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**TRANSFORMATIONAL LEADERSHIP
STYLE AND TALENT MANAGEMENT
PRACTICES IN IMPROVING EMPLOYEE
ENGAGEMENT IN THE MALAYSIAN
PUBLIC SECTOR: THE MEDIATING ROLE
OF PUBLIC SERVICE MOTIVATION**

By

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ABSTRACT

This thesis aims to examine the factors that influence employee engagement in the context of Malaysian public service. It focuses on three main concepts: transformational leadership, talent management practices, and public service motivation. The concept of employee engagement has become of great interest among researchers and practitioners due to its significant impact on organisational performance. The role of leadership, talent management practices and public service motivation are becoming crucial, especially in this volatile, uncertain, complex, and ambiguous world. Leaders must express understanding, concern, and empathy toward employees and their needs. This study is timely as it was conducted during the global pandemic crisis when the job demands of public servants have increased rapidly. Based on Job Demands-Resources Theory, high job demands will undermine employee engagement due to mental, emotional, and physical exhaustion. Therefore, examining public servants' behavioural and motivational factors during this time is crucial since they serve as frontline workers to benefit people and the nation. This study has shed light on how to engage public servants in the Malaysian public service to bring out their greatest potential at work. This is a cross-sectional study that employed the quantitative method approach. A questionnaire was designed to examine the associations between the proposed variables. The sample of this study comprised 318 Administrative and Diplomatic Officers currently serving the Malaysian public service. Both pre-test and pilot studies were conducted to assess the validity, language, and relevancy of the questions included in the questionnaire. In this study, Statistical Package for Social Sciences Statistics version 27 and structural equation modelling: Smart PLS 3 were used as analysing tools to assess the measurement and structural model in this study to test the relationship between the variables and the impact of the proposed model on employee engagement. The result showed that talent management practices, self-perceived transformational leadership style and public service motivation have a positive relationship with employee engagement and that public service motivation mediates talent management practices – employee engagement relationship and self-perceived transformational leadership style – employee engagement relationship. Overall, the data suggested that the public sector needs to develop talent management practices and employee resources to improve employee engagement.

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‘Keep going, and never give up!’

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Table of Contents

CHAPTER 1: INTRODUCTION.....	1
1.1 Introduction	1
1.2 Problem Statement.....	6
1.3 Research Questions.....	10
1.4 Research Objectives	11
1.5 Significance of the Study.....	12
1.5.1 Theoretical Contributions.....	12
1.5.2 Managerial and Practical Contributions.....	14
1.6 Definitions of Key Terms	16
1.6.1 Transformational Leadership Style	16
1.6.2 Talent Management.....	16
1.6.3 Public Service Motivation.....	16
1.6.4 Employee Engagement.....	17
1.6.5 Public Service Department.....	17
1.6.6 Administrative and Diplomatic Officer.....	17
1.7 Organisation of the Thesis	18
CHAPTER 2: LITERATURE REVIEW	20
2.1 Introduction	20
2.2 The Concept of Leadership.....	20
2.2.1 Development of Studies on Theories of Leadership Styles	22
2.2.2 Theory of Transformational and Transactional Leadership.....	24
2.2.3 Studies on Transformational and Transactional Leadership Style.....	27
2.2.4 Studies on Self-Leadership.....	29
2.3 Talent Management	30
2.4 Public Service Motivation	34
2.5 Employee Engagement	36
2.6 Related Theories and Model.....	38
2.6.1 Social Exchange Theory.....	39
2.6.2 Self-Determination Theory	41
2.7 Antecedents of Employee Engagement in the Public Service.....	43
2.7.1 Perceived Leadership: Leadership Styles and Quality of Leaders.....	44
2.7.2 Job-Design Related Experiences	45
2.7.3 Organisational and Team Factor	47
Table 2. 5 Antecedents of employee engagement: Organisational and team factors	48
2.7.4 Individual Related Factor	49
2.7.5 Organisational Interventions	51
2.7.6 Gaps in the Literature.....	52
2.8 Transformational Leadership Style and Employee Engagement	54
2.9 Talent Management Practices and Employee Engagement.....	59
2.10 Transformational Leadership Style and Talent Management Practices	62
2.11 Public Service Motivation and Employee Engagement	64
2.12 Public Service Motivation as a Mediator in This Study.....	66
2.13 Transformational Leadership Style and Employee Engagement: The Mediating Role of Public Service Motivation	67
2.14 Talent Management Practices and Employee Engagement: The Mediating Role of Public Service Motivation.....	69

2.15 Proposed Conceptual Model of The Study.....	71
2.16 An Overview of the Government System in Malaysia.....	73
2.16.1 An Overview of the Malaysian Public Sector.....	74
2.16.2 Talent Management Practices in the Malaysian Public Sector	76
2.16.3 Training and Development in the Malaysian Public Sector.....	79
2.16.4 The Competency Development in the Malaysian Public Sector.....	81
2.16.5 Performance Management System for Public Officers in the Malaysian Public Sector	82
2.16.6 Administrative and Diplomatic Scheme	83
2.16.7 Training and Development for Administrative and Diplomatic Scheme...	87
2.16.8 Leadership Evaluation Programme Framework for Administrative and Diplomatic Officers.....	89
2.16.9 Public Servant Employee Engagement Index	90
CHAPTER 3: RESEARCH METHODOLOGY	92
3.1 Introduction	92
3.2 Philosophies of Knowledge	92
3.2.1 Research Paradigm.....	93
3.3 Research Methods in Employee Engagement Studies	94
3.4 Research Design	97
3.5 Research Scope.....	99
3.5.1 Population and Sample of the Study	100
3.5.2 Determining the Sample Size.....	101
3.5.3 Unit of Analysis	105
3.5.4 Data Collection Procedures	105
3.5.5 Sample Frame.....	108
3.5.6 Ethical Consideration	109
3.6 Preliminary Interview	111
3.7 Survey Instruments and Operationalisation of Research Constructs.....	114
3.7.1 Endogenous Construct: Employee Engagement	116
3.7.2 Exogenous Construct: Transformational Leadership Style.....	117
3.8 Pre-Testing Procedure	122
3.8.1 Expert Evaluation and Review	124
3.8.2 Expert Validation Guide.....	125
3.8.3 Content Validity	127
3.8.4 Calculation of Content Validity Index	128
3.9 Statistical Technique.....	129
3.9.1 Structural Equation Model	130
3.9.2 Partial Least Square Structural Equation Modelling.....	132
3.9.3 CB-SEM or PLS-SEM Selection	133
3.10 Reflective and Formative Construct	138
3.10.1 Measurement Model in This Study	140
3.10.2 Common Method Bias	142
3.11 Pilot Study	143
3.11.1 The Result of Pilot Study	144
3.11.2 Demographic of the Pilot Study Respondents.....	145
3.11.3 Demographic of Managers in the Pilot Study	147
3.11.4 Data Analysis	148
3.11.5 Adaptation of the Instruments	149
3.11.6 Data Preparation and Assumption Testing.....	149
3.11.7 Exploratory Factor Analysis.....	150

3.11.8 PLS-SEM Software: Smart PLS	164
3.11.9 Reliability and Validity of the Study.....	164
3.11.10 Assessing the Measurement Model.....	165
CHAPTER 4: DATA ANALYSIS	170
4.1 Introduction	170
4.2 Data Analysis: An Overview	171
4.3 Data Collection Procedure.....	171
4.4 Descriptive Analysis.....	172
4.4.1 Screening the Data: Detection of Missing Data and Data Presentation	172
4.4.2 Data Preparation.....	172
4.4.3 Data Cleaning	172
4.4.4 Response Pattern	173
4.4.5 Detection of Outliers	173
4.4.6 Normality: Multivariate Normality	174
4.5 Response Rate.....	179
4.6 Demographic Data of Respondents	179
4.7 Demographic of Managers	182
4.8 Assessment of Measurement and Structural Model	183
4.9 Measurement Model Assessment: Convergent Validity	184
4.10 Measurement Model: Divergent Reliability	188
4.11 Common Method Bias Assessment.....	190
4.12 Assessing Collinearity Issues in the Study	192
4.13 Analysis and Result of Structural Model.....	193
4.14 Significance of the Structural Model Assessment.....	194
4.15 The Coefficient of Determination (R^2 value)	196
4.16 Mediating Factor.....	197
4.16.1 Public Service Motivation as a Mediator	198
4.17 Dimensions of Talent Management Practices	200
4.18 PLS Predict to Test Prediction Power of this Study.....	201
4.19 Summary of Hypotheses Testing.....	203
CHAPTER 5: RESEARCH FINDINGS AND DISCUSSION.....	205
5.1 Introduction	205
5.2 Recapitulation of the Study	205
5.3 Research Objectives and Hypotheses	207
5.4 Discussion on the Major Findings	210
5.4.1 Research Question 1.....	210
5.4.2 Research Question 2.....	213
5.4.3 Transformational Leadership Style and Employee Engagement	214
5.4.4 Research Question 3.....	217
5.4.5 Research Question 4.....	221
5.4.6 Research Question 5.....	222
5.5 Assessment of Public Service Motivation as a Mediator	225
5.5.1 Research Question 6	227
5.5.2 Research Question 7.....	228
5.5.3 Research Question 8.....	229
5.6 Level of Employee Engagement, Public Service Motivation and Transformational Leadership Style in the Public Sector	231
5.6.1 Theoretical Implications.....	236
5.6.2 Contributions to the Public Sector	237
5.7 Study Limitations	243

5.8 Recommendations for Future Research.....	244
5.9 Conclusion.....	247

LIST OF TABLES

Table 2. 1 Leadership definitions.....	21
Table 2. 2 Talent management definitions.....	31
Table 2. 3 Antecedents of employee engagement: Perceived leadership	45
Table 2. 4 Antecedents of employee engagement: Job-design related experiences	46
Table 2. 5 Antecedents of employee engagement: Organisational and team factors ..	48
Table 2. 6 Antecedents of employee engagement: Individual factors.....	50
Table 2. 7 Antecedents of employee engagement: Organisational interventions.....	51
Table 2. 8 Service circular of career development in the public service	76
Table 2. 9 Recruitment process of Administrative and Diplomatic scheme.....	86
Table 2. 10 DPA modules.....	88
Table 3. 1 Quantitative studies on employee engagement antecedents in public organisations.....	95
Table 3. 2 Types of research design.....	97
Table 3. 3 Respondents by Grade.....	104
Table 3. 4 Participants in the semi-structured interview.....	113
Table 3. 5 Panel of experts involved in assessing the content validity.....	125
Table 3. 6 Rating scale for expert validation.....	126
Table 3. 7 The difference between PLS-SEM and CB-SEM (Hair et al., 2013).....	131
Table 3. 8 Rule of thumb of selecting CB-SEM or PLS-SEM.....	133
Table 3. 9 A systematic procedure for applying PLS-SEM.....	135
Table 3. 10 The difference between reflective and formative construct.....	139
Table 3. 11 Type of construct.....	141
Table 3. 12 Demographic of respondents in the pilot study.....	146
Table 3. 13 Demographic of managers in the pilot study.....	148
Table 3. 14 Item statement, mean and standard deviation for transformational leadership style of manager construct items.....	152
Table 3. 15 The factor loading for each item and their components (transformational leadership style of manager construct).....	153
Table 3. 16 KMO and Bartlett’s Test Value for transformational leadership style of manager construct items.....	153
Table 3. 17 Internal reliability value for transformational leadership style of manager construct items.....	154
Table 3. 18 Item statement, mean and standard deviation for self-perceived transformational leadership style construct items.....	154
Table 3. 19 The factor loading for each item and their components (self-perceived transformational leadership style construct).....	155
Table 3. 20 KMO and Bartlett’s Test Value for self-perceived transformational leadership style construct.....	155
Table 3. 21 Internal reliability value for self-perceived.....	156
Table 3. 22 Item statement, mean and standard deviation for talent management practices construct items.....	156
Table 3. 23 The factor loading for each item and their components (talent management practices construct).....	157

Table 3. 24 KMO and Bartlett's Test Value for talent management practices construct items.....	158
Table 3. 25 Internal reliability value for each component (talent management practices construct).....	159
Table 3. 26 Internal reliability value for each component (talent management practices construct).....	159
Table 3. 27 Item statement, mean and standard deviation for public service motivation construct items.....	160
Table 3. 28 The factor loading for each item (public service motivation construct).....	161
Table 3. 29 KMO and Bartlett's Test Value for public service motivation construct items.....	161
Table 3. 30 Internal reliability value for each component (public service motivation construct).....	162
Table 3. 31 Item statement, mean and standard deviation for employee engagement construct items.....	162
Table 3. 32 The factor loading for each item (employee engagement construct).....	163
Table 3. 33 KMO and Bartlett's Test value (employee engagement construct).....	163
Table 3. 34 Internal Reliability value for each component (employee engagement construct).....	164
Table 3. 35 Result for reflective measurement model (transformational leadership style constructs).....	166
Table 3. 36 Result for reflective measurement model (talent management practices).....	167
Table 3. 37 Result for reflective measurement model (public service motivation and employee engagement).....	168
Table 3. 38 Convergent validity results of the individual constructs.....	169
Table 3. 39 The discriminant validity.....	169
Table 4. 1 The extract of result of Mahalanobis D squared test for the first 20 cases.....	174
Table 4. 2 Descriptive statistics (mean and standard deviation).....	175
Table 4. 3 Summary on the questionnaires' return rate.....	179
Table 4. 4 Demographic of the respondents.....	181
Table 4. 5 Demographic of managers.....	183
Table 4. 6 Result for reflective measurement model (transformational leadership constructs).....	185
Table 4. 7 Result for reflective measurement model (talent management practices).....	186
Table 4. 8 Measurement model for the second order constructs.....	187
Table 4. 9 Result for reflective measurement model (public service motivation and employee engagement).....	187
Table 4. 10 HTMT values.....	188
Table 4. 11 The deleted item due to discriminant issue.....	189
Table 4. 12 HTMT after deletion of item TM15.....	189
Table 4. 13 Marker variable items.....	191
Table 4. 14 Comparison of path coefficient (β).....	191
Table 4. 15 Comparison of R^2 value between baseline model and marker included model.....	192
Table 4. 16 Inner Variance Inflation Factor (VIF).....	193
Table 4. 17 List of hypotheses in this study.....	194
Table 4. 18 Hypothesis testing direct effects.....	195
Table 4. 19 R Square (R^2) value.....	196

Table 4. 20 Hypotheses testing indirect effects	200
Table 4. 21 Direct effect of talent management practices dimensions on employee engagement	201
Table 4. 22 PLS predict	202
Table 4. 23 Summarise of findings	203
Table 5. 1 Hypotheses and summary of result	209
Table 5. 2 Hypotheses testing indirect effects	226
Table 5. 3 Degree of mediation.....	227
Table 5. 4 Mean score range level	231
Table 5. 5 Administrative and Diplomatic Officers' engagement level	232
Table 5. 6: Level of public service motivation	233
Table 5. 7 Level of transformational leadership style of manager	235

LIST OF FIGURES

Figure 2. 1 Bass leadership factor	24
Figure 2. 2 Literature gaps	52
Figure 2. 3 The relationship between transformational leadership style of manager and employee engagement.....	57
Figure 2. 4 Supervisory level of Administrative and Diplomatic Officers.....	58
Figure 2. 5 The relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers	59
Figure 2. 6 The relationship between talent management practices and employee engagement	62
Figure 2. 7 The relationship between transformational leadership style of manager in the public service and talent management practices	64
Figure 2. 8 Research framework	72
Figure 2. 9 Malaysian public sector structure	74
Figure 2. 10 Leadership evaluation programme framework. Source: Service Circular No. 8, 2016, Public Service Department.....	79
Figure 2. 11 Interconnection between competency development, performance evaluation and career advancement potential evaluation.....	80
Figure 2. 12 Development module based on 3P (education, exposure and experience)	81
Figure 3. 1 Research design for this study	99
Figure 3. 2 Administrative and Diplomatic Officers by grades.....	101
Figure 3. 3 Measurement model in Smart PLS (Using Disjoint Two-Stage Approach)	136
Figure 3. 4 Structural model in Smart PLS (Using Disjoint Two-Stage Approach) .	137
Figure 4. 1 Summary of data analysis procedure.....	171
Figure 4. 2 Illustration of mediation model	199
Figure 4. 3 The direct effect of employee engagement's antecedents	204

LIST OF APPENDICES

Appendix 1	: Approval letter from Ethics Committee.....	289
Appendix 2	: Email Application to conduct Research.....	291
Appendix 3	: Internal Memo from PSD.....	293
Appendix 4	: Email to Director of Service Division.....	295
Appendix 5	: Email Received from Service Division.....	296
Appendix 6	: Semi-Structured Interview.....	297
Appendix 7	: ITBM Certificate.....	299
Appendix 8	: Expert Content Validation Form.....	300
Appendix 9	: Experts Review Rating Form.....	302
Appendix 10	: Detail of CVI.....	306
Appendix 11	: English/ Malay Version Questionnaires.....	308

LIST OF ACRONYMS

ADO	: Administrative and Diplomatic Officer
EPU	: Economic Planning Unit
JD-R	: Job Demands-Resources
KRI	: Key Result Indicator
MAF	: Malaysian Armed Forces
MAMPU	: The Malaysian Administrative Modernisation and Management Planning Unit
PSM	: Public Service Motivation
PSD	: Public Service Department
RBV	: Resource-Based View
RMP	: Royal Malaysia Police
SET	: Social Exchange Theory
SME	: Subject Matter Expert
SPV	: Shared Prosperity Vision
UNDP	: United Nations Development Programme
YDPA	: Yang di-Pertuan Agong

CHAPTER 1: INTRODUCTION

1.1 Introduction

In this globalisation era, public and private sector organisations must adapt to the fast-paced, dynamic, and challenging environment, which is characterised by continuous unpredicted uncertainties due to political, technological, and economic change. In order to sustain and progress, organisations nowadays need a competitive edge to increase indicators such as efficiency, effectiveness, innovation and productivity. In recent years, many organisations have shifted their focus toward a human resource management strategy emphasising that their employees increase their outcomes. Enhancing organisational efficiency through human resources fulfil the notion that organisations can achieve competitive advantage by utilising a unique bundle of resources that are their employees (Inkson, 2008; Narayanan et al., 2019; Shahi et al., 2020) as they meet all four empirical indicators attaining competitive advantage listed by Barney (1991) namely valuable, rare, inimitable, and non-substitutable. The shared understanding among researchers and practitioners of the importance of human capital has resulted in greater attention to human capital-related studies, particularly on the underlying factors that may affect employee outcomes. Therefore, over the past few years, more efforts have been made to strengthen human resource strategy in improving employee outcomes, specifically through employee engagement.

In the last two decades, the concept of employee engagement has acquired a significant interest among researchers and practitioners due to its significant impact on organisational performance (Bakker & Demerouti, 2008; Macey & Schneider, 2008; Shuck et al., 2011). Based on existing studies, engaged employees are more proactive, committed, and dedicated and give their best effort to achieve organisational goals. The founder of employee engagement, Kahn (1990), defined employee engagement as the ability of employees to utilise themselves at work fully. Schaufeli et al. (2002) indicated that an engaged employee has a positive, fulfilling work-related state of mind characterised by vigour, dedication, and absorption. In addition, engaged employees have proven to be more proactive, committed, and dedicated than their less engaged or

disengaged counterparts. Positive attributes demonstrated by these engaged employees have made them the most sought-after talent in public and private organisations.

Employee engagement is crucial in the public sector. However, there is a scarcity of research on employee engagement in the public sector context (Kernaghan, 2011; Tummers et al., 2016; Vigoda-Gadot et al., 2013). The public sector comprises organisations owned and run by a government at any level, from the federal to the state and local governments is the backbone upon which national growth is established through the formulation and execution of government policy. Public organisations play a significant role, including during times of unpredictability and difficulty. The need for robust and effective public service is paramount as government agencies are the centre of responding to the crisis (World Bank, 2020), especially during the global pandemic. Hence, they are responsible for the arrangement of emergency services, the formulation of appropriate responses, intergovernmental coordination, and the regulation of private agencies.

However, stakeholders and the public are concerned about government agencies' ineffectiveness. In 2019, the World Bank found that the performance of the Malaysian government had been flat or declining during the past few years. Malaysia lags far below other countries in the Organisation for Economic Cooperation and Development (OECD) based on the index assessing citizens' ability to have their voices heard and hold their government countable. This gap widened over time as some indicators, such as political stability and the rule of law, worsened. As Malaysia strives to become a high-income and developed nation, it is imperative to invest in public service capacity building, particularly human capital. According to Resource Based Theory, investment in public sector human resource management is vital for competitive advantage. Furthermore, promoting a more open and transparent work atmosphere and effective management of new and emerging trends impact, such as the rapid development of technological innovations and digitalisation, are necessary for public organisations to improve public service delivery.

Improving employee engagement among public servants is one of the initiatives by the Malaysian public service to increase employee outcomes. In order to escalate public servants' performance, numerous strategic initiatives have been introduced by Public

Service Department (Public Service Department, 2020). Collaboration between Public Service Department and the United Nations Development Programme to conduct studies on public servants' engagement shows that Public Service Department is performing necessary measures to improve public servants' outcomes through its employee engagement strategy. Public organisations need engaged employees to boost public service efficiency and effectiveness, particularly among public managers, who are the future leaders in the public sector.

This study focuses on employee engagement of the Administrative and Diplomatic Scheme, the premier service in the Malaysian public sector. Administrative and Diplomatic officers are considered the pillar and cream of the cream in the public service and are involved directly in all public policy formulation and implementation (Mohamed, 2018), which are this study's main focus. Junior officers, grades M41 and M44, are the largest populations in the Administrative and Diplomatic scheme and the most affected group of leadership styles displayed by their leaders and the practice of talent management in public service organisations. On the other hand, middle managers in grades M48 to M52 and senior managers in grade M54 play decisive roles in achieving organisational objectives, maintaining staff wellbeing, and engaging employees to a more significant extent. Middle managers as an organisation's central nervous system must be engaged at work (Guth & Mcmillan, 1986). According to Macleod and Clarke, managers are one of the key enablers of employee engagement (Chamberlain L., 2012). In a report by the Conference Board of Canada, Collin Halls indicated that middle managers are the central to an organisational ability to execute business strategy and ensure their group is engaged in achieving organisational success (Toneguzzi, 2018). This is because engaged managers will spend more time and effort engaging their teams. However, there had been less interest in middle managers in employee engagement literature, contributing to a broad range of consequences for the organisation. Unengaged middle managers will make faulty decisions or leave the organisation, and the costs may be far-reaching (Schaufeli & Salanova, 2008).

In order to ensure the effectiveness of government machinery, the Malaysian public service needs to identify enablers of employee engagement at the workplace. It is essential to understand employee engagement, specifically in the public service context. More empirical studies are needed to understand if some other demands and resources

affect employee engagement (Cooke et al., 2019). Robinson et al. (2004) stated that although organisations might have the same common engagement drivers, engagement levels might vary depending on demographic and job-related factors. Hence, it is recommended to identify the antecedents of employee engagement as they pertain to a particular job, organisation, or group (Saks, 2006). In this study, more focus is given to examining the underlying linkages between proposed integrating variables: leadership, organisation, and individual factors in the Malaysian public service. This is a timely study conducted during a global crisis, where job demands in public organisations have increased rapidly due to uncertainties and uncontrollable situations. Examining public servants' behavioural and motivational factors during this time is imperative since they serve as frontline workers for the people and the nation. In this situation, public servants were expected to be engaged at work and must not be depleted by the falling spirits. A lack of understanding of factors that influence employee engagement can cause failing of public managers to take appropriate steps to improve their employee engagement and performance. This study shed light on how to engage public servants in the Malaysian public service to bring out their greatest potential at work.

Leadership behaviours play a significant role in increasing employee engagement in the public sector, according to numerous studies (e.g., Ancarani et al., 2020; Borst et al., 2017; Gyensare et al., 2017; Malik & Khan, 2019; Mostafa & El-Motalib, 2018; Obuobisa-Darko, 2019; Ugaddan & Park, 2017; Wushe & Shenje, 2019). The studies found that public service leaders demonstrated various leadership styles, such as transformational, transactional, laissez-faire, authentic, and servant leadership.

This study focuses on the influence of transformational leadership style on employee engagement as extant studies indicate a strong positive relationship between transformational leadership style and desired employee outcomes. Positive characteristics of transformational leaders, such as visionary, inspiring, motivating, setting good examples, giving clear directions, and trusting followers, encourage their followers to perform better in achieving organisational mission and vision. Moreover, the current environment, characterised by uncertainties and organisational instability, requires transformational leadership behaviours to prevail at all levels of the organisation. Therefore, this research acknowledged the importance of transformational behaviours and focused on how transformational leadership style among public leaders

and self-perceived transformational leadership style among Administrative and Diplomatic Officers might influence employee engagement.

Furthermore, this study examined the practice of talent management in the public service. The Malaysian government recently showed a strong commitment to developing its talent management capabilities as talent management practices emerged as one of the significant factors affecting employee outcomes, mainly among public officers. It can be seen through the establishment of service circulars pertaining implementation of succession planning and career path development in the Malaysian public service. The talent management approach in public organisations was examined to identify its effectiveness in increasing employee engagement among public officers.

