic category. The procedure follows the coding methods by Saldana (2021) which addresses epistemological research questions. Epistemological research questions deal with descriptive analysis to understand the leadership phenomenon. The focus is underlying meaning across codes. During this process, additional themes emerged about authenticity that adds a new definition to authentic leadership, which would be useful for instrument development in the next phase of the study. However, the findings only discussed based on the participants responses from both samples.

4.4 Findings

At the beginning of the interview, participants were asked about their observations on leadership in general. The discussion also included issues and challenges of leadership in the public sector. The findings were analysed using sentiment analysis. Through this analysis, participants' views on the public sector can be further explored and analysed. What is important about this discussion is that public sector leaders should consider authentic leadership as an alternative leadership style. This is because a lack of authenticity highlights a leader's lack of skills and self-identity. This question therefore provides an opportunity to discuss what authentic leadership means from a practitioner's perspective.

As discussed in 2.3.2 of **Chapter 2**, other characteristics of positive leadership theories were explored in this thesis. Some ideas about positive leadership theories were discussed in the

interview. The purpose of comparing previous definitions is to discover new elements or vocabulary that may be unique to the Malaysian context. However, it is important to note that most participants were not familiar with the theoretical definition of authentic leadership prior to the interviews. Therefore, the discussion was based solely on their professional and personal experiences with leaders or as leaders.

4.4.1 Leadership issues in the public sector

In the beginning of the interview, the participants were asked about general opening questions. One of the questions was about leadership issues faced among the administrative leaders in the government. This question was important to understand the context of the problem and this issue could be specific to administrative leaders, not the political leaders in the government.

Figure 13 captured the key issues.

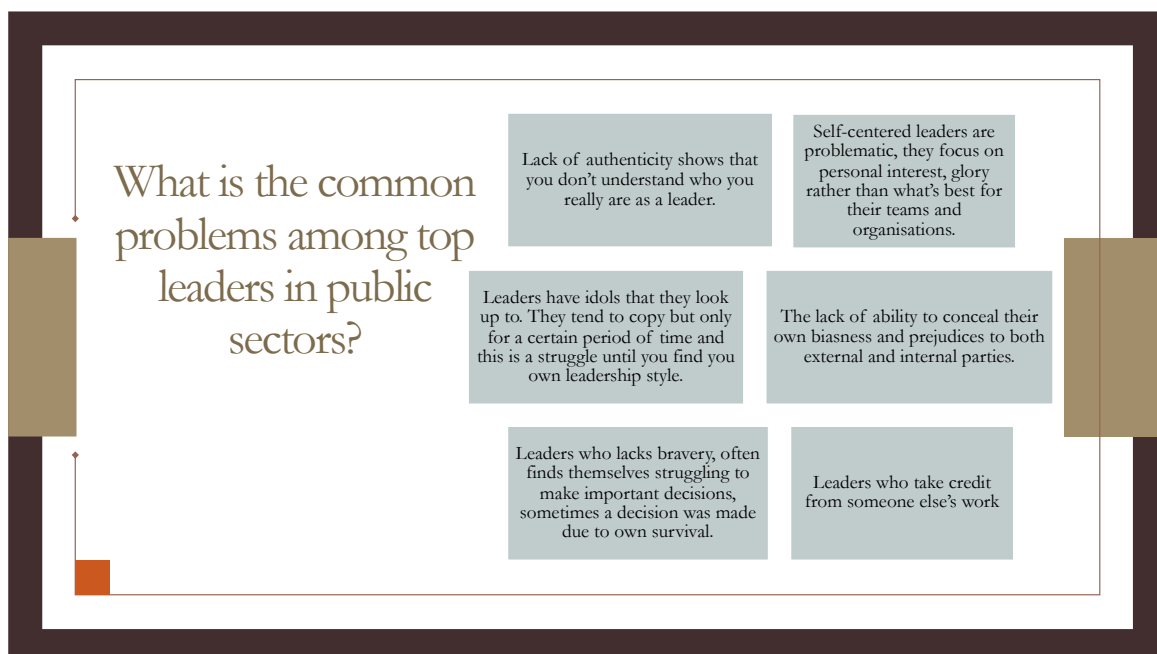


Figure 13 Issues among top leaders in the public sector

4.4.2 Defining authentic leadership

The definition of authentic leadership is based on the practitioner's perspective. The participants discussed the elements of authentic leadership without making any reference to the existing definition. These elements are not necessarily personal qualities, but a combination of mindsets and qualities that are consistent with existing public sector values. The results of the survey can be summarised in **Figure 14**.

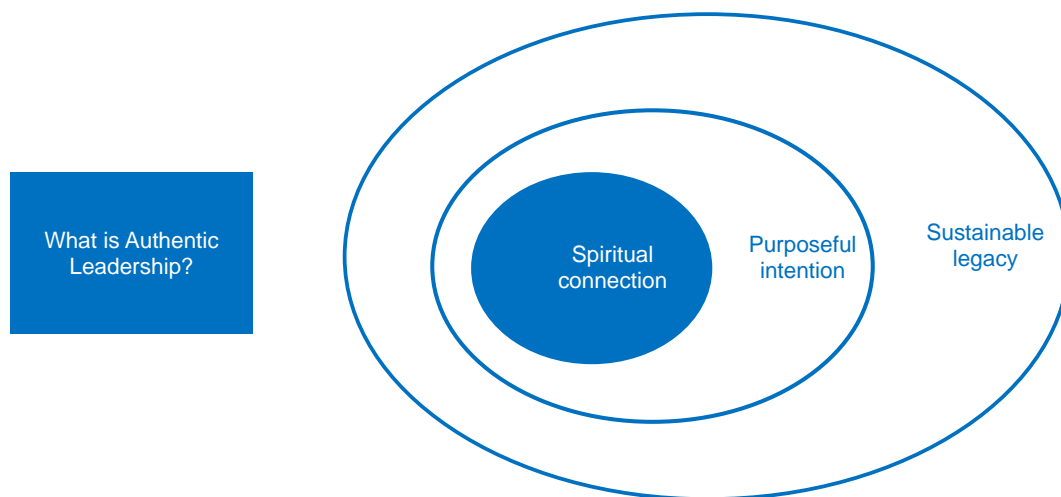


Figure 14 Definition of authentic leadership

The interview transcripts were transcribed and coded systematically using NVivo software. Based on the feedback, each response was categorised into three main themes and the following sub-themes. The main themes were 1) spiritual connection, 2) purposeful intention, 3) sustainable legacy. Each of these themes have its own description. Spiritual connection is the core of authenticity, which also becomes the personal moral compass or their true north.

Based on these two data sources, the leaders and managers defined authentic leadership according to their context. Initially, they began by describing authentic leaders in their own words. Authentic leadership was described as be yourself, being truthful, genuine among the participants (P2, P5, P10, P12). For example,

Authentic leaders are courageous leaders who can be fair in making important decisions for the organisations. They are also good in manoeuvring between firmness and kindness depending on situations. Even though they have their own role model for leaders, they are not tempted to copy them and know who they really are. (P5)

They expressed the word authentic as being self-aware and transparent in both words and actions. However, while exploring the meaning of authenticity, the participants find the term being authentic and authentic leader might be confusing and misleading. Therefore, several leaders suggest that there should be a clear distinction between authenticity, authentic leader, and authentic leadership to help the researcher conceptualise the topic.

Next, sentiment analysis was conducted to look deeper at these views and make inferences. **Table 17** shows the meaning of authentic leadership according to the public sector leaders. In this table, several verbatim (statements) were chosen to indicate how authentic leadership were defined by the practitioners. Based on the sentiment analysis, majority of the leaders described authentic leadership positively based on personal experiences. Authentic leaderships were characterised based on prior experiences, values, and motives. Based on 15 participants (n=15), ten of them define authentic leadership in a positive statement (n=10). The following are excerpts of the statements. Notice that words like credit, motivation, branding are linked to personal experiences being a leader in the selected statements.

Consequently, based on the statements derived from Table 17, these findings were further analysed into common themes and sub-themes. The characteristics of authentic leadership were presented in **Table 18**. The table shows the main categories of authentic leadership, including main themes and subthemes. In this thesis, there are three (3) main themes emerges from the findings, such as purposeful intention, spiritual connection, and sustainable legacy. The purposeful intention was derived based on participants responses about what is authentic and inauthentic based on their individual experiences. The spiritual connection explains the role of leader is very connected to their spiritual connection with the Creator (God) and how this relationship was translated into the relationship with other beings. The sustainable legacy is about creating a legacy that were realised into the form of developing other leaders and useful programmes and government policies.

Table 17 Sentiments about authentic leadership

Term	Selected Verbatim	Inferences
Authentic leadership	<i>“Authenticity means knowing who you are and why you choose this career. Your leadership position became more significant when you know who you really are.”</i>	Leaders need to understand their position and recognise their humble beginnings to become an authentic leader.
	<i>“Authenticity cannot be measured by others, there is a limitation to how people see, perceived you as a leader according to their worldview.”</i>	Authentic leadership could potentially still be a self-report instrument.
	<i>“Authentic leaders do not do things for their personal glory, otherwise the organisation achievement become inauthentic”</i>	Authentic leader is driven by purpose.
	<i>“Authenticity is about branding your own values and experiences. You can copy your role model, but only for a certain period.”</i>	Authentic leadership recognise personal values and experiences of the leader in shaping their character.
	<i>“Authentic leaders give credit to their team members and motivate them to do better.”</i>	Authentic leaders create legacy in the form of the new leaders under their wing.
	<i>“Authenticity can be influenced by your own values and culture, so the definition of authentic leaders could be relative.”</i>	The definition of authentic leadership must include understanding of the values and culture.

Table 18 Themes and subthemes

Themes	Subtheme	Quotations
Purposeful intention	Align intention with behaviour and goal.	<i>How I see authenticity is because of my culture and family upbringing</i>
	Impersonal intention	<i>You become inauthentic when you depend on others for your survival</i>
	Start with why, how, and where	<i>Why do I join the civil service? How long do I plan to be in this career? Where do I see myself in the next 5 or 10, or 15 years?</i>
Spiritual connection	Remember your purpose	<i>Human beings are naturally selfish; you must be honest and do what pleases God instead of pleasing yourself or others.</i>
	A good relationship with God and a relationship with others	<i>Authenticity is connected to both relationships among human beings and with Allah. But first, we need to have a strong connection with the Almighty, and the rest will be easier for us.</i>
	Work-life integration	<i>To a certain point, I no longer believe in work-life balance, but work-life integration is more relevant to our current condition.</i>
Sustainable legacy	Develop others	<i>Praise and motivate your officers when they do a wonderful job and never take credit for someone else's work.</i>
	Develop nation	<i>Working in the public sector is not about you but serving others, building the nation, and protecting national interests.</i>
	Good memories	<i>People will remember how you treat them more than your contribution when you have left.</i>

4.4.3 Elements of authentic leadership

The definition of authentic leadership from the practitioners' perspective were used from both samples. This study noted broader experience based on the descriptions. Overall, the participants described what they perceived based on their personal beliefs and values and according to the norms and work culture of working in Malaysian public administration. In addition to that, they also describe ideal characteristics or essential features that are unique to Malaysian culture.

Based on these two sources of data, leaders and managers defined authentic leadership according to their context. First, they started by describing authentic leaders in their own words. Authentic leadership was described by the participants (P2, P5, P10, P12) as "being oneself", "being truthful" and "being genuine". Authentic leaders are courageous leaders who can be fair in making important decisions for the organisation. They are also good at manoeuvring between firmness and kindness depending on the situation. This is evident in the statement "Although they have their own leadership role models, they are not tempted to copy them and know who they really are." (P5). Therefore, authentic leaders still connect with their self-identity.

They expressed the word authentic in a way that they are self-aware and transparent in both words and actions. However, in exploring the meaning of authenticity, participants note that the terms 'authentic' and 'authentic leader' could be confusing and misleading. Therefore, a clear distinction between authenticity, authentic leader, and authentic leadership are warranted.

From the discussion, there main themes emerged such as 1) spiritual connection, 2) purposeful intention, 3) sustainable legacy.

i. Purposeful intention

Intentions must have a behaviour and a goal. Many participants believe that authentic leadership depends on a moral compass. Although some scholars argue about it, the moral compass must first start with a purposeful intention. The intention must then be followed by a behaviour and a goal. Some older participants relate this to their early experiences as young officers. Their superiors taught them to develop a sense of purpose right at the beginning of their career. One tells (P2) that joining the civil service was due to "more stability in the job" and "expectations" from parents. Another tells that becoming a civil servant was an obligation for him because he was a government scholarship holder (P5). Many of them joined the service for different reasons, but after a few years they began to find their purpose and most of them shared a similar sense of 'service to the nation" or *Berkhidmat Untuk Negara*.

The purpose does not necessarily have to be personal. For example, one participant said, "One should not work or live to please others" (P5). In other words, the decision to serve in public service should not be made for personal reasons or fame. Authentic leaders usually have a strong selfless intention to serve the nation. They bring this to the forefront and remind people how to find their motivation because their purpose is clear. Several participants distinguished between authentic and inauthentic leaders to distinguish the person who "behaves differently before and after promotion" or a person who "shows favoritism for personal reasons" (P7, P12, P15).

Start with the why, how, and where. As the famous Simon Sinek wrote in his book *Start with the Why*, several participants gave this feedback and we have summarised this information. Leaders believe that a purposeful intention to serve must also be accompanied by a series of important questions. To clarify, these are the three questions you should ask yourself if you want to enter public service as a diplomat or administrator: i) Why am I entering public service? ii) How long do I plan to stay in this profession? iii) Where do I see myself in the future?

ii. Spiritual connection

Public service is connected to a noble intention. Because of this intention, participants first think of a spiritual connection before finding meaning in their work. "Remember your purpose" (P1, P3, P4, P10, P11) was mentioned a few times, and "God has the power to change a person's destiny". Even though this phrase is not conceptual, it has a strong connection to the earlier discussion about the moral compass. Most participants are Muslims or have an Islamic faith, so the concept of God plays an important role in their lives. Most agree that Islam is a way of life. So, the meaning of life is to "connect with the Creator" (God).

Moreover, most of them believe that being spiritual is synonymous with being religious. The word spiritual is associated with "sacred", "transcendental" and "holy". To support this statement, participants explain that work is considered an "act of worship" because religion (Islam) in its entirety should be embraced as a way of life. This leads to positive behaviour, thinking and work ethics. This evidently shows that the concept of spirituality and religiosity middle-level bureaucrats were seen in tandem with how they perform at work.

In addition, it is interesting to note that most of the participants disagree with the concept of work-life balance because their work and leadership roles are demanding and most of their

work goes beyond regular office hours. For this reason, they would like to think about integrating work and private life, as it is impossible to separate the two. Most managers were also aware of their role as a supervisor who "leads" and "motivates" rather than "instructs" and "delegates". This conventional practise reflects the work culture of a few decades ago. More recently, leaders feel most comfortable using the words "remind", "advise", and "reflect" as a leadership style to guide the younger generation in the workplace.

iii. Sustainable legacy

Leadership in the public sector is also about creating a legacy. Authentic leaders can create a better legacy because they will seek to make a 'sustainable contribution', whether through public policy or public programmes. One participant said, "People will remember you for who you are, not for what you have done" (P5). Another participant mentioned that leaders are better remembered for their personal qualities, so a negative impression does not leave a lasting impression of the person.

However, we are more interested in how this legacy can be sustainable. Participants explained that legacy is not about personal achievement, but about aligning it with policies or plans in the interest of the public. Sustainable here refers to the relationships and actions of authentic leaders who bring people, policy, and the public together to do what is best for the nation and future generations.

4.4.4 *Middle-level bureaucrats as authentic leaders*

To develop a model of prosocial engagement among middle-level bureaucrats, the interview also asked some questions about middle managers as leaders. Even though they do not hold the most significant positions compared to top leaders in the organisations, they have shown some forms of leadership behaviour because of on-the-job training. Based on the interviews with the top leaders and middle-level bureaucrats, both groups believe that middle-level bureaucrats play an important role in the organisations as they are responsible for managing the internal and external stakeholders of the organisation.

In terms of authentic leaders, middle managers had a better chance of being authentic because of their role as a "sandwiched in between" (Ancarani et al., 2019). This is because they have access to all stakeholders, which strategically enables them to gain buy-in from different levels within the organisation. However, middle-level bureaucrats were also seen as "young" and "inexperienced", which made senior leaders reluctant to take on more challenging leadership roles in public organisations. The challenging tasks were delegated to senior managers, who were usually directors in the ministries or agencies.

In **Table 19**, some selected verbatims (statements) reflect the perception of top leaders about middle-level bureaucrats in Malaysia. Based on the interviews with the top leaders, their perception was categorised into three main areas i) the middle manager roles, ii) the middle managers development as future leaders, and iii) middle manager's authenticity as the leaders. The top leaders acknowledged the importance having middle-level bureaucrats as future leaders in the public sector. More so, they also believed that middle-level bureaucrats could potentially exhibit strong authentic leadership qualities. This is due to their existing positions

by being in the middle does pose its own advantages and limitations. For example, the advantage of being in the middle allow the middle-level bureaucrats to be themselves and they were seen as the most resourceful to work with the upper category and lower category within the hierarchy. The expectations for them were not as high as those who are in the senior management positions in the organisation. This perspective offered interesting insights and alternatives to transformational leadership and servant leadership, which are more common in the public leadership literature.

Table 19 Perception about middle managers from the top leaders

Term	Selected Verbatim	Inferences
Middle manager roles	<i>“Middle managers play an important role within the organisation because they must manage internal and sometimes external stakeholders”.</i>	Mid-level bureaucrats are important because of their position in their organisation.
	<i>“Middle managers were seen immature and inexperienced to take on bigger responsibilities because they lack communication skills, decision making skills, and big picture thinking”.</i>	Mid-level bureaucrats still need to develop some leadership competencies.
Middle manager’s development	<i>“Existing training and leadership programmes were conducted to tackle basic skills as managers”.</i>	Development for middle managers must include strategic leadership skills.
	<i>“Middle managers can be themselves; they are not expected to deal with political masters and senior officials in the government”.</i>	Mid-level bureaucrats can be true to themselves at their respective positions.
	<i>“Middle managers can be developed as leaders using the ‘push and pressure’ technique, which means consistent monitoring in ensuring deadlines are met and they can manage the resources accordingly”.</i>	Mid-level bureaucrats still need mentoring.
	<i>“Middle managers can have their own mentors and role models so that they have their own vision and ideas on how to become a great leader one day”.</i>	They need to have mentors and coaches for personal development.
Middle manager’s authenticity	<i>“Due to the nature of work and the social circle, they can be themselves and apply their own leadership style at work. Their tasks are being delegated from the senior, therefore their struggles are very task-specific”.</i>	The struggles of mid-level bureaucrats are not as great as the senior leaders.
	<i>“Middle managers have a lot of access of resources from their position, so they can get things done effectively and efficiently. A good networking is additional bonus”.</i>	They are resourceful and at the best position to work with others.
	<i>“Middle managers are safe from being judged as bias. They were closer to the team; they work with them closely and some have very tight-knit teams”.</i>	People have less expectations about them and they are more approachable as leaders.

4.5 Discussion

Based on the findings, the interview, important insights were gained into how authentic leadership is perceived in the public sector. First, in defining authentic leadership, the practitioners define leadership and authenticity differently than in the literature. This could be because leadership was defined by different groups of people belonging to different categories and professional backgrounds. In this analysis, the top leaders defined leadership based on their experiences, while the middle level defined leadership based on their expectations. Since human experience can be subjective and interpretive, these findings were only applicable to the ADS in Malaysia.

From the SDT perspective, this study focuses on the early development of AL in Malaysia. Therefore, the theoretical contribution of this study is related to the theory of self-determination or motivation of the leaders. In the literature review, AL studies faced a challenge to advance into more substantive theoretical advancement (Crawford et al., 2020; Diddams and Chang, 2013). This challenge is not particularly unique to AL. This situation is also common with other positive leadership theories (Gardner et al., 2019; Banks et al., 2016) However, the uniqueness of AL is its potential to explore self-growth among individuals (Banks et al., 2016; Shamir and Eilam, 2005), develop others (Levesque-Cote et al., 2020; Yesilkaya and Aydin, 2016), and develop stronger moral components for leadership qualities (Tonkin, 2013). Thus, this study supports AL development by exploring alternative definitions through SDT.

In the background section earlier, the purpose of this study was to investigate key aspects of authentic leadership from the public practitioner's perspective. This study revealed that participants were not familiar with the concept of authentic leadership. Some themes that are

unique to the Malaysian context were explored. Elements like 1) spiritual connection, 2) purposeful intention, 3) sustainable legacy are important and relevant to AL discourse in Malaysia. In addition to that, participants acknowledged the importance of authentic leadership in the public sector. This perspective offered interesting insights and alternatives to transformational and servant leadership, which were more common in public leadership literature. It is important that while the leaders define new elements of authentic leadership, these elements suggest a new model for leaders to develop leaders. As mentioned previously in Table 4.3, mid-level bureaucrats could be authentic leaders because of their position within the organisation, the resources they had, and they were approachable as leaders.

Notably, authentic leadership is a combination of mindset and a set of behaviours because of the leaders' exposure towards the environment and the coaching process with their leaders. Three themes mentioned earlier could be identified to self-growth. The spiritual connection is the inner compass that guide their insights, followed by purposeful intention, and translated into sustainable legacy. This description is a combination of traits and process that is common in motivational theories like SDT (Deci and Ryan, 2000). In SDT, several key components include autonomy, relatedness, and competency (Deci and Ryan, 2000).

So how do we relate this authenticity? The earliest definition of authenticity simply means being true to yourself (Luthans, 2005) and multiple combinations of awareness, unbiased processing, behaviour, and relational orientation (Kernis and Goldman, 2006). Both definitions have in common that both terms are very leader-oriented (Crawford et al., 2020). Purposeful intention only happens when one truly understands their role and responsibilities at work. It is possibly aligned with the competency-related element, which means being skilful and knowledgeable

about something (Miniotaite and Buciuniene, 2013). So, these findings aligned with previous concepts in self-determination theory as well.

This study's important outcome is authentic leadership from the Malaysian public sector perspective. Still, it also provides some distinctions as to what authentic leadership is not. For example, the descriptions of authentic leadership are still unclear, whether it is a process or dimensions with several elements. What this study informs us is that if the definition needs to be expanded into an operational definition for empirical testing, the construct itself could potentially be multi-dimensional (Levesque-Cote et al., 2020), consistent with the previous definition of four dimensions of AL by Walumbwa et al. (2008) or authentic leadership as a process by Avolio et al. (2005) and authentic leadership as leadership approach by George and Sims (2007). These findings are critical as a foundation for quantitative studies, as the scholars need something concrete for theory-testing and statistical model development. This study has laid out an alternative foundation to elements that is also important in authentic leadership from the public sector perspective.

In addition to that, surprisingly, the themes emerging from these studies were also leader-oriented (Crawford et al., 2020). Perhaps, one thing to learn from this process is that leadership is still a representation or perception that comes from the leader rather than the follower. These findings, however, is not a definite answer to the conceptualisation of AL. Further empirical testing is warranted to bring this conversation to another level.

Finally, the spiritual connection element supports previous literature on self-transcendence and spiritual scale by Sendjaya (2007). This theme was not found in previous AL studies, and this is worth mentioning. Most leaders' feel that being religious is also spiritual, evident in the

individual's actions and behaviour. This idea supports a virtuous-based approach and moral leadership perspectives. (Kaptein, 2019; Johnsen, 2018; Avolio and Gardner, 2005; Shamir and Eilam, 2005). Work around this is still underexplored and suggests potential areas for further research. In some cultures, people see religion as separate from the concept of spirituality, while this study suggests otherwise. **Figure 15** suggests possible illustration.