Other than transformational leadership style and talent management practices, public service motivation has been identified as a significant factor determining organisations' performance. United Nations (2020) indicates that effective public servants must possess profiles such as self-sacrificing, trustworthy, risk-taking, skilled, accountable, and knowledgeable, considering the roles that public servants play during this crisis. Public service motivation shared most of the characteristics mentioned based on altruistic motivation to serve the interests of the community of people, a state, a nation, or humankind (Rainey & Steinbauer, 1999). Therefore, public officers should be public service motivated in order to provide effective service to the public. In this study, public service motivation was examined to determine its impact on employee engagement, firstly, as an antecedent of employee engagement and secondly as a mediator of the relationships between (1) transformational leadership style and employee engagement and (2) talent management practices and employee engagement. As a result, this study provides a comprehensive model of employee engagement in the public sector relevant to the Malaysian public service context. It also provides broad theoretical implications and practical recommendations for public managers in the human resource department to develop a strategic plan to boost employee engagement in public organisations.

Given the above reasons, the study intended to examine the factors that could affect Administrative and Diplomatic Officers' engagement levels in the Malaysian public service. The study's contribution is to the body of knowledge in four main areas: transformational leadership (transformational leadership style of manager and self-

perceived transformational leadership style), talent management practices, public service motivation, and employee engagement. Also, the linkages between these five proposed variables are examined.

1.2 Problem Statement

Researchers know very little about the concept of employee engagement in the context of Southeast Asia countries, specifically Malaysia. Most studies on this concept concentrated in North America and European countries (Motyka, 2018; Sheemun et al., 2013). Furthermore, the majority of employee engagement studies are in the private sector (Johari et al., 2013; Sheemun et al., 2013), and only a few academic studies on employee engagement discussed the public sector context (Hee et al., 2018; Vigoda-Gadot & Eldor, 2013) although literature demonstrates that employee engagement generates many desired organisational outcomes such as organisational performance (Chughtai & Buckley, 2011; Li et al., 2012), competitiveness (Schaufeli & Salanova, 2008), productivity (Anitha, 2014), and higher level of employee wellbeing (Shuck & Reio, 2013). Therefore, due to the challenging situation following the global health crisis, political instability, and fast-paced technological advances, most organisations in the private and public sectors are emphasising their human capital to help achieve desired organisational outcomes to improve their performance.

Malaysia is also affected by vulnerabilities and uncertain situations. Over the past few years, the government of Malaysia has had to deal with several challenges and ambiguities due to the political instability that has resulted in frequent changes in leadership and policy shift. The global health crisis in recent years has exacerbated the situation, tremendously increasing job demands in the public service. According to United Nations (2020), public servants sit at the heart of ensuring effective responses to the crisis in this ongoing pandemic, whether as frontline workers or employees in charge of devising strategies and plans to mitigate its impact. Public organisations are expected to provide the best services even though public employees work in life-threatening conditions due to pandemics while also experiencing negative effects. As a consequence, the role of public servants has recently become more complex and demanding as people's expectations of public service performance are higher than ever before, particularly in these volatile situations. Government machinery at all levels,

such as federal, state, and local government agencies, must collaborate to implement initiatives to improve service quality during this unprecedented crisis.

In addition, the Shared Prosperity Vision 2030 launched by the Malaysian government in 2019 to improve government performance to achieve shared prosperity (Economy Planning Unit, 2020) raises public service demands and expectations. Effective institutional delivery is one of the key enablers of the government machinery to achieve the visions. The Key Result Indicator was applied to evaluate public servants' performance to enhance the organisation's efficiency and effectiveness. These government initiatives demonstrate the significance of public servants in achieving government objectives, particularly in the current environment, which demands a robust, efficient, and competitive government system.

Employee engagement in the public sector requires special attention and should be addressed immediately, as more research demonstrates its significant impact on organisational outcomes. In 2013, Gallup Global Workplace Report by Crabtree indicated that only 11 per cent of public service employees are engaged, while 81 per cent are disengaged, and 8 per cent are actively disengaged. According to the report, the engagement level among public employees in Malaysia was very low. Following the report, the Malaysian federal public sector has collaborated with United Nations Development Programme to conduct a research on the Public Sector Employee Engagement Index as an initiative to validate the Gallup report. The research adopted the best practices in developed countries such as the United Kingdom (Civil Service People Survey), Australia (State of Agency Survey), Canada (Public Service Employee Survey), United States of America (GSA Employee Viewpoint Survey), Singapore (Employee Engagement Survey) and India (Civil Service Survey). The first and second research was conducted in 2015 and 2018. In 2018, the research involved public employees from 25 ministries, 220 departments and public agencies. Based on the research, the Public Sector Employee Engagement Index in 2018 was 71.9 per cent, which increased by 2.1 per cent from 2015 (69.8 per cent). However, the high employee engagement index reported in 2018 contradicted the Gallup report.

World Bank Report in 2019 demonstrated that the effectiveness of the Malaysian government has been stagnant or falling for the past few years. Therefore, public

organisations were recommended to invest in their human capital building. According to the Global Competitiveness Report 2019, Malaysia's public service competitiveness level was ranked 27th, which decreased by two levels from 2018 (25th) and 2017 (24th). These adverse outcomes could be attributed to the low level of engagement. Aon Hewitt Report (2018) indicates that Malaysian engagement, including the public and private sector, was below the global average of 65 per cent and among the lowest in major Asian markets. A recent report by Qualtrics (2020) found that employee engagement in Malaysia was only 54 per cent, indicating that there are a significant number of disengaged employees in the workforce. Based on existing literature, low employee engagement could result from numerous factors such as leadership, job characteristics, organisational, personal factor, and work environment. Therefore, to enhance public service's competitiveness, public officers must be engaged at work and ensure their subordinates' engagement to achieve organisational goals. Based on the research on public servant employee engagement, there was an inconsistency and a huge gap between the Malaysian Public Sector Employee Engagement Index and World Bank Report on government effectiveness. This discovery contradicted the past studies that indicate a positive and significant relationship between employee engagement and organisational outcomes.

In the Malaysian public service, the Administrative and Diplomatic Officer is a premier service involved in all stages of public policy formulation and implementation (Mohamed, 2018). Administrative and Diplomatic Officers play a decisive role in attaining public organisational goals. Many senior Administrative and Diplomatic Officers are being promoted to premier positions, such as the Chief Secretary of the government, Secretaries-General, Director-Generals in the public service, ambassadors and high commissioners. They are well recognised as leaders in the Malaysian government administration. Therefore, Administrative and Diplomatic Officers as public managers must put forth their best efforts and unwavering commitments. It is essential to have public managers who are engaged at work as they will create an engaging environment and encourage their subordinates to be engaged as well. According to Nielsen (2015), engaged managers may lead to a larger extent of engagement. Employees who work for engaged managers are likelier to be engaged than those supervised by disengaged managers (Toneguzzi, 2018). Furthermore, the

cost of managing unengaged middle managers could be severe, as they will make poor decisions or leave the organisation (Schaufeli & Salanova, 2008).

Although numerous studies have examined the antecedents of employee engagement, however, there are still very few studies that combine and link leadership, organisational, and individual factors with employee outcomes in one study. Therefore, this study provides a comprehensive model of public sector employee engagement to identify the determinant factors that influence the engagement level of Administrative and Diplomatic Officers in the Malaysian public service.

This study emphasises on a different perspective of prior studies on leadership and employee engagement to fill in the gaps in the literature, such as how self-perceived leadership style influences employee engagement. Furthermore, limited studies have focused on the role of public service motivation as a mediator (Zahari & Kaliannan, 2022), despite the fact that it is one of the specific and unique public service antecedents of employee engagement that has been progressively studied in recent years (e.g., Bashir et al., 2021; Borst et al., 2017; 2018; De Simone et al. 2016; Ugaddan & Park, 2017). A deeper investigation of public service motivation as a mediator of the effect of employee engagement antecedents on public sector employee engagement contribute to the body of knowledge of employee engagement literature.

Past studies found the relationship between organisational factor and employee engagement. Still, there is a paucity of research on talent management practises as an antecedent to employee engagement. Besides, most studies on talent management practises are qualitative. Therefore, empirical evidence is lacking to support the findings. In order to fill in the gaps in literature, this research concentrated on four key areas: leadership styles, talent management practices, public service motivation, and the mediating role of public service motivation in developing a holistic model of employee engagement for the public sector. The influence of proposed antecedents, such as transformational leadership style and talent management practices, on employee engagement, are further discussed in this study. Also, this study explores how Administrative and Diplomatic Officers' level of public service motivation may affect their employee engagement. The results of this study demonstrate the significance of these under-investigated antecedents on employee engagement and the importance of

public service motivation in the relationship between proposed antecedents and employee engagement that has never been uncovered in the previous studies.

1.3 Research Questions

The main research question of this study is as follows:

'What is the influence of transformational leadership style and talent management practices in improving Administrative and Diplomatic Officers' engagement in the Malaysian public sector given public service motivation as the mediating variable?'

The sub-research questions are:

- i) What is the relationship between the transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?
- ii) What is the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?
- iii) What is the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?
- iv) What is the relationship between the transformational leadership style of manager and talent management practices in the Malaysian public sector?
- v) What is the relationship between public service motivation and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?
- vi) Does public service motivation mediate the relationship between the transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?
- vii) Does public service motivation mediate the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?

- viii) Does public service motivation mediate the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?

1.4 Research Objectives

The main research objective of this study is to examine the influence of transformational leadership style and talent management practices in improving Administrative and Diplomatic Officers' engagement in the Malaysian public sector, given public service motivation as a mediating variable.

The sub-research objectives are as follows:

- i) To examine the relationship between the transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector.
- ii) To examine the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector.
- iii) To examine the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector.
- iv) To examine the relationship between transformational leadership style of manager and talent management practices in the Malaysian public sector.
- v) To examine the relationship between public service motivation and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector.
- vi) To examine the mediating effect of public service motivation on the relationship between the transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector.
- vii) To examine the mediating effect of public service motivation on the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic

Officers in the Malaysian public sector.

- viii) To examine the mediating effect of public service motivation on the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector.

1.5 Significance of the Study

The importance of this study is discussed in three dimensions, theoretical contributions, managerial and practical contributions, and its significance for the Malaysian public service.

1.5.1 Theoretical Contributions

Studies on transformational leadership style, talent management practices, employee engagement, and public service motivation were mostly concentrated in North America and European countries (Motyka, 2018; Sheemun et al., 2013). Therefore, there is a dearth of research examining the relationship between transformational leadership style, talent management practices, public service motivation, and employee engagement in public sector undertakings in Malaysia. Therefore, the main contribution of this study is to extend the existing knowledge of employee engagement, specifically on the antecedents that significantly affect employee engagement. This study attempts to shed light on the largely neglected area of research and examines the mediating factor of public service motivation between transformational leadership style, talent management practices, and employee engagement.

Previous studies have supported the association between employee engagement and transformational leadership style (Ancarani et al., 2020; Gyensare et al., 2017; Malik & Khan, 2019; Nel et al., 2015; Obuobiso-Darko, 2019; Soieb, 2018), talent management practices (Bairkhuizen et al., 2014; Bhatnagar, 2007; Fahmi & Mohamed, 2020; Ishiyama, 2022; Pandita & Ray, 2018; Taneja et al., 2015; Tensay & Singh, 2020), and public service motivation (Bashir et al. 2021; Borst, 2018; Borst et al. 2019; Cooke et al., 2019; De Simone et al., 2016; Levitats & Vigoda-Gadot, 2019; Luu, 2019; Peretz, 2020; Ugaddan & Park, 2017). Narayanan et al. (2019) indicates that talent

management's contribution to human resource development and employee engagement is often not explored. There is a lack of empirical research on talent management practices, and most studies on this topic are qualitative research (Pandita & Ray, 2018). Thus, more studies should be conducted to examine the effect of talent management practices on employee engagement. This study adds to the body of knowledge on the indirect effect of public service motivation on employee engagement in the Malaysian public service. It enhances our theoretical and empirical understanding of how officers motivated to serve the public can affect and explain the relationship between the antecedents of employee engagement and employee engagement.

Furthermore, the theoretical contribution of this study is extending the institutional theories of Resource-Based View, Self-Determination Theory, Job Demands-Resources, and Social Exchange Theory on employee engagement conceptual framework. The Resource-Based View Theory contends that organisations could attain competitive advantage by focusing on their internal resources that meet four empirical indicators, which are valuable, rare, inimitable, and non-substitutable. Human resources, or employees, are recognised as internal resources that meet all four of these criteria, and as a result, this study places more emphasis on employee engagement to improve employment outcomes and the performance of public organisations.

The Job Demands-Resources theory proposes that all jobs in public or private sectors have demands and resources that significantly affect employee outcomes. The rapid increase of job demands in this volatile, complex, and uncertain environment and the emerging global COVID-19 pandemic crisis have produced undesirable outcomes and undermined public servants' engagement. High job demands will affect employees' engagement due to mental stress, emotional and physical exhaustion. Hence, examining public servants' behavioural and motivational factors during this crisis is imperative as they serve the public by delivering services to people and the nation. On the other hand, job resources in organisations, such as effective leadership styles, co-workers' support, salary, career opportunities, and a conducive working environment, can reduce job demands and improve employee engagement. Therefore, this study proposes transformational leadership style and talent management practices as the independent variables and public service motivation as the mediating variable. Based on empirical studies, all these predictors considered job resources that will positively affect

employees' outcomes. Employee engagement can be nurtured mainly through organisational support and practices. The unavailability of job resources for employees will lead to less engagement (Schaufeli & Bakker, 2004).

Moreover, this study adds to the body of knowledge on the concept of employee engagement using the Social Exchange Theory, which is one of the most prominent conceptual paradigms in organisational behaviour. The linkages between transformational leadership style, talent management practices, and employee engagement were explored based on the exchange relationship. Empirical studies found that employees will reciprocate if they feel their leaders and organisations they worked at are concerned and care about them. Public motivated employees who perceive the quality of their leaders will have better commitment and engagement levels (Ugaddan et al., 2017). As posited in Social Exchange Theory, employees will demonstrate high engagement in their job and become more committed to the organisational missions and visions when their leaders exhibit positive managerial skills and interpersonal relations. Another important theory that is highlighted in this study is the Self-Determination Theory. The inclusion of two variables, self-perceived transformational leadership style and public service motivation, in the model indicates the importance of self-motivation in order to influence employee outcomes.

1.5.2 Managerial and Practical Contributions

A review of publications indicates that most studies on employee engagement, transformational leadership style, talent management, and public service motivation focused more on developed nations. The questions regarding these variables remain unanswered, particularly in the Malaysian public service context. However, previous research implied that the study on these areas is significant for practice, as the results uncover the influence of these three proposed variables on employees' engagement in the Malaysian public sector.

The findings of this study offer practical advice for public leaders and the importance of human resource managers in the public service regarding transformational leadership style, talent management practices, and public service motivation in improving employee engagement which, according to literature, may contribute a significant

positive impact on public service performance. Firstly, this study will provide human resource managers with information on the level of Administrative and Diplomatic Officers' engagement and public service motivation during this demanding environment. Public leaders will be alerted on employee engagement, and public service motivation levels among public officers as both indicators may affect employees' outcomes and organisational performance. Previous studies indicate that employee engagement generates positive organisational outcomes such as organisational performance (Chughtai & Buckley, 2011; Li et al., 2012; Saks, 2006), competitiveness (Teng et al., 2007; Schaufeli & Salanova, 2008), and productivity (Anitha, 2014). Then, recommendations could be made on how to develop public leaders' transformational behaviours and implement an efficient talent management strategy in the public service to increase the engagement level of Administrative and Diplomatic Officers.

Second, a greater understanding of the importance of public service motivation derived from this study will lead to a further proposal for public organisations to increase public service motivation among public servants. This is important because public service motivation is regarded as a personal resource that can boost employees' outcomes. As proposed by Self-Determination Theory, employees with higher levels of public service motivation will be more engaged than those with low public service motivation (Anderfuhren-Biget et al., 2010). Andrews (2016) indicates that public service motivation can be enhanced. Transformative leadership (Bellé, 2014; Vandenabeele, 2014), training, mentoring programmes, and social events are some of the drivers that may raise public service motivation. Therefore, public organisations are suggested to deploy their talent management practices, for instance, by organising motivational training and development programmes to improve public service motivation among public servants and promote public leaders to practise transformational leadership style.

Finally, public organisations need to ensure that the new officers are determined to serve the public and nation. Therefore, the result of this study could be used to make suggestions to the Public Service Commission to recruit candidates with high public service motivation as Administrative and Diplomatic Officers.

1.6 Definitions of Key Terms

This section provides the definition of key terminology used throughout this study.

1.6.1 Transformational Leadership Style

It refers to the interactions between leaders and followers that raise employees' motivation and morale through leadership behaviours, inspiring employees through their vision and encouraging them to excel in performance and achieve organisational goals (Avolio & Bass, 2004). Four dimensions of transformational leadership style are idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration enable transformational leaders to motivate followers to achieve organisational goals (Avilio, 2011). In the context of this research, transformational leadership style was examined based on transformational leadership behaviours proposed by Carless et al. (2000): communicating a vision, staff development, supportive leadership, empowerment, innovative thinking, leading by example and charismatic leadership.

1.6.2 Talent Management

Schiemann (2014) defines talent management as a unique function that integrates all of the activities and responsibilities associated with managing the talent lifecycle, regardless of geographic location, including attracting, acquiring, developing, and retaining talent. In the context of this research, talent management practices were examined using four dimensions: talent identification, training and development, career advancement, and reward management.

1.6.3 Public Service Motivation

Perry and Hondeghem (2008) define public service motivation as the beliefs, values, and attitudes that go beyond self-interest and organisational interest to energise employees to do good for others and to contribute to the well-being of organisations and society. In the context of this research, public service motivation was measured

using three main characteristics of public service motivation: commitment to the public interest, compassion, and self-sacrifice.

1.6.4 Employee Engagement

Aon Hewitt indicates that employee engagement as a state of emotional and intellectual commitment to an organisation or group where the organisations win the hearts and minds of their employees (Mansor et al., 2018). Schaufeli et al. (2002) define employee engagement as a positive, fulfilling, work-related state of mind. In the context of this research, employee engagement was measured using four dimensions of employee engagement, namely, vigour, dedication, and absorption (Schaufeli et al., 2002).

1.6.5 Public Service Department

The Public Service Department is a central agency responsible for reforming the overall public service towards greater efficiency and effectiveness in human resource management and development (Public Service Department, 2020). The main functions of the Public Service Department are in human resource planning, development, and management in the public service, including the determination of the public service roles, government service size and structure, remuneration package, pension matters, implementation of policies in the organisation development, career development, succession planning, and training.

1.6.6 Administrative and Diplomatic Officer

Public officers under the Administrative and Diplomatic scheme who are responsible for assisting the Malaysian government in strategic areas such as planning, formulating, and implementing public policies. Administrative and Diplomatic Officer has been regarded as key knowledge worker in the public service and serves as a think tank for the government in formulating and maintaining public policies (Yusof et al., 2016). In the context of this research, Administrative and Diplomatic Officers in the public service are the focus of this study due to their critical roles in the Malaysian public sector.

1.7 Organisation of the Thesis

This thesis contains five chapters discussing the study of employee engagement's antecedents, including transformational leadership style, talent management practices, public service motivation, and employee engagement. It provides a profound understanding of how the research is developed and implemented. Chapter One presents the introduction of the research, justifications of the problem statement, research questions, and research objectives, followed by the significance of the study. Finally, the definitions of key terms are discussed further in this chapter.

Chapter Two provides a complete literature review of relevant literature, including the main constructs starting with the concept of leadership, talent management practices, public service motivation, and associations between variables in this study. The chapter also reviews the underpinning theories such as Social Exchange Theory, Self-Determination Theory, Job Demands-Resources Theory, and Resource-Based View Theory. The chapter ends with a brief explanation of the variables used in the research framework and an overview of the Malaysian public sector.

Chapter Three discusses the methodological approach used in this study, beginning with philosophies of knowledge, research methods in employee engagement studies, research scope, type of study, and research design. It follows with ethical consideration, the unit of analysis, and sample determination. Next, the operationalisation of variables, reliability, validity of the constructs, data analysis techniques used to test propositions, and interpretation are presented. The chapter ends with a pre-test and pilot study, which are also discussed in-depth in this chapter.

Chapter Four discusses data analysis in this study. Firstly, descriptive analysis, including data screening, data preparation, data cleaning, detection of outliers and normality assumptions, are presented. Secondly, the demographic data of respondents, including the respondent's years in service, grade, and department of employment within the respective organisations, are discussed. Next, the assessment of measurement and structural model, indirect effects examination, assessment of common method bias, collinearity, R squared, PLS-predict, and Q squared are discussed in detail in this chapter.

Chapter Five discusses the major findings of the research questions focused on transformational leadership style, talent management practices, public service motivation, and employee engagement. This is followed by a discussion of the theoretical implications and practical contributions in this study. Next, this chapter provides limitations of the study and recommendations for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter provides a comprehensive and critical review of the literature on employee engagement, leadership styles, talent management practices, and public service motivation, focusing on the importance of these domains in the context of the Malaysian public sector. This chapter also includes an introduction to the organisational and institutional theories, the relation of the theories to employee engagement, and the applicability of the theories to this study. Furthermore, an overview of the Malaysian context, including Malaysian public service, talent management practices, the role of public agencies, and Administrative and Diplomatic Officers, are presented and discussed in this chapter.

The significance of an emerging concept of employee engagement among academics and practitioners has been acknowledged in the last two decades as various empirical studies have validated the significant impact of employee engagement on organisational outcomes. Therefore, this study seeks to understand employee engagement from the strategic human resource management perspective. The aim is to examine the proposed determinants of employee engagement: transformational leadership style, talent management practices and public service motivation in the Malaysian public service. In addition, this study shed light on the role of public service motivation as a mediator in the relationship between transformational leadership style and talent management practices on employee engagement. A comprehensive framework that includes leadership, organisational and individual contexts is proposed to comprehend the concept of employee engagement in the Malaysian public sector.

2.2 The Concept of Leadership

Leadership is a popular topic that has attracted many researchers and practitioners worldwide. Numerous articles, books, and research on the concepts of leadership concepts have been published from time to time. As of October 3, 2022, there are 5.22 million entries on 'leadership' on Google Scholar. Research on leadership started

centuries ago, together with the demand for insights into leadership that has increased over time (Nohria & Khurana, 2010). The concept of leadership is broad and diverse; hence, researchers have struggled to provide a clear definition of leadership or develop specific leadership styles or behaviours that leaders should follow (Northouse, 2010).

Definitions of leadership are commonly based on leadership traits, skills, processes, competency, leader-follower relationships, or a construct. Many researchers and other people who define it have introduced numerous definitions of leadership. A long list of conceptual definitions and findings of leadership studies clarify distinctive understanding of leadership concepts among scholars. Some of the leadership definitions are shown in Table 2.1.

Table 2. 1 Leadership definitions

Authors	Year	Definitions
Burns	1978	Leaders are inducing followers to act for specific goals that represent the values and the motivations, the wants and needs, the aspirations and expectations of both leaders and followers.
Kotter	1988	The process of moving a group (or groups) in some direction through mostly non-coercive means.
Bass	1990	Interaction between two or more members of the group that often involves structuring or restructuring of the situations and the perceptions and expectations of the members.
Gardner	1995	Leaders are those who significantly influence the thought, behaviours, and feelings of others.
Useem	1998	The act of making a difference and evidenced ‘when the vision is, the voice persuasive, the results tangible’.
Snook	2002	Leadership emphasises the exercise of interpersonal influence and motivation to accomplish the mission.
Northouse	2010	Leadership as an individual’s influence on a group to reach a goal.

Over the last centuries, leadership studies have extensively examined and discussed the effect of leadership on organisational outcomes in many contexts, such as in education, businesses, health, industries, countries, societies, job sectors, and generations. The focus of studies is on leadership styles, behaviours, characteristics, traits, and motives. Till now, the concept of leadership and leadership studies have often been a subject of criticism and marginalisation for the past thirty years by the dominant organisational

paradigm and perspective (Rost, 1991) as no leadership styles and strategies can fit all circumstances. There is a massive amount of evidence that leadership differs depending on various factors, such as cross-cultural, generations, industries, job sectoral, and individual's characteristics. For instance, some cultures allow their employees to express disagreement with their leader, whereas some cannot accept this kind of dispute (Hartog, 2004). This scenario can be seen in western culture, where employees are expected to express their opinions openly and directly to their employers. However, in other cultures, for example., in Asian countries, employees are expected to be more reserved, and thoughts should be voiced indirectly and in respectful manners.

2.2.1 Development of Studies on Theories of Leadership Styles

In this rapidly changing environment, identifying the right leadership style is not an easy task, and indeed it is very complicated. Leadership styles must be flexible and adjustable to meet the current work condition and demands (Tortorella & Fogliatto, 2017). High interest in leadership led to the emergence of various theories of leadership. In the first half of the 20th century, scholars were more interested in the personality traits of the leaders (Humphrey, 2014). Therefore, earlier stage leadership theories appear to focus on the extraordinary characteristics and personalities of the leaders. Similarly, the studies of leadership at that time were more focused on the core personality traits of leaders, and leaders were perceived to be different from ordinary people or followers. The trait theory of leadership indicates that earlier leaders such as Julian Caesar, Napoleon, Roosevelt, and Queen Elizabeth awed their followers by their personalities, and shaped the history by their characters and the decisions they made.