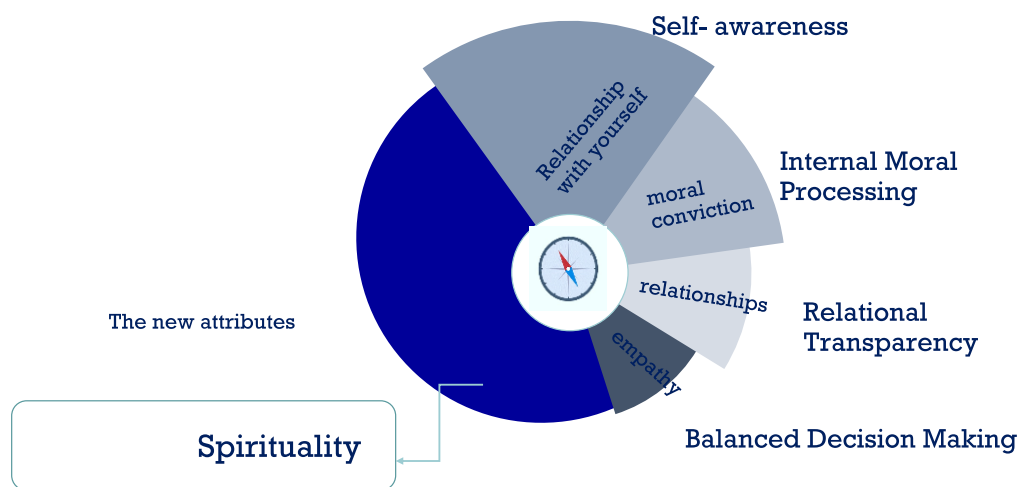


Figure 15 Spirituality in authentic leadership

This diagram highlights some new findings about authentic leadership that is unique in Malaysian context. Previously as noted in the literature, authentic leadership is defined by self-awareness, internal moral processing, relational transparency, and balanced decision making (Walumbwa et al., 2008) as its primary elements. However, according to the top public sector leaders in Malaysia, there are other attributes that matter in defining authenticity. Spirituality is a standalone concept that is different from existing dimensions. This is potentially a theoretical contribution in this thesis.

In addition to that, several attributes emerge about authenticity for example relationship with yourself, moral convictions, relationships, and empathy were viewed equally in important in defining leadership among middle-level bureaucrats. These concepts might be similar with existing elements in authentic leadership theory. Therefore, further validation is required to investigate the findings.

In addition to exploring authentic leadership, another way of defining this concept offers us the opportunity to understand what authentic leadership is not. For example, authenticity becomes insignificant when someone cannot understand who they are. It is a process that requires both internal processing and external perception. In previous studies of authentic leadership using self-reported measures, there was a high possibility of biased results. Therefore, the measurement of authentic leadership should be treated with caution.

An important outcome of this chapter is the need to conceptualise and define authentic leadership. As previous literature suggests that the development of authentic leadership is incomplete in its theoretical underpinnings (Crawford et al., 2020; Gardner et al., 2019; Diddams and Chang, 2013), participants also believe that the development of authentic leadership needs further refinement. Researchers need to define the process, authentic qualities and values that shape such leadership behaviour. Revising the construct of authentic leadership may require the researcher to look at the underlying theories in the existing literature or perhaps take up a new theory and consider a different or more practical approach to avoid confusion.

Furthermore, the element of purposeful intention is congruent with one of the dimensions of authentic leadership as defined by Walumbwa et al. (2008), which consists of four dimensions (self-awareness, balanced processing, relational transparency, and internal moral perspective).

Self-awareness is widely acknowledged as an important criterion for top-level leaders between these four dimensions. However, the researchers need to continue developing authentic leadership measures to know how these dimensions are distinctive or redundant. As such, this calls for scholars to consider further refinement of the Authentic Leadership Questionnaire (ALQ) and Authentic Leadership Instrument (ALI) in the future. To do this, the researchers can consider existing instruments that measure similar concepts and combine these instruments into a model and run appropriate statistical procedures.

Based on this study, the findings were used to propose a new element in AL, which is the spirituality dimension. Together with the existing dimension of AL, it is proposed that the construct to be called Sustainable Authentic Leadership (SAL). The following diagram, **Figure 16** describes the new proposed construct. As seen in the diagram, SAL comprises of five elements such as self-awareness, moral reasoning, decision making, relational transparency and spirituality. These five elements were considered integral in defining the new SAL construct because it is a combination of existing dimensions of AL as defined by Walumbwa et al. (2008), the self-transcendence concept by Sendjaya (2007) and the concept of spirituality according to Malaysian context.

The element of spiritual connection seems to support the earlier literature on self-transcendence and spiritual scale by Sendjaya (2007). Work on this topic remains under-researched and suggests potential areas for further research. In some cultures, people see religion as separate from the concept of spirituality, while this study suggests the opposite. Most leaders believe that a religious person is also a spiritual person, which is evident in the actions and behaviour of the individual. This also supports the idea of a virtue-based approach and moral leadership perspectives (Kaptein, 2019; Johnsen, 2018; Avolio and Gardner, 2005; Shamir and Eilam, 2005). If the construct can be further tested, then this result could potentially become a

theoretical contribution to AL. However, the qualitative approach alone would not be sufficient for validation. Based on this evidence, the five elements were proposed to be tested in the next phase of study using the quantitative approach.

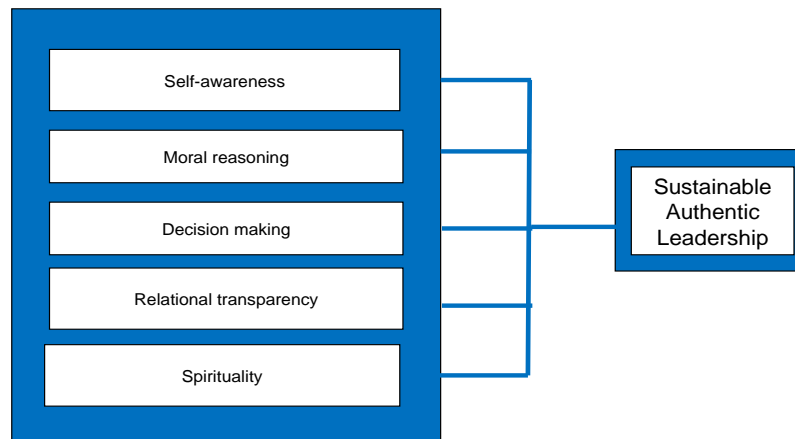


Figure 16 Sustainable authentic leadership

4.6 Summary

As mentioned earlier, the three main themes that emerged from this study were purposeful intention, spiritual connection, and sustainable legacy. It was examined from the perspective of the Malaysian public sector. Although these components are closely intertwined, they are distinct from each other. Some components are considered new elements, such as spiritual connection. There is a need to further develop these components so that dimensions of authentic leadership can also be based on motivational perspectives rather than self-qualities as in other Western studies (Kernis and Goldman, 2006; Walumbwa et al., 2008), especially in non-Western or Asian contexts. In the next chapter, these findings were considered in the development of the instrument of prosocial engagement.

CHAPTER 5

BUILDING PROSOCIAL ENGAGEMENT MODEL

5.1 Introduction

This chapter explains the second phase of the study, which focuses on the development of the prosocial engagement instrument. The development of the instrument is based on the findings from the first survey of public sector leaders in Malaysia. In addition, some of the existing instruments measuring authentic leadership, public service motivation, subjective well-being and organisational citizenship behaviour were also considered. The step-by-step process of instrument development was discussed in detail, including expert review and validation of the scales. It starts with a pre-test, expert review, and validation of the scales. In addition, several statistical procedures were used during the scale validation, including exploratory factor analysis (EFA) as well as Bartlett's test and KMO value. Validity and reliability were also discussed. The results of this process complement the development of the model of prosocial engagement for mid-level bureaucrats in the Malaysian public sector.

5.2 Instrument development process

A rigorous approach was taken in the development of the survey. There are many scales development models that were used as a guide. This research follows the principles and practises explained by Furr (2011) as it provides a deeper insight into instruments that are related to social and personality psychology. Some basic issues to be considered by researchers are the study and interpretation of reliability and validity, dimensionality, the use of the scales

in different groups, and advanced psychometric perspectives, i.e., theoretical perspectives on understanding and evaluating the psychometric properties of a particular scale.

Furr (2011) highlights two relevant aspects in the construction of scales. The first is the psychometric properties and qualities of the measurement. The researcher must be able to assess the reliability and validity of the scales used. In other words, the scale must reflect the constructs the researcher intends to measure. Secondly, the use of scales has implications for the statistical results. Ultimately, the utility of scale depends on whether it is useful to interpret the results to explain a particular phenomenon that the researcher observes.

Scales (instruments) are not all the same (Devellis, 2017) because the relationship between variables, especially latent variables cannot be directly observed. Scales were created based on different concepts that have been combined to produce meaning. In this case, the scale serves as a proxy for representing the variables of interest. Therefore, it is important to create a reliable scale to obtain relevant information from respondents. A reliable scale provides valid data and helps the researcher to draw a logical and reasonable conclusion about the study.

Therefore, several guidelines for instrument development models were used as reference for this study (Ramli N.F, 2019; Devellis, 2017; Furr, 2011). The common features of these models are that each model takes a systematic, step-by-step approach. For example, the researcher must have a clear idea of what basic theories are relevant to the constructs, select the scale and items that reflect the purpose of the scale, determine the measurement format, have the items reviewed by experts, administer them to sample subjects, evaluate the items, and determine the optimal scale length. Devellis (2017) suggests an 8-item approach, while Ramli N.F (2019) suggest a 10-item approach when a researcher wants to develop a new scale. Regardless of the

approaches, these researchers agreed that psychometric analysis is required to assess dimensionality, reliability, and validity. (Ramli N.F 2019; Devellis, 2017; Furr, 2011). Dimensionality reflects the rating and interpretation of the scale and provides psychological meaning. Without these assessments, the meaning would be ambiguous.

According to Davis (1996), there are three approaches to instrument development, namely the deductive, inductive, and mixed method approaches. The best method is the mixed method approach as it provides a more comprehensive perspective (Morgado et al., 2017; Klassen et al., 2012). In this study, a mixed methods approach is used, which includes a 5-step approach that differs slightly from Ramli N.F (2019) and Devellis (2017). The process includes a preliminary interview, conceptualisation of the instrument, development of the instrument, face and content validation, construct validation and newly validated instrument (Figure 17). This is because the researcher uses modified scales and goes through a process of cross-cultural adaptation as the Malaysian population is from non-English speaking countries and uses Bahasa Malaysia as their first language and language for doing business in the public sector.

5.3 Pre-test

Lack of knowledge about pretesting leads to poor data quality. Therefore, it is essential for researchers to conduct pre-tests before distributing questionnaires to respondents. This helps to avoid ambiguity in the questions and among the respondents. At the same time, it tells the researcher how the respondents react to the questions and whether they have understood the questions correctly (Sekaran, 2013). The researcher can either conduct this process through oral interviews or distribute the questionnaires to a specific group of people. One of the

advantages of conducting pre-tests is also the reduction of bias that normally occurs during data collection.

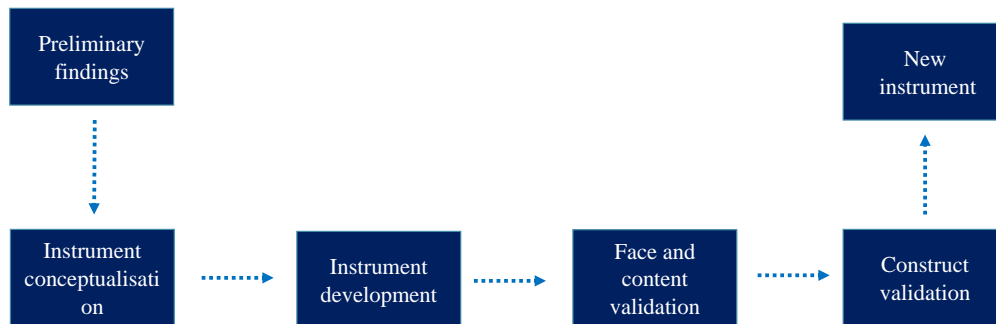


Figure 17 Instrument development process

Source: WHO, 2021; Heggestad et al., 2019; Rowley, 2014 Beaton et al., 2000

The aims of pretesting are many, such as checking the wording of the questionnaires, checking the logical order of the questions, making sure that all the questions are clearly understood by the respondents, or whether there is a way to reduce or add to the questions. Above all, this process helps the researcher to check the instructions given are clear to the respondents

5.3.1 Questionnaire design

i. Part A: Participants profile

The development of the instrument begins with the demographic profiles of the respondents. Initially, this section was proposed as the first section in the questionnaire. However, based on the expert review and Qualtrics assessment, this section was positioned at the end of the survey to increase participants' engagement with the more important questions. This section contains questions on the demographic data of the respondents such as gender, age group, job grade, and years of service, organisational structure, and highest academic degree. This section also includes some background information about the managers as shown in **Table 20**.

Table 20 Demographic profiles in the questionnaire

Demography	Item	Number of items	Sources
Respondents	i)	Gender	Self-developed by the researcher
	ii)	Age group	
	iii)	Job grade	
	iv)	Years of service	
	v)	Organisation structure	
	vi)	Highest academic qualification	
Leaders	i)	Gender	2
	ii)	Job Grade	
		Total	8

ii. Part B: Variables in the study

First, the variables for this questionnaire were based on the model of prosocial engagement. The four variables consist of sustainable authentic leadership (SAL), organisational citizenship behaviour (OCB) and public service motivation (PSM). Subjective well-being (SWB) was later

included in the framework based on the results from the preliminary interview.

Sustainable Authentic Leadership

This section consists of 20 items related to the perception of authentic leadership among the ADS professionals. The items were developed based on the adapted scales of Authentic Leadership Inventory (ALI) developed by Neider and Schresheim (2011) and the Transcendental Spirituality Scale (TSS) developed by Sendjaya (2007). ALI is a multidimensional construct consist of four elements: self-awareness, moral reasoning, balanced decision-making, and relational transparency. TSS is based on religiousness, interconnectedness, sense of mission and wholeness.

Public Service Motivation

This section consists of 12 items related to motivation to serve among the ADS professionals. The items were developed based on the adapted scales of public service motivation scale by Kim (2009) for Korean public sector but later adapted to suit Malaysian context. PSM is a multidimensional construct consist of attraction to public policy making, commitment to public interest, compassion, and self-sacrifice.

Subjective well-being

This section consists of 10 items related to a general evaluation of self towards their own current state of well-being. The items were developed based on the adapted Flourishing scale by Diener et al. (2010). SWB is a multidimensional construct consist of positive emotions,

negative emotions, and life satisfaction. Together with this scale, several items were added from the Authenticity scale by Wood et al. (2008) to measure personal authenticity.

Prosocial Behaviour

This section consists of 10 items related to extra-role behaviour at work. The items were developed based on Lee and Allen (2002) organisational citizenship behaviour scale. PSB is a multidimensional construct consist of altruism, courtesy, conscientiousness, civic virtue, and sportsmanship. For a more detailed explanation, see **Table 21**. The instrument conceptualisation was translated into key operational definitions which was introduced in Chapter 1.

5.3.2 Back translation

Although scale adaptation is widely used in cross-cultural research, there is limited discussion on the best practise of scale adaptation (Heggestad et al., 2019; Hardesty and Bearden, 2004). The researcher uses some guidance from Beaton et al. (2000) on the necessary steps for cross-cultural adaptation of World Health Organisation (2020) self-assessment measures and back-translation procedures. Cross-cultural adaptation of questionnaires is required when the study does not use the same language and culture which it was developed and 5 stages of cross-cultural adaptation includes 1) translation ,2) synthesis, 3) back translation, 4) expert committee review 5) pretesting. (Beaton and Guillemin, 2000). **Figure 18** describes the back translation process.

Table 21 Summary of items in the questionnaire

Variables	Number of items	Cronbach Alpha value
Authentic Leadership Inventory (ALI)	Items	16
Adapted source		Neider and Schrisheim (2011)
Context		Undergrads with work experience (US)
Self-awareness	4	.74
Relational Transparency	4	.81
Internal Moral Perspective	4	.83
Balanced Processing	4	.85
Spirituality Transcendence Scale	Items	4
Adapted source		Sendjaya (2007)
Religiousness	1	.73
Innerconnectedness	1	.87
Sense of Mission	1	.73
Wholeness	1	.87
Organisational Citizenship Behaviour Scale	Items	10
Adapted source		Lee and Allen(2002)
Context		Nurses and their co workers
Altruism	4	.83
Courtesy	4	.83
Conscientiousness	4	.83
Civic virtue	4	.83
Sportsmanship	4	.88
Public Service Motivation Scale	Items	12
Adapted source		Kim et al. (2009)
Context		Korean public sector
Attraction to policy making	4	.68
Commitment to public interest	4	.86
Compassion	4	.73
Self- sacrifice	4	.64
Well-being	Items	13
Adapted source	8	Diener et al. (2010)
Context		US teachers
Positive emotions	4	.70
Negative emotions	2	.70
Life satisfaction	2	.78
Authenticity scale	5	Wood et al. (2008)
Personality authenticity	3	.78
Happiness	2	.78
Total		58 items

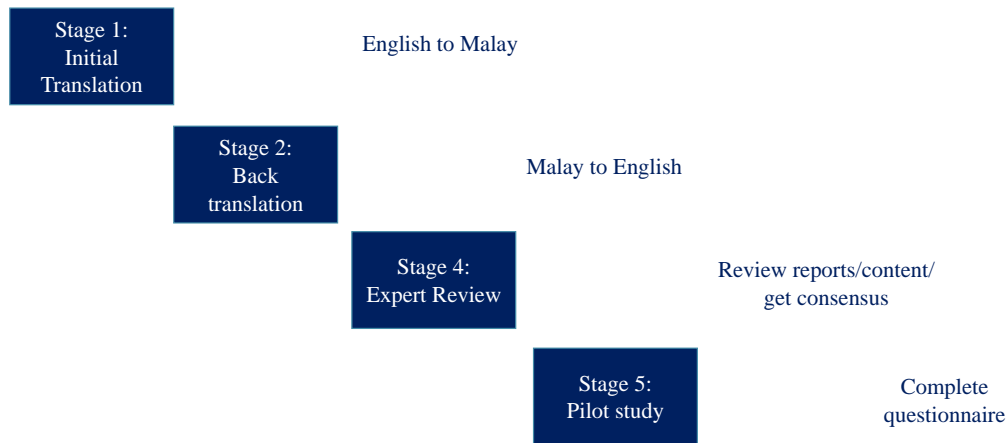


Figure 18 Back translation process

Source: WHO (2020); Beaton et al. (2000)

5.3.3 Expert review

Once the questionnaires have been developed, it means all items are ready for further testing. Next, the expert review process follows. The use of expert reviewers is useful for face and content validity (Hardesty and Bearden, 2004). According to Rowley (2014) a questionnaire is good for predictive and analytical research and testing measurement scales. Therefore, further testing of the adapted version is required to ensure consistency in the content and face validity of the self-report measurement. This study follows Rowley (2014) on designing questionnaires and best practices in writing questions. The expert review was conducted as focus group discussion and based on cognitive interview approach (Leuert and Lenzner, 2015).

The cognitive interview type focuses on the respondent's thinking process when answering survey questions. It is usually a semi-structured, in-depth interview based on the four-stage

model of the survey response process (Leuert and Lenzner, 2015) which includes: (1) understanding the question, (2) retrieving relevant information, (3) using this information to form a judgement, and (4) selecting and reporting a response that matches the response categories provided by the survey question.

During this process, the researcher became aware of problematic questions and can address questions that need to be revised, which in turn reduces measurement error. A preliminary interview was conducted among top leaders in the Malaysian public administration. The results of this study formed the basis for the development of the instrument. When the scale was developed, the experts provided some valuable insights about the survey. In designing the self-administered questionnaires, the researcher follows certain characteristics recommended by Rowley (2014) to ensure that questions are brief, non-leading, not too vague, or general, non-invasive and maintain confidentiality. In this study, several scales measuring the motivation-based model were reviewed and adapted based on AL, OCB, PSM and SWB.

To demonstrate, these questions were prepared for each reviewer based on the template provided below. This template was prepared in both English and Malay. Refer to **Table 22** for details. Once the feedback was finalized, the questionnaires was uploaded in Qualtrics, an online survey tool to create digital survey.

Table 22 Reviewer template

Dimensi/ Dimension	No	Deskripsi/ Description	Remove	Retain	Comments about content
Kesedaran diri <i>Self-awareness</i>	AL 1	Ketua saya mendapatkan maklumbalas demi menambahbaik hubungan beliau dengan orang di sekelilingnya. <i>My boss solicits feedback for improving his/her dealings with others.</i>			
	AL 2	Ketua saya menyampaikan dengan jelas apa yang beliau maksudkan. <i>My boss clearly states what he/she means.</i>			
	AL 3	Ketua saya konsisten dalam pendirian beliau dan tindakan yang diambil. <i>My boss shows consistency between his/her beliefs and actions.</i>			
	AL 4	Ketua saya meminta idea yang mencabar kepercayaan teras beliau. <i>My boss asks for ideas that challenge his/her core beliefs.</i>			
Ketelusan perhubungan <i>Relational transparency</i>	AL 5	Ketua saya menerangkan dengan tepat pandangan orang lain mengenai keupayaan beliau. <i>My boss describes accurately the way that others view his/her abilities.</i>			
	AL 6	Ketua saya mengakui kesilapannya apabila ianya berlaku. <i>My boss admits mistakes when they occur.</i>			
	AL 7	Ketua saya menggunakan kepercayaan teras beliau bagi membuat keputusan. <i>My boss uses his/her core beliefs to make decisions.</i>			
	AL 8	Ketua saya mendengar dengan teliti perspektif alternatif sebelum membuat kesimpulan. <i>My boss carefully listens to alternative perspectives before reaching a conclusion.</i>			
	AL 9	Ketua saya menunjukkan beliau memahami kekuatan dan kelemahan dirinya. <i>My boss shows that he/she understands his/her strengths and weaknesses.</i>			
Proses moral dalaman <i>Internal Moral Processing</i>	AL 10	Ketua saya terbuka untuk berkongsi perasaan beliau dengan orang lain. <i>My boss openly shares his/her feelings with others.</i>			

5.3.4 Scale validation

There are several considerations before validation. According to Davis (1996), there are three approaches to instrument development, namely the deductive, inductive, and mixed method approaches. The best method is the mixed methods approach as it provides a more comprehensive perspective (Morgado et al., 2017; Klassen et al., 2012). In this study, a mixed methods approach is used, which includes the following a 5-step approach that differs slightly from Ramli N.F (2019) and Devellis (2017). The process includes a preliminary interview, conceptualisation of the instrument, development of the instrument, face and content validation, and construct validation (**Figure 19**). This is because the researcher uses modified scales and goes through a process of cross-cultural adaptation as the Malaysian population is from non-English speaking countries and uses Bahasa Malaysia as their first language and business language in the public sector. (See Appendix for the questionnaire).

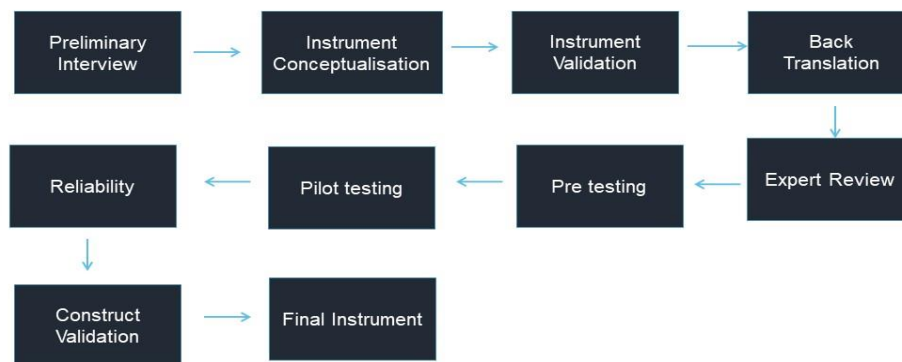


Figure 19 Scale validation process

The final instrument was a combination of six scales: Authentic Leadership Instrument (ALI) from Neider and Schreisheim (2011), Transcendental Spiritual Scale (TS) Sendjaya (2007), Lee and Allen (2002) OCB scale, Kim (2009) PSM Scale, Diener et al. (2010) The Flourishing Scale and The Authenticity Scale (Wood et al., 2008). **Table 23** summarises the Prosocial Engagement Model scale for this study.

5.4 Pilot test

Piloting the questionnaire helps the researcher to make the questions simple and easy to complete (Rowley, 2014). After completing the qualitative interview, the pilot test was conducted in April 2021 in several public institutions in Malaysia. During the pilot test, respondents are required to participate in an online survey that measures the key components of this research, namely AL, OCB, PSM and SWB. The measurement model is a 62-item questionnaire adopted from various measurement scales as mentioned in 5.2.

The questionnaires used were revised and adapted to the context of the public sector in Malaysia, which included back-translation into Malay language and back to English. The measurement scale was subjected to face and content validity check during the pre-testing phase. The expert interview with several participants who were experts in leadership and management. These participants were a combination of academics and practitioners in the relevant research area.

Based on the feedback from the pre-test, the researcher developed a set of survey questions using Qualtrics as the survey tool. Qualtrics is an AI-based survey tool that can more accurately support the development of the survey. Once the survey is ready, Qualtrics generates a QR code and a link to the survey so that the survey can be distributed online across different

platforms. The researcher distributed the survey via WhatsApp to several officials of the Administrative and Diplomatic Service who are also members of the Association of Administrative and Diplomatic Officials (PPTD).

5.6 Data collection and management

Feedback was collected in four phases. The first phase is the pre-survey to obtain qualitative feedback from public sector experts for the development of the tool. Later, in the second phase, the questionnaires were finalised for a pilot study involving 100 respondents from the Malaysian public administration. Then, in the third phase, the actual data was collected from 300 respondents from the public sector. Data collection was conducted in several phases as it is important to gather the insights of the experts (or managers) before the actual study is conducted in the population. The pilot study was conducted before the actual data collection to ensure the feasibility of the study and to allow the researcher to conduct the test data with the expected statistical analysis. To ensure anonymity, the identity of the participants was not disclosed.

Respondents answered a series of online surveys through Qualtrics. The survey was completed in less than 10 minutes. Respondents were recruited via email and social media such as WhatsApp groups and Facebook groups. As this study involves civil servants in the Administrative and Diplomatic Service (ADS) officers in the Malaysian government, they were informed through the official FB group of ADS and through the human resources department of the respective ministries and agencies of the Malaysian federal government.

Table 23 Scales for this study

Construct	Source	Dimensions	Scale	Example of questions
Authentic leadership	Adapted from <i>Authentic Leadership Instrument (ALI)</i> from Neider and Schreisheim (2011) and <i>Transcendental Spiritual Scale (TS)</i> Sendjaya (2007).	It measures <i>five dimensions</i> of leadership: such as self-awareness, balanced decision making, internal moral processing, relational transparency, and transcendental spirituality. Total: 19 items	Likert scale 1 (never) to 5 (very often).	Relational transparency (Five items, e.g. “My boss says exactly what he or she means”), internalised moral perspective (four items, e.g. “My boss demonstrates beliefs that are consistent with actions”), balanced processing (three items, e.g. “My boss solicits views that challenge his or her deeply held positions”), self-awareness (four items, e.g. “My boss seeks feedback to improve interactions with others”) and transcendental spirituality (three items e.g. “My boss regards work as an act of worship”)
Organisational citizenship behaviour	Adapted from Lee and Allen (2002) <i>OCB scale</i> .	It measures <i>two dimensions</i> such as OCB individual (OCBI) and OCB organisation (OCBO). Total: 10 items	Likert scale 1 (never) to 5 (very often).	OCBI (Five items, e.g. “I provide ideas for improving the functions and tasks in the organisation”) and OCBO (Five items, e.g. “I conduct the actions that will help to achieve the organisation goals”).
Public service motivation	Adapted from Kim (2009) <i>PSM Scale</i> .	It measures <i>four dimensions</i> such as attraction to policy making, commitment to public interest, compassion for change. Total: 13 items	Likert scale from 1 (strongly disagree) to 5 (strongly agree).	Attraction to public policy making (Four items, e.g. “I am interested in making public policy programmes that is beneficial for the country and my people”), commitment to public interest (Three items, e.g. I prefer the public servants to choose what is right then what is acceptable when performing responsibilities at work.
Subjective Wellbeing	Adapted from Diener et al. (2010) <i>The Flourishing Scale</i> and <i>The Authenticity Scale</i> (Wood et al., 2008).	It measures <i>three dimensions</i> such as positive and negative emotions, life satisfaction and authenticity. Total: 12 items	Likert scale from 1 (strongly disagree) to 5 (strongly agree).	Positive and negative (Four items, “I lead a purposeful and meaningful life”) Life satisfaction (Four items “I am competent and capable in the activities that are important to me”) and authenticity (Four items “I live in accordance with my values and beliefs”).

5.7 Data analysis

There are two types of factor analysis, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Both are factor analyses, but they differ philosophically in their approach. EFA is considered a traditional method and some researchers have not reported its results. EFA is not derived from theory but helps the researcher determine which variables load on a particular factor and how many factors are appropriate. (Hair et al., 2019, Hair et al., 2017; Byrne, 2016). This technique is useful when the researcher wants to create a new scale or instrument. In performing EFA, 'factorial dimension' can be considered (Ramayah et al., 2018). CFA is a tool to either 'confirm' or 'reject' the researcher's preconceived theory. CFA requires the researcher to specify multiple factors representing a range of variables and determine which factor each variable will load onto before the results can be computed. The CFA statistics provide information on how the factors match the actual data. To conduct the analysis, the construct must first be defined and use a measurement model that can be operationalised. Therefore, it is important to understand beforehand why a scale was chosen compared to other scales to justify it. For this study, the researcher conducted an EFA to see to what extent these factors are suitable for the development of the new construct (SAL).

5.8 Sampling and recruitment

Participants were recruited online after the researcher obtained permission from the Public Service Department of Malaysia. The survey was developed using Qualtrics and participants were invited through various social media platforms such as WhatsApp and Facebook. They were also informed that their participation in this survey were voluntary, and all information would be kept confidential. In addition, they were not asked to provide personal information such as name and

designation, race, or religion as this was considered irrelevant to the study. The survey was distributed to 300 respondents within three weeks. Of the 150 questionnaires distributed, 127 completed questionnaires were received. The researcher then conducted an explanatory factor analysis (EFA) to analyse the factor structure of the new measure and to check its internal reliability.

5.9 Results

5.9.1 Exploratory factor analysis procedure

In addition to the wide use of EFA and CFA in social science research, there are many misconceptions about conducting EFA or CFA to evaluate a measurement model. EFA is not a theory-driven but a data-driven technique that helps researchers explain how many factors or indicators are present in a construct. EFA is based on correlation statistics from software, i.e., no hypotheses are tested. In this phase of the study, the researcher intends to develop a new measurement model for the construct of authentic leadership based on the results of the previous interviews. According to experts, researchers should not misuse EFA and CFA by conducting the analysis with the same data set (Kline, 2015; Hair et al., 2010). Therefore, the datasets obtained for this analysis was only used for EFA procedure.

In this study, it was more appropriate to conduct EFA because there is an additional element or dimension that the researcher wanted to add to the existing Authentic Leadership Scale (ALI). Therefore, the researcher needs to know more about the factor structure. To this end, the EFA is conducted using SPSS to further explore the dimensionality of these items before proceeding with the PLS-SEM method. EFA procedure was applied using the extraction method of Principal Axis

Factoring with Varimax (Variation Maximization) rotation for each construct. These two results indicate that the data is adequate to proceed with the EFA data reduction procedure.

For illustrative purposes, the illustration of the development of the construct of was highlighted. Based on the existing scale, this study used an interval scale between 1 (strongly disagree) and 5 (strongly agree) for each statement to measure the 5 elements of this construct, which consists of 58 items. The measurement of each element of construct was presented in the descriptive statistical **Table 24 to Table 27**, showing the mean and standard deviation for each item.

Table 24 SAL items based on EFA

AL items	Minimum	Maximum	Mean	Std Deviation	Variance
AL1	1	5	3.58	0.97	0.95
AL2	1	5	3.38	1.09	1.18
AL3	1	5	2.98	1.10	1.20
AL4	1	5	3.61	0.96	0.92
AL5	1	5	3.76	0.98	0.96
AL6	1	5	3.15	1.09	1.19
AL7	1	5	3.88	0.94	0.88
AL8	1	5	3.89	0.92	0.84
AL9	1	5	3.59	0.94	0.89
AL10	1	5	3.63	1.03	1.07
AL11	1	5	3.47	0.97	0.93
AL12	1	5	3.66	0.89	0.80
AL13	1	5	3.75	0.96	0.93
AL14	1	5	3.64	1.11	1.23
AL15	1	5	3.68	0.97	0.94
AL16	1	5	3.73	0.91	0.83
AL17	1	5	3.50	1.08	1.17
AL18	1	5	3.40	1.01	1.03
AL19	1	5	3.29	1.12	1.26

In Table 24, all items under SAL constructs were analysed. The mean range is between 2.98-3.89 while standard deviation is 0.9-1.10. AL20 was reduced due to its redundancy.

Table 25 PSM items based on EFA

AL items	Minimum	Maximum	Mean	Std Deviation	Variance
PSM1	1	5	4.63	0.64	0.93
PSM2	1	5	4.50	0.55	0.87
PSM3	1	5	4.58	0.64	1.20
PSM4	1	5	4.88	0.32	0.92
PSM5	1	5	4.74	0.46	0.96
PSM6	1	5	4.68	0.51	1.19
PSM7	1	5	4.64	0.55	0.88
PSM8	1	5	4.87	0.37	0.84
PSM9	1	5	4.05	0.86	0.89
PSM10	1	5	4.69	0.50	1.07
PSM11	1	5	4.77	0.44	0.80
PSM12	1	5	4.64	0.58	0.80

In Table 25, all items under PSM constructs were analysed. The mean range is between 4.05-4.88 while standard deviation is 0.32- 0.86.

Table 26 OCB items based on EFA

AL items	Minimum	Maximum	Mean	Std Deviation	Variance
OCB1	1	5	4.09	0.79	0.95
OCB2	1	5	4.19	0.69	1.01
OCB3	1	5	4.25	0.67	1.20
OCB4	1	5	4.06	0.69	0.92
OCB5	1	5	4.08	0.74	0.80
OCB6	1	5	3.99	0.77	1.19
OCB7	1	5	3.88	0.74	0.88
OCB8	1	5	4.16	0.58	0.84
OCB9	1	5	4.45	0.86	0.89
OCB10	1	5	4.18	0.62	0.88

In Table 26, all items under OCB constructs were analysed. The mean range is between 4.05-4.88 while standard deviation is 0.62- 0.86. In Table 27, all items under OCB constructs were analysed. The mean range is between 4.05-4.88 while standard deviation is 0.62- 0.86.

Table 27 SWB items based on EFA

AL items	Minimum	Maximum	Mean	Std Deviation	Variance
SWB1	1	5	4.48	0.54	0.95
SWB2	1	5	4.30	0.61	1.01
SWB3	1	5	4.35	0.64	1.20
SWB4	1	5	4.47	0.60	0.92
SWB5	1	5	4.53	0.54	0.80
SWB6	1	5	4.50	0.58	1.19
SWB7	1	5	4.27	0.77	0.88
SWB8	1	5	4.15	0.72	0.84
SWB9	1	5	3.54	0.86	0.89
SWB10	1	5	4.47	0.62	0.88
SWB11	1	5	4.50	0.62	0.84
SWB12	1	5	4.64	0.54	0.92

5.9.2 Bartlett's test and KMO value

Before proceeding with factor determination, the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity were conducted, and the procedures explained through analysis of variance. This measure is a statistic that indicates the proportion of variance in variables that potentially caused by underlying factors. High values (close to 1.0) indicate that factor analysis may be useful with the data being investigated. If the value is less than 0.50, the results of the factor analysis probably will not be very useful.

Both the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity of all constructs (SAL, PSM, OCB and SWB) showed that the correlation matrix had significant correlations as shown in **Table 28**. Statistical validity was confirmed for further analysis.

Table 28 KMO and Bartlett's Test

Sustainable Authentic Leadership		
Kaiser-Meyer-Olkin measure of sampling adequacy		.85
Bartlett's test of sphericity	Approx. Chi- Square	7413.93
	df	153
	Sig.	.000
Public Service Motivation		
Kaiser-Meyer-Olkin measure of sampling adequacy		.77
Bartlett's test of sphericity	Approx. Chi- Square	481.09
	df	78
	Sig.	.000
Organisational Citizenship Behaviour		
Kaiser-Meyer-Olkin measure of sampling adequacy		.85
Bartlett's test of sphericity	Approx. Chi- Square	630.02
	df	45
	Sig.	.000
Subjective well-being		
Kaiser-Meyer-Olkin measure of sampling adequacy		.85
Bartlett's test of sphericity	Approx. Chi- Square	655.63
	df	66
	Sig.	.000

5.9.3 Principal Axis Factoring

In conducting the EFA, there are several principles for conducting the analysis. The two primary approaches to find out how many underlying factors to extract that can represent the patterns are either principal axis factoring (PAF) or principal component factoring (PCA). PAF is used in this study as this study is only interested in common shared variance. According to Maskey et al. (2018) PAF was a better option for common variance. This requires factor extraction and factor retention procedures.

Table 29 The initial eigenvalues based on PAF

a) *Sustainable authentic leadership*

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	11.45	60.291	60.29
2	1.031	5.424	65.71
3	0.98	5.152	70.86
4	0.72	3.784	74.65
5	0.66	3.46	78.11
6	0.64	3.34	81.46
7	0.48	2.54	84.00
8	0.46	2.42	86.43
9	0.39	2.04	88.47
10	0.35	1.86	90.34
11	0.30	1.58	91.92
12	0.28	1.44	93.37
13	0.26	1.33	94.71
14	0.21	1.09	95.80
15	0.20	1.05	96.86
16	0.19	1.98	97.85
17	0.16	1.83	98.69
18	0.14	1.75	99.44
19	0.11	1.55	100.00
20	0.11	0.55	100.00

Table 29 (a) shows the initial eigenvalues based on PAF. This study observed this rule, in which the aim is to retain the most optimal number of factors with the Eigen values greater than 1 (Kaiser Criterion).

b) Public service motivation

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.43	34.10	34.10
2	1.62	12.47	46.58
3	1.27	9.79	56.37
4	1.08	8.32	64.69
5	0.84	6.49	71.19
6	0.83	6.45	77.65
7	0.57	4.44	82.09
8	0.54	4.20	86.30
9	0.47	3.65	89.95
10	0.42	3.26	93.22
11	0.33	2.57	95.80
12	0.29	2.29	98.09
13	0.29	0.29	98.09

Table 29 (b) shows the initial eigenvalues based on PAF. This study observed this rule, in which the aim is to retain the most optimal number of factors with the Eigen values greater than 1 (Kaiser Criterion).

c) Organisational citizenship behaviour

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	5.35	53.57	53.57
2	1.16	11.62	65.20
3	0.88	8.85	74.05
4	0.69	6.92	80.97
5	0.57	5.79	86.76
6	0.33	3.35	90.12
7	0.31	3.16	93.29
8	0.26	2.68	95.97
9	0.24	2.40	98.38
10	0.16	1.61	100.00

Table 29 (c) shows the initial eigenvalues based on PAF. This study observed this rule, in which the aim is to retain the most optimal number of factors with the Eigen values greater than 1 (Kaiser Criterion).

d) Subjective well-being

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	5.47	45.58	45.58
2	1.39	11.61	57.19
3	1.09	9.11	66.30
4	0.84	6.99	73.29
5	0.70	5.83	79.12
6	0.63	5.24	84.36
7	0.51	4.24	88.60
8	0.41	3.39	91.98
9	0.30	0.28	98.10
10	0.30	0.028	98.10

Based on Eigen values greater than 1 (Kaiser Criterion) rule, the study reduced four factors with low eigen values and the final items for this scale was 58 items.

Table 29 (d) shows the initial eigenvalues based on PAF. This study observed this rule, in which the aim is to retain the most optimal number of factors with the Eigen values greater than 1 (Kaiser Criterion).

5.9.4 Internal Reliability

Finally, Cronbach's alpha was needed to indicate the reliability of the items in measuring this construct. Internal consistency or reliability indicates how strongly items hold together when measuring certain constructs. For items to achieve internal reliability, Cronbach's alpha should be greater than 0.7 (Rahlin et al., 2019). **Table 30** shows the five components measuring the construct Sustainable Authentic Leadership (SAL) with their respective Cronbach's Alpha values. The five components have Cronbach's alpha values greater than 0.7. In addition, the Cronbach's alpha value for all 20 items is 0.86, which is also above the threshold value of 0.7. Therefore, the study concluded that the instruments measuring the Sustainable Authentic Leadership construct (SAL) have adequate internal reliability.

Consequently, these results showed that the reliability measures for the five components of the SAL construct exceeded the required value. Consequently, the extracted components with their respective items are reliable and suitable to measure the construct SAL. Therefore, this study recommends using SAL in future studies.

5.9.5 *Validity*

Validity is divided into two types: a) construct validity and b) criterion validity. Construct validity refers to the extent to which a measured variable can measure the conceptual variable (Stangor, 2015). Face validity, content validity, convergent validity, and discriminant validity are ways to assess validity (Creswell and Plano Clark, 2018; Devellis, 2017; Stangor, 2015). To ensure that face validity and content validity have been considered, the researcher needs to conduct back-translation of the scales and expert review to validate the instrument. Then, convergent validity and discriminant validity are examined during the preliminary data analysis based on the results of the pilot study. Further explanation can be found in the next chapter.

Table 30 Cronbach's Alpha of SAL

Constructs and Items	Factor Loadings in Extraction Method	Cronbach's Alpha of AL	Cronbach's Alpha of SAL	
Self-awareness				
AL1	0.77	0.74	0.86	
AL2	0.73			
AL3	0.51			
AL4	0.68			
Moral reasoning				
AL5	0.83	0.83		
AL6	0.67			
AL7	0.87			
AL8	0.66			
Balanced decision making				
AL9	0.76	0.85		
AL10	0.78			
AL11	0.89			
AL12	0.61			
Relational transparency				
AL13	0.74	0.81		
AL14	0.86			
AL15	0.82			
AL16	0.73			
Spirituality				
AL17	0.87	0.73		
AL18	0.79			
AL19	0.71			
AL20	0.66			

5.10 Discussion

The findings support SAL as a multidimensional construct with its five underlying dimensions i) self-awareness ii) moral reasoning iii) balanced decision making iv) relational transparency v) spirituality. The valid results are ensured by eliminating the low scores item through rigorous statistical procedures. In previous studies on AL (Crawford et al., 2020; Gardner et al., 2019) only four dimensions were tested in various setting. Therefore, this thesis adds a novel contribution to the measurement of the SAL construct, mainly in the public sector context.

Subsequently, moving forward with the Prosocial Engagement Model as a whole, which was a result of four components of multi-dimensional constructs (SAL, PSB, PSM and SWB) several procedures were conducted in this stage. The rigorous statistical procedure used in this analysis is the EFA technique (Hair et al., 2017). As mentioned, EFA is useful to check how many variables or items can load into one dimension. EFA is considered traditional approach (Ramayah et al., 2018) but it is the best approach to develop new construct (Kline, 2015) or revising existing scale (Hair et al., 2017). The EFA outcomes formed a configuration that extracts four components of Prosocial Engagement Scale which can be measured by 58 items established in this research, with high Cronbach's Alpha value (Rahlin et al., 2019), meet Bartlett Test achievements (significant), KMO (> 0.6), and factor loading exceeds the minimum threshold of 0.6. This result reveals that the elements are applicable in this study.

Moreover, besides SAL as a new construct, all other constructs such as PSM, PSB and SWB are consistent with previous studies (Crawford et al., 2020; deGeus, 2020; Diener et al., 2018). The prosocial engagement scale development and the current research validation confirmed that the

validated instrument is consistent and stable across samples and can be used in future studies to measure Prosocial Engagement Model. As such, this supports the new Prosocial Engagement Model was based on empirical findings.

The practical implication of this model is validated self-report Prosocial Engagement Model, which is applicable for middle-level bureaucrats in Malaysia. This questionnaire can be used to assess the level of influence of leaders in the organisation, as well as the employee well-being and motivation at work. Most importantly, by knowing the level of the prosocial engagement can improve relationships and team collaboration at work. Human resource managers can plan better programs to increase level of engagement among the employees.

However, as this phase only aims at building an instrument, there are a few other issues need to be addressed using different statistical procedures. For example, AL, PSM, OCB and SWB were all identified as multi-dimensional constructs, which means that factor analysis through SPSS would insufficient (Hair et al., 2019; Kline, 2017). Therefore, measurement model assessment for PLS-SEM analysis need to be considered in the next phase of study. With this procedure in mind, there are possibility for further reduction of items in the model. This is consistent with recommendations for PLS-SEM procedures by Wong et al. (2019), determine the higher order construct nature (Sardstedt et al., 2019; Kay-Kwong, 2019; Ramayah et al., 2018). In doing so, improvement on the scale can be further administered.

After conducting this procedure for the pilot study, a slight change in the methodological approach can change the results. For example, in the EFA analysis, PAF procedures allowed the new dimension, SAL to be retained in the model. This justifies the inclusion of SAL in the model for further processes such as hypothesis testing. The only limitation with EFA procedures was

that this approach requires many samples (100 datasets) as mentioned in Hair et al. (2017). Therefore, the next phase of the study requires another set of data. This to ensure than the empirical research is valid and reliable.

5.11 Summary

This chapter explained the development of the prosocial engagement instrument. The process includes modification of existing scales for the four main constructs of the study: authentic leadership, public service motivation, subjective well-being, and organisational citizenship behaviour. Through EFA, sustainable authentic leadership (SAL) was established. Using PAF, the 62-item instrument was reduced to 58-items. The results of this process complement the development of the model of prosocial engagement instrument for mid-level bureaucrats in the Malaysian public sector. The scale development and the current research validation confirmed that the validated instrument is consistent and can be used in the next phase of study.

CHAPTER 6

PROSOCIAL ENGAGEMENT AMONG MIDDLE-LEVEL BUREAUCRATS

6.1 Introduction

The main premise of this study is that leadership, motivation, and well-being are important for positive work behaviour in organisations and that promoting prosocial engagement can create better leaders. This chapter covers the final phase of the study on the application of the prosocial engagement model to mid-level bureaucrats in the Malaysian public sector. It begins with a brief introduction to the theoretical framework, hypothesis development, sampling rationale and demographic profiles of the respondents.

For data analysis, the PLS-SEM approach was used, which includes various statistical procedures such as measurement model assessment, structural model assessment, mediation analysis and moderation analysis. Additional procedures such as Confirmatory Composite Analysis (CCA), Confirmatory Tetrad Analysis (CTA-PLS) and Important Performance Assessment Matrix (IPMA) were also conducted in this study. These procedures contribute to a better understanding of the statistical model and provided new insights into how the variables interacted with each other. The following discussion sheds light on how the results capture the reality of prosocial engagement among mid-level bureaucrats in the public sector.

Subsequently, three research questions were addressed in this chapter. The first research question is, what is the relationship between perceived leadership behaviour, motivation, well-being, and

prosocial behaviour among ADS professionals? Secondly, do motivation and well-being mediate the relationship between the perceived leadership behaviour among ADS professionals? Third, does seniority have a moderating effect on the relationship between motivation, well-being, and prosocial behaviour among ADS professionals?

6.2 Theoretical framework

As mentioned in Chapter 3, the variables were operationalised into four main constructs. The construct of sustainable authentic leadership (SAL) represents the leadership variable, the construct of prosocial behaviour (PSB) represents organisational behaviour, public service motivation (PSM) represents motivation, and subjective well-being (SWB) represents employee needs. Perceived AL is expected to positively influence PSB via PSM and SWB. These constructs are multidimensional constructs. PSB and SWB are the mediating constructs. There are 58 items for this research framework. This thesis also examined the role of seniority as a moderator. **Figure 20** shows the theoretical framework.