Decades later, there were arguments among some scholars as they implied that traits have nothing to do with leadership because measures of personality traits reflect only a slight or moderate correlation on leadership emergence or performance (Mann, 1959; Stogdill, 1948). Since then, the number of researchers studying leadership traits had decreased, and the focus has shifted to behavioural studies. In 1939, Kurt Lewin introduced three leadership styles, which were the earliest leadership styles of the time, known as autocratic leadership, democratic leadership, and laissez-faire leadership (Cowell, 1972). These styles of leadership have different characteristics, and the application of these styles by leaders depends on the culture, functions, and goals of the

organisation. The advantage of these behavioural theories over the trait theories is that researchers are able to determine leadership behaviours that can improve and enhance employees' effectiveness.

The development of leadership behavioural studies led to the emergence of two prominent leadership styles, namely transformational and transactional leadership, which have since become the focal point among scholars (Judge et al., 2004). In the beginning, transactional leadership was broadly discussed since 1947, before the focus has shifted to other characteristics that were closely inclined towards transformational leadership. Later, in 1983, Burns introduced the transformational leadership style (Gastill, 1994), and it has since become the most prominent leadership concept.

In 1985, Full-Range Leadership Theory was introduced by Bass that helped in clarifying leadership theory, which consists of three components, namely, transformational leadership, transactional leadership, and laissez-faires leadership (also known as non-leadership) (Avolio et al., 1991; Avolio et al., 1988). Each component has been identified in different methods, such as through observations, by using factor analyses conducting interview, or by the descriptions of the ideal leaders by followers (Bass et al., 2003). Although it was known as one of the earliest leadership styles, laissez-faire leadership style remained relevant until now. Researchers often make comparisons of these three styles, and many studies confirmed that transformational and transactional leadership styles have positive impact on organisational performance and productivity. In contrast, laissez-faire leadership style found to have a negative effect on organisational outcomes because of the ineffectiveness of the leaders who exhibit this style. They avoid responsibility and neglect involvement when critical issues arise (Antonakis et al., 2003). That is why some researchers considered laissez-faire as non-leadership as this style has no positive impact on organisational outcomes in any situation (Stafford, 2010).

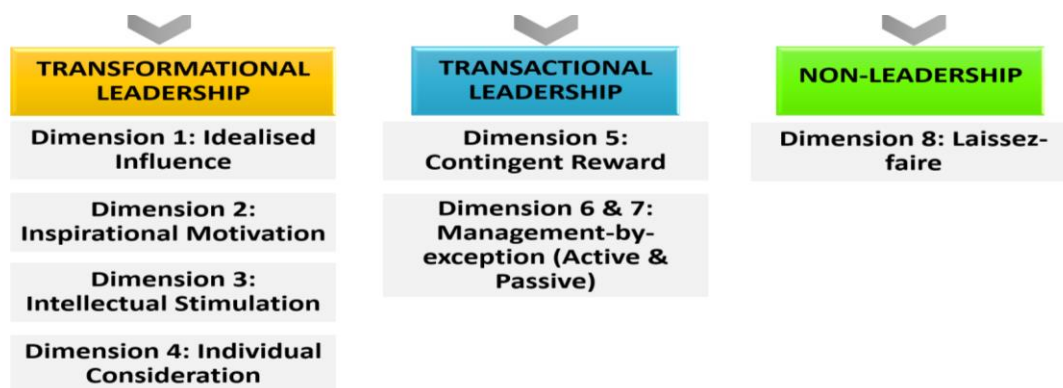


Figure 2. 1 Bass leadership factor

2.2.2 Theory of Transformational and Transactional Leadership

The most recent evolutionary stage of leadership involves the theories of transformational and transactional leadership. A leader may also exhibit both leadership styles at work, not only a specific leadership style of either transformational or transactional leadership.

2.2.2.1 Transformational Leadership Style

Transformational leadership style was first introduced by Bass 30 years ago, and since then, it has become an increasingly popular concept that has attracted significant interest among researchers (Banks et al., 2016). According to Bass and Avolio (1994), transformational leaders inspire, empower, and stimulate their followers to excel based on charismatic, intellectual stimulation, and individual consideration. There are four dimensions of transformational leadership style, which are idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration.

Idealised influence occurs when a transformational leader act as a role model and followers try to emulate their actions. The leaders are trusted, respected, and admired by the followers. They manage to build respect, demonstrating confidence, and instilling pride in subordinates (Avolio & Bass, 2004).

Inspirational motivation refers to the behaviour that transformational leaders use when they inspire others by providing meaning to their work. The leader shapes a clear future

vision of the organisation; setting ambitious goals and high standards; direct and challenge followers to achieve extraordinary outcomes for serving the general mission and vision of the organisation (Avolio & Bass, 2004; Sarros & Santora, 2001).

Intellectual stimulation occurs when the transformational leader increases their follower's innovation and creativity. They encourage and challenge followers to fully engaged in the problem-solving process and think about old problems, assumptions, and the status quo in a new and creative approach (Hater & Bass, 1988; Nusair et al., 2012).

Individualised consideration occurs when the transformational leader acts as a coach and mentor and providing developmental feedback to their followers. The leader recognised that individuals differ in their abilities and needs for growth and achievement; therefore, each individual is being given equal attention based on one-to-one interactive relationship between the leader and the follower (Boerner et al., 2007; Nusair et al., 2012).

The attributes of transformational leadership style show that transformational leader is a nearly ideal type of leadership, where the leaders inspire their follower by being role models. The followers always look up to the leaders to seek directions, guidance, and support. Transformational leaders develop their followers, challenge them to give their best, motivate them to provide confidence in achieving higher performance at work. According to Yukl (2002), the tentative guidelines for transformational leadership style to be effective in motivating and inspiring followers is by providing clear visions of the organisations, explain how they can be attained, and empower the followers to achieve the visions. The leaders show a good example to their followers, act confidently, optimistically, and express confidence in their followers.

2.2.2.2 Transactional Leadership Style

Transactional leadership theory was first introduced by Max Weber in 1947 before Bass later in 1981 expanded the theory (Stone & Patterson, 2005). In contrast to transformational leaders that have been discussed earlier in this study, transactional leaders do not emphasise on the individual needs of their followers or their follower's personal development. Transactional leadership focuses more on the accomplishment of tasks and goals by employees in exchange for rewards and recognition. Organisations will set goals for their employees and ensures the goals to be met (Fannon, 2018). Based on this fact, there is an exchange process between leaders and followers when the followers adhere to their leader's request (Yukl, 2002).

The dimensions of transactional leadership are management by exception (active and passive) and contingent reward. The details are as follows:

Management by exception active occurs when the leader demonstrates positive, continuous intensive observation and supervision on subordinates' performances, take corrective actions to properly determine and prevent errors, mistakes or deviations from happening based on rules, standards, and expectations of the organisation (Egan et al., 1995; Si & Wei, 2012).

Management by exception passive occurs when the leader intervenes into the performance of followers once standards were not satisfied, and serious problems or mistakes already took place (Nguni et al., 2006).

Contingent reward occurs when the transactional leaders set up clear expectations for performance, specify what should be done and what should not be done, and offer financial rewards to employees if they achieve goals and expectations.

Bass (1985) indicates that transactional leader is a type of leader that fits in stable and predictable environments, works in existing systems or cultures, practice risk avoidance, strictness in terms of time and efficiency measures, and also emphasises process over substance. Previous studies found that contingent reward is the dimension in transactional leadership that has greater impacts on organisational outcomes, such as

organisational effectiveness (Lowe et al., 1996), employee engagement (Breevaart et al., 2014; Jilani & Juma, 2015), and job satisfaction (Rothfelder et al., 2012). Whereas management-by-exception is found to have no effect on effectiveness (Lowe et al., 1996).

2.2.3 Studies on Transformational and Transactional Leadership Style

There is no single leadership style that can fit in every situation and environment. Transformational leadership style may look like an ideal leadership style as transformational leaders have the ability to motivate behaviour by transforming their followers' attitudes and assumptions, inspire effort and raise followers' awareness of the importance of organisational outcomes. Although a transformational leader has positive traits and characteristics required as an effective leader; however, empirical findings consistently show that successful leaders enhance their use of beneficial transactional behaviours with more transformational ones (Bass & Ringgio, 2006). In other words, both transformational and transactional leadership styles are perceived as important in the federal government, although transformational leaders are considered slightly more important (Trottier et al., 2008). Lowe et al. (1996) also indicate that a transformational leader may be ineffective in executing his tasks in the absence of transactional leadership style.

There are numerous studies on transformational and transactional leadership since the discovery of both leadership styles. Many studies combine both leadership styles where the focus is to examine the influence of transformational and transactional leaders on various employees' outcomes, such as employees' performance, satisfaction, and engagement. A meta-analysis study by Wang et al. (2011) found that transformational leadership style has a positive relationship on individual performance, organisational citizenship behaviour, team performance, and organisational performance. Transactional leaders also found to have a positive influence on their followers through contingency rewards, which improve individual, team, and organisational performance.

Judge et al. (2004), in their meta-analysis study, examines the effect of transformational and transactional leadership on employees' job satisfaction. They found that transformational leadership style has a strong positive relationship with followers' job satisfaction. The followers are more satisfied and motivated when their leaders applied

the transformational leadership style. Multiple regression analysis used in the study revealed that transformational leaders have a larger effect on followers' satisfaction compared to transactional leadership. Nonetheless, transactional leaders who applied contingent rewards have managed to increase their followers' job satisfaction. Therefore, the study confirmed that followers preferred more if their leaders display transformational leadership style than transactional leadership style. The study also suggested that leaders should reward their employees for their excellent performance.

Numerous studies on transformational leadership style have been conducted by researchers from all over the world, as the concept has attracted many of them. Leong and Fischer (2011) studied the level of transformational leadership style in 18 countries and found that many countries were represented by single studies with a small sample size. Therefore, when interpreting the results for any studies, caution should be taken into account regarding this matter.

Transformational leadership theory is one of the prominent leadership theories of organisational behaviour nowadays that is consistently linked to employee performance and satisfaction (Bass & Ringgio, 2006). This is also applied to public service organisations (Trottier et al., 2008). Transformational leaders have the potential to leave a strong impression on their followers in order to achieve visions and missions of the organisations. They are most likely affiliated and insightful, able to express a clear and inspiring vision, showing trust and respect, interact well with others, and guiding others to act and possess a positive work ethic. Transformational leaders exert their influence on the organisation by creating a positive affective climate throughout the organisation can lead to positive feelings being shared among members in the organisation through the process of emotional contagion.

Trottier et al. (2008) examine the transactional and transformational leadership style debate in government settings and found that transformational leadership style is slightly more important than transactional leadership in terms of perception of leaders' effectiveness and employees' satisfaction. Idealised influence is found to be the most important dimension, followed by inspirational motivation under transformational leadership style, and individualised consideration and contingent reward under transactional leadership style. However, in the study, federal managers are evaluated as

better transactional leaders. This is because individualised consideration, which is one of the transformational dimensions, was included in transactional leadership as there is argument that the dimension was in transactional leadership before it had been shifted into transformational leadership style. Therefore, the authors suggest that leaders do not only need traditional managerial and technical skills of the past, but also transformational competencies that can emphasise mission delivery, vision, and inspirational motivation.

Wright and Pandey (2010) supported the past findings on the prevalence of transformational leadership practice in public organisations and suggested possible explanations why public organisations exhibit higher transformational leadership, which is inconsistent with the mainstream management literature that indicates transformational leadership practice is lesser in public service due to bureaucracy characteristics that seem to reduce the transformational leadership practice. Based on the findings, transformational leadership is not negatively affected by organisational rule and red tape as the public employees seem to understand that procedural constraint is established in order to protect citizens and avoid inappropriate use of public resources. Therefore, the findings suggest leaders in the public sector to practise transformative behaviours in order to achieve the public organisation's missions and visions.

2.2.4 Studies on Self-Leadership

Bandura's (1977, 1986) theories argue that individuals can influence their own motivation, cognition, and behaviour. This theory has been supported by Manz (1986) that described self-leadership as an approach through which people motivate and direct themselves to attain their desired results. Individual can use the consequences of their own actions as a source of information and motivation because of the constant interaction between themselves and their surroundings (Norris, 2008). They can learn to better control their thoughts and behaviours by using behavioural and cognitive strategies, which is a broader definition of self-influence (Manz, 1986; Stewart et al., 2011). Behavioural self-regulation mechanisms enable individual to keep track of the difference between their actual performance and the criteria or goals they have established for themselves (Carver & Scheier, 2002). Self-leadership strategies are used

to improve the effectiveness of these self-regulation processes. Behavioural methods encompass techniques such as natural rewards and positive reinforcement as well as strategies that focus on the thoughts themselves (Neck & Houghton, 2006).

Self-leadership and employee engagement discovered to have a statistically significant relationship. Study found that daily self-management comprising five strategies: setting goals, rewarding oneself, punishing oneself, watching oneself, and cueing oneself was associated with an increase in employees' resourcefulness as well as their daily work engagement (Breevaart, Bakker, & Demerouti, 2014). According to many researchers, self-leadership empowers individuals to push themselves, meet their goals, and improve their work environment, all of which contributes to increased job engagement. Self-leadership and work engagement were found to be positively associated by Shaoping et al. (2015). Self-leadership have been linked to higher levels of psychological functioning such as increased optimism and hardiness. Using self-leadership techniques can help people feel more confidence in their ability to succeed at work (Norris, 2008).

Park et al. (2015) and Kotze (2018) in their study found that self-leadership have a significant effect on job engagement. Self-leadership, like other individual level variables such as growth requirements and a sense of self-worth, is a vital individual motivator to support employee engagement and performance. According to the findings, personal resources such as self-leadership skills and mindfulness can have a positive impact on work engagement on the way people feel about their jobs and, both directly and indirectly.

2.3 Talent Management

Talent Management has received a remarkable degree of interest among researchers and practitioners in recent years (Collings et al., 2019; De Boeck et al., 2018; Krishnan & Scullion, 2017; McDonnell et al., 2017; Meyers et al., 2019) due to the growing belief on the importance of talents in achieving positive organisational outcomes. According to Schiemann (2014), talent is collective knowledge, skills, abilities, experiences, values, habits, and behaviours of the employees. Many organisations find it difficult to determine the right employees they should consider as talent. In general, there are two approaches of talent management: the exclusive and inclusive approach. The exclusive

approach considers talent as a high-performing and high-potential employee, or the 10 per cent ‘best and brightest’ in the organisations in terms of their work performance. These employees are the high-potential employees that are likely to be considered for promotion to higher positions. While the inclusive approach view talent as the entire workforce in the organisations that should be managed and developed.

The consensus on the concept of talent management is hard to achieve by researchers and practitioners. For instance, Poocharoen and Lee (2013), in their comparative study of specific talent management schemes in Singapore, Malaysia, and Thailand, revealed that each country has different talent management definitions, approaches, processes, systems, and performance rewards. The diverse definitions of talent management are presented in Table 2.2.

Table 2. 2 Talent management definitions

Authors	Year	Definitions
Boudreau and Ramstad	2005	The activities and processes that involve systematic attraction, identification, development, engagement, retention, and deployment of those talents which are of particular value to an organisation to create sustainable strategic success.
CIPD	2006	The systematic attraction, identification, development, engagement/retention, and deployment of those individuals with high potentials who are of particular value to an organisation.
Lewis and Heckman	2006	Exclusive talent management, human resource management (HRM) strategies, policies, and practices where organisations identify and focus resources on a limited number of talented and high performing employees. The objective of talent management is to ultimately nurture and maintain a talent pool of adequately skilled and engaged workforce.
Collings and Mellahi	2009	Talent Management includes activities and processes that involve systematic identification of critical positions, the development of a talent pool of high potential and high performing incumbents to fill these roles, and the development of a differentiated human resource architecture to facilitate filling these positions with competent incumbents and to ensure their continued commitment to the organisation.
Johns Hopkins University	2010	Talent management is an integrated group of organisational human resource methods intended to draw, grow, stimulate, and maintain the dynamic and engaged personnel.

Schiemann, W. A	2014	Talent management is a unique function that integrates all of the activities and responsibilities associated with the management of the talent lifecycle regardless of geography from attracting and acquiring talent to developing and retaining it.
Jyoti & Rani	2014	The high performers and high potential employees, who have a sharp strategic mindset, managerial, communication, and functional skills along with experience, commitment, and contribution behaviour, which resulted in outstanding performance.

Although derived from distinct origins, it was clearly observed that there is some degree of overlap between the above definitions. Although Table 2.2 has shown that there are mixed findings on how scholars defined talent management, a number of scholars indicate that talent management involves process of managing high potential or high performer that is also known as talent in organisations, while others view talent as the entire employees in the organisation. Talent management is seen as a subset of human resource management strategy in managing their talents in order to achieve organisational goals. The holistic process to optimise human capital in the organisation begins with identifying high potentials and planning for development programmes. The aims of this initiative are to equip them with required skills and competencies in order to fill in key positions at the same time to ensure employees engagement, retention and to encourage employees to give their best commitment to the organisations. However, organisations should not only focus on their talent pool that includes high performers and high potentials in the organisations as there are only a small percentage of employees listed in the talent pool. Instead, to achieve significant improvement on organisational performance, organisations should focus on their entire workforce, not only the high performers. The rationale is that the majority of employees in the organisation do not fall under these high performers category. But since the organisations spend a lot of their allocations for payrolls, and allowances, therefore, these employees also need to be groomed and their skills and competencies should be developed to enable them to perform their job better. If organisations succeed in managing majority of their workforce effectively and raising their engagement level at work, certainly the efforts will bring greatest impact for the organisation.

Organisation that successfully recruit, groom, and managed to retain talented employees enable to raise their organisational performance, which benefit both employees and organisations. However, a lack of effective talent management practices leads to a critical impact. Although many managers have acknowledged the importance of talent management, however the linkage between talent management and organisational performance is still underdeveloped (Kim & McLean, 2012). The limitations of empirical investigations on this regard arise because talent management studies have been predominated by qualitative research, although the validation of concepts and models is very crucial (Narayanan et al., 2019; Pandita & Ray, 2018). Moreover, Collings et al. (2011), indicated that talent management studies has been limited by a predominantly narrow, universalist, profit-driven perspective, driven mainly by Anglo-Saxon institutions as the leaders of this stream. Thunissen et al. (2013) implied that talent management studies are mostly in the multinational context and private sector organisations. The findings on limitation of talent management studies have also been supported by Ariss et al. (2014), as they indicated that research on talent management had fallen behind, and the studies do not provide enough vision and direction to the organisation. There is a lack of theoretical perspective and an agreed-upon meaning of what talent management really is. Also, many studies that have been conducted on talent management emphasises on large and profit organisations (Buttiens & Hondeghem, 2015).

Gallardo-Gallardo et al. (2019), in a recent review of the empirical literature on talent management, has raised about the negligence of contextual factors' impact and the role of actors in a specific context on the talent management conceptualisation and implementation. In addition, the authors also stated about the limitation of academic attention on the impact of talent management on performance in the public sector organisations. The dearth of studies on talent management in the public sector requires more studies to be conducted to discover the meaning of talent management, also the challenges and issues in the public sector (Buttiens & Hondeghem, 2015; Gallardo-Gallardo & Thunnisen, 2016). Therefore, there is a need to conduct more comprehensive approach to explore the dynamics of talent management, in turn with other domains such as strategic management, organisational theory, and strategic human resource management to explain the complexity of talent management practices.

Talent management has become a very significant concept when employees or ‘talent’ meet all characteristics of the Resource-Based View theory introduced by Barney (1991) in achieving sustainable competitive advantage. Talent is valuable, rare, difficult to imitate, and non-substitutable. Therefore, they are proven to be the most precious and critical resource in the organisation to improve employee and organisational outcomes. The need for effective talent management practices is essential in mobilising human resources especially in public service organisations.

Poocharoen and Lee (2013), in their comparative study, sought to study specific talent management schemes in Singapore, Malaysia, and Thailand, in order to explore the factors and explain the differences between them. The study revealed that each country has different talent management definitions, approach, processes, systems, and performance rewards. The authors pointed out that government organisations should take both inclusive and exclusive approaches to implement strategies to put the right people in the right place. Public organisations must ensure that leaders who lead the organisations have the right amount of dominance to make decisions and connection with other public agencies to develop their talent. In the study, the authors suggest that future research should investigate the inclusive and exclusive approach used in public sector organisations to see whether they have the right individuals in control, and proper authority for decision making.

2.4 Public Service Motivation

Public service motivation is the beliefs, values, and attitudes that go beyond self-interest and organisational interest to energise employees to do good for others and to contribute to the well-being of organisations and society (Paarlberg & Lavigna, 2010). Rainer and Steinbauer (1999) viewed public service motivation as a general, altruistic motivation to serve the interest of a society, a state, a nation, or humankind. In other words, public service motivation is associated with altruism. Therefore, employees with high level of public service motivation are more attracted to working in the public sector, as working in the public sector meets their personal interest in serving the public, and because this type of employment for them is rewarding (Perry & Wise, 1990). In regard to recruitment, self-selection, and socialisation process, public servants are less likely to be interested in extrinsic rewards and more likely to intrinsic reward than private sector

employee (Park & Word, 2012). Cooke et al. (2019) indicate that employees with higher public service motivation will be altruistic because their motivation meets the value of public service. Although there is red tape in the public service, they consider it as part and parcel of public sector environment. The congruence between individual motives and organisational mission will enhance employees' job satisfaction (Harari et al. 2017), which is in line with the assertion by Warren and Chen (2013) that public sector employment provides employees with high public service motivation the opportunity to fulfil their motivations. Hence, they tend to perform their job better than their peers who have lower public service motivation.

Andrews (2016) implied that public service motivation is a dynamic feature that can be enhanced through series of practices that socialised public servants on public values. The role of transformative leadership (Bellé, 2014; Vandenabeele, 2014), training, mentoring programmes, and social events are crucial to raise public service motivation. Public service motivation studies also show how public service motivation can decline over time. Harari et al. (2017) indicate that employees' public service motivation level will decrease with the increasing work experience and duration in the public sector. This situation happens because the public servants engaged in the service with strong commitment might feel frustrated over time due to the lost hope of contributing to the public sector (Moynihan & Pandey, 2007).

Research on public service motivation, particularly in developing countries is still limited. Most of the studies focused on Anglo-American and Western European context. Thus, several arguments arise regarding the difference in public service motivation context between developed and developing countries. Previous studies indicate that the possibility public service motivation has an influence on employee behaviours, and attitudes are based on cultural features or administrative traditions that vary across countries (Harari et al., 2017). For instance, government employment in countries such as China, India, Malaysia, and Singapore, has a higher social stature (Liu et al., 2013), that often provides job security, power and prestige, higher wages, and better employment benefits than the private sector. Therefore, public, and private employees in these countries may show a marked difference than most in western countries. There is an argument that public service motivation studies in the non-western countries should shift from individual dispositions towards institutional and

environmental context in order to get insight into how these factors can affect public service motivation (Moynihan & Pandey, 2007; Perry, 2000). Researchers may add significantly to public management debates on such settings by providing more insights into how institutional factors affect public service motivation, specifically in the ill-functioning public sector in developing countries characterised by major corruption issues and the ambiguous international pressure for public service reform (Andrews, 2013).

2.5 Employee Engagement

Employee engagement has attracted many researchers and practitioners nationwide as it has become a very popular concept in recent years. Numerous studies revealed that employee engagement generates positive organisational outcomes, for instance organisational performance (Chughtai & Buckley, 2011; Li et al., 2012; Saks, 2006) higher productivity (Anitha, 2014), higher customer satisfaction (Nel et al., 2015; Salanova et al., 2005), and higher level of employee wellbeing (Shuck & Reio, 2013). The notion of employee engagement was first introduced by Kahn (1990), and it was defined as harnessing people or employees of their work roles. The author explained how people are engaged and disengaged at work. Employees who are engaged will employ and express themselves physically, cognitively, and emotionally in their job role performance. That means engaged employees will be ‘mentally present at work’, hence, they would think, feel, and act on their job (Bakar, 2013). However, Kahn's research was not comprehensive because it explored psychological conditions and focused only on individual roles but did not take into account the theoretical conceptualisation of employee engagement.

Later, the concept of employee engagement was reintroduced by Maslach and Leiter (1997) as an energetic state at work that opposed to burnout. Engaged employees are seen as more energetic, and they view work as a challenge, different from employees who are burnout, where they view work as demanding and stressful. Schaufeli et al. (2002) proposed work engagement as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption. Employee engagement has been defined by Aon Hewitt as a state of emotional and intellectual commitment to an

organisation or group, the extent to which an organisation wins the hearts and minds of its employees (Mansor et al., 2018).

Employee engagement concept is still considered a relatively new concept among researchers as many employee engagement studies were conducted by consulting firms and practitioners such as Aon Hewitt and Gallup institute. Experts emphasise that the studies of employee engagement are still in transition and being explored as there is a lack of research in the academic literature on this concept (Kaliannan & Adjovu, 2015; Omar, 2015).

Robinson et al. (2004) stated that even though organisations might have the same common engagement drivers, engagement level can vary depending on demographic and job-related factors. This statement is consistent with Macey et al. (2009) notion that the drivers of employee engagement may not be uniform across the workforce, and the effort to increase employee engagement by focusing on single corporate initiative may achieve limited success within some segments of the workforce. So, it is recommended to identify the antecedents of employee engagement as they pertain to a particular job, organisation, or group (Omar, 2015). Numerous studies measure the impact of diversified antecedents on employee engagement. Some studies focused on the hygiene factors such as pay, health, safety, and other benefits. Whereas some other studies focused on critical factors that motivate employees to give their exemplary efforts, such as leadership, effective communication, and cooperation. Other studies proposed factors such as training, career development, organisation policies, structures, workplace culture, and wellbeing as enablers of employee engagement. Harris (2018) found that millennial public sector accountants are most affected by managers' support, work-life balance, professional growth and development, having a voice, and providing technical expertise. That means the employees will reciprocate if they perceive that the benefits have been received from the organisation. On the other hand, Meyer (2013) concluded that incentive compensation such as bonus pay, one-time lump sum forms of variable pay, and merit-based pay has led to elevated levels of employee engagement among multigenerational public sector employee engagement. This is in contrast with the notion that public servants are less likely interested in extrinsic rewards (Park & Word, 2012).

The studies on employee engagement are still sparse outside Anglo-Saxon countries, especially among Southeast Asian countries. In Malaysia, there is very limited empirical research on employee engagement, and majority of the research is in the private sector (Johari et al., 2013; SheeMun et al., 2013), only a few academic studies on employee engagement are in the public sector context (Hee et al., 2018; Vigoda-Gadot & Eldor, 2013). Mansor et al. (2018) studied the influence of career development, work-life balance, and supervisor-subordinate relationship with employee engagement in the public sector in Malaysia. The authors found that career development, supervisor-subordinate relationship have a positive and moderate relationship with employee engagement. Whereas work-life balance has a positive but low strength relative to employee engagement. Soieb et al. (2015) examined the influence of leadership styles and organisational citizenship behaviour on the level of employee engagement in the Malaysian public sector found that collaboration demonstrate partial mediation on the relationship. Other studies conducted in Malaysia are the research by SheeMun et al. (2013) that examined four antecedents of employee engagement: job autonomy, strategic attention, role benefit, and goal setting. Johari et al. (2013) studied the effects of human resource practices such as training and development, financial and non-financial recognition, fringe benefits and supervisor-subordinate relationship on employee engagement, and Bakar (2013) on empowering leadership behaviour, high impact work practices and employee engagement in the private sector in Malaysia.

2.6 Related Theories and Model

This chapter discusses the theoretical underpinnings of this study. According to Creswell (2009), a theory is an interrelated collection of constructs shaped into propositions or assumptions that indicates the relationship between variables. Sekaran and Bougie (2013) further elaborated that a good model requires a solid theory that justifies the relationship between variables. This study examines employee engagement antecedents, specifically the transformational leadership style, talent management practices and public service motivation underpinned by significant theories in behavioural studies: Social Exchange Theory and Self-Determination Theory.

2.6.1 Social Exchange Theory

In understanding organisational behaviour, Social Exchange Theory is among the most prominent conceptual paradigms since the 1920s in multiple disciplines, such as anthropology, social psychology and sociology (Cropanzano & Mitchell, 2005). Scholars who are responsible to the emergence of Social Exchange Theory in sociology and social psychology are George Homans, John Thibaut, Harold Kelley and Peter Blau. It was first started when Homans in 1958 sought to identify and advance this point of view in 'Social Behaviour as Exchange' and Blau in 'Exchange and Power' in 1964, assured exchange approach for the future in the field. Despite different views on Social Exchange Theory, theorists concur that social exchange comprises a series of interactions that generate obligations. The interactions are seen as interdependent and contingent on the actions of other persons (Blau, 1964), which has the potential to generate high-quality relationships.

In this study, Social Exchange Theory is used as an integrating theory to explain the relationship between transformational leadership style, talent management practices, public service motivation, and employee engagement, which are the main variables in this study. This theory explains the reciprocal behaviour interdependence between individuals, employees, and organisations, and also leaders and followers (Aselage & Eisenberger, 2003; Saks, 2006). Reciprocal behaviour between leaders and followers can be seen when employees perceive that leader are highly competent, for instance, when leaders possess good managerial, communication, and interpersonal skills, and they work hard to achieve organisational missions and visions. Leaders who respect other people, showing concerns towards their followers, provide support, and motivating them to excel at work, may resulted in the employees to reciprocate and respond positively and go beyond their duty. In contrast, low-quality leaders will enable the contractual exchange to be completed, but not necessarily to exert extra efforts at their work (Ugaddan & Park, 2017). The perception of employees towards their leader's attitude and management styles affects their work attitude and behaviours (Meng & Wu, 2015).

Social Exchange Theory explains the linkages between leadership behaviours, talent management practices, and employee engagement. As posited in Social Exchange

Theory, when leaders exhibit positive managerial skills and interpersonal relations, employees demonstrate high engagement in their job and become more committed to the organisational missions and visions. Moreover, employee engagement occurs when employees feel that the organisations they are working at treat them well, for instance, by providing appropriate organisational support such as effective organisational culture, training, career path, and performance management. Employees reciprocate by focusing and contributing more on their job and to their organisations (Eisenberger et al., 1990; Saks, 2006). Employees reciprocate by being more engaged in their job, more productive, and exhibit positive behaviour at work. However, if the organisations treat their employees strictly and too rigid about adhering to organisational rules and regulation, employees are observed to respond to them accordingly. They will only contribute to the organisations based on their contract or job descriptions. Therefore, leaders and organisations in this regard play an important role as the initiator of this exchange process to enhance employee outcomes.

Positive social exchange between leaders may also influence employees' public service motivation, which is associated with desirable employees' outcomes. Ugaddan and Park (2017) confirm that the quality of leadership significantly associated with public service motivation and employee engagement. The study found that Social Exchange Theory might predict employee engagement based on quality of leaders through public service motivation. Therefore, it is important for organisations and leaders to enhance social exchange with their employees. Social exchange occurs when employees perceive their organisations adhere to the same values and motives as they are. Cooke et al. (2019) affirm that employees with higher public service motivation will be altruistic because their motivation meets the value of public service. The congruent between individual motives and organisational mission will enhance employees' job satisfaction (Harari et al., 2017). When the organisations demonstrate same values and motives, employees will respond positively and may engaged and contribute their best to their organisations.

However, like any other theories, there was criticism of Social Exchange Theory. The main critique is ordinary people are not as rational as the theory requires (Health, 1977). People do not weight up or evaluate alternatives in a way required; more often, they make decisions impulsively. They do not make decisions based on complete information and make little effort to get complete and accurate information. The other

critics of Social Exchange Theory are that people do not maximise but instead satisfice, choosing an alternative which provides satisfactory outcome but not necessarily the best outcome available. Therefore, the criticism suggests that employees might not respond positively to the effort by their leaders or organisations, and this contradict the Social Exchange Theory notions that have been discussed earlier in this study.

2.6.2 Self-Determination Theory

Ryan and Deci (2000) proposed the Self-Determination Theory as a metatheory of human motivation and personality development which concerned on how people interact with and influence by their social surrounding. According to Self-Determination Theory, people naturally and deliberately strive for growth and self-organisation. They attempt to extend and understand themselves through incorporating with new experiences, nurturing their needs, desires, and interests, and engaging with others and the outside world.

Self-Determination Theory focuses on the three fundamental psychological needs or basic needs, which are autonomy, competence and relatedness, and its crucial role in self-determining motivation, growth, and wellbeing. The situations that support an individual's sense of autonomy, competence, and connectedness generate motivation that is both voluntary and of great quality, leading to better performance, persistence, and creativity (Deci & Ryan, 1985). The theory argues that individual continually engages in a dynamic interaction with the social world, at the same time aiming for the fulfilment of needs and responding to environmental situations that either support or hinder needs. People become either interested, curious, connected, and whole as a result of this person-environment interaction, or they will become demotivated, ineffectual, and alienated (Legault, L., 2017).

According to the Self-Determination Theory, individuals participate in activities they find intriguing, optimally challenging, or provide them aesthetic pleasure (Tremblay et al., 2009). Unless there are external pressures or extrinsic causes, activities that are not experienced in this way are unlikely to be undertaken. However, fundamental psychological needs differ from motivation, as fundamental psychological needs involve psychological nutrients received that allow growth and well-being, whereas the

latter is the quality of experience that boosts behaviour. The motivation of individuals is higher for activities they find fascinating or have autonomy but lower for activities driven by extrinsic or control forces. Therefore, Self-Determination Theory is based on individuals' nature of motivation and whether the individual is determined to be driven by himself/ herself.

Motivation, according to Self-Determination Theory, exists on a continuum spanning from amotivation, extrinsic incentive to intrinsic motivation. Amotivation, which refers to the state of being unmotivated or lacking the willingness or intention to perform, is at the beginning of the continuum. Employees go through the motions as a result of a lack of appreciation for a task. Meanwhile, extrinsic motivation, which can be controlled or autonomous, exists between the extreme poles of the continuum. Controlled motivation, on the one hand, emerges from self-imposed demands and concerns behaviours related to the desire to retain self-esteem, please others, or obey orders. Autonomous motivation is linked to acts resulting from or consistent with one's own self and represents one's interests or values. All in all, extrinsic motivation according to Ryan and Deci (2000) encompasses actions taken to meet the necessity of external demand or reward and behaviours done to avoid guilt, fear and to achieve ego and enhancement. In this situation, people are motivated to display ability and value, and while driven internally, these acts are undertaken to meet some external standards that may not be fully perceived as part of themselves. Lastly, at the end of the continuum lies intrinsic motivation, which defined as the act of performing a task for the sake of its intrinsic pleasure. Self-determination is an example of intrinsic motivation (Ryan & Deci, 2000).

This study argues that individual who managed to fulfil these three basic needs underlined by Self-Determination Theory could give better performance than their counterparts. Individuals with self-determination motivation (autonomous or intrinsic motivation) and transformational leadership behaviours are more effective and productive at work than those with controlled motivation. This study integrates the research on transformational leadership style, motivation, and employee engagement together to construct a conceptual model that represents employees' perceptions of their transformational leadership behaviours as being closely linked to the various components of their motivation and employee engagement. Transformational leaders

allow individual to make their choices as transformational leaders according to Burns (1978) will satisfy or appear to satisfy specific needs of the followers.

Furthermore, acquiring external or intrinsic motivations that assist in achieving these basic needs will also increase individual motivation. For example, organisations that provide relevant development and trainings programmes can increase competency level of their employees and provide them with the ability to control their individual outcomes through skills, experience and expertise. Employees will be more motivated to perform their best at work. The model also illustrates motivation variable (public service motivation) as mediators in the interaction between (1) self-perceived transformational leadership style and employee engagement, (2) talent management practices and employee engagement. Assessing Self-Determination Theory characteristics should help in acquiring an in-depth understanding of their distinct function in the engagement of followers in the transformational leadership style context.

2.7 Antecedents of Employee Engagement in the Public Service

Recent publications of employee engagement antecedents in the public sector were reviewed to identify the current trends. Web of Science and Scopus, two prominent journal databases, were utilised to identify relevant literature. Adopting Preferred Reporting Items for Systematic Reviews and Meta-Analyses, a final of 48 articles were systematically analysed as research samples. Five main themes emerged upon review: organisational and team factors, perceived leadership, job-related experience, individual states, and organisational intervention factors. According to the results of this research, most of the recent literature focuses on a single or only a few antecedent-related themes, as opposed to providing a comprehensive model encompassing all related aspects. Generally, there is a lack of emphasis was placed on intervention factor as an antecedent of employee engagement compared to job-related experience, organisational and individual factors.

Empirical studies relevant to the review were extracted based on the identification, screening, and eligibility stages. Each article was analysed, and antecedents identified were grouped into the main themes with sub-themes or antecedents of employee engagement.

2.7.1 Perceived Leadership: Leadership Styles and Quality of Leaders

A total of twelve cross-sectional studies discussed leadership styles that influence employee engagement among employees in the public sector. Of these studies, four studies examined transformational leadership style (Ancarani et al., 2020; Gyensare et al., 2017; Mauno et al., 2016; Obuobisa-Darko, 2019). All studies found a positive association between transformational leadership style and employee engagement in the public sector. Besides, two of these studies also look into the relationship between transactional leadership and public-sector employee engagement. Obuobisa Darko's study in 2019 discovered a positive correlation between transactional leadership and employee engagement. However, in contrast to transactional leaders, the study found that public leaders who exhibited the transformational leadership style significantly affects employee engagement. Contingent Reward and Management by Example (Passive), the characteristics of transactional leadership, have an insignificant direct effect on employee engagement, according to another study by Ancarani et al. (2020). Nevertheless, Management by Example (Active) demonstrates a small significant negative effect on employee engagement. The other studies (Ancarani et al., 2020; Malik & Khan, 2019; Mostafa & El-Motalib, 2018) discovered a correlation between laissez-faire, employee engagement, ethical leadership, and authentic leadership in the public sector. According to the study by Malik and Khan (2019), authentic leadership has a positive relationship with employee engagement. Additionally, ethical leadership and employee engagement in the public sector were found to be positively correlated (Mostafa & El-Motalib, 2018). However, it was discovered that laissez-faire had an insignificant impact on employee engagement (Ancarani et al., 2020).

Other studies have examined other aspects of leadership besides leadership style, which are the quality of leadership and effective leadership. The effectiveness of political and administrative leadership on employee engagement among federal employees in the United States was examined in a study by Ugaddan and Park study in 2017. The study discovered a significant positive relationship between the two variables. According to a study by Wushe and Shenje (2019), effective leadership and employee engagement have a significant and positive relationship. Detail of publications, including author, antecedent and theory in this leadership theme, is presented in Table 2.3.

Table 2. 3 Antecedents of employee engagement: Perceived leadership

Authors	Sub-themes/ Antecedents	Theory
Mauno et al. (2016)	Transformational leadership	Job Demand-Resources
Gyensare et al. (2017)	Transformational leadership	Job Demand-Resources
Ugaddan & Park (2017)	The quality of leadership	Social Exchange Theory
Mostafa & El-Motalib (2018)	Ethical leadership	-
Malik & Khan (2019)	Authentic leadership	-
Obuobisa-Darko (2019)	Transformational, Transactional	Social Exchange Theory
Wushe & Shenje (2019)	Effective leadership	Social Exchange Theory
Asif et al. (2019)	Ethical leadership	Organisational justice theory
Ancarani et al. (2020)	Transformational, Transactional, Laissez-faire	Job Demand-Resources
Ryu & Shim (2020)	Developmental leadership	Job Demand-Resources
Martinez et al. (2020)	Leadership	Job Demand-Resources
Asif et al. (2020)	Ethical leadership	Social Exchange Theory

2.7.2 Job-Design Related Experiences

Seventeen studies examined the association between job-design-related experiences and employee engagement. Antecedents that have been focused on are perceived autonomy, perceived office support, supervisory support, career prospect, compassion from supervisor, task characteristics, job re-design, abusive supervision, organisation cronyism, workload, and red tape.

Three studies discovered a positive relationship between perceived supervisor support and employee engagement, which includes compassion from the supervisor (Eldor, 2018; Halinski & Harrison, 2020; Jin & McDonald, 2016). Perceived office support (Jin & McDonald, 2016), job characteristics (Rai & Maheshwari, 2020), job re-design (Hernaes et al., 2017), and work meaningfulness (Mostafa & El-Motalib, 2018) were found to have a positive influence on employee engagement in the public sector. The research conducted by Conway et al. (2016) focused on the experience of employees concerning performance management and employee voice. The study found that experience of performance management was negatively correlated to employee engagement. Instead, it is positively correlated to employee exhaustion which is the

opposite of engagement. Employees who were exposed to performance management were thus less engaged at work than their counterparts who were not. In contrast, a public sector organisation in Ireland found a positive correlation between employee voice experience and engagement.

In consistent with the Job Demands-Resources Theory, the negative antecedents under this theme negatively affect work engagement (Borst, 2018; Idike et al., 2020; Shaheen et al., 2020; Ugwu & Onyishi, 2020). These antecedents include abusive supervisors, organisational cronyism, perceived heavy workload, and red tape. Detail of publications, including author, antecedent and theory in this theme, is presented in Table 2.4.

Table 2. 4 Antecedents of employee engagement: Job-design related experiences

Authors	Sub-themes/ Antecedents	Theory
Conway et al. (2016)	Experience in voice mechanism and performance management system	Job Demand-Resources Theory
Jin & McDonald (2016)	Perceived office support, perceived supervisor support	Social Exchange Theory, Organisation Support Theory
Hernaus et al. (2017)	Job re-design	-
Borst et al. (2017)	Perceived red tape, perceived autonomy	Job Demand-Resources
Borst (2018)	Perceived red tape, perceived autonomy.	Job Demand-Resources
Eldor (2018)	Compassion from supervisors	-
Giudetti et al. (2018)	Support from supervisor, content of change	Transactional Stress Theory
Rai & Maheshwari (2020)	Job characteristics	Job Demand-Resources, Social Exchange Theory
Halinski & Harrison (2020)	Supervisor support	Job Demand-Resources
Idike et al. (2020)	Abusive supervision	-
Meng et al. (2020)	Task characteristics (task autonomy, task significant)	Job Characteristics Model, Integrative Theory

Zhang et al. (2020)	Career prospects, macro visions	Expectancy Theory, Social Exchange Theory
Rai et al. (2020)	Job characteristic	Social Exchange Theory
Ugwu & Onyishi (2020)	Perceived high workload	Job Demand-Resources
Shaheen et al. (2020)	Organisational cronyism	Equity Theory, The Conservation of Resource Theory
Hooda (2020)	Process management	The Theory of Strategic Intent Proposed
Almotawa & Shaari (2020)	Digital capability and workplace spirituality, reward and recognition	-
Martinez et al. (2020)	Emotional overload	Job Demand-Resources

2.7.3 Organisational and Team Factor

Human resource practices, organisational support for development, organisational culture, and organisational justice are some of the topics that have been studied at both the organisational and team levels by a total of twelve studies. According to Social Exchange Theory, people make decisions by assessing the costs and rewards of a relationship or activity and maximising their reward at the end. Employee engagement is believed to increase when favourable conditions exist. Two studies (Almotawa & Shaari, 2020; Wushe & Shenje, 2019) examined the effects of incentive programmes, rewards, and recognition. Compensation and incentive programmes are positively related to employee engagement, according to research by Wushe and Shenje (2019). However, Almotawa and Shaari (2020) study discovered that incentive and recognition have a negative and insignificant association with employee engagement, which inconsistent with the Social Exchange Theory.

There is a positive and statistically significant relationship between organisational justice (including distributive, procedural, and interactional justice) and employee engagement at work (Lamprakis et al., 2018; Ozer et al., 2017; Pirzada et al., 2020). Distributional justice, procedural justice, and interactional justice all positively correlate with employee engagement, but to varying degrees (strong, mediocre, and

weak), as discussed by Lamprakis et al. (2018). Two studies (Pradhan et al., 2019; Tensay & Singh, 2020) discovered that human resource management was significantly associated with higher levels of employee engagement. Organisational learning, organisational culture, and support for employees (Ozer et al., 2017; Uhunoma et al., 2020) have all been shown to increase employee engagement for their jobs. Specifically, Ancarani et al. (2020) discovered that readiness to change and goal orientation were two attributes of organisational climate for change that positively correlated with work engagement in the public sector. In contrast, operational efficiency was negatively associated with employees' engagement for their jobs. Detail of the publications including author, antecedent and theory in this theme is presented in Table 2.5.

Table 2. 5 Antecedents of employee engagement: Organisational and team factors

Authors	Sub-themes/ Antecedents	Theory
Ozer et al. (2017)	Organisational justice perception	Adams' Theory of Equity
Lamprakis et al. (2018)	Distributive justice, procedural justice and interactional justice	-
Pradhan et al. (2019)	Human resource practices (internal career opportunities, employment security, participation, and job descriptions)	Social Exchange Theory
Wushe & Shenje (2019)	Compensation, incentive programme, organisational policies & procedure	Social Exchange Theory
Brunetto et al. (2020)	Management support	Social Exchange Theory
Halinski & Harrison (2020)	Organisation support for development	Job Demand-Resources Theory
Ancarani et al. (2020)	Organisational climate for change	Job Demand-Resources Theory
Uhunoma et al. (2020)	Organisational culture, organisational learning	Theory of Informal Learning
Pirzada et al. (2020)	Organisational justice	
Alias et al. (2020)	Workplace incivility	Social Exchange Theory

Almotawa & Shaari (2020)	Reward and recognition	-
Tensay & Singh (2020)	Human resource management (Recruitment and selection, performance appraisal, compensation and reward; autonomy and employee participation)	Ability Motivation Opportunity Theory, Social Exchange Theory

2.7.4 Individual Related Factor

The theme of individual psychological states includes employee constructs, states, conditions, behaviours, and experiences, which have been found in numerous studies as the basis for developing a framework for measuring work engagement. This theme is believed to be the basis for the development of employee engagement. In other words, it denotes the positive mental state or perceptions an individual holds towards their personal strength and ability. Several studies found a positive association between antecedents relevant to individual factors with engagement. Six studies examined personal resources as an antecedent of employee engagement in the public sector. Of these, four described public service motivation. Meanwhile, other factors, such as employee loyalty and positive emotion (relational identification), were also explored as antecedents of employee engagement in the public sector.

Individual psychological states are a theme that encompasses employees' constructs, states, conditions, behaviours, and experiences, which have been found to be the basis for the development of employee engagement frameworks in numerous studies. Individuals' positive or negative mental states or perceptions of their job, organisations, teams, personal strengths, and abilities are all included in this theme. Motivation, positive emotion, strength used, perceived meaningfulness, and psychological ownership were discovered to be positively associated with engagement (Chai et al., 2020; Malik & Khan, 2019; Meng et al., 2020). The outcomes of negative individual psychological states, such as employee silence, obsolescence, and perceived stress, on the other hand, demonstrated a significant and negative relationship with employee engagement (Miranda et al., 2020; Pirzada et al., 2020; Singh & Kumar, 2019). Another negative psychological state, challenge stressors, has a positive direct effect on employee engagement (Jiang Q et al., 2020), contradicting the Job Demands-Resources theory, which states that job demands have a negative impact on employee engagement.

Public service motivation is the only individual factor examined that was specifically related to and focused on the public sector was identified as a predictor of employee engagement in four of the research papers reviewed and was found to have a positive effect on employee engagement in all studies (e.g., Borst 2017; Borst 2018; De Simone et al. 2016; Ugaddan & Park, 2017), which was consistent with previous findings (Bakker, 2015). However, Borst et al. (2018) discovered that a dimension of public service motivation, which is the attraction to public policy, had no significant effect on employee engagement among people-changing organisations (e.g., education and health care). Nonetheless, it has been demonstrated to affect people-processing organisations significantly positively. One possible explanation is that public servants who worked in people-changing organisations view their work as their true calling and, thus, were less interested in public policy. The detail of the journal articles, including author, antecedent and theory on this theme, is presented in Table 2.6.

Table 2. 6 Antecedents of employee engagement: Individual factors

Authors	Sub-themes/ Antecedents	Theory
De Simone et. al. (2016)	Public service motivation	Theory of Herzberg
Mauno et al. (2016)	Emotional labour, work ethic feasibility	Job Demand-Resources Theory
Ugaddan & Park (2017)	Public service motivation	Social Exchange Theory
Borst et al. (2017)	Public service motivation	Job Demand-Resources Theory
Farid et al. (2017)	Islamic work ethics	-
Costantini et al. (2017)	Job crafting	Broaden and Built Theory
Babic et al. (2017)	Work–family conflict, work-family enrichment	The Role Conflict Theory
Borst (2018)	Public service motivation	Job Demand-Resources Theory
Giudetti et al. (2018)	Concerns about mastering change	Transactional Stress Theory
Mostafa & El-Motalib (2018)	Work meaningfulness	-
Malik & Khan (2019)	Positive emotion: relational identification	-
Singh & Kumar (2019)	Obsolescence	-
Meng et al. (2020)	Perceived meaningfulness	-
Idike et al. (2020)	Strength used; promotion focus	-
Pirzada et al. (2020)	Employee silence	-

Jiang Q et al. (2020)	Challenge stressor	Transactional Theory of Stress
Chai et al. (2020)	Psychological ownership	-
Zhang et al. (2020)	Realistic motivations	Expectancy Theory, Social Exchange Theory
Babic et al. (2020)	Work-family conflict, work-family enrichment	Social Exchange Theory
Shaheen et al. (2020)	Islamic work ethics	Equity Theory, Conservation of Resource Theory
Miranda et al. (2020)	Perceived stress	Conservation of Resources Theory
Seppala et al. (2020)	Job crafting	Job Demand-Resources Theory

2.7.5 Organisational Interventions

Least explored studies (four studies) on the topic of employee engagement are the role of organisational intervention such as training and development initiatives. Previous research indicate that training and development programmes affect employees' engagement (Nawaz et al., 2014; Rana & Chhabra, 2011; Sundaray, 2011). Training and development have been found to have a significant and positive relationship with employee engagement by Wushe and Shenje (2019), Pradhan et al. (2019), and Tensay and Singh (2020). However, Almotawa and Shaari (2020) study found that training and development have a small and negative effect on employee engagement which is against Social Exchange Theory and Job Demand-Resources Theory. Detail of the publications include author, antecedent and theory in this theme is presented in Table 2.7.

Table 2. 7 Antecedents of employee engagement: Organisational interventions

Authors	Sub-themes/ Antecedents	Theory
Wushe & Shenje (2019)	Training & career development	Social Exchange Theory
Pradhan et al. (2019)	Human resource practices (training)	Social Exchange Theory
Almotawa & Shaari (2020)	Training and development	-
Tensay & Singh (2020)	Human resource management (Training and Development)	Ability, motivation and opportunity Theory, Social Exchange Theory

2.7.6 Gaps in the Literature

After assessing the literature on the current employee engagement in the public sector, six primary research gaps were found from the assessment, as presented in Figure 2.2.