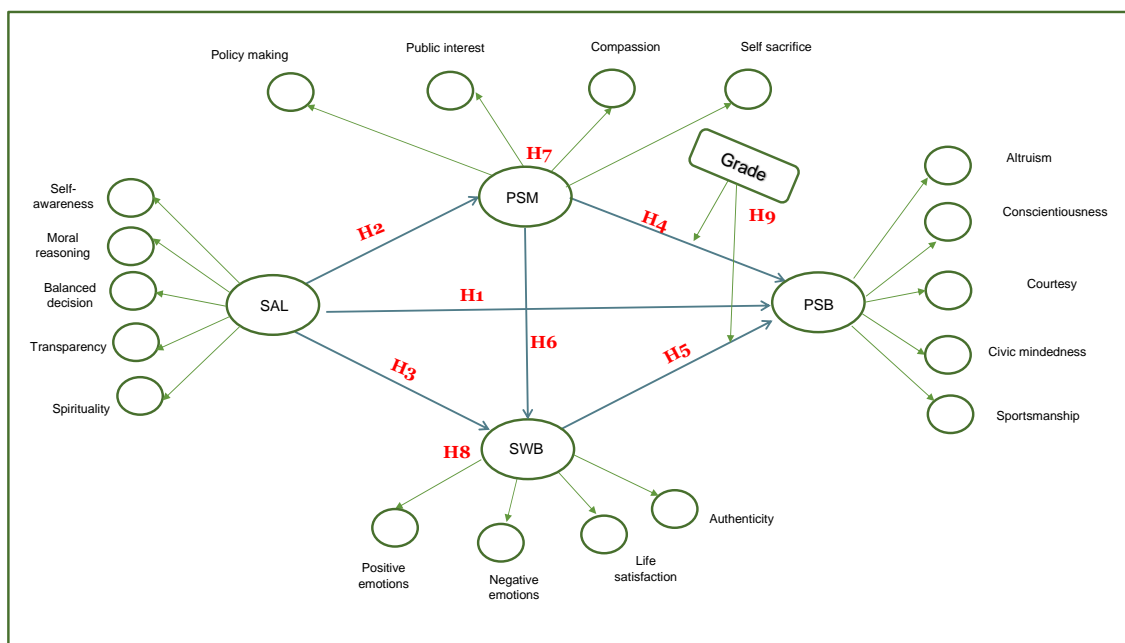


Figure 20 The theoretical framework

Partial Least Square structural equation modelling (PLS- SEM) was used for the analysis. The PLS- SEM approach was used for hypothesis testing, mediation, indirect effects, and measurement of group differences, which are all analyses intended for this study.

6.3 Hypotheses development

There are two important points to consider when forming hypotheses, the first is conceptualisation: hypotheses were developed based on theories and application to problems and the second is operationalisation: hypotheses were tested based on theories or application (Fiske, 2003). The development of hypotheses is usually based on theories that have been shaped into a testable proposition. To formulate a hypothesis, researchers need variables (characteristics) that can be operationalised and serve as working definitions. Therefore, as mentioned earlier, the main operational definitions for this research were Sustainable Authentic Leadership (SAL), Prosocial Behaviour (PSB), Public Service Motivation (PSM) and Subjective Well-being (SWB). The development of the hypotheses in this study was driven by the application (Fiske, 2003) of SDT and positive leadership theories and the problem was conceptualised using the contingency model based on real problems faced among the mid-level bureaucrats in the Malaysian public sector.

Table 31 summarises the hypotheses of the study and types of analyses involved.

6.4 Setting

The fieldwork was conducted in Malaysia in November-December 2021. During the data collection, the Malaysian government implemented a Movement Control Order (MCO 2.0) as a security measure during the Covid 19 pandemic. Due to these restrictions, many companies and government agencies conducted their business from home. Keeping these restrictions in mind, the online survey method was chosen for this study. The survey development software Qualtrics

was used to create the items and questions. The survey was distributed through various media platforms and the internet.

Table 31 Hypotheses statements

Hypothesis	Relationship	Types of Analysis
<i>H1</i> : The perceived AL has positive influence towards PSB amongst the ADS professionals.	AL - PSB	Path analysis
<i>H2</i> : The perceived AL has positive influence on PSM amongst the ADS professionals.	AL - PSM	Path analysis
<i>H3</i> : The perceived AL has positive influence towards SWB amongst the ADS professionals.	AL - SWB	Path analysis
<i>H4</i> : PSM has a positive influence on employee PSB amongst the ADS professionals.	PSM - PSB	Path analysis
<i>H5</i> : SWB has a positive influence on employee PSB amongst the ADS professionals.	SWB - PSB	Path analysis
<i>H6</i> : PSM significantly mediates the relationship between AL and PSB amongst the ADS professionals in Malaysia.	AL-PSM-PSB	Mediation analysis
<i>H7</i> : SWB significantly mediates the relationship between AL and PSB amongst the ADS professionals in Malaysia.	AL-SWB-PSB	Mediation analysis
<i>H8</i> : Seniority significantly moderates the relationship between PSM and PSB amongst the ADS professionals in Malaysia.	PSM*grade- PSB	Moderation analysis
<i>H9</i> : Seniority significantly moderates the relationship between SWB and PSB amongst the ADS professionals in Malaysia.	SWB*grade- PSB	Moderation analysis

6.5 Sampling and recruitment

As mentioned earlier Chapter 3, the Administrative and Diplomatic Scheme represented 14% of the total population of professional and managerial staff in the Malaysian public sector (JPA, 2020). Purposive sampling techniques were used, with due consideration given to quotas for grade representation. For data collection, the M41 grade was used as the cut-off criterion, which is typically used in the Malaysian government for junior ADS, but still middle-level, civil servants. This study focused only on ADS, as they have undergone leadership training and work closely

with the top leaders and lower categories of public sector employees. Moreover, a representative study covering the probability-based approach would be costly and time-consuming. Therefore, the sample included the middle category of ADS, but also those working in various ministries and agencies of the Malaysian federal government.

Respondents were recruited online after the researcher obtained approval from the Public Service Department. The survey was developed using Qualtrics and participants were invited through various social media platforms such as WhatsApp and Facebook. They were selected based on certain criteria such as middle managers must belong to the Administrative and Diplomatic Scheme. They should be in the ranks of M41, M44, M48 and M52 positions and they served the Malaysian federal government. In the survey, it was mentioned that their participation was voluntary, and that all information would be kept confidential. In addition, they were not asked to provide personal details such as name and designation, race, or religion.

To determine the minimum sample size, it was estimated using G*Power 3.1.9.2 software (Sarstedt et al., 2015). An a priori analysis was performed according to the following formula: Effect size $f^2 = 0.15$ (medium), $\alpha = 0.05$, power value = 95 per cent and predictors = 3 and the sample size generated for this study was 119. After 6 weeks of online distribution, 400 respondents participated and 398 completed the questionnaires. These responses indicate that a sufficient sample to meet the power requirements.

6.6 Data collection

The ADS officers participated via an online survey. This survey collected their demographic data as well as open-ended questions about their opinions of their leaders and their own leadership experiences. The survey was developed using a software called Qualtrics. There were 1100

questionnaires distributed online through social media platforms such as Facebook and WhatsApp groups from October to Dec 2021 (three months). 398 respondents were able to answer the survey. The questionnaires consist of ideas about authentic leadership, followed by open-ended questions about leadership issues and challenges from their perspective. **Figure 21** shows data collection in phases.

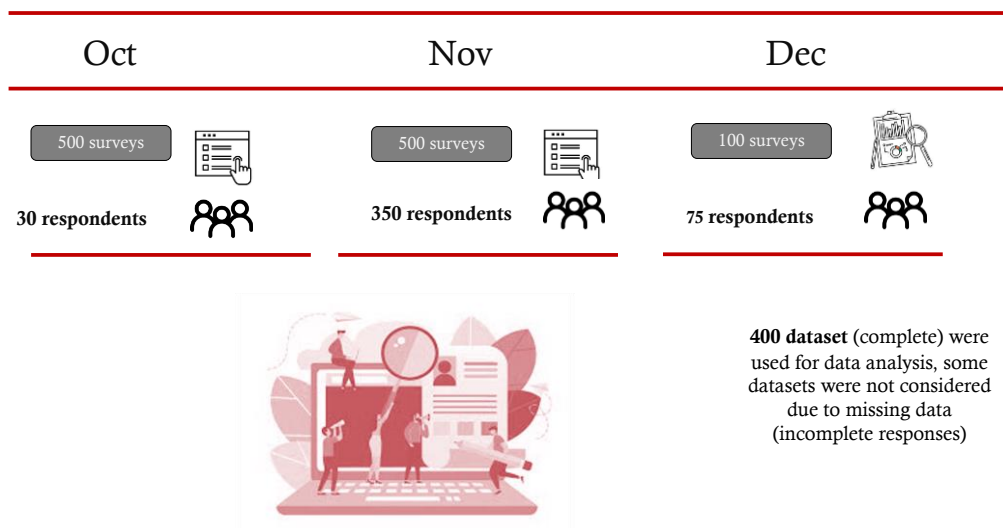


Figure 21 Data collection phase

6.7 Demographic features

The study found that 57.26% of the respondents were female, 78.74% were over 40 years of age and 55.11% had been in the civil service for more than 10 years. As for seniority level, 51.96% of the civil servants were in grade 41-44. As expected, 49.6% of the respondents had pursued master's degree. The sample consisted of 398 officers. **Table 32** shows the demographic profiles of the respondents.

Table 32 Respondent profiles

Demographics	Characteristics	Number	%
Gender	Male	60	47.24
	Female	67	57.26
Education	PhD	2	1.57
	Masters	63	49.60
	Bachelor	62	48.81
Grade	41-44	66	51.96
	48-52	61	48.03
	20-29	10	7.87
Age	30-39	27	21.26
	40-49	100	78.74
	Less than 5	20	15.74
Tenure	6-10	27	21.25
	More than 10	70	55.11
	Organisation structure	Ministries	67
Agencies		60	47.24

6.8 Questionnaire design

Based on the second phase of the study, the revised and adapted questionnaire was used for the final study. The questionnaire was divided into six parts. The first part is about the perception of authentic leadership, the second part analyses the respondents' public service motivation, and the third part is about their subjective well-being. The fourth part assesses the respondents' organisational citizenship behaviour. The fifth part is the demographic profile, and the last part

concludes with an open-ended question about how middle managers practise their leadership style at work.

In total, the questionnaire contains 58 items. In this study, several scales measuring the model of prosocial engagement based on AL, OCB, PSM and SWB were reviewed and adapted. The AL scale was adapted from the Authentic Leadership Instrument (ALI) by Neider and Schreisheim (2011) and the Transcendental Spiritual Scale (TS) by Sendjaya (2007). The OCB scale was adapted from the OCB scale by Lee and Allen (2002). The PSM scale was adapted from the PSM scale by Kim (2009). Finally, the SWB scale was adapted from Diener et al. (2010) The Flourishing Scale and The Authenticity Scale (Wood et al., 2008).

6.8.1 Common method bias

Because the data come from a single source, there are some limitations in cross-sectional data that suggest that common method bias (CMB) may occur (Jordan and Troth, 2019; Fuller et al., 2014). CMB becomes a problem because it can affect the reliability and validity of the measurement. According to Podsakoff et al. (2012), there are two ways researchers can deal with CMB, procedural and statistical. Schwartz et al. (2012) argue that using a single technique is insufficient, and another perspective suggests that a combination of procedural and statistical methods would minimise CMB (Jordan and Troth, 2019). Therefore, in this study, multiple strategies that fit business research were used.

In the first phase, the procedural approach was used during instrument development. Instructions in the questionnaires were made clear to respondents. This included a cover sheet with instructions and an introduction to each variable used in the study at the beginning of each section.

Reverse coded items were included in the questionnaire to balance both positive and negative words in the scale. These strategies are widely used in studies of management (Jordan and Troth, 2019). These questionnaires were later validated through expert review and pre-tested.

In the second phase, two statistical methods were used. The first is Harman's Single Factor Test using Exploratory Factor Analysis (EFA) to make estimates based on the results. Although this approach has been used most frequently, it was considered the minimum standard for testing CMB (Craighead et al, 2011). This study employed SPSS v.26 and conducted the test with unrotated principal component analysis. There were 11 factors with eigenvalues greater than 1.0. The first factor accounted for only 20 per cent of the total variance explained. If the component accounted for more than 50 per cent, there would be evidence of CMB. In this case, CMB is not an issue. The next approach is called marker variable technique, where another variable (authenticity) is added to the construct of subjective well-being. The correlation between the marker variable and SWB showed no significant correlations, demonstrating greater confidence in the results.

6.8.2 Missing value amputation

There is a possibility that missing values in the dataset may be a problem, especially if it is a large dataset. For this study, imputation of missing values was done in SPSS using Expectation Maximization (EM). This technique is considered the current trend in imputing missing values to compensate for the missing data without deleting it.

6.9 Results

As mentioned earlier, this section discusses results of this study using several statistical analyses such as Confirmatory Composite Analysis (CCA), Confirmatory Tetrad Analysis (CTA-PLS) and Important Performance Assessment Matrix (IPMA). In addition to that, mediation and moderation analysis were included.

6.9.1 *Confirmatory Composite Analysis*

Confirmatory composite analysis (CCA) can be conducted for both exploratory and confirmatory studies. The aim of this analysis is to confirm the measurement model and predict the dependent variables. Unlike confirmatory factor analysis (CFA), which focuses only on the common variance, CCA focuses on the total variance. CCA provides a good analysis for a measurement model before moving on to the structural model (path analysis). CCA is recommended as a step in the use of PLS-SEM (Hair et al., 2020) and can be used to confirm both reflective and formative measurement models. This procedure was carried out because the total variance score measures all construct together, including multidimensional constructs.

Before conducting the assessment, it is important to confirm the operational definitions of the multi-item constructs in this study, which can be done based on sound theoretical reasoning. For example, in previous studies, PSM and OCB have been proposed as reflective-reflective higher order constructs (citations), while AL has mixed opinions. In this case, another analysis called Confirmatory Tetrad Analysis in PLS (CTA-PLS) was conducted as suggested by Wong, 2019; Gudergan et al., 2008).

6.9.2 Confirmatory Tetrad Analysis

Confirmatory Tetrad Analysis in PLS (CTA-PLS) is a technique developed by Gudergan et al. (2008) to solve some challenges among researchers in dealing with formative and reflective indicators in a measurement model. Some constructs are defined as formative constructs, i.e., indicators that cause a latent construct, while in most cases reflective constructs are caused by latent constructs such as behavioural constructs. However, when conducting CTA-PLS, at least four indicators must be associated with each latent construct.

In this study, each construct had at least three or four indicators. Based on previous studies on AL, several studies indicate that AL is a formative-reflective construct (Walumbwa et al., 2008). Therefore, CTA-PLS is conducted to find out whether SAL is a formative-reflective or a reflective-reflective construct. In CTA-PLS, each tetrad is expected to be zero. If one or more of the tetrads in the measurement model is significantly different from zero, the construct is considered formative. **Table 33** served as a guide for determining the model.

Table 33 Guidelines for CTA-PLS

	CI Low adj.	CI Up adj.		Measurement Model is
If all values are...	-	-	then	formative
If all values are...	+	+	then	formative
If one or more of the values are	-	+	then	reflective

The CTA-PLS on Sustainable Authentic Leadership (SAL) was applied to find out whether this construct is reflective-reflective or formative-reflective. The results are shown in **Table 34**.

Table 34 CTA-PLS results

Construct	Alpha adj.	z(1-alpha)	CI Low adj.	CI Up adj.
Self-awareness	0.050	1.960	-0.009	0.281
Balanced decision making	0.050	1.960	0.308	0.693
Moral reasoning	0.050	1.960	-0.187	0.147
Spirituality	0.050	1.960	-0.187	0.147

If one or more of the values are - and +, the tetra is not significantly different from zero, then the model is considered reflective (Wong, 2019; Wong, 2013, Gudergan et al., 2008). Based on the results, it is suggested that Sustainable AL is a reflective-reflective model.

According to Hair et al. (2011), the basic procedures of PLS-SEM include the measurement model and structural model. In the first step, the measurement model is used to assess the reliability and validity of the construct. The structural model examines the relationship between variables. In the measurement model, this study examines the relationship between indicator and construct, which can be identified as loadings (reflective model) and weights (formative model).

In order to conduct this analysis, the operational definition of each construct for this study, namely Sustainable Authentic Leadership (SAL), Prosocial Behaviour (PSB), Public Service Motivation (PSM) and Subjective Well-Being (SWB) were defined as latent constructs. These constructs are higher order multidimensional constructs and reflective-reflective type constructs. The operational definition of each construct is simplified in this **Table 35**.

6.9.3 Measurement model assessment

To perform measurement model, the evaluation criteria for internal consistency (reliability), convergent validity and discriminant validity must be considered. For internal consistency, for example, the composite reliability (CR), which ranges from 0.7 to 0.9 and is considered satisfactory (Gefen et al, 2000). Next, the average variance extracted (AVE) of more than 0.5 (Hair et al., 2017) must be observed. In terms of discriminant validity, cross loading values, Fornell and Larcker (1981) and HTMT scores (Hair et al., 2014) were observed.

Table 35 Key operational definitions

Term	Construct	Definition
Sustainable Authentic Leadership	SAL	a set of characteristics of self-awareness, an internalized moral perspective, balanced processing of information, relational transparency, and transcendence spirituality on the part of leaders working with followers.
Public Service Motivation	PSM	a set of belief, values and attitudes that go beyond self-interest and organisational interest, which is based on attraction to policy making, commitment to public interest, compassion, and self- sacrifice.
Prosocial Behaviour	PSB	“extra-role behavior” that contributes to performance beyond expectations that incorporates these values such as altruism, courtesy, conscientiousness, civic virtue, and sportsmanship among individuals.
Subjective Well-being	SWB	the state of being of a person that includes both positive and negative emotions, as well as life satisfaction and authenticity.

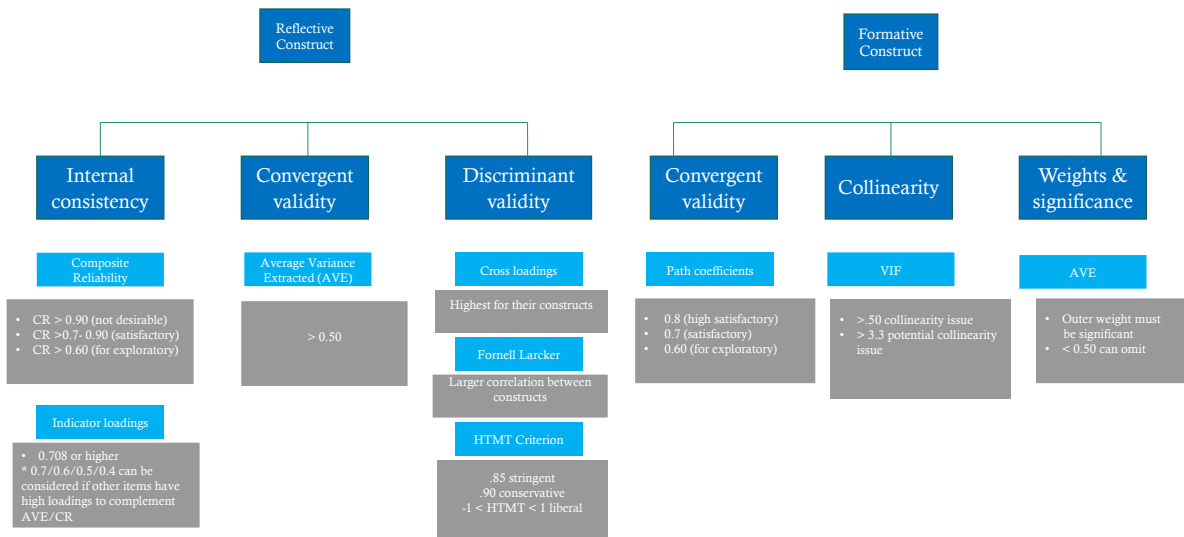


Figure 22 Measurement model assessment

Figure 22 served as a guide for determining the model. According to Ramayah et al., (2018), there are two types of constructs i) reflective and ii) formative. To determine what type of construct is suitable for the model, CTA-PLS procedure (Wong, 2019) can be applied. Essentially, this procedure helps to check validity of instruments. The whole process of determining the model can be conducted using SmartPLS software (Sardstedt et al., 2019).

Subsequently, SmartPLS also helps to create visual representation of the statistical model. The example of Prosocial Engagement Model using SmartPLS is shown in **Figure 23**.

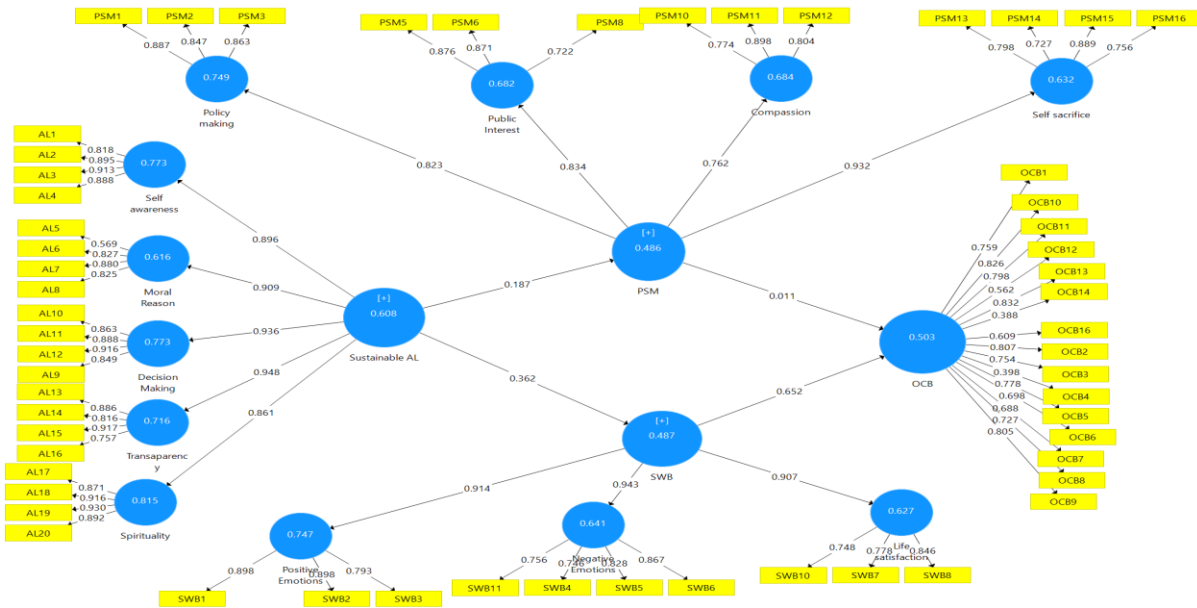


Figure 23 Measurement model illustration in SmartPLS

The diagram shows the illustration of measurement model in SmartPLS. In this diagram, the variables in blue circle were considered the latent constructs and its dimensions. The items in yellow boxes were sub-dimensions in each construct. In Smart-PLS analysis, items in yellow boxes with less significant scores can be removed from the model. This diagram illustrates the final model of prosocial behaviour with several items were removed from the original model. To have a better understanding about the variable scores, please refer to **Table 36** in the following page.

Table 36 Measurement model assessment

Construct	Items	Loadings	AVE	CR
Sustainable Authentic Leadership	ALa	0.773	0.608	0.968
	ALb	0.616		
	ALc	0.773		
	ALd	0.716		
	ALe	0.815		
Public Service Motivation	PSMa	0.810	0.681	0.839
	PSMb	0.877	0.780	
	PSMc	1.000	1.000	
	PSMd	0.856	0.655	
Subjective Wellbeing	SWBa	0.811	0.870	0.900
	SWBb	0.799	0.875	
	SWBc	0.900	0.952	
Prosocial Behaviour	OCBa	0.868	0.622	0.900
	OCBb	0.882	0.601	

Table 36 shows that all items loaded on their respective construct and the factor loadings are above the threshold of 0.7 (Hair et al., 2017). The CRs of all first-order constructs ranged from 0.839 to 0.900 and exceeded the threshold of 0.8 (Chin, 2010). The results supported the reflective measurement model of the four first-order constructs. The construct validity of the reflective measurement model was a function of convergent and discriminant validity (Hair et al., 2011). Furthermore, all AVEs of the first-order constructs were higher than the threshold of 0.5. The results showed that convergent validity was ensured for the three reflective first-order constructs. Discriminant validity is the extent to which each construct differs from other constructs in a model (Chin, 2010). To achieve discriminant validity, the square root of AVE of each construct should

be higher than the highest correlation of the construct with another latent variable in the model (Chin, 2010; Fornell and Larcker, 1981). **Table 37** shows the acceptance of discriminant validity for the first-order constructs, where the square root of AVE (in bold) is higher than the correlation between all constructs.

Table 37 Discriminant validity using Fornell and Larcker criterion

	Public Service Motivation	Subjective Wellbeing	Prosocial Behaviour	Sustainable Authentic Leadership
Public Service Motivation	0.613			
Subjective Wellbeing	0.552	0.725		
Prosocial Behaviour	0.460	0.513	0.745	
Sustainable Authentic Leadership	0.187	0.362	0.530	0.780

Note: Diagonals represent the square root of the AVE while the off diagonals represent the correlations.

The cross-loading test is usually the first approach to assessing discriminant validity (Hair et al., 2017). It is conducted when the discriminant validity test is not met. It is conducted by ensuring that the OL value for the specified item is greater than the loading value for other constructs. As shown in **Table 38** discriminant validity was achieved because the indicators load high on their own constructs but low on others.