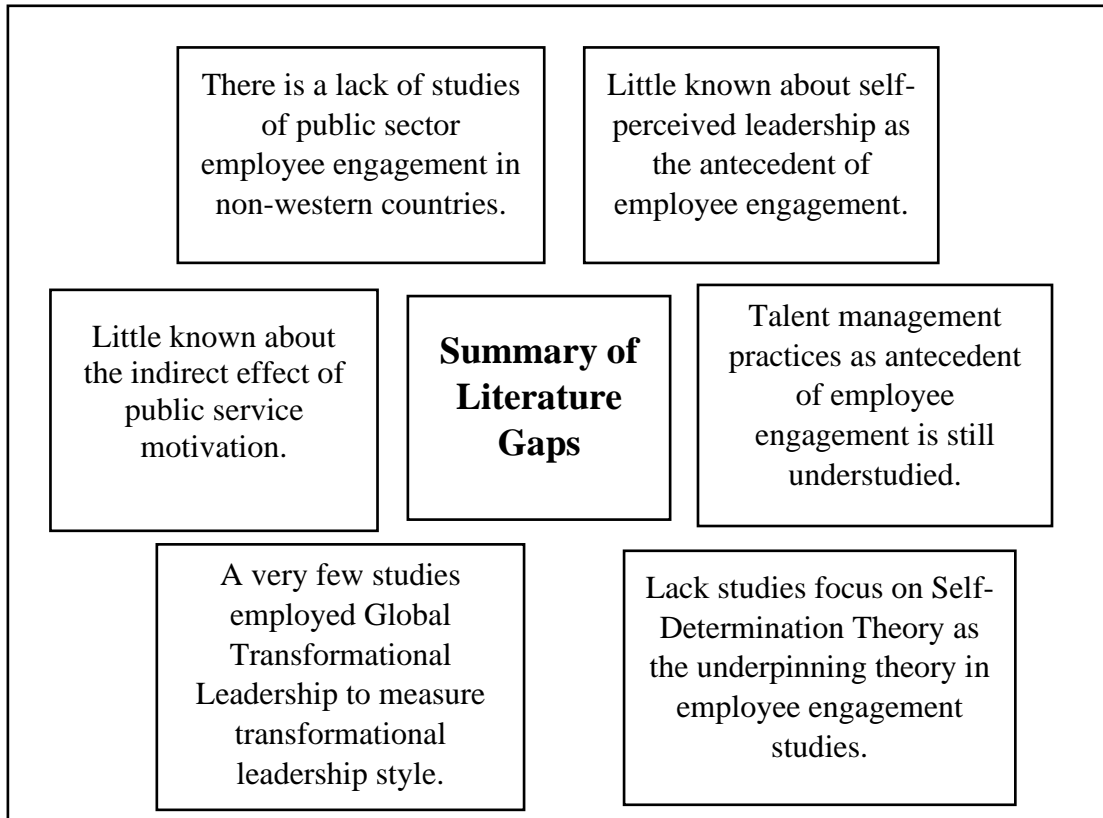


Figure 2. 2 Literature gaps

The first gap identified in previous research in this field is the lack of studies on antecedents of public sector employee engagement in non-western countries, especially in developing countries such as Malaysia. Most studies explored employee engagement in the context of the private sector rather than the public sector. Zahari and Kaliannan (2022) systematically reviewed journal articles on employee engagement in the public sector and found that none of the research was conducted in Malaysia.

Second, studies on employee engagement centre around the nexus of leadership styles on employee engagement in the public sector (e.g., Ancarani et al., 2020; Asif et al., 2019; 2020; Gyensare et al., 2017; Malik & Khan, 2019; Mauno et al., 2016; Mostafa & El-Motalib, 2018; Obuobisa-Darko, 2019), lack studies looked at a different

perspective of leadership factor, for instance on how self-perceived leadership style affects employee engagement.

Third, limited studies focus on the public service motivation as a mediator (Zahari & Kaliannan, 2022), although it is one of the specific and unique public service antecedents of employee engagement that is increasingly being examined in recent studies (e.g., Bashir et al., 2021; Borst et al., 2017; 2018; De Simone et al. 2016; Ugaddan & Park, 2017). Public service motivation is an important concept in the public sector as its individuals' motivation, affection, and compassion due to social responsibility and concern for others. Delving deeper into public service motivation as the mediating on the effect of antecedents of employee engagement on public sector employee engagement contributes to the body of knowledge on employee engagement literature.

Fourth, the study on talent management practices as the antecedent of employee engagement is still limited. The term talent management practices are scarcely studied as the antecedent of employee engagement in the public sector. Most studies still use the term human resource management (e.g., Pradhan et al., 2019; Tensay & Singh, 2020) or the dimensions or subset of human resource and talent management practices such as training and development (Almotawa & Shaari, 2020; Pradhan et al., 2019; Tensay & Singh, 2020; Wushe & Shenje, 2019), career development, reward and recognition (Almotawa & Shaari, 2020), and performance management as a standalone variable. Furthermore, there has been a limited amount of empirical research conducted on talent management, and the main reason for this is the extremely limited availability of talent management constructs (Yogalakshmi & Supriya, 2020). Based on the literature, there are two approaches to talent management: exclusive and inclusive. According to Kaliannan et al. (2022), the lack of knowledge on inclusive talent development as a critical talent management method requires immediate and extensive research.

Fifth, although several studies examine transformational leadership style and employee engagement (e.g., Ancarani et al., 2020; Gyensare et al., 2017; Mauno et al., 2016); however, most of the studies employed the lengthy prominent instrument, The Multifactor Leadership Questionnaire (MLQ) to measure transformational leadership

style. Limited studies used another instrument to quantify transformational leadership style, such as a short measure of transformational leadership behaviours, known as the Global Transformational Leadership scale, which is shorter but still reliable and valid to assess transformational leadership style.

Finally, most underpinning theories used in identifying antecedents of employee engagement centre around Job Demand Resources and Social Exchange Theory. Only a few studies used Self-Determination Theory as the underlying factor to research employee engagement antecedents. As a consequence, a failure to pay attention to Self-Determination Theory apart from the other prominent employee engagement theories will limit the ability to investigate alternative perspectives of employee engagement antecedents, particularly in the public sector. Therefore, in order to fill in the gaps in literature, this study combined Social Exchange Theory and Self-Determination Theory in one comprehensive study in order to identify other antecedents of employee engagement that have yet to be research previously.

2.8 Transformational Leadership Style and Employee Engagement

Numerous studies have discussed the importance of leadership on organisational outcomes. Effective leadership is one of the most prominent factors contributing to employee productivity (Maus, 2018). An effective leader will have fewer followers who are burnout, and it is widely believed that burnout is contrary to engagement. However, empirical studies on the relationship between leadership and employee engagement are not adequately demonstrated (Li, 2016). There is a dearth of studies of empirical and conceptual on leadership and employee engagement in academic literature, in contrast with various publications in this area by practitioners and consulting firms, e.g., Aon Hewitt, Gallup Institute and Blessing White (Macey & Schneider, 2008; Saks, 2006; Shuck & Herd, 2012; Lee et al., 2017).

Leadership as an antecedent of employee engagement was highlighted in several studies, such as in Bakar (2013), Li (2016), and Li et al. (2018). Lamade (2019) conceded that the increased level of employee engagement is contingent upon leadership despite the benefits of an engaged workforce. Employee engagement can be elevated by positive leadership styles (Leary et al., 2013), such as transformational and

transactional leadership styles. Li et al. (2018) revealed that transformational leadership style has a greater predictive effect on employees' psychological capital and employee engagement than transactional leadership style. Coleman (2017) conducted a qualitative study where he interviewed a group of senior transformational leaders to identify the best practices, including activities, processes, ideas, and events that transformational leaders use to address employee engagement issues that future leaders can follow. The author found that the best way to inspire employee engagement is to build relationships with employees and provide them with resources or invest in their future. Lamade (2019) and Gyensare (2016), in their study, found a positive relationship between transformational leadership style and employee engagement. These findings are probably because transformational leaders demonstrate positive behaviours that seek to inspire and motivate employees to engage in their roles in ways that produce high-quality results. Similarly, the results of the study by Lee et al. (2017), who observed the relationship between leadership styles and employee engagement, found that transformational leadership style has a positive relationship with employee engagement. In addition, the study also found that employee engagement mediates the relationship between transformational leadership style and organisational performance. Another study by Milhem et al. (2019) found that leaders' emotional intelligence at work mediates the relationship between transformational leadership style and employee engagement entirely. Understanding that there are factors that might have mediation and moderation effects on the relationship between leadership style and employee engagement is essential.

Other than leadership styles, other factors are exerted in the employee engagement literature, such as leadership behaviour and supervisor-subordinate relationship. Studies on leadership behaviours implied that a leader's behaviour might affect employee engagement. For example, Bakar (2013) study found that leadership behaviour has the largest effect on employee engagement. Engaged leaders are effective leaders seeking to meet and exceed organisational targets through their employees. They will develop strategies to improve individual performance by engaging their employees to accomplish organisational goals (Wang & Hsieh, 2013). McCrae (2019) indicates that participants in his qualitative study described personal lived experiences of leadership engagement behaviour's effect on engagement and organisational performance. Bersin et al. (2014) stated that a successful leader should be able to balance the need to

encourage a culture of engagement in the workplace, at the same time trying their best to remain competitive in the marketplace. To achieve this mission, leaders must inspire and motivate their employees to achieve high performance.

The interaction between leaders and employees is essential to increase employee engagement. However, empirical studies on the interaction between leaders and employees through supervisor-subordinate relationship and their impact on employee engagement have mixed findings. They may be varied depending on demographic and job-related factors. Macey et al. (2009) indicate that the drivers of employee engagement may not be uniform across the workforce. Many studies have found that the supervisor-subordinate relationship is strongly associated with employee engagement (Wagner & Harter 2006; Swindall 2007; McPhie 2008). However, the findings contradict the studies by Mansor et al. (2018) and Kaliannan and Adjovu (2015) that implied supervisor-subordinate relationships only have a medium or moderate effect on subordinates' level of engagement at work. Another study by Johari et al. (2013) found that the supervisor-subordinates relationship had no significant impact on employees' engagement levels. It could be because the research involved operational-level employees in manufacturing firms where their tasks are executed based on instructions given by their supervisor. Also, they do not have to make decisions in performing their job; hence they can achieve their job effectively with clear directions from their supervisors. Establishing a good relationship with their supervisors is not crucial for them to be highly engaged at work.

There are limited studies on leadership and engagement in the federal government related to transformational and transactional leadership styles (Barker, 2018). Hee et al. (2018) examined the mediating role of employee engagement between transformational leadership style and employee performance in the public organisation in Malaysia. Based on the research, employee engagement is identified as a full mediator in the relationship between transformational leaders and employee performance. Hence, when discussing transformational leadership style and employee performance in the public sector, employee engagement cannot be detached.

This study examines the relationship between transformational leadership style and employee engagement in public service. It is argued that a correlation may exist

between the transformational leadership style of managers in public service and employee engagement. Therefore, the following hypothesis is tested:

Hypothesis 1: Transformational leadership style of manager will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.

The framework for this hypothesis is shown in Figure 2.3.

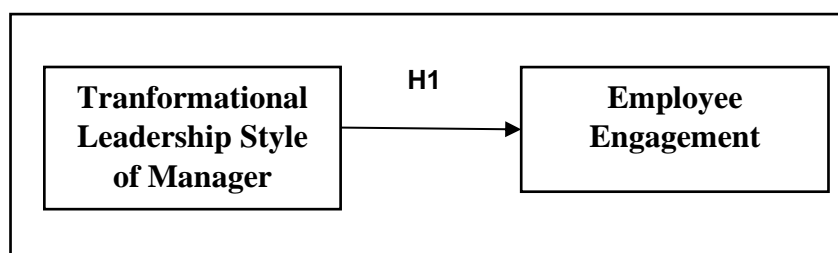


Figure 2. 3 The relationship between transformational leadership style of manager and employee engagement

In this study, the relationship between self-perceived transformational leadership style and employee engagement is also assessed. The reason for this argument is because Administrative and Diplomatic Officers, at all levels, although they are at the lowest grade, M41 have supervision responsibilities. In the Malaysian public organisations, Administrative and Diplomatic Officers in grades M41 and M44 need to supervise staff at lower-level positions, such as executive officers and staff (non-degree employees). Therefore, examining self-perceived transformational leadership style among Administrative and Diplomatic Officers are crucial as it could influence their employee engagement. Figure 2.4 illustrates supervision levels among Administrative and Diplomatic Officers in the Malaysian public service.

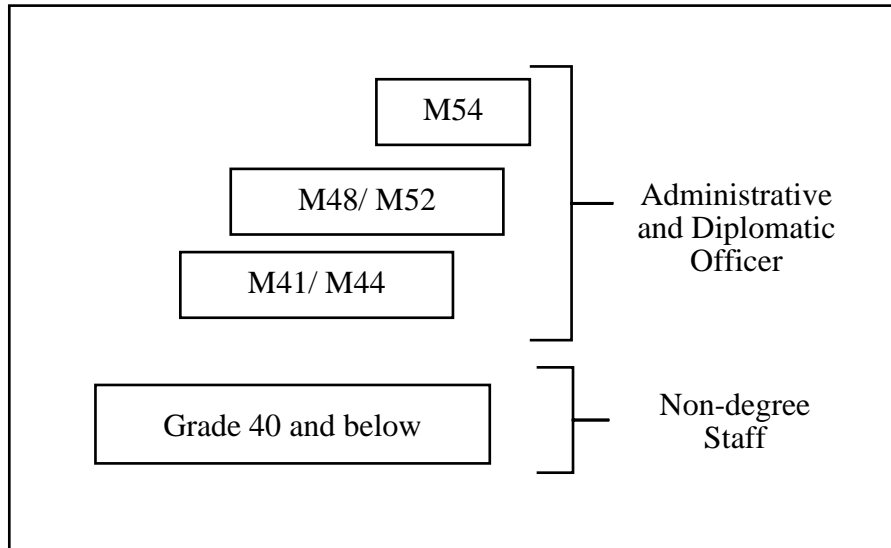


Figure 2. 4 Supervisory level of Administrative and Diplomatic Officers

According to Burns (2003), transformational leaders took the initiative to mobilise their followers to participate in the process of change. Those who exhibit transformational leadership style have a strong will for change, hence, they are more engaged at work. Furthermore, they will encourage people around them to be engaged at work too. Therefore, this study argues that Administrative and Diplomatic Officers with self-perceived transformational leadership style have a higher level of employee engagement as the positive traits of transformational leadership style motivate them to strive hard to achieve organisational goals.

This study examines the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.

Therefore, the following hypothesis is tested:

Hypothesis 2: Self-perceived transformational leadership style will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.

The framework for this hypothesis is shown in Figure 2.5.

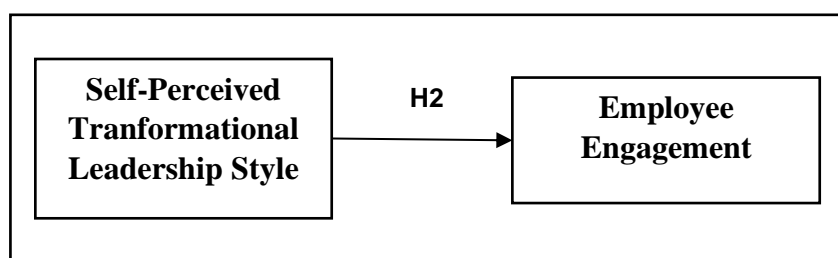


Figure 2. 5 The relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers

2.9 Talent Management Practices and Employee Engagement

Talent management is considered as a new concept in human resources and organisational behaviour; hence, empirical studies on both concepts remain scarce. Höglund (2012) indicates that academic knowledge regarding the influence of talent management on employees' attitudes and behaviours is still limited. Narayanan et al. (2019) supported this statement by affirming that the contribution of talent management to human resource development and employee engagement is often unexplored. Sadeli (2012) reiterates that very few research explicitly relate talent management and employee engagement. There is a limitation of the research on these areas, although many leaders, researchers, and practitioners have acknowledged the importance of talent management and employee engagement to organisational survival and success in this knowledge-based economy era.

Empirical studies have discussed factors affecting employee engagement; for example, Schaufeli and Bakker (2004) indicate that employee engagement can be nurtured primarily through organisational support and practices. Employees are less likely to engage if they perceived that job resources are not available for them at work. This situation may lead to undesirable workplace outcomes. Therefore, organisational can offer support to their employees by improving their talent management practices such as training, career development, and rewards management. The study by Pandita and Ray (2018) suggests that talent management practices, such as performance management, talent management programmes, career management and planning are the most efficient tools to ensure employees remain committed to perform well and engaged at work. Social Exchange Theory stated that when organisations invest in their

employees, the employees tend to reciprocate to this corporate investment in a positive way. As a result, many organisations are currently aware of the need to manage their talent effectively, hence they tend to invest more in their talent management practices. It is very crucial for organisations to identify talent management practices that can accelerate and also hinder the development process in the organisations. For example, talent management practices such as career advancement are considered resources provided by the organisation. It is also an extrinsic motivator, which can foster employee engagement (Moynihan & Pandey, 2007). Ellickson (2002) found that opportunity for career advancement is a key motivator for job satisfaction among government employees. This is in line with Herzberg Two-Factor Theory of satisfaction that proposes opportunity work advancement as a key motivator at work (Ewen et al., 1966). Employees who value opportunities for career advancement will show higher level of engagement in the hope for gaining the reward. Other than that, Bohlander and Snell (2013) indicate that training improves employee performance. This is because employees are interested in learning new skills, knowledge, and approaches in their work as this make their job interesting and fresh (Andrew & Sofian, 2012). Literature argue that employees are satisfied when there is a sound career development system, and the system is designed by the company for managerial and professional staff (McCracken, 2002; Rutherford, 2005).

Mansor et al. (2018) studied the relationship between career development and employee engagement in a manufacturing firm in Malaysia. In the study, majority of the respondents came from Gen Y, which accounted for 76.9 percent of the sample, while another 23.1 percent came from Gen X. The results show that career development has a large effect on employee engagement. This finding is consistent with another study by Liyanage and Gamage (2017) that examined employee engagement among Gen Y in the private sector in Sri Lanka; the similarity of the findings may be because the study respondents were among Gen Y. On the other hand, a study conducted by Johari et al. (2013) on the influence of human resource practices on employees' engagement among operational level employees in the manufacturing firm in Malaysia found that training and development were not a significant contributor to employee engagement. A plausible explanation for these findings is due to the requirement for skills and knowledge for operational level employees are very minimal as the job is generic in nature. The basic training that employees received is considered sufficient for them to

perform their job; therefore, training and development had no weightage on their engagement level. In another study by Pradhan et al. (2019), employee engagement is found to significantly mediated the relationship between human resource practices (internal career opportunities, employment security, training, participation, job descriptions) and job satisfaction. It shows that employee engagement is the reason for the linkages between human resources and job satisfaction. For employees to satisfy with their job, they need to be engaged at work through effective human resource practices.

In this study, the practice of talent management is examined to determine whether the adoption of exclusive and inclusive talent management approach in the public service affect employee engagement. As discussed earlier, in the 'exclusive' approach, 'talent' is a high performer or high potential in the public service, and the talent identification process is conducted through a series of assessment programmes (Public Service Department, 2016). High performers will be given priority for the upcoming promotion process to get promoted to higher grades or positions, and they will have more opportunities to attend high-impact training and development programmes. Literature finds that fairness will affect engagement (Saks, 2006). Therefore, this study aims to examine talent management practices in the public service influence on public officers' engagement, especially for those who are not listed in the 'talent pool' or not being recognised as talent or a high performer. This study also examines the relationship between the four dimensions of talent management practices and employee engagement in the public service. It is argued that talent management practices have a positive and significant relationship on employee engagement consistent with the Social Exchange Theory.

Therefore, the following hypothesis is tested:

Hypothesis 3: Talent management practices will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.

The relationship between talent management practices and employee engagement in this study is presented in Figure 2.6.

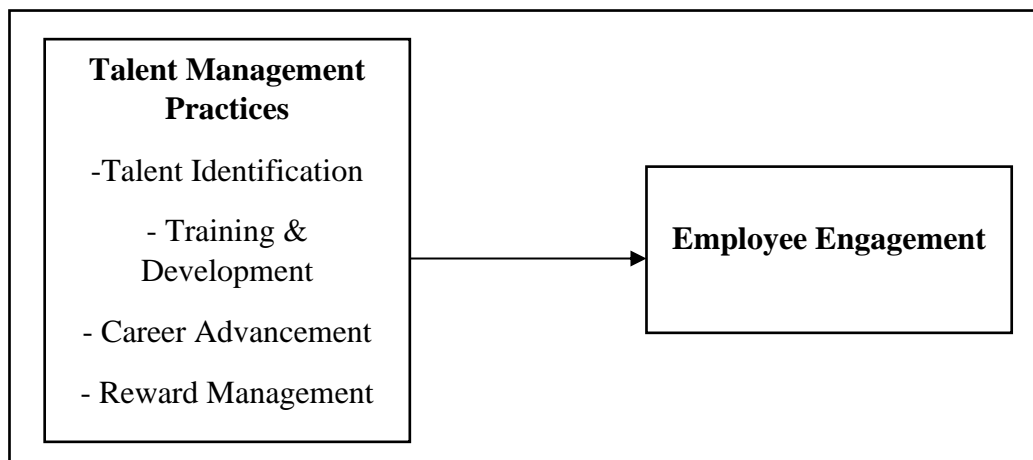


Figure 2. 6 The relationship between talent management practices and employee engagement

2.10 Transformational Leadership Style and Talent Management Practices

Empirical studies found that transformational leadership style and talent management practices positively influence employee engagement. Sadeli (2012) affirms that transformational leadership behaviour and talent management practices have a significant and positive effect on employee engagement. In the study, leadership behaviours, which are transformational and interaction between transformational and transactional are found to significantly affect mediating variables (talent management practices, organisational culture, and perceived organisational support), whereas transactional leadership must interact with transformational leadership behaviour to affect the mediating variables. Therefore, the study supports that transformational leadership style significantly influences talent management practices in the organisations. Employee engagement is started with leadership since leader is the one who creates the meaning and shapes organisational culture. Leaders may inculcate positive values and behaviours, such as cultural norms, to induce in the organisational culture. They are also responsible for developing and implementing talent management practices that may foster engagement level in the organisation. Therefore, leadership-driven talent management practices are proven to have engaged the high potential talents, which in turn will increase organisational performance and success. To drive

talent management practices towards employee engagement, it is vital to have leaders with transformational leadership behaviour. Employees, especially talented ones, appreciate if their employers further develop their capabilities, measure their performance objectively, and offer job promotions and retention plans. The study by Ahmad and Mohamed (2019) demonstrated that transformational leadership style is partly significantly related to succession planning and among the dimensions of transformational leadership style, individualise influence is the main predictor of succession planning programme, which is also the practice of talent management. Hence, leaders need to keep on reviewing and adjusting their leadership style and behaviour from time to time in order to be effective leaders. Organisations should not only focus on their succession planning programme but also on the commitment of the leader if they are intended to groom the potential future leaders.

In consistent with the previous study, Leng (2018) found that leadership is essential for the effectiveness of talent management (recruitment, retention, development, reward practices). The author discovered that all three dimensions of leadership competencies (leading organisation, leading others, and leading oneself) are important and correlate with effectiveness of talent management. However, the degree of correlation varies between leadership competency; where leading oneself (taking initiatives, self-awareness, inspiring, and work-life balance) has the strongest correlation with effectiveness of talent management. Leading others dimension encompasses observable behaviour such as kindness, integrity, communication, and delegations have the most significant correlation with effectiveness of talent management. Whereas leading organisation (connect responsibility to mission, work effectively, analyse environment, making decisions, biasness, cultivate informal relationship, change management) have the lowest correlation with the effectiveness of talent management. Respondent rated as 'neutral' in all leading organisation dimensions. Therefore, the study affirms that the importance of leadership towards effectiveness should not simply to be torn apart, with eighty per cent of respondents agree that leadership is important towards effectiveness of talent management. Ahmad and Mohamed (2019) found that one of the transformational dimensions, which is individualised influence is significantly related to succession planning programme, which is the practice under talent management. Therefore, the authors suggested that public sector should emphasise on their top management's leadership styles in order to ensure the achievement of succession-

planning programme. This study aims to examine the relationship between transformational leadership style of managers in the public service and talent management practices. It is argued that transformational leadership style might have a positive and significant effect on talent management practices. Transformational leadership traits that emphasise on employee’s development will lead to the success of talent management practices in public organisations.

Therefore, the following hypothesis is tested:

Hypothesis 4: Transformational leadership style of manager in the public service will significantly predict talent management practices.

This study examines the relationship between the transformational leadership style of manager and talent management practices in the public service. The framework for this hypothesis is shown in Figure 2.7.

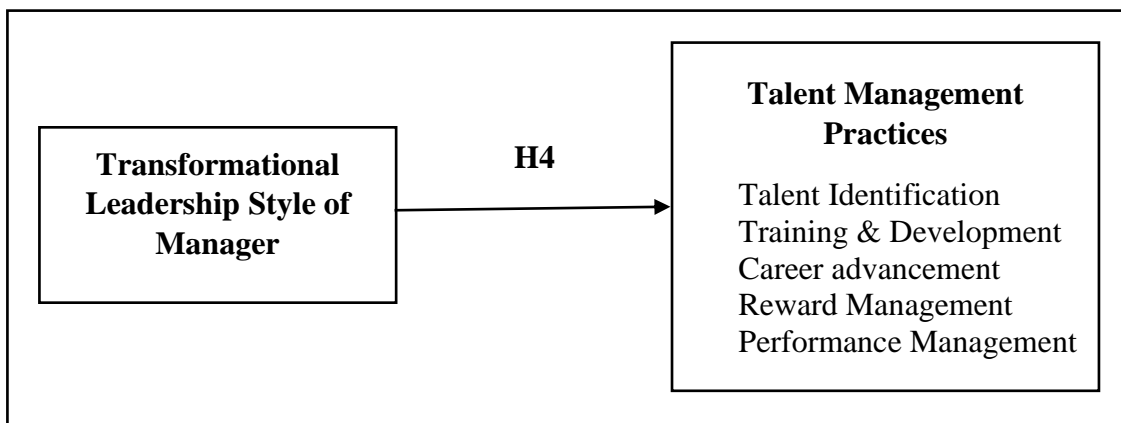


Figure 2. 7 The relationship between transformational leadership style of manager in the public service and talent management practices

2.11 Public Service Motivation and Employee Engagement

Public service motivation is a specific public sector antecedent in employee engagement literature (Zahari & Kaliannan, 2022). Public service motivation research indicates that public servants who have a high level of public service motivation are more committed because of the perceived fit between their own features and the organisation (Moynihan & Pandey, 2007; Park & Rainey, 2008; Taylor, 2008). Potipiroon and Ford (2017)

found that the effect of public service motivation on organisational commitment is more positive when accompanied by a high level of intrinsic motivation and ethical leadership. A lack of intrinsic motivation and/ or ethical leadership has caused the relationship between public service motivation on organisational commitment to be negative or insignificant. In addition, the author also found that ethical leadership did not correlate significantly with public service motivation. These results contradict with Paarlberg and Lavigna (2010) study that found relationship between ethical leadership and organisational commitment is mediated by public service motivation.

Kahn's (1990) framework of employee engagement proposes meaningfulness as one of the work context elements. Employees will feel their work meaningful when their personal values and their organisational values are identical as those who have high public service motivation will most likely choose to work in the public sector. Therefore, employees with a high public service motivation will be more engaged than those who have a low public service motivation. Public service motivation is regarded as a personal resource that has been identified as an antecedent of employee engagement (Anderfuhren-Biget et al., 2010).

Studies on public service motivation have found a significant relationship between public service motivation and employee engagement (Bashir et al. 2021; Borst et. al, 2017: 2018; De Simone et al. 2016; Ugaddan & Park, 2017). Cooke et al. (2019) found strong support for public service motivation as an antecedent along with perceived job influence and perceived procurement red tape to employee engagement. In the study, the authors came out with two models. In the first model, public service motivation acts as an antecedent, whereas in the second model, public service motivation act as a mediator between the resources or challenges and employee engagement. The results further support public service motivation as an antecedent of employee engagement more strongly than its role as a mediator. According to De Simone et al. (2016), public service motivation is often examined as an independent variable, due to the assumption that in the civil service organisations, public service motivation has a positive relationship to individual performance. Thus, understanding and fostering public service motivation will help public organisations to improve their performance (Schott & Ritz, 2017). Zahari and Kaliannan (2022) in their systematic literature review suggested that future studies should examine the indirect effects of public service

motivation on the relationship between employee engagement antecedent and employee engagement, with public service motivation, as a mediator or moderator in the study to add the body of knowledge of employee engagement in the public sector.

Therefore, the discussion presented above lead to the following hypothesis:

Hypothesis 5: Public Service Motivation will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian Public Service.

2.12 Public Service Motivation as a Mediator in This Study

The beliefs, values, and attitudes that go beyond self-interest and organisational interest to energise employees to do good for others and contribute to the well-being of organisations and society has made public service motivation an important antecedent of employee engagement in the public sector. Public service motivation is an individual job resource that may resonate public employees' willingness to give their extraordinary effort to organisation. This situation occurs due to their beliefs, values, and attitudes toward serving the people that is in line with the functions of government organisations to provide services to the nation and people. Public service motivation enables this drive by enhancing employee's appreciation for the work itself as they have strong desire to serve the public.

According to the Self-Determination Theory, as indicated by Tremblay et al. (2009), individuals will engage in activities they find interesting, optimally challenging, or provide them with aesthetic pleasure. People attempt to comprehend and extend themselves by incorporating new experiences, nurturing their needs, desires, interests, and engaging with others and also the outside world. Situations that foster an individual's sense of autonomy, competence, and connectedness generate voluntary and high-quality motivation, leading to improved performance, persistence, and creativity. This means that individual factor such as self-awareness or self-motivation will drive someone to be engaged when performing their work if they find their work is interesting and they are passionate about their work, regardless of other external factors such as management or pay. Employees with a high level of public service motivation are more attracted to working in the public sector because the job meets their personal interest in

serving the public. They feel this type of employment is rewarding for them (Perry & Wise, 1990) although working in the public sector will not provide them with financial incentive and rewards.

Therefore, this study argues that public service motivation is a critical factor in keeping public employees engaged at work as personal resources such as self-determinant or intrinsic motives and values will motivate employees to give their extraordinary effort at work and their absolute best on the job. Although other factors are also important, those who are passionate about their work and believe that their work is consistent with their self-values and beliefs will perform significantly better.

2.13 Transformational Leadership Style and Employee Engagement: The Mediating Role of Public Service Motivation

Ugaddan et al. (2017), in their study provides empirical evidence demonstrated that positive social exchange might predict engagement based on the quality of leadership through public service motivation. The authors also suggested that public organisations should strengthen the relationship between leaders and subordinates to improve employees' engagement. These findings show that when employees with a high public service motivation perceived the quality of their leaders, their' commitment and engagement at work will increase tremendously.

Bao et al. (2018) study examines two mediating mechanisms of the influence of servant leadership on employee engagement in the public sector. The mediators present in this study are social exchange mechanism represented by leader-member exchange and the social learning mechanism represented by public service motivation. The study found that the leadership style is positively related to employee engagement, and the relationship was mediated by leader-member exchange, but not by public service motivation. This is because the impact of servant leadership on employee engagement primarily through the social exchange process in leader-member exchange, and in this case, the social learning process in public service motivation is challenging to take place. The study suggests leaders to display servant leadership in order to build a strong relationship with employees to increase their motivation.

Until now, there is no study that examine public service motivation as a mediator on the relationship between transformational leadership style and employee engagement. Therefore, in this study, transformational leadership style is examined as various studies revealed that transformational leaders have positive impact on employees' outcomes (Ancarani et al. 2020; Gyensare et al., 2017; Malik & Khan, 2019; Nel et al., 2015; Obuobiso-Darko, 2019; Soieb, 2018). Transformational leaders naturally seek to create a positive change for their followers; motivate and inspire people, and they are driven by a strong purpose to boost employees' morale, performance, and motivation. Transformational leaders' positive qualities to transform public service delivery meet the motives and beliefs of the public service motivated employees (Perry & Wise, 1990). When employees see that they have transformational leaders, they automatically tend to be more motivated to go further and perform better at work (Belle, 2014; Vandenabeele, 2014; Wright et al., 2012). Public service motivated employees will embrace the positive traits of transformational leadership style and achieve higher level of engagement. On the other hand, if the public employees themselves possess transformational leadership behaviours, they will be more engaged at work. Positive transformational leadership qualities will drive them to strive at work, be more work-oriented, at the same time inspire their subordinates to do the same.

Although the effects of transformational leadership style on individual performance have been extensively studied, motivation factor such as public service motivation may also interact with transformational leadership style to affect individual performance (Caillier, 2014). Wright, Moynihan and Pandey (2012) indicate that transformational leadership, and public service motivation have their origins in the motivational influence of organisational aims. Goal-setting theory contends that setting such objectives may boost performance. According to Moynihan, Pandey and Wright (2009), transformational leadership style has the ability to enhance public service motivation. Vandenabeele's (2014) research found that transformational leadership style has a positive effect on public service motivation levels, consistent with Wright, Moynihan and Pandey (2012) study that discovered transformational leadership style enhance public service motivation. Public service motivation is dynamic in the sense that it can change in response to external factors, particularly transformational leadership style (Bellé, 2014; Paarlberg & Lavigna, 2010; Vandenabeele, 2014; Wright et al., 2012).

The argument leads to the development of hypothesis 6 and hypothesis 7:

Hypothesis 6: Public service motivation mediates the relationship between transformational leadership style of managers in the public service and employee engagement among Administrative and Diplomatic Officer.

Hypothesis 7: Public service motivation mediates the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.

2.14 Talent Management Practices and Employee Engagement: The Mediating Role of Public Service Motivation

Talent management research is often viewed as a collection of functions that reflect typical human resource management procedures (Mucha, 2004). From this point of view, it includes other human resource practices such as strategic planning, employee development, and retaining great employees (Iles et al., 2010; Schiemann, 2014). There is limited research that focus on talent management practises as a predictor of employee engagement. Most studies examined human resource management (e.g., Pradhan et al., 2019; Tensay & Singh, 2020; Wushe & Shenje, 2019) or the dimensions of human resource which are trainings and development (Almotawa & Shaari, 2020; Johari et al., 2013; Mansor et al., 2018; Pradhan et al., 2019; Tensay & Singh, 2020; Wushe & Shenje, 2019), career development, reward and recognition (Almotawa & Shaari (2020); Moynihan & Pandey, 2007).

According to Giauque et al. (2013; 2015), intrinsic human resource management practises such as job enrichment, participation, individual appraisal, and professional development positively affect public service motivation either individually or as bundles for instance diverse work tasks, independence at work, flexible working hours, the ability to influence important decisions and to reconcile personal and professional life. Dzansi et al. (2016) findings show a positive relationship between perceived fairness in human resource management practices and employee motivation. Thus, municipal workers in South Africa who feel that they are being treated unfairly due to human resource management practises may become dissatisfied and less motivated to

achieve organisation's ultimate goal, and also to provide high-quality service to their customers. This means fair human resource management practises promote employee motivation. Mostafa et al. (2015) in their study found that public service motivation partially mediated the relationship between high-performance human resource practices, employees' affective commitment and organisational citizenship behaviours. Similar results were achieved when the system of high-performance human resource practices was disaggregated to consider the individual effects of human resource practices.

Horton and Hondeghem (2006) argue that public employees are more motivated by intrinsic motivators and less concerned with extrinsic motivators, in contrary with employees in the private sectors. Theoretically and empirically, public service motivation and intrinsic motivation share common values and orientations, specifically within the public and non-profit organisational contexts. Employees who have a high public service motivation are likely to concern more about serving people and less motivated about extrinsic rewards. However, there are arguments that extrinsic motivators may also boose employee engagement. Extrinsic motivators through talent management practices such as career development, advancement (Mansor et al., 2018; Moynihan & Pandey, 2007), training, and development (Andrew & Sofian, 2012; Bakar, 2013; Ray, 2019) have a significant impact on employee engagement. These results are in line with the notion of Social Exchange Theory that employee will reciprocate if they feel their employer care about them and provide them with resources they need at work. Employees with a high public service motivation more likely to be motivated by these organisational initiatives. They will feel grateful and react positively to the resources and opportunities through their organisation's talent management practices. The positive impact of talent management practices on employees with high public service motivation will be enhanced, and therefore, they will be more engaged at work. This is because the combination of extrinsic and intrinsic motivators will boost employee engagement to a higher degree. In the absence of such coordination, the impact of talent management practices may be lessened because the employees are just performing their job, and they are not motivated enough to contribute their best for the organisation. This study argues that talent management practices influence employee engagement with the existence of public service motivation. Public service motivation is an important individual resource that is critical to enhance the relationship between

talent management practices and employee engagement as the self-interest and self-value motivate individual to be more active, energetic, dedicated and focus at work.

The development of the following hypothesis based on the impression that public service motivation would mediate the relationship between talent management practices and employee engagement.

Hypothesis 8: Public service motivation mediates the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysia Public Service.

The above arguments and discussions demonstrate the importance of organisational related factors to raise employee engagement among public officers. However, the linkages of different concepts provide a mean for examining key issues that may help to improve our theoretical and empirical understanding of the concepts such as talent management practices that affect employee engagement.

2.15 Proposed Conceptual Model of The Study

The relationship between antecedents of employee engagement in this study; transformational leadership style, self-perceived transformational leadership style, talent management practices, public service motivation and employee engagement is yet to be explained in one model. Therefore, this study aims to fill this gap by creating and testing these relationships. The conceptual framework of this study is illustrated in Figure 2.8.

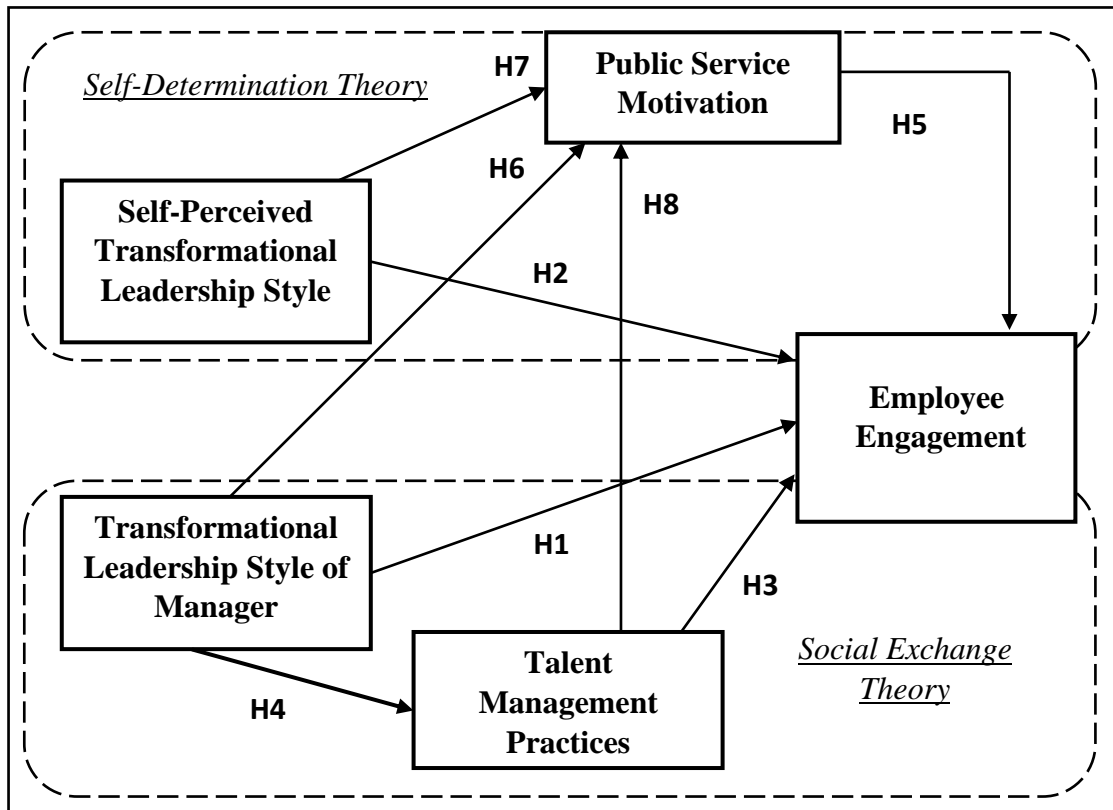


Figure 2. 8 Research framework

The proposed conceptual framework in Figure 2.8 demonstrates the relationship between independent variables: transformational leadership style of manager, self-perceived transformational leadership, and talent management practices, mediating variable; public service motivation and dependent variable; employee engagement. Based on the studied literature and previous empirical research that has been discussed, this study presents the potential interrelationships between transformational leadership, talent management practices and public service motivation on employee engagement. Specifically, this study looks into the transformational leadership style of the leader in the public service, self-perceived transformational leadership style among Administrative and Diplomatic officers, talent management practices and its four dimensions: talent identification, training and development, career advancement and rewards management, public service motivation and employee engagement construct. Lastly, this study examines the mediating role of public service motivation on the relationship between transformational leadership style, talent management practices, and employee engagement. Accordingly, the outcomes in this conceptual framework of the study refer to employee engagement in the Malaysian public service.

2.16 An Overview of the Government System in Malaysia

Malaysia practises parliamentary democracy with constitutional Monarchy and His Majesty the King or Yang di-Pertuan Agong (YDPA) as the Paramount Ruler. The Malaysian government system adopted the Westminster model head by the YDPA, who is elected every five years by the Council of Malay Rulers among the sultans of the Malaysian states. Malaysian government practise the principle of separation of powers, which has three branches, legislative, executive, and judiciary, to prevent abuse of power in any branch, avoid autocracy, and safeguard freedom of the people. The legislative branch is the Parliament, consisting of Dewan Rakyat and Dewan Negara, the legislative authority for the Federation, that enacts laws to be enforced nationwide. Parliament passes federal laws, make amendment to existing federal laws, examine government policies, and approve government expenditure and new taxes. Parliament also serves as a forum to discuss matters of the public interest (Parliament, 2019). On the other hand, the executive branch is headed by the Prime Minister, appointed by the YDPA. The role of the Prime Minister is to lead the government and the party that holds the majority in Parliament and carry out all government matters in the name of the YDPA. The YDPA shall act according to the Cabinet's advice. The third branch is the judiciary, which is a body of judges in a constitutional system. In the judiciary system, judges are given powers to interpret and execute the law with authority vested in them.

The government sector is also known as the public sector in Malaysia, which is divided into three levels: federal, state, and local. The federal government consists of various ministries, departments, and agencies to carry out public service duties. The state government is the second level of government that rules the states in the federation of Malaysia, which includes eleven states in peninsular Malaysia, Sabah, Sarawak and also federal territories (Wilayah Persekutuan Putrajaya, Kuala Lumpur and Labuan). Each state is led by the Chief Minister and has its own written constitution, legislative assembly, and executive council, which reports to the legislature. The state government is in charge of general policies governing the development and use of lands and buildings. It may issue directives and policies that must be followed by local governments. A state government may have some political autonomy or be directly controlled by the federal government. The third level is the local government, the lowest tier of government. Local governments include city councils, municipal councils, and

district councils. Their income comes from three sources: taxes, non-tax revenue, and federal and state government allocations. The public service structure is presented in Figure 2.9.

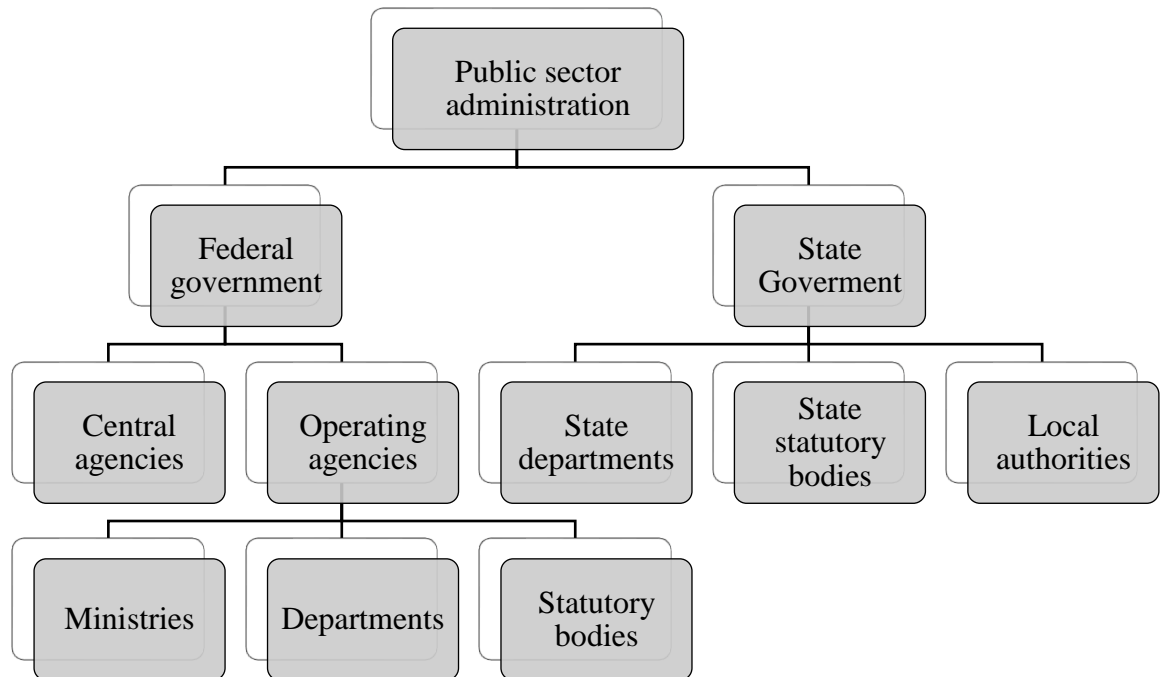


Figure 2. 9 Malaysian public sector structure

2.16.1 An Overview of the Malaysian Public Sector

The Malaysian public sector roles involve formulation, administration, and implementation of government policies. The core business is to deliver services such as health, national defence, agriculture, education, and international affairs. The Malaysian public sector currently employs approximately 1.6 million public employees. The large size of the public sector has become a concern among public as it involves higher government spending (Borre & Viegas, 1995), hence, it affects the effectiveness in continuous improvement and national development. The size of the Malaysian public sector is claimed to be much larger than in other countries. However, unlike other countries that do not include educational services, education, and national defence as part of public service, Malaysian public sector includes these services as part of the public sector. These three services contribute to the largest number of public employees.

The Malaysian public service is administrative machinery under the executive branch. Public service roles are to implementing policies and decisions coordinated by the Prime Minister's Department through the cabinet secretariat, led by the Chief Secretary to the Government. Chief Secretary to the Government is the highest position in the public service that hold great responsibility as the principal advisor to the Prime Minister and the secretary to the cabinet. Agencies. Three central agencies under Prime Minister Department; Public Service Department (PSD), Economic Planning Unit (EPU), and Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) are responsible for executing the government bureaucracy. The Public Service Department is responsible for human resource management, including human resource planning, development, and public service management.

The functions of human resource planning include determining the public service roles, government service size and structure, remuneration package, pension matters, developing strategic alliances and networking. Human resource development functions include the implementation of policies, such as in organisation development, career development, succession planning, training, and management of human resource management in the public service. Human resource management functions include the process of recruitment, positioning, promotions, pensions benefit, service matters, employer-employee relationship, training, policies monitoring, and evaluation management (Public Service Department, 2020). The Public Service Department serves as a centralised administrator for human resource management for the entire public service except for the Malaysian Armed Forces (MAF) and the Royal Malaysia Police (RMP). Some responsibilities related to human resource management and service matters for most public service schemes have been delegated to ministries, departments, and agencies to be performed at organisational levels, such as job placement, transfer, career development, and training.

The public sector consists of employees from various schemes and grades, each with its own entry requirements and recruitment procedures. There are two categories of schemes in the public service: a common user and a non-common user scheme. Human resource management and service matter for common user schemes is managed by Public Service Department, including recruitment, position, career development, and promotion. The schemes under common user service, including administrative,

diplomatic, psychology, and vocational training. Meanwhile, non-common user schemes are managed by the ministries, departments, and agencies that in charge of the core business. Non-common user schemes including education, health, agriculture, national defence, science, and technology services.

2.16.2 Talent Management Practices in the Malaysian Public Sector

Talent management is crucial for the developing countries to become a developed country (Vaiman et al., 2012). Therefore, public organisations greatly emphasise on their human resource development (Tymon et al., 2010; Vaiman et al., 2012). Poocharoen and Lee (2013) conducted a comparison study of talent management practices between Malaysia, Singapore, and Thailand public services. The authors found that each country illustrates a varying degree of an exclusive strategy using the milestones of development opportunities, exposure to high-profile projects, or mentorship offered to a selected group of employees. Singapore is identified to practise the most exclusive talent management, followed by Malaysia, while Thailand is the least. In recent years, Malaysian public service has given more attention to the practice of talent management. The effort shown through the release of service circulars related to talent management practices is presented in Table 2.8.

Table 2. 8 Service circular of career development in the public service

Circular	Year	Title
Service Circular No 3, 2006	2006	The Guidelines for Setting Up Search Committee, and Succession Planning Implementation Process
Service Circular No 7, 2016	2016	Career Advancement Path for Subject Matter Expert (SME) in the Federal Public Service.
Service Circular No 8, 2016	2016	Implementation of the Policy on Career Advancement Path for Fast Track Officer.

Source: Public Service Department (2020)

The Malaysian government issued Service Circular No. 3, 2006, The Guidelines for Setting Up Search Committee, and Succession Planning Implementation Process outlining the principles to establish search committee and succession planning implementation in the public sector. The importance of setting up search committee and

the implementation of succession planning is to ensure that only competent officers fill the strategic positions in public organisation to meet the requirement of public organisation and stakeholders. Long-term organisational goals, human capital development needs, trends and predictions in human capital management increase transparency in the recruitment and selection process, successors, and job placement as the decisions are made collectively by the designated committee. Besides, setting up search committees and implementation of succession planning is to strengthen the organisational structure of ministries and agencies, at the same time to ensure that public service is still relevant to the public and nation.

The succession planning process consists of five execution stages: identification, assessment, development, implementation, effectiveness and improvement study. The first stage in the succession planning process is identification. In this process, public agencies should perform a thorough study, including determining department demographic factors such as the available promotion positions, a list of officers by grade and seniority, a relevant service plan, and the service tenure of the officers. The organisation direction is then identified, such as (i) department goals and missions, (ii) future competencies and skills required, and (iii) established talent requirements and critical roles.