Table 38 Cross loadings

Constructs	Sustainable Authentic Leadership	Public Service Motivation	Subjective Wellbeing	Prosocial Behaviour
ALa	0.774	0.102	0.35	0.430
ALb	0.891	0.175	0.263	0.443
ALc	0.780	0.130	0.310	0.562
ALd	0.871	0.178	0.344	0.413
ALe	0.745	0.181	0.268	0.479
PSMa	0.213	0.708	0.471	0.404
PSMb	0.207	0.577	0.225	0.404
PSMc	0.100	0.698	0.254	0.213
SWBa	0.093	0.471	0.725	0.225
SWBb	0.312	0.225	0.896	0.254
SWBc	0.337	0.348	0.786	0.348
OCBa	0.410	0.190	0.386	0.660
OCBb	0.520	0.110	0.225	0.788

To improve the quality of the model, the researcher needs to delete some indicators with low loadings when conducting CCA. There are several indicators that do not have satisfactory values, such as PSMc and SWBc. In the previous chapter, although the same procedure was carried out, all items were retained to compare the effectiveness of the model. In this procedure, several items were deleted (AL11, AL12, OCB4, PSM4, PSM7, PSM9, SWB9) to improve the measurements. This procedure is still within the 20% rule as suggested by (Hair et al., 2017). To further assess discriminant validity, the HTMT was performed as in **Table 39**.

Table 39 HTMT values

	Compassion	Decision Making	Life satisfaction	Moral Reason	Negative Emotions	PSB	PS M	Policy making	Positive Emotions	Public Interest	SWB	Self-awareness	Self-sacrifice	Spirituality	SAL
Decision Making	0.072														
Life satisfaction	0.460	0.540													
Moral Reason	0.112	1.027	0.485												
Negative Emotions	0.596	0.265	1.068	0.263											
OCB	0.399	0.561	0.804	0.527	0.652										
PSM	0.919	0.256	0.552	0.244	0.659	0.468									
Policy making	0.618	0.225	0.31	0.269	0.429	0.301	0.943								
Positive Emotions	0.502	0.455	0.978	0.344	0.954	0.688	0.770	0.543							
Public Interest	0.600	0.355	0.648	0.264	0.606	0.483	0.978	0.694	0.879						
SWB	0.557	0.413	1.130	0.368	1.098	0.718	0.701	0.465	1.043	0.735					
Self-awareness	0.159	0.877	0.542	0.857	0.244	0.529	0.202	0.132	0.402	0.284	0.374				
Self-sacrifice	0.803	0.258	0.560	0.223	0.711	0.484	1.081	0.840	0.813	0.916	0.739	0.160			
Spirituality	0.101	0.787	0.558	0.816	0.276	0.516	0.178	0.108	0.353	0.286	0.372	0.716	0.151		
SAL	0.122	0.999	0.552	1.029	0.268	0.556	0.227	0.182	0.406	0.319	0.396	0.957	0.196	0.904	
Transparency	0.132	0.949	0.474	0.952	0.217	0.498	0.201	0.147	0.361	0.315	0.342	0.973	0.142	0.860	1.031

6.9.4 Multivariate normality

Before carrying out an assessment of the structural model, you need to assess normality. Assessing normality is important to determine whether the multivariate data is normal or not. The research used Webpower's online calculator to check the calculations of multivariate skewness and kurtosis. The calculator is available at <https://webpower.psychstat.org/models/kurtosis/>. The analysis showed that the data are normally distributed by Mardia's multivariate skewness ($\beta = .610, p < 0.05$) and Mardia's multivariate kurtosis ($\beta = .468, p < 0.05$). Therefore, a non-parametric analysis with PLS is appropriate.

6.9.5 Structural model assessment

Structural model examines the relationship between variables. Alternatively, this step involves hypotheses testing on all related variables. In this study, the influence of SAL on PSB, PSM and SWB were examined. There is a six-step procedure (Hair et al., 2017) in assessing the structural model in PLS-SEM, which is one of the standard procedures in statistical modelling.

As seen in **Figure 24**, the six steps were explained based on relevant statistical procedures and the eligibility of the scores. First, the structural model was tested for collinearity; second, the significance and relevance of the relationships of the structural model were tested; and third, the coefficient of determination (R^2) was assessed. In addition, the effect size (f^2), the predictive relevance (Q^2) and the effect size (q^2) were also assessed. Such assessment was important

statistical modelling to ensure that this model can reflect the phenomenon in the real world.

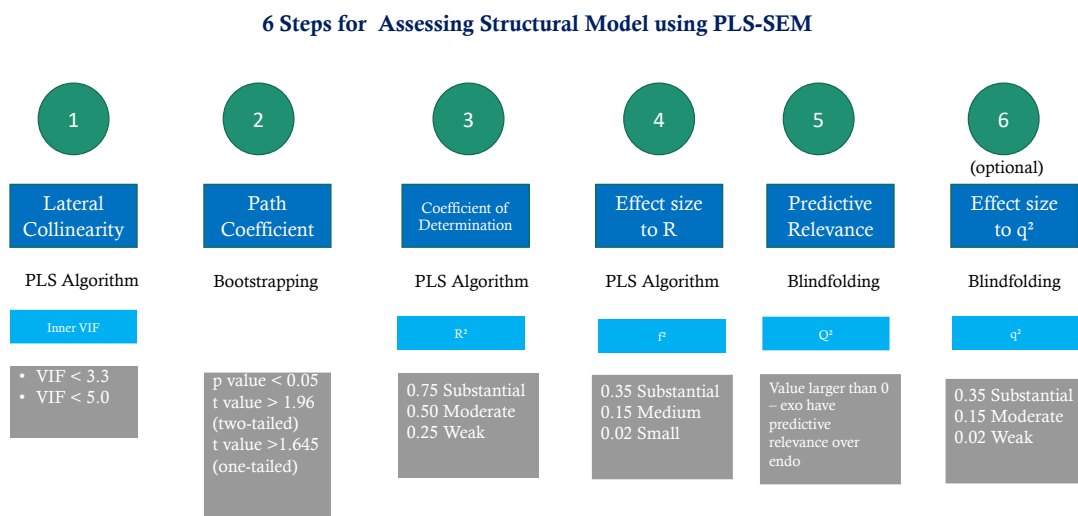


Figure 24 Structural model assessment guide

Next, the following diagram in **Figure 25** illustrates the results of the path analysis using the SmartPLS 4.0 software. This model includes a combination of higher order constructs (HOC) and lower order constructs (LOC), resulting in a complex structural equation model. As complex as it looks, the statistical procedures require several procedures and assessments, as mentioned earlier, and the following discussion will address the explanation of the model.

In the previous section, the initial assessment of the reflective-reflective measurement model was completed. During the measurement model assessment, several items such as AL5, PSM4, PSM7, PSM9, OCB4, SWB 10 and SWB 12 were excluded from the model due to low loading values. This deletion considered the rule that no more than 20% of the indicators should be included in the whole model (Hair et al., 2010). This was done to optimise the loading values for each variable.

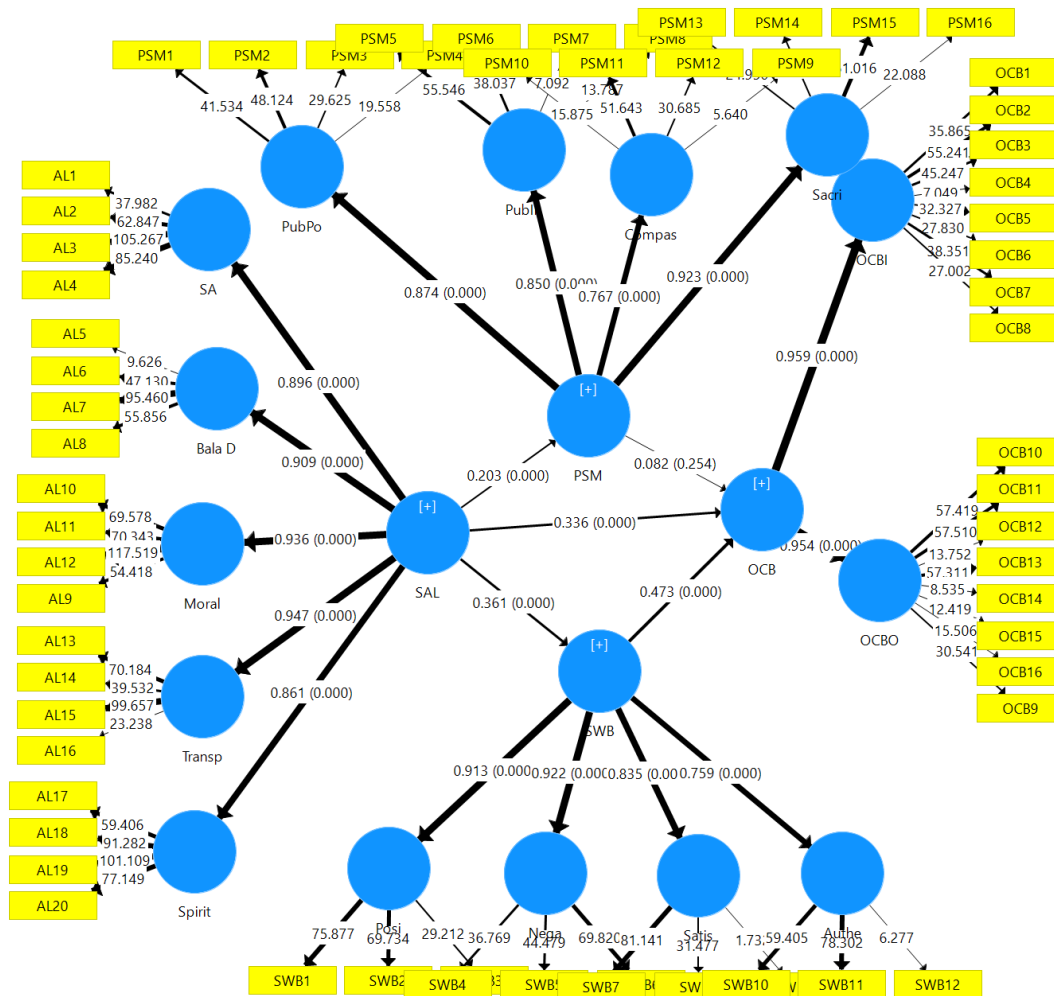


Figure 25 Structural model illustration using SmartPLS

First, the problem of lateral collinearity was addressed by the variance inflator factor (VIF). According to Diamontopoulos and Sigouw (2006), inner VIF value of 3.3 or higher indicate a potential collinearity problem. Hair et al. (2017) suggest a VIF value above 5 as a more stringent criterion. As shown in the diagram, the variables in the dataset were sustainable authentic leadership (SA, BalaD, Moral, Transp, Spirit), Public Service Motivation (PubPo, PubIn, Compas, Sacri) and Subjective Well-being (Posi, Nega, Satis, Authe) as exogenous variables. Organisational Citizenship Behaviour (OCBI, OCBO) as endogenous variables.

Table 40 Inner VIF

	Compassion	Decision Making	Life satisfaction	Moral Reason	Negative Emotions	OCB	PSM	Policy making	Positive Emotions	Public Interest	SWB	Self-awareness	Self-sacrifice	Spirituality
Compassion														
Decision Making														
Life satisfaction														
Moral Reason														
Negative Emotions														
OCB														
Policy making														
Positive Emotions														
Public Interest														
SWB			1		1	1.615			1					
Self-awareness														
Self-sacrifice														
Spirituality														
Sustainable AL	1		1			1				1	1		1	
Transparency														
PSM	1					1.615		1		1			1	

Table 40 shows that all the inner VIF values for the independent variables (Sustainable Authentic Leadership, Public Service Motivation and Subjective Well-being) are less than 5 and 3.3, indicating that collinearity is not a problem (Hair et al., 2017) The next step is to check the significant result for the path coefficient. Subsequently, the next procedure involved path analysis results or more commonly identified as hypotheses testing. **Table 41** shows the results.

Table 41 Hypotheses testing

Hypothesis	Relationship	Std Beta	Std Error	t-value	Hypothesis	R2	f2	Q2
H1	SAL-PSB	0.338	0.053	6.362	supported	1	0.211	0.589
H2	SAL-PSM	0.190	0.051	3.753	supported	0.036	0.037	0.016
H3	PSM-PSB	0.049	0.072	0.688	not supported	0.527	0.144	0.265
H4	SAL-SWB	0.355	0.055	6.477	supported	0.126	0.003	0.005
H5	SWB-PSB	0.502	0.051	9.903	supported	0.13	0.302	0.064

In this table, the study examined the relative importance of exogenous constructs such as Sustainable Authentic Leadership, Public Service Motivation and Subjective Wellbeing in predicting prosocial behaviour. It is found that Subjective Well-being (SWB = 0.502) is the most important predictor, followed by Sustainable Authentic Leadership (SAL = 0.338). The analysis shows that all relationships have a t-value of ≥ 1.645 , with the exception of motivation for Public Service Motivation, which is thus significant at the 0.05 level of significance.

Moreover, the predictors Subjective Well-Being ($\beta = 0.502$, $p < 0.01$), Sustainable Authentic Leadership ($\beta = 0.338$, $p < 0.01$) are positively related to Prosocial Behaviour and explain 13% of the variances in PSB. Thus, H1, H3 and H5 are supported. On the other hand, Public Service Motivation t-value less than 1.645 (t-value = 0.688), which means that H3 is not supported. The

R² value of 0.13 is lower than the value of 0.26 suggested by Cohen (1988), indicating a moderate model.

Furthermore, the effect size (f^2) was assessed using Cohen's (1998) guideline. According to this guideline, the values of 0.02, 0.15 and 0.35 indicate small, medium, and large effects, respectively. From the table, Sustainable Authentic Leadership (0.211) and Subjective Well-Being (0.302) have medium effect in generating R² for Prosocial Behaviour. In addition, the result showed that Sustainable Authentic Leadership (0.037) has a small effect in generating R² for Public Service Motivation. We also found that Sustainable Authentic Leadership (0.003) has a small effect in generating R² for Subjective Well-Being.

The next step was to examine predictive relevance using the blind folding procedure. This study followed the guidelines of several scholars (Hair et al., 2017; Stone, 1974; Geiser, 1974) that a value greater than 0 indicates that the exogenous constructs have predictive relevance to the endogenous constructs. All three Q² values for Organisational Citizenship Behaviour (Q² = 0.589) are greater than 0, indicating that the model has sufficient predictive relevance. The following diagram illustrates the results of the path analysis.

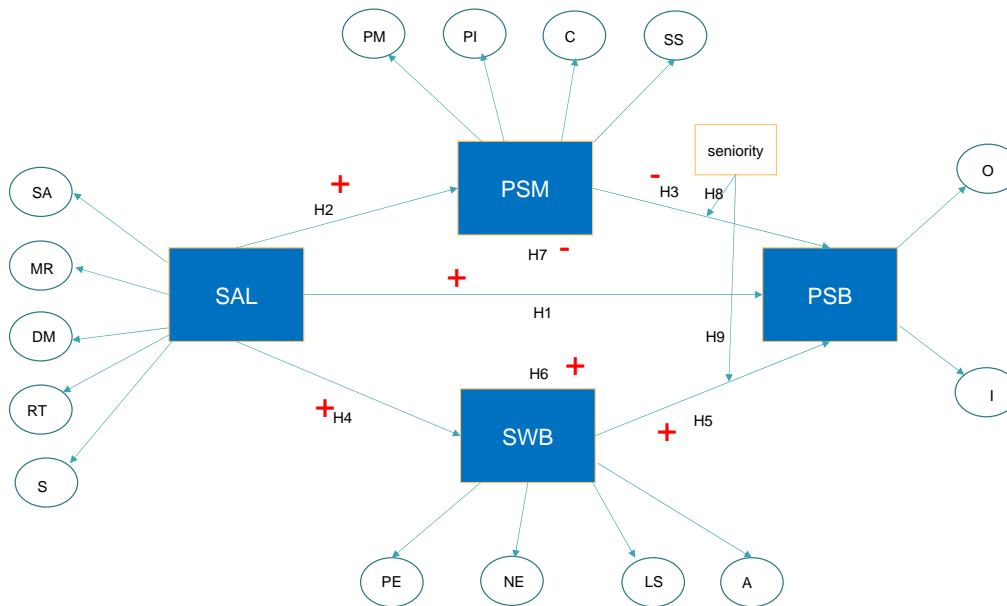


Figure 26 Path analysis results

In **Figure 26**, note that the main constructs were reflected in blue coloured boxes. Each hypothesis was explained with arrow indicators with H1-H10. The significant relationship between the variables were demonstrated using positive (+) symbol while the non-significant relationship using negative (–) symbol. In this diagram, most hypotheses yield positive relationship between the variables except for PSM and PSB.

6.9.6 PLS-Predict

In addition to assessing predictive relevance, the predictive power of the model can be analysed. This requires an analysis of the RMSE of in-sample prediction (A) and the RMSE of out-of-sample prediction (B). The in-sample prediction, which has already been done using the

coefficient of determination R^2 and the effect size f^2 , provides some explanatory power for the model. Out-of-sample prediction provides predictive power that is useful for predicting new observations and the practical generalisability of the results. It is important to note that explanatory power is not synonymous with predictive power, so further analysis may be conducted. In this study, the researcher conducted an analysis using the PLS-Predict procedure. PLS-Predict is a tool that can be used to check how accurate the model is as a prediction. This is done by comparing the research model with an artificial model based on the error. If the artificial model has a higher error, then the research model can be replicated by others for further research on the topic. The result of this analysis is shown in **Table 42**.

When comparing the two models, this table shows the difference between the RMSE values. The RMSE (A) in the first column in refers to this study, while the RMSE (B) in the second column refers to the predictive model with the linear regression model (LM). In comparison, RMSE (A) is higher than RMSE (B). This indicates that, the RMSE values in this research model are higher than those of the model LM. This means that this model also has higher predictive power than the model of LM. The predictive power was based on the variables used for this study. Evidently, the values were based on Prosocial Behaviour, Public Service Motivation and Subjective Well-being as the variables for this model.

Table 42 PLS Predict using RMSE scores

	RMSE(A)	RMSE(B)	MAE	MAPE	
OCB7	1.15	1.06	0.97	0.97	41.27
OCB12	0.79	0.68	0.60	0.60	20.49
OCB6	1.05	1.02	0.90	0.90	31.66
OCB11	0.89	0.86	0.71	0.71	22.40
OCB15	0.66	0.61	0.56	0.56	14.079
OCB3	1.08	0.96	0.94	0.94	35.67
OCB9	1.11	1.06	0.93	0.93	38.63
PSM9	0.99	0.85	0.77	0.77	30.65
PSM10	0.65	0.65	0.48	0.48	14.16
PSM12	0.61	0.60	0.52	0.52	13.10
PSM11	0.53	0.52	0.42	0.42	10.54
PSM5	0.72	0.72	0.56	0.56	15.67
PSM6	0.57	0.56	0.46	0.46	11.52
PSM8	0.72	0.66	0.60	0.60	16.24
PSM15	0.62	0.61	0.53	0.53	13.38
SWB11	0.58	0.53	0.51	0.51	12.45
SWB10	0.89	0.76	0.70	0.70	24.59
SWB1	0.76	0.71	0.61	0.61	16.98
SWB7	0.75	0.69	0.62	0.62	16.84
SWB9	0.81	0.76	0.65	0.65	21.01
SWB6	0.64	0.62	0.54	0.54	13.81
SWB12	0.73	0.71	0.61	0.61	16.33
SWB8	0.85	0.70	0.65	0.65	22.46
SWB2	0.81	0.770	0.64	0.64	19.10
SWB5	0.74	0.665	0.61	0.61	16.44
SWB4	0.73	0.661	0.58	0.58	15.63
SWB3	0.70	0.683	0.56	0.56	15.01

By referring to the results in Table 42, it further suggests that other researchers should include other variables in future studies for better predictive power of the model of prosocial engagement.

6.9.7 Mediation analysis

This section discusses the results of the mediation analysis of this study. Based on the following hypotheses, a mediation analysis was conducted to determine the indirect effects of Public Service Motivation and subjective well-being on the exogenous and endogenous construct.

H6: PSM significantly mediates the relationship between AL and PSB among middle-level bureaucrats in Malaysia.

H7: SWB significantly mediates the relationship between AL and PSB among the middle-level bureaucrats in Malaysia.

In the direct effect relationship, the more authentic the leader is, the more likely prosocial behaviour is promoted in the workplace. And the more authentic the leader, the more positive the effect on motivation and well-being, which in turn predicts prosocial behaviour in the workplace. These hypotheses were composed of two mediating variables. The proposed indirect relationship path is expected to reduce the strength of the base relationship. Using a deductive approach, we need to find out the indirect effects from the obtained data to confirm or refute the proposed model. The mediation effects of public service motivation and subjective well-being are shown in **Table 43**.

Table 43 Mediation analysis results

No	Procedure	Relationship	Path Coeff	Indirect effect	STDEV	Total effect	VAF	t values	sig	p values	hypothesis
	Direct effect	AL - PSB	0.34		0.05			6.36	***	0.00	
H6	Indirect effect	AL-PSM	0.19	0.01	0.05	0.21	0.20	3.75	**		Rejected
	Direct effect	PSM-PSB	0.05	0.07	0.07	0.15	0.08	0.69	**	0.50	
H7	Indirect effect	AL-SWB	0.36	0.30	0.06	0.55	0.35	6.48	***		Accepted
		SWB-OCB	0.50	0.42	0.05			9.90	***	0.00	

As shown in the **Table 43**, the VAF value of the total indirect effect was 35.20 per cent. The two hypotheses, i.e., H6 (authentic leadership → public service motivation → prosocial behaviour) and H7. (Authentic leadership → subjective well-being → prosocial behaviour). The result shows that one path is significant (subjective well-being as a mediator), and another path is not significant as a mediator (public service motivation). Consequently, only H6 was supported. Moreover, authentic leadership → prosocial behaviour was also found to be significant, implying that H6 partially mediates the relationship between authentic leadership and prosocial behaviour. Next, this study assessed the VAF value (Hair et al., 2017), where a VAF between 20-80 per cent represents partial mediation.

Next **Figure 27** illustrates the mediation results as explained in the indirect path analysis results. The big circles in the middle of the diagram represents the four constructs as SAL, PSB, PSM and SWB and their composite scores. There are two mediators in this study, reflected by PSM in purple and SWB in green.

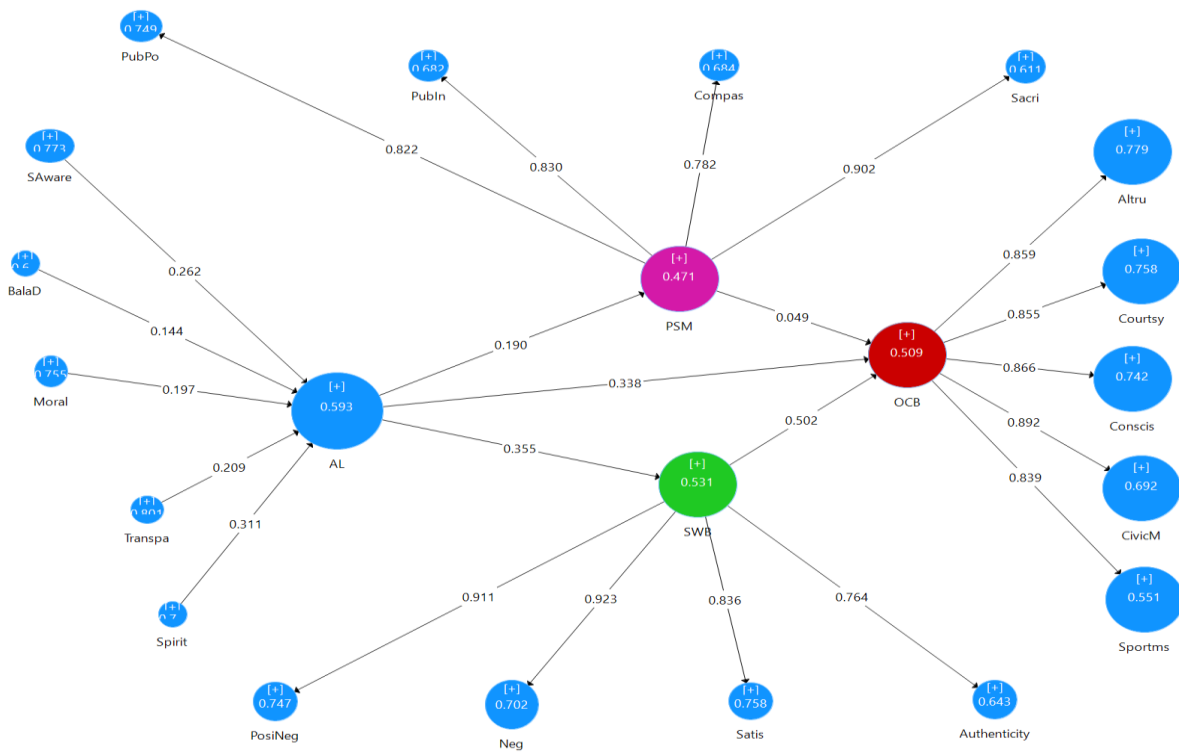


Figure 27 Mediation results illustration in SmartPLS

6.9.8 Moderation analysis

In the next analysis, the following hypothesis was tested,

H8: Seniority significantly moderates the relationship between PSM and PSB among ADS professionals in Malaysia.

It was hypothesised that the positive relationship between subjective well-being and prosocial behaviour would be stronger among junior managers than senior managers. In any moderating analysis, this study investigates whether the moderating variable influences the nature (magnitude/direction) of the effect of an antecedent or outcome. This study examined whether seniority plays a role in influencing prosocial behaviour. Seniority level was presented because grade is considered a categorical variable.

Therefore, a traditional data analytic approach is used by comparing correlation or regression coefficients across categories. Multigroup analysis (MGA) in PLS-SEM was used for this analysis. The interaction term depends on the measurement models involved and in this case the measurement model was reflective. For the group comparison, the product indicator approach was used as suggested by Chin et al. (2003). The following table explains the result.

Table 44 Moderation analysis results

Hypothesis	Relationship	Std.Beta	Std. Error	t-value
<i>H8</i>	SWB*grade -> OCB	-1.60	0.30	5.40

When conducting the MGA, two things were observed, one was the interaction diagram and the other was the moderation effect size. From the interaction diagram, we could determine whether the moderating variable strengthens or weakens the relationship between subjective well-being and prosocial behaviour. As for the moderating effect, it can be determined whether it is small, medium, or large. The result of the interaction is shown in **Table 45**.

Table 45 The moderation effect of seniority level

Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
SWB -> OCB	-0.30	-0.32	0.17	1.78	0.04
SWB*grade -> OCB	-1.56	-1.63	0.30	5.40	0.00
grade -> OCB	0.38	0.39	0.07	5.44	0.00

From this table, the interaction between grade*OCB is positive, but it is not clear in terms of

group (junior, senior). Therefore, an interaction diagram is drawn and shown in **Figure 28**.

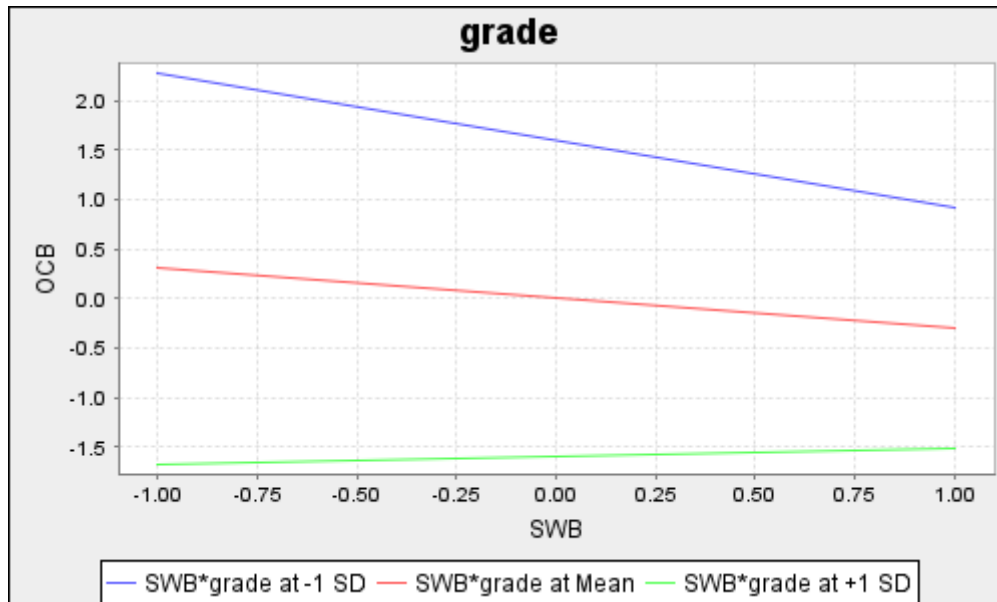


Figure 28 MGA analysis results

In this diagram, the blue and green lines are important to facilitate the interpretation of Grade as a moderating effect between the relationship between subjective well-being and organisational citizenship behaviour at +1SD (Junior =1) and gender at 1- SD (Middle=0). The blue lines are steeper than the green line and therefore indicate a stronger interaction between junior and senior. Thus, seniority level moderates the relationship between subjective well-being and organisational citizenship behaviour with the effect being stronger for the junior group.

6.9.9 Important Performance Matrix Assessment

The Importance Performance Matrix Assessment (IPMA) is useful to extend the results of the basic PLS-SEM results. It can highlight significant areas for improvement when highlighting management implications for the research. In this research, IPMA was used as a tool to identify

the most important part of developing mid-level managers as future leaders. The following table explains the impact of all factors in relation to prosocial behaviour.

Table 46 IPMA results

Construct	Importance (Total Effect)	Performance (Total Effect)
Public Service Motivation	0.13	87.82
Sustainable Authentic Leadership	0.34	57.95
Subjective Wellbeing	0.64	82.20

The result indicates that subjective well-being has the highest significance on prosocial behaviour with 0.64, while public service motivation was the least important with 0.13 in effect size with 0.13. In terms of performance, motivation for public service was found to be significant for performance (87.82), but sustained authentic leadership was least perceived by the group (57.95). The following diagram further illustrates this.

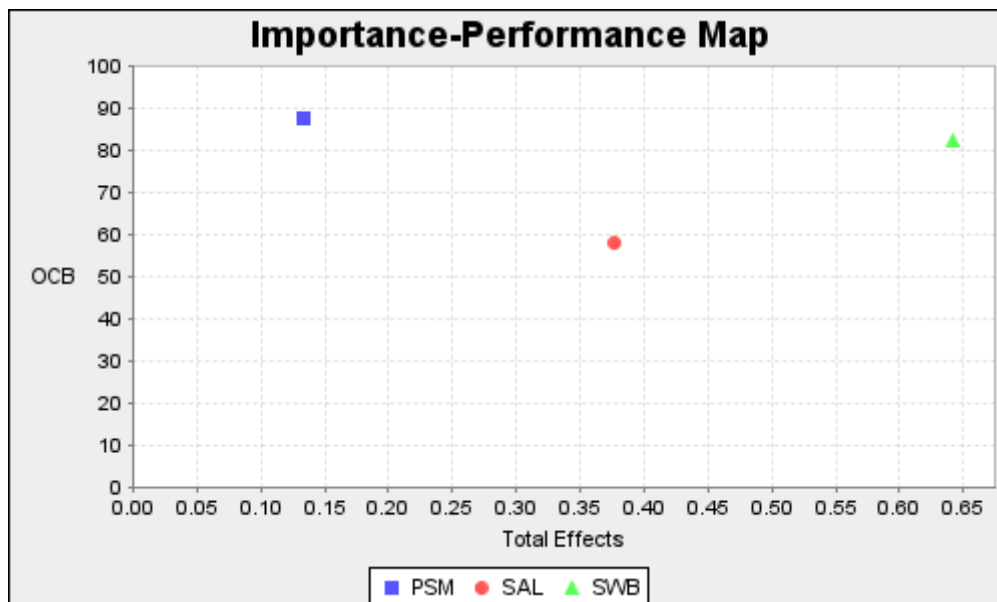


Figure 29 IPMA results

As the diagram suggests, SAL and SWB are important for prosocial behaviour. SWB is already highly regarded in performance and is very important. However, SAL is slightly lower, implying that more development programmes are needed for future leaders. In terms of helping behaviour in the organisation, it is important for the organisation to focus on PSM to motivate middle managers so that they can work productively and feel enthusiastic at work.

6.10 Discussion

This section discusses the main findings of this study. There are several important findings from this study. In the first procedure, the measurement model assessment was conducted based on several criteria such as internal consistency (reliability), convergent validity and discriminant validity (Hair et al., 2019; Ramayah et al., 2018, Sarstedt et al., 2017). According to Ramayah et al. (2018) in measurement model assessment procedure, several items, or the lower order constructs (LOC) can be removed to improve the effectiveness of the model. This procedure also provides evidence that the model passed the validity and reliability tests.

The next step in the structural model assessment examined the relationship between the variables. This includes direct analysis and indirect analysis. For example, the most significant predictor of prosocial behaviour is subjective well-being (SWB = 0.502), followed by Sustainable Authentic Leadership (SAL = 0.338), as these constructs have the highest value in the analysis of all four multidimensional constructs and are considered highly significant. Perhaps this result shows that bureaucrats believe that well-being and leadership are important in fostering collaboration in the workplace. These results were in line with several findings of similar studies on authentic leadership and organisational behaviour (Alillyani et al., 2018; Yesilkaya and Aydin, 2016; Bank et al., 2016) and well-being (Adams et al., 2020; Sutton, 2019).

Based on this observation, leadership qualities remain important factors for organisational productivity. However, we also need to pay attention to how employee subjective well-being is perceived, and this is crucial for well-being at work.

If we highlight the significant results, it does not mean that the less significant results can be ignored. Interestingly, when discussing the effect size (f^2), Sustainable Authentic Leadership (0.037) has a small effect in generating R^2 for Public Service Motivation. It is also observed that Sustainable Authentic Leadership (0.003) has a small effect in generating R^2 for subjective well-being. This tells us that while leadership is important to the collaborative culture, it has little effect on individuals' motivation to serve and their well-being. Although few studies on authentic leadership in relation to public service motivation and subjective well-being (Crawford et al., 2020; Adams et al., 2020) were quoted and compared, this result is considered novel.

Next, the mediation analysis compared two factors such as motivation (PSM) and well-being (SWB) in mediating leadership and prosocial behaviour. The results showed that one of the pathways was not significant (PSM). In this case, it could mean that the motivation to serve does not influence bureaucrats to help others. This result also contradicts previous findings that motivation for public service motivation is a strong predictor to organisational citizenship behaviour (Peretz, 2020; Bataglio and Gelgec, 2016; Kim, 2006). On the other hand, SWB shows a significant path and partial mediation based on the VAF value of the total indirect effect (35.20 per cent). This means that there is a direct relationship between SWB and PSB. It also indicates that SWB probably causes the outcome of PSB.

In the moderating analysis, this study also examined whether seniority level within the hierarchy plays a role in influencing prosocial behaviour. To date, there is very few literatures discussing

seniority as a factor influencing job performance and behaviour. However, categorical data such as this helps researchers understand more about the dynamics of people and their characteristics that might influence organisational behaviour (Aguinis, Hill and Bailey, 2019). Therefore, this requires the researcher to compare perceptions between the junior and senior groups in the samples through MGA analysis.

The analysis examined the group comparison between M41 and M44 (junior group) and M48-M52 (senior group). The results suggest that seniority level moderates the relationship between subjective well-being and organisational citizenship behaviour, with the effect being stronger in the junior group. Thus, seniority here represents rank within a bureaucratic organisation. It influences the extent of prosocial behaviour. This also suggests that the level of seniority influences job satisfaction and this in turn influences the outcome of prosocial behaviour of team members and aligns with previous studies on well-being (Sutton, 2020; Diener et al., 2018)

The evidence presented shows that the model of prosocial engagement using SDT, and positive leadership contributes to a better understanding of the interaction between the elements of authentic leadership, motivation, well-being and prosocial interact with each other. Although SDT and positive leadership are deeply rooted in positive psychology (Diener et al., 2019) not all elements were relevant in determining a culture of collaboration. In SDT, three main elements such as autonomy, relatedness, and competence (Deci and Ryan, 2000) determine how a person feels, behaves, and thinks in the workplace. Based on the analysis, this study made an important contribution to the application of SDT through prosocial engagement in the public sector.

6.11 Summary

In this chapter, the results of the quantitative analysis based on the questionnaire distributed among the mid-level bureaucrats in Malaysia were discussed. Several procedures using the PLS-SEM approach were considered to analyse the validity and reliability of the instrument as well as the path relationships. The main point from the path analysis was sustainable authentic leadership has a positive relationship with prosocial behaviour, which is partly mediated by subjective well-being. Furthermore, this study showed a comparison between the junior and senior groups among mid-level bureaucrats in the public sector. The junior group showed stronger helping behaviour than the senior group in the organisation. The results made an important contribution to the application of SDT in the public sector.

CHAPTER 7

DISCUSSION AND CONCLUSION

7.1 Introduction

This chapter comprises the final discussion of this thesis, which includes an overview of the study, the integration of findings from the three phases of the study and the main research findings. It also discusses the study's contribution to the body of knowledge, implications for management and practice, limitations of the study and recommendations for future research.

7.2 Overview of the study

As mentioned in Chapter 1, the overall aim of this study is to develop a model of prosocial engagement for public sector leaders. Therefore, it explores how mid-level bureaucrats behaved in the organisation to improve organisational performance. It has explored the factors that promote prosocial behaviour in the context of public organisations in Malaysia through authentic leadership, public service motivation and subjective well-being. All these factors were examined using self-determination theory (SDT), authentic leadership theory (ALT) and contingency model. Through this process, a model of prosocial engagement was proposed in Chapter 6 based on the data collected from the ADS officers in public administration in Malaysia.

This model allows us to see the bigger picture of the culture of collaboration in bureaucratic organisations, and it can help human resource managers in how we approach our work. In addition, studying motivation and well-being helps us understand that people give meaning to their work. People who find meaning in their work can bring their whole selves to work. This thesis suggests a mechanism to motivate others which could be an alternative to investing in

formal training, through building a collaborative culture and changing mindsets towards positive relationships.

7.3 Integration of results

The model of prosocial engagement presented in this study integrates self-determination theory (Deci & Ryan, 2000), authentic leadership theory (Walumbwa et al., 2008) and the contingency model (Vidal et al., 2017). In the first phase of the study, perceptions of authentic leadership were derived from public sector leaders through qualitative interviews. First, the view that authentic leadership is built on four dimensions: self-awareness, internalised moral perspective, relational transparency, and balanced processing (Gardner et al., 2019; Walumbwa et al., 2008) is challenged by also exploring the spiritual component, which is recognised as transcendental spirituality (Sendjaya, 2008). Linking new elements of authentic leadership provides a new understanding of the prosocial engagement of mid-level bureaucrats in the public sector. Accordingly, this study presents some findings that differ significantly from previous studies on leadership (Avolio and Walumbwa, 2014; Walumbwa et al., 2008; Luthans et al., 2007). The findings suggest that authentic leadership in the public sector has been defined in terms of three main components: 1) purposeful intention, 2) spiritual connection and 3) sustainable legacy.

However, these results alone are not conclusive. Therefore, the next phase of instrument development was conducted to determine whether these elements of leadership could be empirically tested. The prosocial engagement instrument was based on a few measures such as the Authentic Leadership Instrument (Neider and Schrieshem, 2011), the Spiritual Scale (Sendjaya, 2008), the Public Service Motivation Scale (Kim, 2009), the Subjective Wellbeing Scale (Diener et al., 2010), and the Organisational Citizenship Behaviour Scale (Lee and Allen, 2002). The scale validation process included a pre-test and a pilot test. During the pilot test, the

EFA was conducted. Specifically for the authentic leadership constructs, all components had Cronbach's alpha values greater than 0.7. The difference between the original instrument of ALI (Neider and Schrieshem, 2011) and Sustainable Authentic Leadership (SAL) was that ALI had 16 items and SAL had 20 items. Therefore, the pilot tests concluded that the instruments measuring SAL had adequate internal reliability. Thus, an important contribution was made to the development of a new dimension of authentic leadership in the public sector.

Furthermore, in the final phase of the study, the model of prosocial engagement was used as an exploratory model to investigate the relationships between variables. By examining several additional factors such as motivation, well-being through public service motivation and subjective well-being as a mediator, the complex relationships of prosocial engagement in the workplace could be integrated. In previous studies (Vieweg, 2018; Vandenabeele, 2007; Brewer and Seldon, 2000, motivations for prosocial behaviour were driven by 1) different leadership styles such as transformational and authentic leadership and 2) intrinsic motivations and benefits). The finding supports the previous study (Vieweg, 2018) that authentic leadership influences prosocial behaviour in the workplace by specifically looking at the middle-level bureaucrats. Furthermore, between motivation and well-being as mediators of prosocial behaviour, only one of the two factors was significant (subjective well-being). This result uniquely demonstrates the differences between previous studies on motivation and organisational behaviour (de Geus, 2020), where PSM is not necessarily an antecedent to OCB. Consistent with previous studies on OCB (Ingrams et.al, 2018 and Mekuria, 2016; Pandey, et al., 2008), this study also suggests that SWB is important for the development of OCB in the workplace.

7.4 Key research findings

As mentioned in chapter 3, this study involved three phases of data collection, the data were analysed using different methods and presented in separate chapters (Chapter 4, 5 and 6). This section highlights the key research findings.

7.4.1 *Dimensions of authentic leadership*

Data from the qualitative interviews in chapter 4 were analysed using a content analysis approach to understand some of the key meanings of authentic leadership from the public sector perspective. AL has been defined from an intrapersonal, interpersonal, and developmental perspective (Northouse, 2019). In the earliest development of this concept, it was defined from an intrapersonal perspective, focusing on a leader's self-knowledge, self-regulation, and self-concept (Shamir and Eilam, 2005). Then, from the interpersonal perspective, AL focuses on the relational process resulting from reciprocal interaction between leader and follower (Eagly, 2005). Interestingly, this study suggests findings which offers a new perspective on how authentic leadership works as a new leadership approach for public organisations.

In **Figure 30**, authentic leadership is mainly defined based on three main themes as discussed earlier in Chapter 4. The three main themes that emerged from this study were 1) purposeful intention, 2) spiritual connection and 3) sustainable legacy. It was studied from the perspective of the Malaysian public sector. Although these components are closely intertwined, they are distinct from each other. From the main themes, the sub-themes explain how each dimension were defined by the leaders.

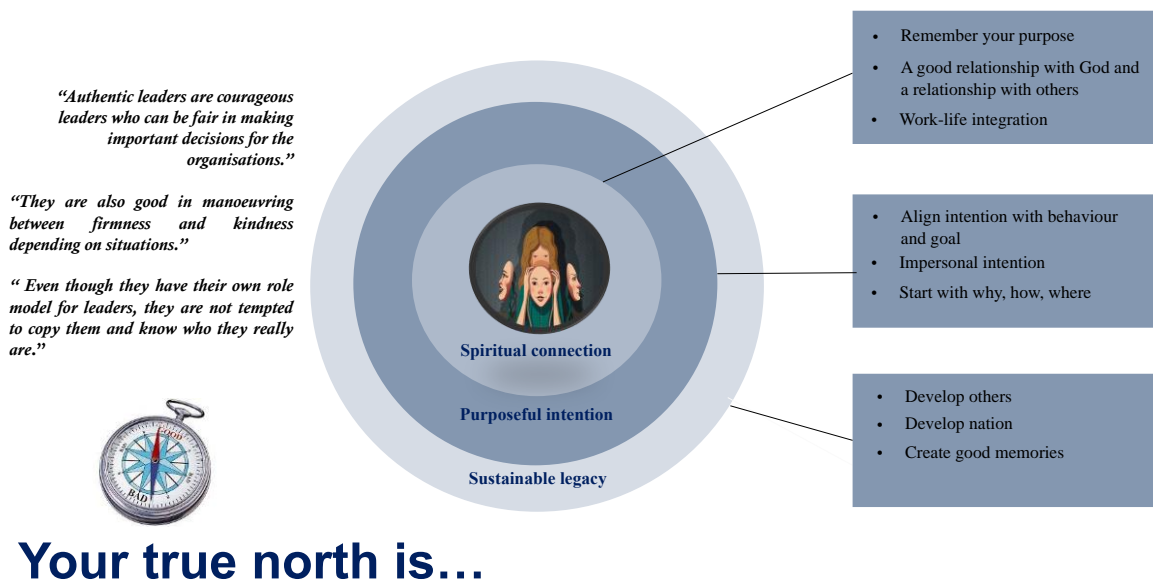


Figure 30 Authentic leadership in Malaysian context

For example, spiritual connection is the core of authentic leadership. If self-awareness dimension in previous AL models (Walumbwa et al., 2008; Kernis, 2003) were considered as the true north for leaders in the Western context (Ibarra, 2015; George, 2007), among Malaysian leaders, spiritual connection is their personal compass because it involves awareness and connection with God as the creator. This eventually motivates the leaders to find their purpose for leading. This finding further strengthen supports leadership concept in Islam, whereas men were regarded as caliphs and leaders of mankind, so leadership is a responsibility (Mahazan et al., 2017).

Subsequently, understanding the core will provide a better comprehension of purposeful intention. Intention can only be purposeful when the reason for leading is clear among the leaders. This helps them to align the intention and responsibility in serving the public without having personal interest or gain. In serving the public and government, ethics, and integrity (Brown et al., 2005) should be the highest priority that sets the leaders apart from unethical leaders. Authentic leadership reflects the outcome of good leadership, alongside transformational

leadership (Banks et al., 2016), servant leadership (Kaptein, 2019), is built on similar foundations on self-awareness and self-concordance (Eva et al., 2019; Ling et al., 2017).

7.4.2 Model of prosocial engagement

Essentially, this thesis examined factors that promote prosocial behaviour. These factors formed the basis for constructing a model of prosocial engagement to explore how mid-level bureaucrats perceived authentic leadership, motivation and well-being when collaborating with others at work. The model was called the Prosocial Engagement Model. The results of this model help others understand that engagement is important not only to do one's best at work, but also because we need to put ourselves out there to have a meaningful career and be satisfied.

This model was a response to the problem of engagement and wellbeing at work as reported in the Civil Service Engagement Survey and Civil Service Wellbeing Survey in Malaysia. The results of this study indicate how that prosocial activities are practised among mid-level bureaucrats in Malaysia. 10 hypotheses were developed and tested. A summary of the results of the hypotheses was presented in **Table 47**.

In this analysis, it has produced significant and non-significant findings. These results were important to understand patterns of behaviour of mid-level bureaucrats in Malaysia. For example, SAL and SWB were important predictors of prosocial behaviour, SWB also served as a mediator in enhancing the prosocial behaviour and seniority level played a role in analysing the performance between junior managers and senior managers in the public sector.

Table 47 Summary of hypotheses findings

Research questions		Hypotheses	Findings
What is the relationship between the perceived leadership behaviour, motivation, wellbeing, and prosocial behaviour amongst the ADS professionals?	H1	The perceived AL has positive influence towards PSB amongst the ADS professionals.	Fully supported
	H2	The perceived AL has positive influence on PSM amongst the ADS professionals.	Fully supported
	H3	The perceived AL has positive influence towards SWB amongst the ADS professionals.	Fully supported
	H4	PSM has a positive influence on employee PSB amongst the ADS professionals.	Not supported
	H5	SWB has a positive influence on employee PSB amongst the ADS professionals.	Fully supported
	H6	PSM has a positive influence on employee SWB amongst the ADS professionals	Fully supported
Does motivation and wellbeing mediate the relationship between the perceived leadership behaviour amongst the ADS professionals?	H7	PSM significantly mediates the relationship between AL and PSB amongst the ADS professionals in Malaysia.	Not supported
	H8	SWB significantly mediates the relationship between AL and PSB amongst the ADS professionals in Malaysia.	Partially supported
Does seniority moderate the relationship between the perceived leadership and wellbeing behaviour amongst the ADS professionals?	H9	Seniority significantly moderates the relationship between PSM and PSB amongst the ADS professionals in Malaysia.	Fully supported
	H10	Seniority significantly moderates the relationship between SWB and PSB amongst the ADS professionals in Malaysia.	Fully supported

7.4.3 Middle managers lead through collaboration

In Hypothesis 1 (H1) between the variable AL and PSB was deemed significant. There are possible explanations for this result. Using the model, mid-level bureaucrats generally had a positive influence from their leader who applied authentic leadership approach at work. These results also indicate that they are satisfied with their overall well-being. This is assessed by the positive and negative emotions and life experiences in the survey items (SWB scale). This study supports the previous studies and extends the studies on middle managers (Gjerde and Alvesson, 2020; Cooper, 2019) who give meaning to their work as they have become agents and experts in the organisation.