During the assessment stage, ministries and agencies should strengthen the process of identifying high performers by developing a strong approach and evaluation tools, performance management and a fair selection procedure. Aside from that, the skill set belongs to the public employees should be assessed together with the comparison between skill set needed now and the skill set needed in the future. Following that, the department should be prepared to develop officers by identifying high performers and low performers, a list of critical positions, promotion and career development, an emphasis on the top potential officers, and the readiness of officers to fill the position based on the gap between officers' skills and abilities and the skillset required in the future. To develop future officers, ministries and agencies should identify the officers' educational level and provide appropriate training, mentor system, job rotation, employment experience, project execution possibilities, and opportunities for self-development.

To implement succession planning into action, the management team should identify the best method to communicate with potential candidates. The implementation of succession planning should involve selection and recruitment methods based on the skills and competencies required for the position, performance management that focuses on the competencies to fulfil the requirements of the position, training and development to fulfil the requirements and competencies required by the department, better perks, compensation, emolument and benefits. Departments should also consider potential candidates from outside the organisation. Next, to assess the effectiveness of the succession planning that has been developed and implemented, the search committee should collect data, analyse the data, and draw conclusions based on the findings to assess the effectiveness of communication of succession planning and the succession planning development implementation. The research should be conducted on a regular basis or as required.

In 2016, the Malaysian public service introduced career path development for fast-track officers and subject matter experts (SME) to acknowledge and retain high potential officers with great leadership skills and expertise in the civil service. This initiative is aligned with the public service aspiration to provide a national leadership track in the civil service (MAMPU, 2020). The fast track and subject matter expert officers were identified through a series of leadership assessment programmes wherein the sessions and participants will be evaluated based on their thinking, leadership, and communication skills. Other requirements are language proficiency, psychometrics, and fitness test. The requirements should be met for one to be recognised as a fast-track and subject matter expert officer. There are additional requirements for subject matter experts, such as significant contributions to the organisation, academic writing, publication, conference and seminar participation. Leadership Assessment Programme (LEAP) is conducted to identify fast-track officers in the public service. The selection process for fast track in the leadership evaluation programme framework is shown in Figure 2.10.

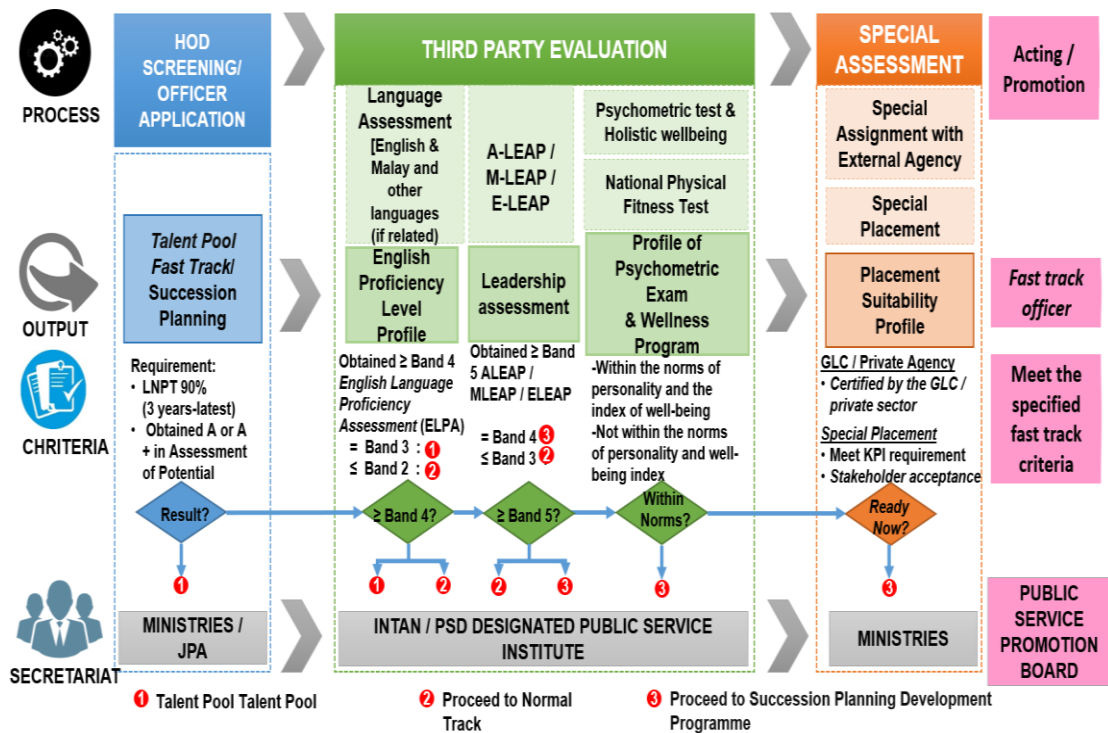


Figure 2. 10 Leadership evaluation programme framework. Source: Service Circular No. 8, 2016, Public Service Department

2.16.3 Training and Development in the Malaysian Public Sector

The Public Service Human Resource Development Policy version 1.0 was released and effective from January 1, 2022. It is a revision of the Public Sector Human Resource Training Policy introduced in 2005. The aim of the Public Service Human Resource Development Policy is for the public officers' competencies development in order to fulfil the current needs and compete in future challenges. The concept employed in Public Sector Human Resource Training Policy has been improved to ensure that human resource development in the public sector is still relevant in line with the current changes. The training concept in the previous training policy has been revised and changed to the human resources development concept as the model is more comprehensive and inclusive. Under the new policy, public service officers must complete forty (40) hours of formal and structured training during the evaluation year. At the same time, they are also encouraged to join other informal development or training programmes. The need for a new policy is to provide competent officers with the opportunities for better and various career opportunities. Three main activities of

the Public Service Human Resource Development Policy are (i) competency development, (ii) performance evaluation, and (iii) career advancement potential evaluation as presented in Figure 2.11.

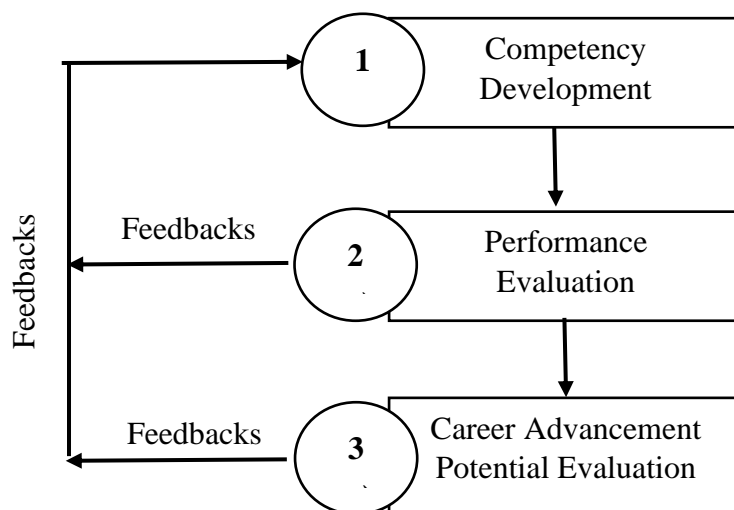


Figure 2. 11 Interconnection between competency development, performance evaluation and career advancement potential evaluation

Each public officer should have a set of skills or competencies that should be continuously developed. The skill set falls into one of these two categories:

- (i) Generic competency development: Leadership characteristics required for public service officers is based on the officers’ grade as underlined in the Public Service Leadership Competency. Five leadership competency attributes underlined in the Public Service Leadership Framework are authentic, agile, adaptive, strategic, executive presence and transformative.

- (ii) Functional competency: refers to the specific skills, abilities and knowledge required to complete the duties and responsibilities based on job descriptions in the organisation. This functional competency criteria should be developed by head of service or head of profession through a human resource development panel in ministries, departments and agencies.

2.16.4 The Competency Development in the Malaysian Public Sector

Based on the Public Service Leadership Framework, the development model of both categories, generic and functional competencies, follows the 3P approach of education, exposure, and experience. The competencies development model in the Public Service Human Resource Development Policy is presented in Figure 2.12.

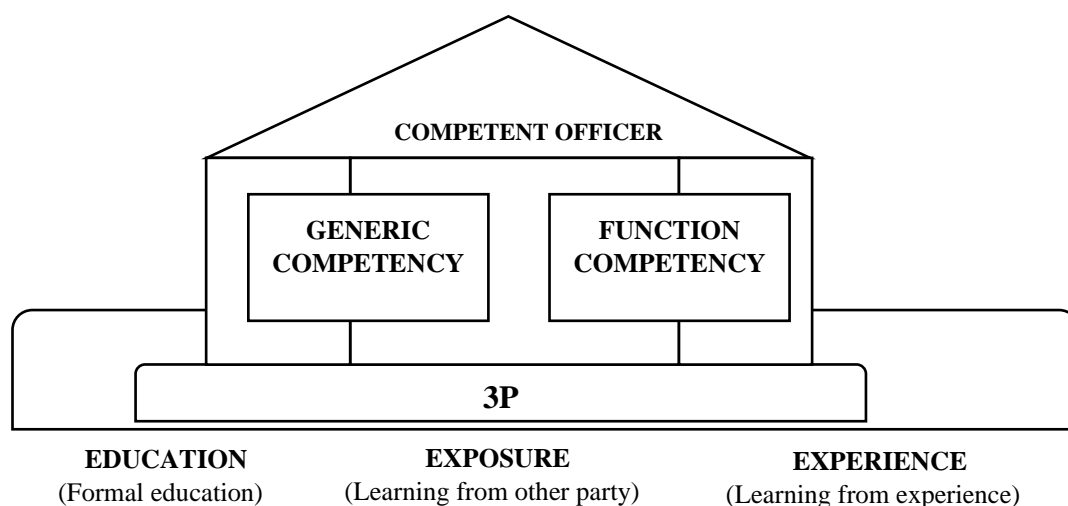


Figure 2. 12 Development module based on 3P (education, exposure and experience)

The Public Service Leadership Competency Framework has been developed to serve as a reference and guide for public officers to complete the required competencies to meet continuous challenges and changes in the public sector environment. Using this framework, human resource manager can develop a relevant development programme plan in their ministries, departments, and agencies.

This framework is multidimensional. The most important dimensions are the future leadership attributes, which are authentic, agile, adaptive, strategic, executive presence and transformative. Each officer must achieve a good level for every attributes depending on their positions and grades. Each attribute has four leadership elements: think, lead, speak and act. In addition, the Bloom taxonomy indicator is also one of the framework dimensions.

2.16.5 Performance Management System for Public Officers in the Malaysian Public Sector

Employee performance appraisal or individual performance appraisal is a procedure of evaluating an employee's achievements on a periodic and regular basis. Performance appraisal is one of the most significant human resource management processes in the organisation. It is a structured formal system designed to monitor and evaluate work-related behaviours of public employees in order to improve employees' and organisational outcomes for the benefit of individuals and organisations.

Performance management enables organisations and employees to work together in achieving the organisational vision and mission. It is highlighted that human capital is the primary driving force for an organisation to plan and perform successfully and effectively. As a result, systematic implementation of employee performance management has been adopted in the Malaysian public sector. Employee performance evaluations allow employees to gain insight into their personal abilities and capacity to complete tasks under the organisation's objectives. Performance management in the public sector emphasises attitude, skills and knowledge (Abas M, 2006).

The performance evaluation system in the Malaysian public service is based on the appropriate principles that align with the organisation's goals. It has been developed based on the principle that evaluation process should be implemented objectively, fairly, and transparently. The evaluation should be based on work outcomes and behaviours towards the achievement of organisational objectives. Besides, performance evaluation system encourages positive competition among public officers to improve quality and productivity. In regards to the principles, the performance evaluation system is developed to ensure (i) the evaluation of work performance is more systematic and convincing, (ii) the implementation of performance evaluation by the head of the service is according to the suitability of certain services, (iii) the usage of performance evaluation system in various human resources management function such as career development, placement and training, (iv) the increase of head of the department and supervisors involvement in the performance evaluation process.

Performance management in the Malaysian public service include involvement of various parties, such as head of the department, human resource development panel, and the evaluation officer. The head of the department's roles in public service is to optimally mobilise the resources under his control, including human resources, finances, equipment, and technology, in order to accomplish the organisation's goals. In accordance with the purpose of the performance evaluation system, the head of the department is responsible for determining the direction, goals, and objectives of the organisation, ensuring an effective work system to achieve the annual key performance indicator of the organisation, obtaining the commitment of all levels of employees through a participative management style, and emphasising the career development of employees. On the other hand, some of the functions and jurisdiction of the human resource development panel are in the verification of performance evaluation score if there is uncertainty and a strong foundation, do revision and coordinate the score as necessary. The panel can recommend or determine the officer's placement and career development based on his or her potential, abilities, privileges, and progress.

2.16.6 Administrative and Diplomatic Scheme

The Administrative and Diplomatic scheme is the earliest premier service in the Malaysian public service. The Administrative and Diplomatic scheme was introduced during British occupation in 1904. The former name of this scheme was the Malay Civil Service, appointed among British officers responsible for administering the Malay land. In 1929, Malay Administrative Service scheme was introduced to replace the Malay Civil Service. Since then, Malay officer has taken over the administrative role of the British officers in the public sector. Next, the scheme was renamed to Malaysian Home and Foreign Service (MHFS) in 1966 and Administrative and Diplomatic Officer in 1971 and remain an elite service until now.

There are different grades of Administrative and Diplomatic Officers, which begin from grade M41 for junior officers to grade M54 for senior officers and some are promoted to premier grades in the public service. Administrative and Diplomatic Officer grades M41 and M44, are the junior officers and the largest population in the Administrative and Diplomatic scheme. Meanwhile, Administrative and Diplomatic Officer grades

M48 to M52 are categorised as middle managers. They are the most affected group of leadership styles and talent management practices in the public service. The roles of Administrative and Diplomatic Officers are very broad. Their responsibilities include assisting the government in planning, formulating, and implementing public policies for human resource and organisational, financial resources, economic, regional, local and land resources, social planning and administration, international relations and foreign affairs including foreign services, national security and information technology management in the public service.

Administrative and Diplomatic Officer is regarded as a key knowledge worker and serves as think tank for the government in formulating and maintaining public policies (Yusof et al., 2016). The lowest entry level for the Administrative and Diplomatic scheme is a bachelor's degree (any major) from local and international universities recognised by the Malaysian government (Public Service Commission, 2020). Administrative and Diplomatic Officers can be assigned to serve in any organisation within Malaysia's federal government, state government, and statutory bodies. In 2021, there were approximately 8,000 to 9,000 Administrative and Diplomatic Officers in the Malaysian public service.

In line with the Malaysian government's aspiration to create a world-class public service, a comprehensive human resource plan has been developed to outline the recruitment and hiring strategy of the Administrative and Diplomatic Officer, who are the future leaders in the public sector. This strategy is important as the role of the Administrative and Diplomatic Officer is critical in improving and enhancing the public service delivery system. Through this recruitment and appointment strategy, the candidate must fulfil all criteria required to be appointed as the Administrative and Diplomatic Officer, such as displaying great leadership, communication, thinking skills and qualifications in the administrative and diplomatic service focus area.

The recruitment and selection process for Administrative and Diplomatic Officers is among the most challenging in the public sector. The candidates must undergo a strict and tough screening process such as the entrance level examination, Administrative and Diplomatic officer assessment centre and interview. The first screening is the public service entrance examination. At this stage, the candidate's knowledge of current issues,

government administration, logical thinking, mathematics, history, Malay and English language efficiency and fluency are being assessed in the examination. The candidate who has passed the first screening will be invited to the second screening process, which is the Administrative and Diplomatic service assessment centre. This assessment centre assesses the candidates' attitude, leadership skills, communication skills (Malay and English language), confidence level, and teamwork. The assessment involves activities such as management games, debate, public speaking, group discussions and essay writing. In addition, the candidate's fitness level is also being assessed through physical activities such as a bleep test and a 2.4-kilometre run. Candidate who passes this assessment centre will be invited to the interview stage, which focuses on the candidates' personality traits, attitude, confidence level, communication skills and knowledge.

The recruitment process of Administrative and Diplomatic officers has undergone a series of transformation phases since the process was first implemented. In 1971, cadet officers were appointed on a contract basis, and only those who passed the Public Administration Diploma were appointed as Administrative and Diplomatic Officers. In 2000 until now, the recruitment of Administrative and Diplomatic Officer is on a permanent basis. However, the candidate must pass three stages of the hiring process: special entrance public service examinations for the scheme, assessment centre and interview. The Public Administration Diploma course is a pre-requisite for the confirmation of the service. The recruitment and hiring process for Administrative and Diplomatic scheme has been improved from time to time in order to get the best candidates to join the public service. The main screening process that is being implemented in the Malaysian public sector is presented in Table 2.9.

Table 2. 9 Recruitment process of Administrative and Diplomatic scheme

Screening process	Competencies
Entry level examination	General knowledge, current issues, Malaysian administration, history, language (Malay and English language), logical thinking, mathematic.
Assessment centre	Leadership, communication (discussion, public speaking), teamwork, knowledge, emotional intelligence, confidence level.
Interview	Knowledge on government administration, work experience, communication, confidence level, leadership.

The Administrative and Diplomatic Service scheme was the pioneer for the implementation of the Career Advancement Path for Fast Track Officer under Circular No. 8, 2016, Public Service Department. The fast-track lane has been introduced to recognise high-potential officers that possess high leadership skills, thinking, communication, and innovation. Furthermore, the officer should be accountable, possess high principles, could make strategic decisions, be able to take risks, and know how to manage a variety of stakeholders. Fast-track officers are high-potential candidates to fill current and future strategic positions in public service. Administrative and Diplomatic Officers who are selected to be on the fast-track lane must meet all promotion requirements and pass a rigorous screening, as outlined below:

- (i) Annual performance evaluation reports for the last three years must achieve 90 per cent and above.
- (ii) Score A in the potential evaluation level.
- (iii) At least Band 4 in English Language Proficiency Assessment (ELPA). The requirement for other languages is determined based on the requirement of certain service schemes.
- (iv) Achieve excellent grades in the third-party evaluation programme.
- (v) Pass a required special evaluation.
- (vi) Approve by the search committee of the Promotion Board.
- (vii) Fulfil other criteria determined by the government from time to time.

2.16.7 Training and Development for Administrative and Diplomatic Scheme

Numerous training and development programmes are designed for Administrative and Diplomatic Officers to provide knowledge and appropriate skills for them to perform their duties in the ministries and public organisations. Administrative and Diplomatic Officers are known as leaders in the public service. Hence, comprehensive, and relevant training programmes have been designed to develop them with relevant leadership and communication skills, as well as other functional knowledge and skills in relation to the organisations they serve.

The National Institute of Public Administration (INTAN) Postgraduate Diploma in Public Management Programme (DPA) was developed as an initiative to provide the competent, dynamic, and progressive talent in the public service. DPA is a mandatory course for Administrative and Diplomatic officers and has been implemented since 1976 (Ahmad & Zahari, 2012) as a pre-requisite for the appointment into Administrative and Diplomatic service scheme. It is a comprehensive course conducted by INTAN that aims to enhance professionalism among the officers. The duration of this course is a minimum of six months, and the module has been continuously improved to ensure relevancy and to meet current needs.

Effective December 30, 2015, the DPA programme has obtained full accreditation from the Malaysian Qualification Agency (MQA) to ensure continuous quality monitoring of the programmes. The DPA programme emphasises professional growth and character development. It focuses on ASKAR, acronym for Attitude, Skills, Knowledge, Adaptability, and Resilience. Basically, DPA modules consist of two main parts; Part 1: Curriculum and (ii) Part 2: Co-Curricular Activities. DPA modules are presented in Table 2.10.

Table 2. 10 DPA modules

Part 1: Curriculum (Theory and practical training)			Part 2: Co-curricular activities
Academic a) Public Financial Management b) Leadership and Strategic Management c) Government Administration and Public Policy Management d) Security Management and International Relations e) Social and Infrastructure Management f) English Proficiency for Public Sector Executive g) Human Resource Management and Integrity h) Public Economic Management i) Research Methodology j) Innovation and Technology Management	National Integration and Self-Resilience a) Strategic Partnership Programme b) Strategic Engagement Programme c) Rural Transformation Initiative d) Disaster Management (FIRE) e) Public Order Management (POLICE) f) Orientation of National Defence (ARMY) g) Outward Bound School (OBS)	Leadership and Interpersonal Skills a) Office Management Orientation Module b) Group Integration (GI) c) Innovation Ambassador Development Programme (IADP) d) Event Management Module (MPM) e) Synthesis week	a) Sports b) Group Integration c) Outdoor activities d) Intellectual discourse e) Students' bureaus

2.16.8 Leadership Evaluation Programme Framework for Administrative and Diplomatic Officers

The Leadership Evaluation Framework has been developed for Administrative and Diplomatic scheme grades 44 to 54 to identify the officer's capabilities and readiness to be promoted to a higher level. The leadership programmes that have been implemented are:

- (i) **Junior Executive Leadership Assessment Programme (J-LEAP):** An assessment programme designed specifically for Administrative and Diplomatic Officer grade M44 and fast track grade M41 prior to promoting them to grade M48. This programme sought to assess the officers' competencies to be promoted to higher grades including leadership qualities, and also to identify officers' future qualities need, strategic thinking skills, effective communication skills, ability to take action, synthesise view of stakeholder and high integrity officers. The assessment activities in J-LEAP include problem-solving, discussion, management games and debates.
- (ii) **Executive Leadership Assessment Programme (E-LEAP):** An assessment programme designed for Administrative and Diplomatic Officer grade M48 and fast track grade M44 prior to their promotion to grade M52. This programme is intended to identify officers who meet specific criteria and competencies, focusing on leadership qualities. Objectives of this programme are to assess leadership capabilities, to identify officers with strategic thinking, effective leadership, and ability to take action, synthesising the view of stakeholders, high integrity and future quality needs. This programme consists of psychometric test, national physical and fitness test, English language proficiency and other assessment such as case studies, management games, debate and negotiation.
- (iii) **Middle Management Leadership Assessment Programme (M-LEAP):** An assessment designed for Administrative and Diplomatic Officer grade M52 and fast track grade M48 to get promoted to grade M54. This programme aims to identify officers that meet quality and specific criteria before promoting them to grade M54. This programme assesses leadership capabilities, identifying officers with future

quality needs, strategic thinking, effective communication, ability to take action, synthesise views of stakeholders and identify officers with high integrity.

- (iv) Advanced Leadership Development and Assessment Programme (A-LEAP): This is a pre-JUSA programme designed for Administrative and Diplomatic Officer grade 54 and fast-track grade 52. This programme consists of development programmes (talks) and also evaluation sessions covering leadership transformation, creative and innovative idea lab, case study session and commentary session. This programme aims to identify officers with leadership qualities, to enhance knowledge and exposure to current issues and latest developments in the administration, to evaluate the ability of the participants to think critically, creatively and to assess participants from the aspect of personality to develop a credible leader.

Source: National Institute of Public Administration (2022)

2.16.9 Public Servant Employee Engagement Index

The development of the public servant employee engagement index is one of the initiatives introduced by the Malaysian government to increase public service delivery in the public sector. The research on employee engagement was conducted following the Gallup report in 2013 that indicate public servant engagement in Malaysia was only 11 per cent. In 2015, Public Service Department, in collaboration with the United Nations Development Programme (UNDP), implemented research on employee engagement to validate the findings of the Gallup report. This research benchmarked the best practices of employee engagement study in developed countries such as the United Kingdom (Civil Service People Survey), Australia (State of Agency Survey), Canada (Public Service Employee Survey), United States of America (GSA Employee Viewpoint Survey), Singapore (Employee Engagement Survey) and India (Civil Services Survey).

The latest public servant employee engagement report was issued in 2018, involving public officers from 25 ministries, 220 departments and agencies. Employee attributes that have been assessed are pride, advocacy, belonging, inspiration, and motivation. The

research aims to (i) measure the engagement level of public servants and to identify factors that could influence the engagement, (ii) to produce a public servant engagement index as the measurement indicator of human resource best practices, (iii) to generate the strategic improvement by the top management of the factors influencing the officer's engagement, (iv) to assess and evaluate the engagement index comparison between 2015 and 2018. The measurement employed in this study is used to determine the combination of engagement attributes that can increase public officers' commitment to contribute extra discretionary effort to achieving the vision, mission, and goals of the organisation.

Based on the latest report, the public servant engagement index in 2018 was 71.9 per cent, an increase of 2.1 per cent from 2015 (69.8%). All attributes demonstrated an increase compared to the previous year. The engagement drivers consisted of four themes: leadership cluster, work environment cluster, career development cluster and site theme. The relationship between the drivers is based on themes and employee engagement was assessed using Pearson Correlation. The study discovered that nine themes have a moderate relationship with employee engagement. Leadership, organisational culture, action-taking, workload, supervisor, inclusivity, learning, transformation, and work are themes. Meanwhile, three themes demonstrate a weak relationship with employee engagement direction, my team and pay.

The result is inconsistent with the report by the World Bank in 2019 that found the efficiency of Malaysian public service is stagnant and decreasing. As the literature on employee engagement indicates that employee engagement positively affects organisational outcomes, a study must be conducted to validate the findings. Therefore, this study is conducted as the initiative to examine the antecedents of employee engagement among Administrative and Diplomatic Officers.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses research methodology and research design that were used in this study, based on the conceptual framework that was developed in Chapter 2. In this chapter, several topics were discussed, starting with the philosophies of knowledge and the explanation of research paradigms. The latest studies on public sector employee engagement and their research methodology are presented. The next section details out explanation on research design, scopes, sampling techniques for instance, sampling frame, sample size and justification of the selected sample employed in this study.