7.4.4 The construct of sustainable authentic leadership

As mentioned in Chapter 3, each factor was treated as a latent construct in the theoretical framework. This was in response to problems with the clarity of the constructs, such as the construct AL. Therefore, each construct needs to be redefined and reassessed using appropriate statistical measures. This justifies the process of qualitative data for the development of the instruments. To further explain, the model of prosocial engagement presented in this study integrates SDT and ALT. While AL is widely recognised as a multidimensional construct (Banks et al., 2016; Diddams and Chang, 2013; Avolio et al., 2010, Walumbwa et al., 2008) with four dimensions (self-awareness, relational transparency, balanced decision-making, and internal moral perspective), the finding points to another new dimension for AL, namely spirituality. Together, these dimensions form a new meaning for AL in the context of the

Malaysian public sector, known as Sustainable Authentic Leadership (SAL). The contribution is illustrated in the following figure.

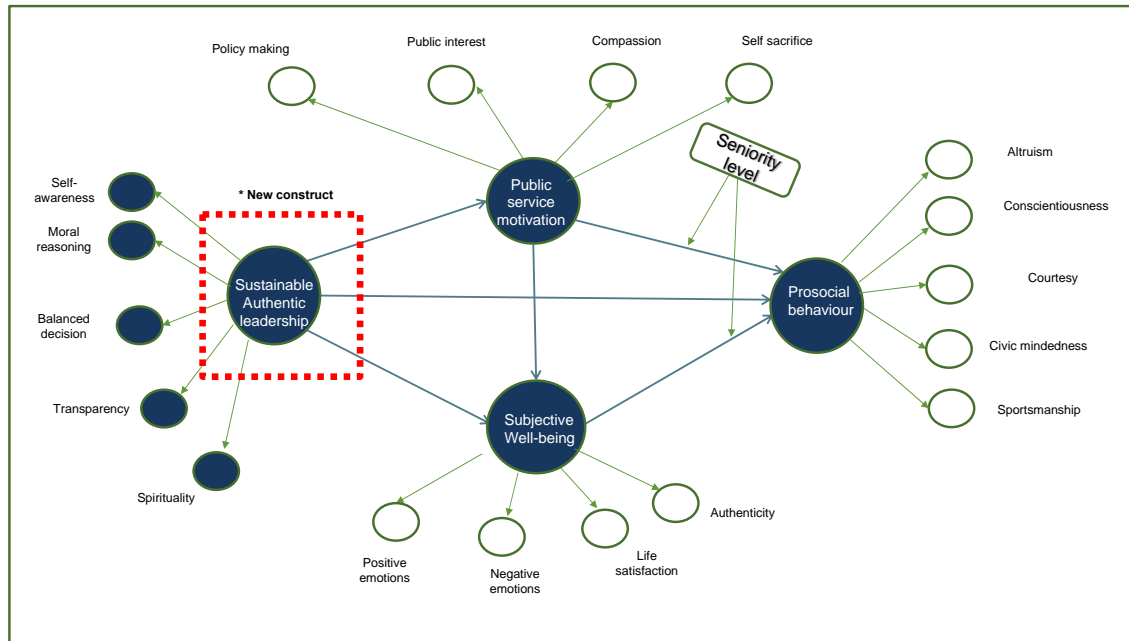


Figure 31 Sustainable authentic leadership construct

The main premise of a new dimension was to respond to the issues of construct clarity discussed in the literature. Spirituality is another element that is also a bridge to create a better perspective of leadership (Riggio et al., 2010; Sendjaya, 2007; Fry, 2005). This study supports the previous findings on spirituality on individuals (Sendjaya, 2007) but it also highlights that spirituality is one of the dimensions of authentic leadership. While it was not clear how spirituality is related to leadership, the findings suggest that the sub-construct correlates with other dimensions in AL. This view may be unique to Malaysia and differs from previous studies.

7.4.7 The application of self-determination theory

Furthermore, this study begins to explore the issues of leadership, motivation, well-being, and collaboration process using several theories such as SDT, ALT and the contingency model. For

example, SDT has been applied in numerous fields as it enhances organisational performance on the one hand and increases well-being in the workplace on the other (Ryan and Deci, 2000). This has not always been the case for ALT. Using SDT and ALT, this study concludes that competence, autonomy, and relatedness of SDT can be further analysed under the dimensions of AL and SWB. The reason for this argument is that there is a strong relationship between these variables, both directly and in indirect path relationships, as mentioned in Chapter 6.

Considering previous work on SDT and leadership (Ju et al., 2019), motivation for a career in public service (Chen et al., 2018), influence on public values (Andrews, 2015), predicting people's behaviour (Gul Gilal, 2018), promoting sincere and altruistic motivation in the public sector (Xu and Chen, 2016), the results at AL show that they can be analysed from the perspective of autonomous motivation. These findings are consistent with several studies on correlates between leadership and prosocial behaviour in the workplace (Yesilkaya and Aydin, 2016; Hsieh and Wang, 2015; Valsania et al., 2012). It seems possible that these results are since AL is considered a form of positive leadership approach alongside transformational leadership, ethical leadership, and servant leadership (Dinh et al., 2014; Gardner et al. 2011; Peus et al., 2011), so it is likely that this leads to similar results. Another explanation for this phenomenon is that if we analyse this theory from a practical perspective, we can predict that mid-level bureaucrats are generally helpful and love teamwork, but these factors such as motivation and well-being may also predict other factors that could promote better performance.

However, there are also some findings that are inconsistent with previous studies. In previous studies on motivation, PSM has been found to be a predictor of organisational performance (Ingrams et al., 2018; Ritz et al., 2016) and a mediator of organisational citizenship behaviour

(de Geus et al., 2020). In this study, PSM and PSB had no interaction (negative relationship), which may have to do with the fact that motivation and prosocial behaviour are similar (de Geus et al., 2020). Alternatively, this also means that motivation to serve in public service does not necessarily explain collaborative behaviour at work. This explains previous studies on organisational behaviour (Ritz et al., 2016) that the contextual environment plays a role in influencing behaviour in organisations.

7.4.8 The moderating effect of seniority level

In moderating effect analysis, 2 hypotheses were tested. The positive relationship between subjective well-being and prosocial behaviour will be stronger for junior managers than for senior managers. This result is important to see how bureaucratic organisation was influenced by hierarchical structures. Seniority level reflects the different grades (M41, M44, M48, M52) within the ADS schemes which explains that the higher the seniority in the department, the greater the responsibility and role they took on for their portfolio.

Through the multi-group analysis (MGA), this study shows a stronger interaction between junior managers compared to senior managers. Thus, seniority is found to moderate the relationship between subjective well-being and prosocial behaviour, with the effect being stronger for the junior group. It seems possible that junior managers, who are still at the beginning of their career, are more inclined to work in teams because they have less power compared to senior managers. In hierarchical structures such as in the Malaysian public administration, these managers must report to their immediate superiors and junior managers have more access to colleagues and subordinates because they work closely together. Senior managers were less hands-on and gave more instructions to the team, so they have more

authority in their role. In other words, the junior managers worked together more than the others.

7.5 Contributions of the study

There are three types of contributions that are common in scientific research, namely conceptual contributions, empirical contributions, and methodological contributions (Makadol et al., 2018; Summers, 2001). Researchers fall into the trap of trying to convince that their contributions are sufficiently high, while what matters most is how significant the contribution is (Ladik and Stewart, 2008; Summers, 2001). The overall contribution is the development of the model of prosocial engagement as a mechanism for understanding complex workplace behaviours and a motivation-based approach to studying performance-related issues in organisations. In other words, this study proposes a new model of how we can bring our whole selves to work.

Conceptually, by combining content analysis based on qualitative data interviews and PAF analysis based on the results of the pilot study, this study identifies a five-dimensional construct for sustainable authentic leadership (SAL) and empirically explores the relationships between authentic leadership, prosocial engagement, motivation, and well-being through PLS-SEM. This helps identify relevant factors to promote a collaborative culture. In addition, this study also examined the extent to which these factors are relevant to the public sector and mid-level bureaucrats in the Malaysian public administration.

7.5.1 The conceptual contribution

Conceptual contribution involves an improved definition of the original constructs or additional constructs may be added to the model (Summers, 2001). For example, the original

construct AL, as defined in authentic leadership theory, has four dimensions: Self-awareness, internalised moral perspective, balanced information processing and relationship transparency, and promotion of positive development (Walumbwa et al., 2008). This study does not want to challenge the existing definitions of AL, but rather to provide an alternative definition on how authenticity is perceived differently in another context, such as the public sector. Therefore, while Walumbwa's definition of AL became the primary reference, this study also reviewed several other definitions such as George (2003), Kernis and Goldman (2005) and Avolio and Gardner (2005). Notwithstanding the fact that Walumbwa's four dimensions of AL is the widely used and tested definitions (Crawford et al., 2020, Gardner et al., 2019) with few controversial retractions (Zhang et al., 2013; Peterson et al., 2012; Walumbwa et al., 2010), the quest for more improved conceptual definitions remains.

Previous studies suggest that AL is a loose construct (Ancarani et al., 2019; Banks et al., 2016) and further development of the construct is warranted (Crawford et al., 2020; Diddams and Chang, 2013; Alvesson and Einola, 2009). The lack of empirical evidence on the use of AL in public service (Yesilkaya and Aydin, 2016; Allilyani et al., 2016) was one of the motivations for this study. In Chapter 4, the qualitative interviews generated interesting responses about authentic leadership in the public sector. Several analyses on individual statements using sentiment analysis and thematic analysis provided new insights. For example, the definition of authentic leadership in the public sector was based on three main elements i) purposeful intention ii) spiritual connection iii) sustainable legacy. All these elements were compared to the existing AL definition (Crawford et al., 2020; Diddams and Chang, 2013). While purposeful intention and sustainable legacy might share similar characteristics, spiritual connection is indeed unique to Malaysian context. Therefore, the original contribution of this

study is the improved conceptual definitions of authentic leadership from Malaysian perspective.

Initially, the definition of spiritual elements was based on the concept of spiritual transcendence by Sendjaya (2008) in his article about spiritual leadership. However, in the second phase of this study during the instrument development process, the element was refined to fit into Malaysian context and more relevant to the Malay culture. This is potentially true because many civil servants in Malaysia are Muslims in faith and Malay who practices Islamic way of life. Thus, based on qualitative interviews and thematic analysis, new elements relevant to authentic leadership were discovered, with spirituality emerging as the new element and regarded as potential conceptual contribution.

Subsequently, the concept was tested using the quantitative approach through self-reported instrument on Prosocial Engagement. In the instrument development phase, the concept of sustainable authentic leadership (SAL) was proposed which encompasses of self-awareness, internalised moral perspective, balanced processing of information and relational transparency, and spirituality. This is considered as a new element in AL. The dimensions were tested using Exploratory Factor Analysis (EFA) as discussed in Chapter 5 with several statistical requirements. In the case of internal reliability of this construct using Cronbach's alpha value, the value must be between 0.7 to 0.9 (Bahkia et al., 2019; Hoque et al., 2018; Hoque et al., 2017). SAL as a multi-dimensional construct has Cronbach's alpha values of more than 0.7. In this context, the Cronbach's alpha value for all 20 items is 0.922, which is also above the threshold of 0.7. Therefore, the study concluded that the instruments measuring the Sustainable Authentic Leadership construct (SAL) have adequate internal reliability. This justifies the

argument that SAL is a potential conceptual contribution based on EFA procedures, in other words, the dimensions were already statistically supported.

Another contribution from theoretical standpoint is how the theoretical framework was based on self-determination theory (SDT), authentic leadership theory (ALT) and the contingency model. To provide robust explanation on prosocial engagement model, the consolidation of these theories and model have provided an original contribution in terms of using existing theories in leadership and management literature to further understand the leadership behaviours among middle-level bureaucrats. Prosocial engagement model has deemed useful in supporting further understanding of leadership struggles among middle managers (Sudirman et al., 2020; Ancarani et al., 2020). The findings extend a recent article on middle managers performance were predicted by the proactive motivation (Mustafa et al., 2022) in which based on the analysis, it was revealed that authentic leadership influences their behaviour, motivation to serve and their state of wellbeing at work.

7.5.2 The empirical contribution

The empirical contribution involves a theoretical linkage between variables that has not been tested before, or the degree to which the variables mediate the relationship between two constructs (Makadol et al., 2018; Ladik and Steward, 2008). Most importantly, in this thesis, the observation on relationship between variables provide an indication whether the prosocial engagement model can be operationalised.

Initially, although some leadership studies found a correlation between authentic leadership and organisational citizenship behaviour, motivation in public service motivation as a predictor of prosocial behaviour (Gould et al., 2013, Pandey et al. 2008, Kim, 2006) and psychological

well-being with leadership, there is limited evidence on authentic leadership with motivation and well-being and other forms of motivation such as PSM and well-being (SWB) (Pandey, et al., 2008; Ingrams et.al, 2018 and Mekuria, 2016). Therefore, this study attempted to address these concerns by building a model called prosocial engagement model based on SAL, PSB, PSM and SWB as the main constructs.

Due to the lack of empirical findings on the above factors in the public sector, this study explores the relationship between authentic leadership and prosocial behaviour. This study made several important discoveries supported by the statistical analysis procedures as elaborated in Chapter 6. Using the six-step procedure (Hair et al., 2017) in assessing the structural model in PLS-SEM, Subjective well-being (SWB = 0.502) was the most important predictor, followed by Sustainable Authentic Leadership (SAL = 0.338). The analysis showed that all relationships have a t-value ≥ 1.645 , except for Public Service Motivation, and were thus significant at the 0.05 level of significance. In addition, the predictors Subjective Well-Being ($\beta = 0.502$, $p < 0.01$), Sustainable Authentic Leadership ($\beta = 0.338$, $p < 0.01$) were positively associated with prosocial behaviour and explain 13% of the variances in PSB. Thus, H1, H3 and H5 were supported. On the other hand, Public Service Motivation had t-value less than 1.645 (t-value = 0.688), which means that H3 was not supported. The R^2 value of 0.13 was lower than the value of 0.26 suggested by Cohen (1988), indicating a moderate model.

Based on the assessment of the model, this study pointed out that, well-being is the most important factor for prosocial behaviour. This is consistent with previous studies on well-being in the workplace (Diener et al., 2018; Yurcu et al., 2015) but the findings are considered novel in the public sector. This situation has informed us that workplace culture is as important as workplace performance. This empirical contribution has shown that employer need to focus on

employee well-being to drive better performance and enhancing meaningful professional relationships.

In addition to study interaction between the variables, the application of SAL was tested with several variables such as PSB, PSM and SWB. Based on the direct path analysis, the value of Sustainable Authentic Leadership (0.211) and Subjective Well-Being (0.302) indicated medium effect in generating R^2 for Prosocial Behaviour. The result has shown that Sustainable Authentic Leadership (0.037) had a small effect in generating R^2 for Public Service Motivation. Moreover, Sustainable Authentic Leadership (0.003) had a small effect in generating R^2 for Subjective Wellbeing. While comparing previous leadership studies, there are few findings that discuss the implication of positive effects of transformational leadership on PSM (Banks et al., 2016; Tonkin, 2013) and positive effects of PSM on OCB (deGeus et al., 2020; Kim, 2006), this study suggest otherwise. This is also considered an empirical contribution. While the positive effect of SAL on SWB and PSM are considered new and is statistically significant, but it has rather limited practical in real world. In other words, relationships and collaborations cannot be based on these four main factors (leadership, motivation, well-being, helping behaviour) only. Moreover, the findings inform us how important each factor is when it comes to middle- level bureaucrats' leadership behaviour and management styles. They responded to each factor based on how that factor affects them and its importance, especially in an organisational context.

The theoretical framework predicted that leadership influences individuals' behaviour at work. In the path analysis using PLS-SEM, the perceived AL influences individuals' prosocial behaviour. SWB also mediates the relationship between AL and PSB. However, well-being plays a greater role than motivation to serve others. This suggests that

while PSM is important in understanding one's motive to serve others (especially in the context of public service), it is not as important as SWB.

In addition, while there are many variations of well-being, such as subjective well-being (SWB) and psychological well-being (PWB), SWB provides an overall perspective of life satisfaction, positive and negative experiences (Pacek et al., 2019; Diener et al., 2018) while PWB is more appropriate for personal growth and individual assessment (Eger and Maridal, 2015; Diener et al., 2010). This finding of this study is consistent with previous studies on well-being at work (Pacek et al., 2019; Fisher, 2014; Baker, 2011) and shows that high scores of SWB reflect the quality of pleasant experiences they have at work.

In addition, this study also found the correlation between authentic leadership, motivation for public service motivation and subjective well-being. In other words, authentic leadership is the predictor of all three factors public service motivation, consistent with studies on positive transformational leadership effects on motivation (Banks et al., 2016; Tonkin, 2013) and positive effect of subjective well-being on organisational citizenship behaviour (OCB) (Sutton, 2020; Diener et al., 2018).

However, novel findings on the negative effects on public service motivation on prosocial behaviour is inconsistent with previous articles PSM effects on OCB (Peretz, 2020; Crawford et al., 2020; Bakker et al., 2014). The indirect effects on PSM and SWB were supported in mediation analysis of PLS-SEM. The understanding of the impact of the authentic leadership approach and prosocial behaviour alongside with PSM and SWB might project different outcome as not be necessary true as in the case of public sector. In summary, based on these

findings, the prosocial engagement model can be operationalised, and this is considered as empirical contribution of the study.

7.5.3 The methodological contribution

The methodological contributions are connected to field studies when the attempt for construct validity of the key measures is made or application of multiple methods of measurement (Summers, 2001), although some views consider it was the least important as compared to theoretical and empirical contribution (Ladik and Stewart, 2008). This thesis aims to provide new perspective for looking at authentic leadership as a new leadership approach in the public sector of a developing country (Malaysia). Previous studies on this topic were largely confirmatory and tested in Western contexts (Crawford et al., 2020; Alvesson and Einola, 2019; Hoch et al., 2018) and some interesting cases in China, Korea, and Middle East (Alillyani et al., 2018; Hirst et al., 2016, Yesilkaya and Aydin, 2016).

Instead of adopting the confirmatory approach, this study has taken the alternative route of an exploratory study using SDT and ALT as the basis of theoretical assumptions using the PLS-SEM approach. Using mixed-approach can reduce bias from single data collection source (Bryman et al., 2014) and this study explored mixed-method approach to improve conceptual definitions and addressed different aspects of validity and reliability in research.

In terms of validity, this study achieved internal validity as the study was divided into different phases. For example, the instruments were reviewed by the experts during the pre-test, then a small number from the population participated in the pilot study. In this way, the instrument could be refined and redesigned to fit the population. In the actual study, a different sample

group was selected, and these models were empirically tested. In the first phase, the qualitative data were obtained through interviews and instruments were validated through focus group discussion. In the next phase, the quantitative data were obtained from the survey questionnaires and further analysed using several statistical procedures. Previous papers on authentic leadership employed confirmatory approach using CB-SEM approach (Newman, 2019; Eva et al., 2019; Walumbwa et al., 2008) while this study employed PLS-SEM approach as it was intended to explore the application of SDT, ALT and the contingency model through the development of prosocial engagement model, which is a new model for collaboration in the workplace.

In terms of novelty, this is probably the first study in the Malaysian public sector to analyse the influence of authentic leadership among middle managers compared to more popular theories such as transformational leadership (Gardner et al., 2019; Banks et al., 2016). It has obtained a variety of data from both middle-level bureaucrats and top-level executive leaders, which could be useful for generalising the findings based on the variables. From the perspective of external validity, the results are trustworthy as all levels of middle-level bureaucrats were covered, suggesting that they can be generalised to the Administrative and Diplomatic Service Officers in the Malaysian public administration.

Based on this explanation, this study enriches the discourse on prosocial engagement and authentic leadership. This study explores variables or factors unique to motivation or specifically autonomous motivation in SDT. It also contributes to advancing knowledge about authentic leadership in the public sector.

7.6 Practical implications

a) Future development of leadership programmes

In addition to theoretical contributions that may be of use to the community of scholars, this study also aims to provide practical implications for public sector practitioners, particularly those involved in talent development and human resource management. This study provides an interesting opportunity for future development programmes on authentic leadership approaches in Malaysia. In addition, this study also observes the leadership behaviour of middle-level bureaucrats that is different from other studies (Ancarani et al., 2019; Gregory and Kempster, 2018). The findings could be useful in understanding the current struggle, identifying gaps, and suggesting plans for development. The following diagram summarises the study.

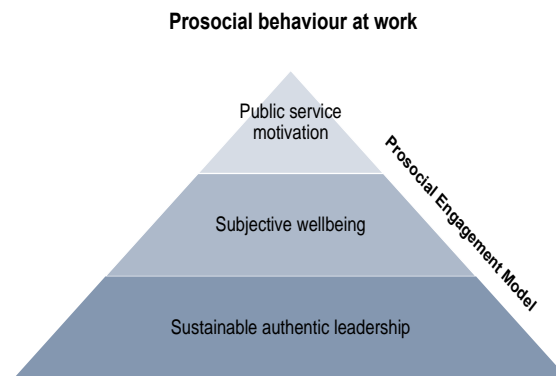


Figure 32 Prosocial behaviour at work

b) The development of authentic leaders for public sector

One of the results to be highlighted here is the Importance-Performance Matrix Analysis (IPMA) results using Smart-PLS. These results were discussed in Chapter 5. This analysis shows that authentic leadership and subjective well-being are important for positive prosocial behaviour. Well-being scores are high in performance and very important. However, it is also clear from the analysis that awareness of authentic leadership should be raised in the future and leaders must focus on increasing the motivation of middle managers so that they work productively.

This thesis supports the qualitative findings on AL previously (Gardner et al., 2019; Ibarra, 2015) It was highlighted in Chapter 4 which discussed the components of authentic leadership are unique to the Malaysian context and need to be developed accordingly. Using Prosocial Engagement Model as the new instrument, it can assess the middle-level bureaucrats' leadership styles and therefore suggest how organisations can be led by them.

Another finding from Chapter 4, based on the qualitative interview, deals with the aspects of authentic leadership. From the Malaysian public sector perspective, leaders saw authentic leadership in three components such as purposeful intention, spiritual connection, and sustainable legacy. Although these components are closely intertwined, there are some differences. Some components are seen as new elements that were not considered in the earlier discussions on authentic leadership among scholars.

d) Positioning middle level bureaucrats as leaders

As this thesis was originally written to address common themes from a practitioner's perspective, it also highlights that developing future leader in the public sector is a critical element for success and effective administration. In the previous discussion, leaders pointed out that middle managers are more authentic than top leaders. Authenticity is an important quality in gaining the approval of the followers. Previous studies on middle managers have shown that middle managers play an important role within the organisation as they must manage multiple stakeholders inside and outside the organisation. As technical experts standing between the two levels, their role is crucial in bridging the gap between the different hierarchical positions in the bureaucratic organisation (Ancarani et al., 2019; Murphy et al., 2017; Van Mart; 2013). Because of this unique dual role of dealing with upper management (their superiors) and lower management (subordinates), they are exposed to both stress and a steep learning curve.

Authentic leadership should be encouraged in the organisation and as the leader mentions, sometimes 'push and pressure' techniques are used to get things done. However, this technique should be used with caution so as not to neglect the emotional state and well-being of the staff. Leaders continue to be a motivating factor in getting things done in the organisation. This study found that further development of authentic leadership will benefit middle managers in the organisation.

Another observation about middle level bureaucrats is that based on this study and their middle level role in the organisation, they are still perceived as young. They still need to mature in terms of communication and decision-making skills. If they learn about a positive leadership approach and understand the importance of being authentic, it can help them understand the big picture, play different roles and have the courage to challenge the status quo of how things

are done. However, this requires the support of top management and human resource managers in the organisation.

For example, leadership training should be broader rather than focusing on skills and professional competencies. Continuous professional development programmes must also include personal development such as coaching, mentoring and sponsorship. In addition, training and development should give top priority to maintaining a positive work culture to promote authentic leadership. It has already been discussed that employees may observe inauthentic qualities in their leaders and that injustice, favouritism and unconscious bias may occur in organisations. Although this may be unintentional, leaders need to have a high level of self-awareness so that their actions are not interpreted as biases clouding their leadership style. Therefore, open communication and building trust are important so that authentic leadership can lead to positive organisational behaviour and staff well-being.

7.7 Limitations of the study

In the next section, this thesis addressed the limitations of the study. Essentially, good research must be able to reflect on what has happened, what went wrong and what can others do about it. The aim of this study was essentially to develop a model to examine engagement and collaboration in the workplace. Using middle level managers, this study was developed to observe the Administrative and Diplomatic Service (ADS) officers in the Malaysian public administration as leaders.

Although this study has led to important findings about prosocial engagement, some aspects were excluded from the analysis, such as a deeper analysis of demographic differences, which

could provide more insightful ideas about the leadership preferences of younger leaders. The result is limited to institutional differences, such as in the moderation analysis, which shows that younger leaders behave more prosocially. The results show that leadership is an internal process.

In terms of limitation of the study, the mixed method approach has its own limitations, especially in terms of replicability. Not all research can replicate the process and include both qualitative and quantitative data. However, as different research methods were used at each stage, it would be possible for future studies to focus on a particular methodology to increase the validity of the research and instruments. For example, with the self-report survey, findings could only be obtained from the perspective of the manager. Therefore, the findings are limited to the population of ADS in Malaysian public administration.

Another limitation of this study is the extent to which the findings can be generalised beyond the population of this study. The findings of this study might be limited to the ADS officers in the Malaysian public administration. There are 20 different schemes in the public sector, each performing different functions and therefore facing different challenges at work. Further studies on other schemes of services are warranted. In qualitative interviews, for example, and it would be insufficient to generalise about what happens in public administration. To do justice to the small sample in this study, rigour was applied in selecting quotes that represent how the leaders understood authentic leadership.

7.8 Suggestions for future research

This study could be useful for the exploratory phase, but further testing based on solid theoretical foundations and valid and reliable instruments is warranted. In the future, more qualitative studies should be conducted and that a mixed methods design could contribute to a solid theoretical development of authentic leadership as a leadership theory.

Sustainable authentic leadership can be a good starting point to explore how, alongside a collaborative culture, employee well-being remains the top human resource priority. Understanding and exploring how this can work requires a qualitative approach, the methods of which can be replicated in other studies in a different setting. As mentioned earlier, this study is on top leaders in the Malaysian public administration, future studies may also include technical leaders in the organisation. A comparison between managers and technical leaders will allow for a more comprehensive discussion on how authenticity is viewed based on the different professional roles. It will also educate the community on how important cultural factors are in understanding organisational behaviour.

Authentic leadership is essential for the development of positive behaviour in both leaders and followers. However, existing studies require extensive work on its theoretical underpinnings and effective measurement. While current studies continue to focus on the application of authentic leadership as a construct, this study provides an understanding for building a theoretical foundation for authentic leadership as a theory. These findings could help illuminate new dimensions of authentic leadership based on cultural perspectives. These findings may improve new models and existing measures and provide practitioners with some practical recommendations.

This study suggests early intervention in leadership during the formative years of a future leader's work. This requires extensive work to delve deeper into motivation-based theories and related variables. One possible way to further develop this into formidable concepts could consider the role of self-determination theory to explore other specific behaviours or values that might influence individuals to become leaders.

Another suggestion is to revisit the altruistic component of prosocial behaviour theory to outline the motive to help others in the organisation. Unfortunately, both theories are the least researched for this topic. For now, this study suggests that the construct of authentic leadership can be further refined based on contextual and cultural realities, as these areas are still under-researched and could provide interesting recommendations that could be relevant to practice.

In addition to exploring what authentic leadership is, another way of defining this concept offers us the opportunity to understand what authentic leadership is not. For example, authenticity becomes insignificant when a person does not understand who they are. It is a process that requires both internal processing and external perception. Previous studies of authentic leadership that used self-assessments have a high probability of biased results. Therefore, the measurement of authentic leadership should be treated with caution.

Furthermore, the element of purposeful intention aligns with one of the dimensions of authentic leadership defined by Walumbwa et al. (2008), which consists of four dimensions (self-awareness, balanced processing, relational transparency, and internal moral perspective). This study finds that self-awareness is widely recognised as an important criterion for top-level leaders among these four dimensions. However, researchers still need to develop further measures of authentic leadership to find out the extent to which these dimensions differ or are

redundant. Therefore, researchers should consider further refinement of the Authentic Leadership Questionnaire (ALQ) and the Authentic Leadership Instrument (ALI) in the future. To this end, researchers may consider existing instruments that measure similar concepts and combine these instruments into one model and conduct appropriate statistical procedures.

7.9 Conclusion

This chapter summarises the main findings of this thesis. In general, each of the methods used has made its own contribution and has contributed to a better understanding of the body of knowledge. In terms of theoretical contribution, the development of the construct of sustainable authentic leadership suggests that self-determination theory has its own utility in the area of authentic leadership, public service motivation, subjective well-being and prosocial behaviour in the public sector. The findings are applicable in the Malaysian public sector.

Then, this study also has an impact on society. Specifically for the public sector, this study provided some insights that people can work collaboratively as a team or otherwise through the model of prosocial engagement when their needs are met. These needs include support from their leaders, feeling valued and satisfied at work and in society in general (based on subjective well-being scores). The conclusion from this study is that practitioners can refer to these findings when prioritising personal growth or professional development for high performers. By focusing on what is important and meaningful to the individual, the organisation can perform better and get the best out of its employees.

What does prosocial engagement really mean in the public sector? In the introduction, issues with lack of engagement and wellbeing in the Malaysian public sector were evident. As the title of the thesis suggests, leading authentically is the way forward for future leaders.

Collaboration are driven by authentic leaders, happy people. Authentic leaders also influenced followers' motivation to serve and their state of well-being. This model simply provides a framework and tool based on the culture of collaboration to address these issues among mid-level bureaucrats. Leadership can happen at all levels if staff are empowered, feel connected to each other and have appropriate skills and competencies for their work. Most importantly, sustainable authentic leadership informs us that true north is based on spiritual connection, purposeful intention and sustainable legacy.

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APPENDICES

Research Ethics Approval

NUBS Research Ethics [Ref No.:NUBS-REC-2021-4]

ONLINEFORM <Onlineform@nottingham.edu.my>

Mon 29/3/2021 1:05 PM

To: Hal Mahera Binti Ahmad <saxha1@nottingham.edu.my>

29 March 2021

Dear Hal Mahera binti Ahmad,

Reference Number: NUBS-REC-2021-4

Project title: The influence of authentic leadership on organisational citizenship behaviour and public service motivation for effective leadership development among ads officers in Malaysia

The NUBS Research Ethics Committee approves your application.

Please note that this approval is for the research work you describe in the



**University of
Nottingham**

UK | CHINA | MALAYSIA

THE MANIFESTATION OF THOUGHTS ABOUT AUTHENTIC LEADERSHIP, ORGANISATIONAL CITIZENSHIP BEHAVIOUR AND PUBLIC SERVICE MOTIVATION IN THE MALAYSIAN PUBLIC ADMINISTRATION

• **ABOUT THE RESEARCH**

Authentic leaders can positively influence the follower's motivation in enhancing organizational behaviour to drive the organizational performance. Authentic leadership promotes helping behaviour, builds effective leader-follower relationship and were the least studied as compared to other leadership theories in recent leadership literature. To examine the impact of authentic leadership in Malaysia public administration, there are two important criterions chosen for this study which, are organisational citizenship behaviour as an outcome and public service motivation as the moderating factor. Instead of focusing on the top echelons of the public service, this study will look at mid-level managers who served as public administrators in the Malaysian government. It is important to gather the insights from the experts (or leaders) before the actual study is being conducted to the population.

Therefore, to assist this study, the expert will need to think about the current Malaysian context in terms of leadership challenges especially in managing people in the organisation. This research aims to propose an authentic leadership model to confront the obstacles of managing employee motivation and engagement in the public sector. What values or insightful observations among the senior leaders might need to be surfaced and worked on? The feedback might assist in developing an analytical tool to help to understand the complex environment into which the leadership need to be exercised.

• **RESEARCH DESIGN**

This research requires three stages of data collection in its initial phase during the instrument development process.

1. Phase 1 : An expert review interview
2. Phase 2: An expert review feedback regarding questionnaires
3. Phase 3: A pilot study with the real respondents for the study (mid-level managers in the Malaysian public sector)

The researcher will conduct an expert review interview to selected experts in the Malaysia public administration. These experts (later addressed as participants) will provide some valuable insights from the practitioners as well as expert opinion about main issues in public administration, leadership challenges and what is needed for the future. In this interview, the participants will be asked to discuss some questions pertaining to authentic leadership, organisational citizenship behaviour and public service motivation.

The outcome of this research will assist the government to better understand the leadership gaps and to focus on in their leadership development needs.

The experts in this stage will fit this profile below:

- Leaders in the senior grade of the Malaysian Public Service (JUSA)
- Have a minimum 5 years of working experience in the top management or senior executive role in the public sector

The input shared by the experts will be mapped against Authentic Leadership Questionnaires (ALQ), Organisational Citizenship Behaviour (OCB) Scale and Public Service Motivation (PSM) Scale. This is to ensure that the measurement instrument developed for this study able to reflect perceptions among public sector officers in the Malaysian public administration.

- **IMPLEMENTATION**

The researcher plans to conduct a face-to-face interview with the selected experts to ensure the accuracy of information captured for the purpose of study.

- **INTERVIEW QUESTIONS**

These questions are designed to initiate thinking about the impact of leadership on the complex leader-follower relationship in the public sector. It was based on several instruments that are common in organisational studies.

AUTHENTIC LEADERSHIP

1. Authentic Leadership consists of several characteristics such as self-awareness, internalized moral perspective, relational transparency and balanced processing during decision making and is built upon developing others in the organisation.

In your opinion, what Authentic Leadership isn't?

2. Could middle managers be more authentic? Explain your views.
3. How do you lead and follow positive sense of authenticity in interacting with each other (followers, stakeholders, public?)
4. We have seen Jacinda Ardern's unprecedented popularity handling Covid-19 gain support towards authentic leadership. What makes people choose authentic leadership in managing today's challenges?
5. What leadership competencies are needed for the government to develop authentic leadership among the mid-level managers?
6. Often authentic leadership talks about moral compass. What values shapes your thinking and leadership style?

7. The future of leadership requires virtualisation and collaboration, and in the context of public administrations, this demands a lot of facilitation and effective communication. How do we build authentic leadership model that includes these unprecedented new challenges to increase motivation and engagement among the team members?

ORGANISATIONAL CITIZENSHIP BEHAVIOUR

1. Organisational Citizenship Behaviour means “going above and beyond” or “giving their all” when it comes to performing something that are not indirectly related to the job. Employees with high OCB traits exhibits altruism, courtesy, and conscientiousness. In your opinion why does OCB is important in public sector?
2. What factors/behaviours do you perceive as relevant to OCB?
3. What challenges do you see in getting a new task?
4. How would you expect your employees to contribute to the sense of belonging to the organisation?
5. What do you think of leadership impacts employee behaviour in the workplace?
6. How does performing extra role are concordant with your ideals, interest, and values and more meaningful to you?

PUBLIC SERVICE MOTIVATION

1. What makes serving Malaysia public interest is an important drive in your life?
2. How can serving public interest is bigger than helping people individually?
3. Public service motivations mean attraction to policy making, commitment to public interest, compassion, and self-sacrifice. Previous studies have shown that health workers and educators exhibit high scores of PSM, what do you have to say about public administrators in general?
4. In your opinion, what kind of behaviour, attitudes, or mindsets that leaders can portray to encourage public service motivation among their followers?
5. What are your thoughts about this statement?

Making a difference in Malaysian society means more to me than personal achievements.

6. How do people decide what to strive in their lives?

• CONTACT INFORMATION

Questions or inquiries for additional information or clarification can be addressed to:

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The University of
Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Dear Sir/Madam,

My name is HAL MAHERA BINTI AHMAD, a PhD student from The University of Nottingham Malaysia Campus, Nottingham University Business School. I am currently conducting research on “The Influence of Perceived Authentic Leadership Towards Organisational Citizenship Behaviour: The Mediating Role of Public Service Motivation And Subjective Well-Being Among ADS Professionals In The Malaysian Public Administration”. Specifically, to obtain a clear picture of the perception of authentic leadership, organisational citizenship behaviour and public service motivation from the perspective of PTD in the Malaysian civil service. As the focus of this study is on PTD in the Malaysia public administration, I wish to invite you to participate in this survey.

It will take around 15 to 20 minutes to complete the survey. Kindly rest assured that your response will be anonymous and treated in the strictest confidence. The obtained responses are critically important in getting the accurate findings that will help reflect the practical scenario of your organisation. Moreover, there is no right, or wrong answer and information derived from this questionnaire will be used for **research purposes only** to fulfil the PhD thesis requirements of The University of Nottingham.

While you are completing this survey, please do not hesitate to contact me in case of any related enquiries. If you wish to complain about the way in which the research is being conducted or have any other concerns about the research, then in the first instance please contact my supervisor Associate Prof Dr. Maniam Kaliannan at Maniam.Kaliannan@nottingham.edu.my. Alternatively, you may contact Research Ethics Committee, Nottingham University Business School (NUBS REC) at nubs-rec@nottingham.edu.my. Thank you for your cooperation and agreement to participate in this survey.

Yours Sincerely,

HAL MAHERA BINTI AHMAD

PhD Student

Nottingham University Business School

The University of Nottingham Malaysia Campus

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BAHAGIAN 1: PROFIL DEMOGRAFIK PESERTA
PART 1: RESPONDENT'S DEMOGRAPHIC PROFILES

Arahan : Mohon tandakan (√) di dalam kotak yang disediakan.

Instructions: Please tick (√) in the box given.

Note : Soalan 7 dan 8 adalah mengenai ketua anda.

Note: Question 7 and 8 is about your current manager

<p>1. <input type="checkbox"/> Jantina / Gender</p> <p>Grade</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p><input type="checkbox"/> Wanita/ Female</p> <p>2. Kategori umur /Age group</p> <p><input type="checkbox"/> <input type="checkbox"/></p> <p><input type="checkbox"/> 21-25</p> <p><input type="checkbox"/> <input type="checkbox"/> 26-30</p> <p><input type="checkbox"/> Female</p> <p><input type="checkbox"/> 31-35</p> <p><input type="checkbox"/> 36-40</p> <p><input type="checkbox"/> 41-50</p> <p>3. <input type="checkbox"/> Gred Jawatan / Job Grade</p> <p>M41</p> <p><input type="checkbox"/> M44</p> <p>4. <input type="checkbox"/> Jenis Organisasi</p> <p><input type="checkbox"/> Kementerian/ Ministry</p> <p><input type="checkbox"/> Agensi/ Agency</p> <p>5. Kelayakan akademik tertinggi / Highest education level:</p> <p><input type="checkbox"/> <input type="checkbox"/> Sarjana Muda /Bachelor's degree</p> <p><input type="checkbox"/> Sarjana / Masters</p> <p>Doktor Falsafah /PhD</p> <p>6. Tempoh perkhidmatan / Duration of service</p> <p><input type="checkbox"/> 1 hingga 5 tahun / 1 to 5 years</p> <p><input type="checkbox"/> 6 hingga 10 tahun / 6-10 years</p> <p><input type="checkbox"/> Lebih dari 10 tahun / More than 10 years</p>	<p>7. Gred Jawatan Pengurus /Manager's Job</p> <p>M48</p> <p>M52</p> <p>M54</p> <p>8. Jantina/ Gender</p> <p>Lelaki / Male</p> <p>Wanita /</p>
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PART 2: AUTHENTIC LEADERSHIP

Authentic leadership refers to a leadership approach style that foster greater self-awareness, an internalised moral perspective, balanced processing of information, relational transparency, and spiritual awakening on the part of leaders working with followers, fostering positive self-development.

The following part of this survey focused on **your perception and assessment towards your manager's authentic leadership**. Judge how frequently each of the statements fits your manager. Please tick (✓) the most appropriate number that best matches your own assessment based on the given rating scale: 1 = Never, 2 = Rarely, 3 = Occasionally, 4 = Often, 5 = Very often.

Dimension	No	Description	Never	Rarely	Occasionally	Often	Very Often
Self-awareness	S1	My boss solicits feedback for improving his/her dealings with others.	1	2	3	4	5
	S2	My boss clearly states what he/she means.	1	2	3	4	5
	S3	My boss shows consistency between his/her beliefs and actions.	1	2	3	4	5
	S4	My boss asks for ideas that challenge his/her core beliefs.	1	2	3	4	5
Relational transparency	RT1	My boss describes accurately the way that others view his/her abilities.	1	2	3	4	5
	RT2	My boss admits mistakes when they occur.	1	2	3	4	5
	RT3	My boss uses his/her core beliefs to make decisions.	1	2	3	4	5
	RT4	My boss carefully listens	1	2	3	4	5

			<i>to alternative perspectives before reaching a conclusion.</i>					
<i>Internal Processing</i>	<i>Moral</i>	IMP1	<i>My boss shows that he/she understands his/her strengths and weaknesses.</i>	1	2	3	4	5
		IMP2	<i>My boss openly shares his/her feelings with others.</i>	1	2	3	4	5
		IMP3	<i>My boss is guided in his/her actions by internal moral standards.</i>	1	2	3	4	5
		IMP4	<i>My boss expresses his/her ideas and thoughts clearly to others.</i>	1	2	3	4	5
<i>Balanced Decision Making</i>		BM1	<i>My boss listens very carefully to the ideas of others before making decisions.</i>	1	2	3	4	5
		BM2	<i>My boss makes a strong point if it gives a significant impact to the organisation.</i>	1	2	3	4	5
		BM3	<i>My boss seeks others view before making decisions.</i>	1	2	3	4	5

	BM4	<i>My boss encourages others to voice opposing points of view.</i>	1	2	3	4	5
<i>Transcendental Spiritual</i>	SA1	<i>My boss works with sincere intention to please God.</i>	1	2	3	4	5
	SA2	<i>My boss regards work as an act of worship.</i>	1	2	3	4	5
	SA3	<i>My boss fosters spiritual and moral approach among members in the organisation.</i>	1	2	3	4	5
	SA4	<i>My boss promotes the culture of working as an act of worship towards the Creator.</i>	1	2	3	4	5
	SA5	<i>My manager reminds me to take my job seriously as it is accountable to God.</i>	1	2	3	4	5

SECTION 3: ORGANISATIONAL CITIZENSHIP BEHAVIOUR

Organisational Citizenship Behaviour refers to “extra-role behavior” which “contributes to performance beyond expectations” that incorporates these values such as altruism, courtesy, conscientiousness, civic virtue, and sportsmanship among individuals in the organisation.

The following part of this survey focused on the respondent’s **perception and evaluation towards their own organisational citizenship behaviour** that resulted from the direct and indirect effects of their manager’s authentic leadership. Please tick (✓) at the most appropriate number that best matches your own assessment based on the given rating scale.: 1 = Never, 2 = Rarely, 3 = Occasionally, 4 = Often, 5 = Very often.

Dimension	No	Description	Never	Rarely	Occasionally	Often	Very often
Altruism	OCB1	<i>I provide ideas for improving the functions and tasks in the organisation.</i>	1	2	3	4	5
	OCB2	<i>I look forward to contributing to the development of the organisation.</i>	1	2	3	4	5
	OCB3	<i>I dedicate some time to help others in work and non-work issues.</i>	1	2	3	4	5
	OCB4	<i>I believe it takes measures to protect my organisation against potential problems.</i>	1	2	3	4	5
Courtesy	OCB5	<i>I defend my organisation when somebody talks negatively about it.</i>	1	2	3	4	5

	OCB6	<i>I help to those who were absent.</i>	1	2	3	4	5
	OCB7	<i>I give my personal properties to others to help them in their work.</i>	1	2	3	4	5
	OCB8	<i>With inner satisfaction, I spend my time to help others who have faced work-related problems.</i>	1	2	3	4	5
<i>Conscientiousness</i>	OCB9	<i>I help others to fulfil their obligations.</i>	1	2	3	4	5
	OCB10	<i>I adjust my work schedule such that I may address in extra time the request of co-workers.</i>	1	2	3	4	5
	OCB11	<i>I express my concerns about the reputation and image of organization clearly.</i>	1	2	3	4	5
<i>Civic mindedness</i>	OCB12	<i>I keep up with the developments of my organisation.</i>	1	2	3	4	5
	OCB13	<i>I welcome new employees</i>	1	2	3	4	5

with open arms.

OCB14 *I feel proud when representing the organisation.* 1 2 3 4 5

OCB15 *I stay loyal to the organisation.* 1 2 3 4 5

Sportmanship **OCB16** *I conduct the actions that will help to achieve the organization's goals.* 1 2 3 4 5

OCB17 *I show goodwill towards co-workers, even when they try to achieve personal goal.* 1 2 3 4 5

SECTION 4: PUBLIC SERVICE MOTIVATION

Public Service Motivation refers to a set of belief, values and attitudes that go beyond self-interest and organisational interest, which is based on attraction to policy making, commitment to public interest, compassion, and self- sacrifice.

The following part of this survey focused on the respondent’s **perception and evaluation towards their own public service motivation** that resulted from the direct and indirect relationship with their manager’s authentic leadership. Please circle the most appropriate number that best matches your own assessment based on the given rating scale: 1 = Never, 2 = Rarely, 3 = Occasionally, 4 = Often, 5 = Very often.

Dimension	No	Description	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neither agree/disagree</i>	<i>Agree</i>	<i>Strongly agree</i>
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PSM1 *I am interested in making public policy programmes that is beneficial for the country and my people.* 1 2 3 4 5

Attention to policy making

	PSM2	<i>I share my views about public policy because I am attracted to it.</i>	2	3	4	5
	PSM3	<i>I feel satisfied when the public programme yields benefit to others.</i>	2	3	4	5
	PSM4	<i>I consider public service is my true calling.</i>	2	3	4	5
Commitment to public interest	PSM5	<i>I feel that it is meaningful to work in the government.</i>	2	3	4	5
	PSM6	<i>I prefer the public servants to choose what is right then what is acceptable when performing responsibilities at work.</i>	2	3	4	5
	PSM7	<i>It is difficult to contain my feelings when I was under distress.</i>	2	3	4	5
	PSM8	<i>I am often reminded by how we need each other.</i>	2	3	4	5
Compassion	PSM9	<i>Other people know where my leader stand on controversial issues.</i>	2	3	4	5

	PSM 10	I felt sympathetic when facing underprivileged people.	1	2	3	4	5
	PSM11	I felt patriotic to serve the welfare of others.	1	2	3	4	5
	PSM 12	<i>Serving others will give me a feel-good feeling, even with no extra pay.</i>	1	2	3	4	5
	PSM 13	<i>Making a difference with the society is regarded as personal achievements.</i>	1	2	3	4	5
	PSM 14	<i>I believe in serving nation before self-interest.</i>	1	2	3	4	5
Conscientiousness	PSM 15	<i>The outcome of my work is significant to the well-being of others.</i>	1	2	3	4	5
	PSM16	<i>I believe my job helps to tackle social problems.</i>	1	2	3	4	5

SECTION 5: SUBJECTIVE WELLBEING

Subjective wellbeing refers to the state of being of a person that includes both positive and negative emotions, as well as life satisfaction and authenticity.

The following part of this survey focused on the respondent's **perception and evaluation towards their own subjective wellbeing** that resulted from the direct and indirect relationship with their manager's authentic leadership. Please circle the most appropriate number that best matches your own assessment based on the given rating scale: 1 = Never, 2 = Rarely, 3 = Occasionally, 4 = Often, 5 = Very often.

Dimension No	Description	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree
SWB1	<i>I lead a purposeful</i>	1	2	3	4	5

*and
meaningful
life.*

SWB2	<i>My social relationships are supportive and rewarding.</i>	1	2	3	4	5
SWB3	<i>I am engaged and interested in my daily activities.</i>	1	2	3	4	5
SWB4	<i>I actively contribute to the happiness and well-being of others.</i>	1	2	3	4	5
SWB5	<i>I am competent and capable in the activities that are important to me.</i>	1	2	3	4	5
SWB6	<i>I am a good person and live a good life.</i>	1	2	3	4	5
SWB7	<i>I am optimistic about my future.</i>	1	2	3	4	5
SWB8	<i>Other people respect me.</i>	1	2	3	4	5
SWB9	<i>Other people influence me.</i>	1	2	3	4	5

SWB10 *I am true to myself in most situations.* 1 2 3 4 5

SWB11 *I live in accordance with my values and beliefs.* 1 2 3 4 5

SWB12 *I think it is better to be yourself, than to be popular.* 1 2 3 4 5