This chapter also discussed the preliminary study that was conducted to gather knowledge and information on the real issues that need to be addressed in the public sector and to develop the research instrument to assess the model developed in this study. Another section in this chapter discusses the process of developing the survey questionnaire and translation process of the questionnaire. Next, the procedure of pre-test and a pilot study are discussed including the result of the studies. Lastly, the final section provides a summary of this chapter.

3.2 Philosophies of Knowledge

Philosophy of knowledge could be the best instrument in determining the appropriate approach to be applied in research study. It explains any formation and discovery of phenomena by rationalising, validating, and concluding, which is essential in choosing the best method or approach to be selected in a study. In academic discipline, philosophy is the study of the fundamental nature of reality, knowledge, and existence. There are two main approaches of philosophy of knowledge in the field of social science. Firstly, to study the knowledge using the tools of natural science and secondly by using a different set of tools other than natural science and acknowledge human uniqueness as the main factor. Philosophy of knowledge contains two realms, namely, ontology and epistemology.

Ontology is defined as the assumptions made by researchers that emphasised the nature of reality that will shape the perception of researchers, resulted on how research object will be studied (Saunders et al., 2016). Thus, ontology examines the nature of reality and more interested in addressing ‘What in reality?’. In this study, ontology assumptions have been made to predict the phenomenon of employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector by concentrating on transformational leadership style, talent management practices, public service motivation as the antecedents of employee engagement and the mediating role of public service motivation.

Meanwhile, epistemology is defined as assumptions concerned with how knowledge can be created, interpreted, and constituted (Saunders et al., 2016, Scotland, 2012). Thus, epistemology refers to how people understand knowledge, their thinking process, and what others know. Epistemological perspective explains how knowledge on this subject can be created and interpreted. Researchers used various types of knowledge available that related to the topic.

3.2.1 Research Paradigm

Combining ontology and epistemology determination of research paradigm will enable researchers to establish the approach and methodology best suited to examine the knowledge. It is essential to understand research paradigm to improve the quality of the study. Ontological assumptions have been made concentrating on how transformational leadership style and talent management practices will predict and influence employee engagement through public service motivation as the mediating role. Therefore, the relationships between these variables were investigated.

In this study, researchers intended to measure the phenomenon of employee engagement in the public sector. Hence, this study embraced positivist research paradigm that uses the underlying concept that indicates research can only be obtained and offer an approximate representation of reality since researchers cannot fully explain the observed or measured phenomena. Positivism uses traditional positivism epistemology, which collect and organise information based on the notion that parts of the elements under research can be observed and measured.

Ontology perspective assumes that observations, measurements, and analyses are inadequate. Also, only partial comprehension of the subject under research is possible. Therefore, researcher decisions on essential aspects such as topic definition, participant selection, and selection of data collection tools form a framework for the study that influences understanding the studied phenomenon. Thus, the findings and conclusion of phenomenon study aimed at representing reality may not fully represent the studied phenomenon accurately. The positivist research paradigm puts theoretical hypotheses to the test before commencing research, assuming that the proposition's variables are observable data (Cresswell, 2009). Furthermore, based on the positivism approach, data can be evaluated with deductive reasoning. Deductive reasoning is the process of arriving at a logical conclusion by reasoning from one or more statements to identify the nature or reasons of the variance in the phenomenon under study. According to Lancaster (2005), deductive reasoning helps the researcher form an inference about the validity of the hypotheses by analysing the data supporting or rejecting it.

3.3 Research Methods in Employee Engagement Studies

In order to gather information on research related to antecedents of employee engagement in the public sector, previous research articles using quantitative studies have been compiled from Web of Science and Scopus, two reputable databases through a systematic literature review technique. The research design and methods used in the studies have been thoroughly examined. Summary of research design, instrument, sample of study, and statistical software that were used in the employee engagement literature is shown in Table 3.1.

Table 3. 1 Quantitative studies on employee engagement antecedents in public organisations

Author	Sample of the study	Research design/ Instrument/ Statistical Software
Gyensare et. (2017)	336 non-managerial public employees.	Cross-sectional study/ Gallup 12-item /SPSS 20.0, LISREL, PROCESS
Malik & Khan (2019)	550 employees of public sector.	Time-lagged study/ UWES 9-item/ Structural Equation Modelling (SEM)
Ancarani et. al (2020)	2721 local government worker.	Cross-sectional study/ UWES 9-item/ Covariance Based SEM
Borst et. al (2017)	13,513 public servants (people-processing services) and 10,175 public servants (people-changing services).	Cross-sectional study/ UWES-6/ SEM Mplus version 7.4
Borst (2018)	24,334 public servants.	Cross-sectional study/ UWES-6 SEM/ MPLUS
Brunetto et. al (2020)	193 police officers in Australia, 588 from the USA, and 249 from Malta.	Cross-sectional study/ UWES-9/ SEM
De Simone et. al. (2016)	137 employee public organisation.	Cross-sectional study/ UWES-9/ SPSS
Halinski & Harrison (2020)	2,206 public service employees (digital services branch).	Cross-sectional study/ UWES-3 (ultra-short item)/ SPSS 25/ AMOS -SEM
Hernaus et. al (2017)	65 white-collar employees and 20 supervisors	Longitudinal study/ UWES/linear/hierarchical Regression
Mostafa & El-Motalib (2018)	197 public hospital nurses.	Cross-sectional study/ UWES-12/ SEM
Rai & Maheshwari (2020)	622 employees of Indian PSBs.	Cross-sectional study/ UWES-9/ SPSS Macro
Uhunoma et. al (2020)	239 government employees.	Cross-sectional study/ UWES-24/ SEM
Conway et. al (2016)	2,348 employees in a large public-sector organisation.	Cross-sectional study/ UWES-9/ SEM AMOS version 18.0
Eldor (2018)	166 public service employees, their supervisors and 333 of their clients (citizens) in Israel.	Longitudinal Study/ UWES-9/ SEM
Jin & McDonald (2017)	1,251 employees from state and local government agencies in the United States.	Cross-sectional study/ The 2012 Employee Engagement Survey/ SEM AMOS

Obuobisa-Darko (2019)	411 permanent employees.	Cross-sectional study/ UWES/ PLS-SEM
Pradhan et. al (2019)	393 public executives.	Cross-sectional study/ UWES-9/ SPSS 20 SEM AMOS
Ugaddan & Park (2017)	13,051 federal employees.	Cross-sectional study/ The Chartered Institute of Personnel and Development's (CIPD) Emotional Engagement/ SEM AMOS 20.0
Wushe & Shenje (2019)	206 employees and management in five selected government departments.	Cross-sectional study/ UWES-9/ SPSS

Based on the recent five-year studies (2016 to 2020), a number of 48 quantitative studies was found to focus on antecedents of employee engagement in the public sector. A total of 38 studies are cross-sectional studies (e.g., Ancarani et al., 2020; Brunetto et al., 2020; De Simone et. al., 2016; Gyensare et al., 2017; Malik & Khan, 2019), while ten studies are longitudinal and time-lagged studies (Eldor, 2018; Hernaus et al., 2017; Malik & Khan, 2019). Using the data collected from multiple sources in a longitudinal design at multiple levels help in order to reducing the common method bias (Favero & Bullock, 2015; Podsakoff et al., 2003). However, of all studies, only a few (3 studies) focuses on public leaders' employee engagement in the public sector.

In terms of the instrument used to examine the antecedents of employee engagement, most studies (n=41) used the prominent Utrecht Work Engagement Scale (UWES) developed by Schaufeli et. al (2002). Overall, UWES was found to be a reliable and valid scale to assess academic employee engagement. Other instruments that have been used are Gallup 12-item employee engagement survey and Chartered Institute of Personnel and Development Emotional Engagement. Based on the literature findings, many studies used convenience sampling which does not represents the entire population (public employees) being studied, hence, undermine the ability of generalisation.

3.4 Research Design

The research design term refers to a strategy or plan for shaping a study that may include the entire study process from conceptualising the research problem or issue, defining the research gap, formulating research questions, collecting data, analysing the data, evaluating the findings, report writing, and finally indicating which research methods are suitable to be adopted (Creswell & Clark, 2007; Walliman, 2006). There are three main types of research design adopted by researchers including (i) descriptive (ii) explanatory, and (iii) exploratory (Ghauri & Gronhough, 2005). Table 3.2 presents the explanation of the types of research design.

Table 3. 2 Types of research design

Explanatory
This type of study usually a cause-and-effect relationship, where data is collected, analysed, and findings can be verified by experiment and observation (Kumar, 2011).
Exploratory
Exploratory study is employed to get to know and understand the problem/ issue (Saunders et al. 2007), and when information about the situation and how the same problem/ issue was solved are limited (Sekaran, 2006). In addition, this type of study aims to find new ideas and enlightened phenomenon.
Descriptive
This type of study is beneficial when answers for research questions are barely found, therefore, more research needs to be done to find the answer (Saunders et. al. (2007).

A cross-sectional study involves a collection of data from more than one case at a single point of time in order to collect quantifiable or quantitative data with two or more variables which are examined to detect the pattern of association (Bryman, 2008). Employing a cross-sectional approach means that no repeated study will be conducted,

and statistical inference may differ in the future (Kumar, 1999). In addition, the data collection for this quantitative approach involves no direct interference by the researcher (Field, 2011).

This research is a cross-sectional study. The employment of this research design is due to the study timeline, as this type of research is less time consuming than other research type, more convenient and cost effective to be conducted. This research design also allow researcher to collect data from a large population and the comparison of differences between groups can be achieved. An approval letter to conduct the research was obtained from Nottingham University Business School Ethics Committee on 1st March 2021 (See Appendix 1) for data collection purposes. Following that, an application to conduct the research was sent through email to the Deputy Director-General of the Public Service on 2nd March 2021 (See Appendix 2). The approval notice was received from Public Service Department through an internal memo dated 10th March 2021 (See Appendix 3).

There are four main phases involved in this study. The first phase is the preliminary study aims at getting an understanding of the problems highlighted in this study that may also help in the instrument development process. In the preliminary study, semi-structured interviews were conducted with human resource personnel from the public sector who are also Administrative and Diplomatic Officers working in various ministries, departments, and agencies. Job descriptions of Administrative and Diplomatic Officers involve in this study include managing human resource and service matters in the public sector.

The second phase of this study is instrument development. The instrument was developed based on the findings obtained from the preliminary study and the established instruments from previous studies. Next, in the third phase, pre-testing procedure was employed. In this phase, expert review procedure was conducted to evaluate each item in the instrument developed to determine whether the items constitute the domain in term of content relevance, representativeness, and technical quality. To determine whether the items are valid, and the instrument can be used as a data collection tool in this study, content validity index was calculated. Then, the questionnaire has been appropriately revised and improved based on results of the expert reviews procedure

and content validity index. Finally, in the fourth phase, the research instruments (questionnaire) were distributed to a small number of sample to avoid any possible problems or issues involving data collection and analysis. This procedure is important to determine the relevancy of the items and the comprehensibility of the translation process. Subsequently, a pilot study was carried out to test the reliability and validity of the instrument. Other than that, the pilot study aims to evaluate the accuracy of languages used in this study as well as the relevancy of items included in the questionnaire. The research design of this study is presented in Figure 3.1.

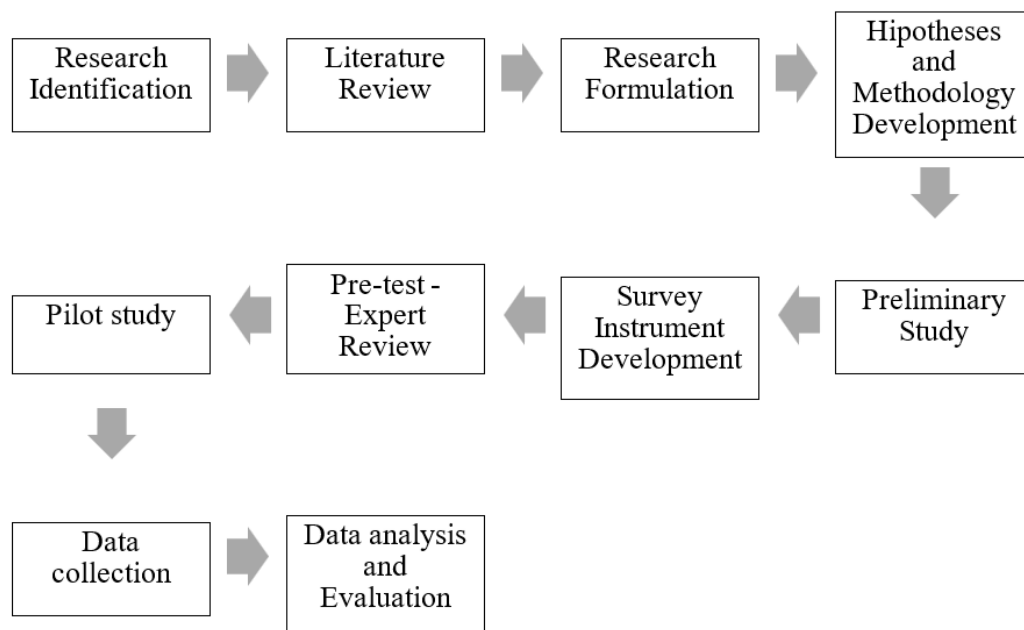


Figure 3. 1 Research design for this study

3.5 Research Scope

This study focuses on transformational leadership style, talent management practices, public service motivation in the public service, and how these factors affect Administrative and Diplomatic Officer’s engagement in the public sector. The rational of this study focuses on the Malaysian public sector and Administrative and Diplomatic Officers have been discussed in Chapter 1. Public sector is the largest and most prominent sector in Malaysia, with 1.6 million public employees working at central agencies, ministries, public departments, agencies, and state governments. Federal

government consist of ministries, departments, and agencies under full authority of the central government. On the other hand, state government consist of departments and agencies under the authority of state government. This study focuses on Administrative and Diplomatic Officers in federal government and state governments organisations. There are approximately 8,000 to 9,000 Administrative and Diplomatic Officers serve in the Malaysian public sector.

3.5.1 Population and Sample of the Study

A population is a community of people that have similar characteristic or trait, who the researcher intended to draw conclusion about. Population can be in any numbers and spread any geographical area (Richardson & Kramer, 2006). Identifying the study population is important in order to determine the adequate number of samples needed in a quantitative study.

The unit of analysis in this study is Administrative and Diplomatic Officers working in the federal government, state government agencies and statutory bodies. According to Public Service Commission (Public Service Commission, 2020) website, Administrative and Diplomatic Officers are responsible in planning, formulating, and implementing public policies in these areas:

- i. Human resource management and organisation.
- ii. Financial resources, and economy.
- iii. Regional, district, local, land administration and development.
- iv. Social planning and administration.
- v. International relations and foreign affairs including foreign services.
- vi. National security and resilience.
- vii. Information technology management.

The broad responsibilities of Administrative and Diplomatic Officers demonstrate that they play significant roles in the Malaysian public sector. Most of them are head of various government agencies leading public organisations to achieve their visions and missions.

An email was sent to the Director of Service Division, Public Service Department, Datuk Abd Shukor bin Mahmood (See Appendix 4), to obtain related information on Administrative and Diplomatic Officers, including the current number of Administrative and Diplomatic Officers, grades, gender, and organisations. This information is used to determine the sampling procedure and sample size appropriate for the study, as the information is not available in any of the government organisation's public websites. Accordingly, an email pertaining information requested was received on 26 March 2021 (See Figure 3.2) from Puan Ruhaizah Muhamad, Assistant Director from Service Division (See Appendix 5). Based on the records, there are a total of 9,252 Administrative and Diplomatic Officers in the public service as of 17 March 2021. Of the total number, 2,029 are in grade M41, 2,976 in grade M44, 2,132 in grade M48, 1,227 in grade M52, and 888 in grade M54. 53 percent (4,902) of Administrative and Diplomatic Officers are female, and 47 percent (4,350) are male. Administrative and Diplomatic Officers by grades is presented in Figure 3.2.

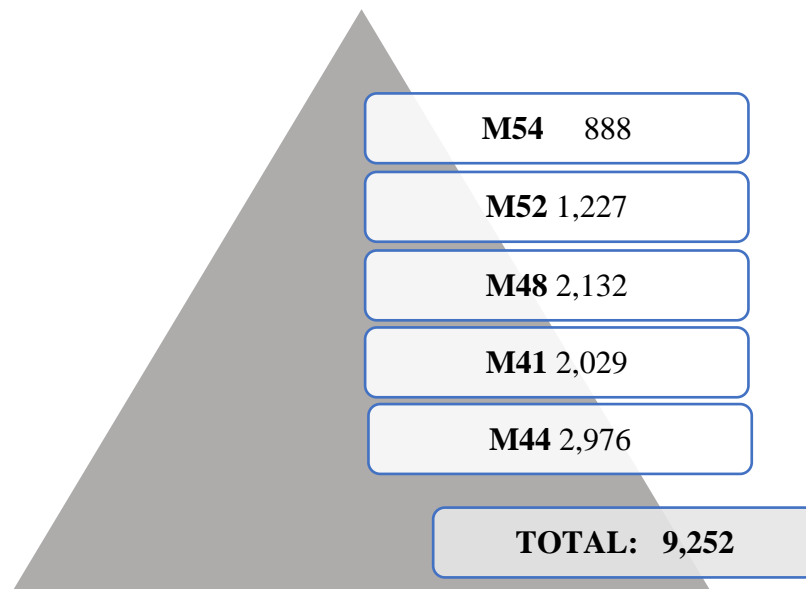


Figure 3. 2 Administrative and Diplomatic Officers by grades. Source: Public Service Department (2021)

3.5.2 Determining the Sample Size

According to Awang (2012), a sample is a portion of population selected to represent the whole population under study. It is a small subset of the population and collected

data from this sample can be used to presume the population (Awang, 2012; Field, 2011). Richardson and Kramer (2006) define sample as a subgroup of the bigger group or population. While sampling is a process of choosing of few samples to become the foundation for predicting or estimating a situation, outcome or fact about the population. Determining the appropriate sample size to represent the studied population in quantitative research is crucial for research investigation to draw realistic findings. Generally, sample of the study must be at optimum size. Researcher might be unable to meet the research objectives if the sample size is insufficient. On the other hand, excessive sample size may have a negative impact on the quality and accuracy of the study. It can lead to a type-1 error due to the statistical significance being too sensitive or making the relationship statistically significant despite being contradictory (Hair et al., 2018; Kline, 2016). A type-1 error occurs when a hypothesis null was rejected when it is true. In addition, According to Sekaran (2006), a sample size that is too large, for instance, over 500, could cause a problem as it is more likely to commit a type-II error, which is an error of false positive, occurs when the null hypothesis itself is false. Besides, obtaining a large sample size may raise the overall cost of the research. Therefore, in order to know the size of samples that could be considered optimum or ideal for a study that provides the most accurate and the least cost, researchers need to use the most reliable and effective sampling strategy and techniques.

In determining the sample size, researchers should consider the desired power levels, effect sizes, and significance in mind (Cohen 1992). There are several methods for estimating the sample size for a study. For a different research project, different researchers recommended different sample sizes. Fielding (2007) suggested that the sample should be 30 percent of the total population. In this case, for this study, the sample needed if this rule of thumb is accepted is 2,776 (30% of 9,252). However, Sekaran (2006) argues that sample size, which is too large or more than 500, could create problems and lead to type-II error, error of false positive.

The other sampling tool to determine sample size is Krejcie and Morgan's (1970) Table for determining the sample size for finite population. Based on this table, the sample needed for Administrative Diplomatic Officer population of 9,252 is 368. However, researcher that use Krejcie Morgan Table should employ a probability sampling

technique that is rarely being used in social science and behavioural research due to the unavailability of the sampling frame (Memon et al., 2020).

Moreover, some researchers recommend sample-to-item ratio and sample-to-variable ratio to determine the sample size. For example, according to Hair et al., (2009), sample should be at least five times as many observations as the number of variables to be analysed. However, the more acceptable sample size would have a 10:1 ratio. In this study, there are five variables included in the model; therefore, the minimum sample size for this technique is 50.

Recent trends propose the researchers to determine the sample size using power analysis technique (Hair et al., 2019; Kline, 2016; Ringle et al., 2018; Uttley, 2019). Power analysis tool namely G*Power could determine the minimum sample size for the research study as the software provides the accurate calculation method with low errors (Faul et al., 2007). The sample size required in this research using G*Power 3.1.9.7 is 103. Application of G*Power 3.1.9.7 to determine the sample size in this study follows the steps suggested by Memon et al. (2020):

Step 1: Test family: F-test.

Step 2: Linear multiple regression: Fixed Model R^2 deviation from zero.

Step 3: Type of Power analysis: A Priori: Compute required sample size- given alpha, power, and effect size.

Next, the selection of input parameters for effect size is 0.15 (medium), alpha level (error probability) 0.05, statistical power (beta) 0.80, and predictors seven were selected.

In this study, there are three independent variables, one mediator and one dependent variable:

- (i) Transformational leadership style of managers as an independent variable
- (ii) Self-perceived transformational leadership style as an independent variable.
- (iii) Talent Management Practices as an independent variable.
- (iv) Public Service Motivation as an independent variable.
- (v) Public Service Motivation as a mediator.

(vi) Employee engagement as a dependent variable.

Hair et al. (2010) suggested that the minimum sample size should be based on the complexity of the model and characteristics of the measurement construct model. However, in consideration of sample size, the researcher needs to investigate factors that could influence the data size, such as time, resources, and budget incurred (Bartlett et al., 2001). Hence, given the determination of sample size information for research, in this study, the sample size required is 400. Although, the total is above the sample size decided by G*Power, Hair et al. (2009) and Krejcie Morgan (1970) which is not too small and not too large (more than 500) that can cause type I error (rejecting hypothesis null when it is true) and II error (error of false positive).

In term of the distribution process, this study employed sampling method that allows all relevant subgroups of the target population to participate equally in this study, known as stratified sampling technique. The advantages of using this method of sampling include greater precision at the same sample size compared to simple random sampling, smaller sample size requirements due to increased precision, the avoidance of an unrepresentative sample, and the potential assure of sufficient sample points to support a separate analysis of any subgroup.

Administrative and Diplomatic scheme comprises of five level of grades beginning with grade M41, M44, M48, M52 and M54. The researcher employed the stratified sampling techniques to ensure sample from all grades are represented in this study. The selection of the right sampling technique is crucial to reduce bias and to ensure the data obtained represent the whole population and to enable the findings to be generalised. The breakdown of number of respondents selected from each grade is presented in Table 3.3.

Table 3. 3 Respondents by Grade

Grades	Numbers
M54	38
M52	51
M48	68
M44	101
M41	64
Total	322

3.5.3 Unit of Analysis

A unit of analysis consists of the main subject or entity being studied and the location where data is collected. It is the 'who' and 'what' the study analyse. The unit of analysis in this study is determine based on the research problem that the study aims to address. This study focuses on how to increase organisational outcomes in government organisations through the increase of employee engagement among public officer in the Malaysian public sector. This study argues that the increase of engagement level among officers at the higher level will improve organisational outcomes as the high-level public officers will spread the engagement to other members in the organisation especially their subordinates. Engaged managers create a positive and better environment at work that engaging others. This study focusses on the higher-ranking officers. The unit of analysis in this study is Administrative and Diplomatic Officers from grades M41 to grade M54 who serve in the federal, state government agencies and statutory bodies in Malaysia.

The rational of public sector as the focus of this study are, firstly, because government or public sector is the most prominent and significant sector in Malaysia, which responsible in developing, administering, and executing government policies. During the pandemic, public officials are taking the lead in the pandemic response and action plan. Public sector suddenly become agile with new procedures and norms being built with unprecedented speed controlling remote work, expedited recruiting processes, and fast-track mobility programmes (OECD, 2020). Secondly, the Malaysian public service is large, which consist of 1.6 million employees. Therefore, given the significant amount of money the government spends on operating expenses of public organisations, it is imperative to ensure that public organisations are operating effectively and that public employees are motivated at work.

3.5.4 Data Collection Procedures

Data collection refers to the systematic process of accumulating and analysing information relevant to the focus of the study in order to answer the research questions, testing the hypotheses, and assessing the results. The data collection procedures

employed in this study has been carefully planned prior to conducting the final data collection to ensure its effectiveness.

Due to the Movement Control Order (MCO) enforced by the Malaysian government between March 2020 to December 2021, researchers were unable to reach a geographically dispersed population physically. Travelling inter-state is restricted during this time, and public are strongly advised to stay at home as much as possible. Furthermore, travelling to different states and districts to approach population and hiring enumerators is time-consuming and involves a lot of money.

In public sector organisations, only 40 per cent of public employees are permitted to work at the office at some point during movement control, while the remaining 60 per cent are instructed to work from home. Therefore, in this situation, the use of conventional and physical approach to collect data was not feasible. The alternative for data collecting procedure is by using online questionnaire through online survey software such as Qualtrics Survey Software, and Google Forms.

This study employed Qualtrics survey software to collect data in the pilot and actual study since the software is provided by University of Nottingham Malaysia for postgraduate students. Qualtrics is a user-friendly, comprehensive, and impactful online survey which facilitated the management process of respondents, secure data processing and provide relevant statistics. Training on creating survey with Qualtrics has been organised by graduate school to introduce students on the core Qualtrics concepts and tool, including how to create questions and basic question types, basic survey logic, anonymous distribution, and basic reporting. After research instrument has been established, each item of the questionnaire can be keyed-in into the Qualtrics survey software.

The limitation of access to meet participants in person has turned many researchers to use online surveys and rating scales in their data collection. Challenges and potential drawbacks need to be dealt with when conducting online surveys, mainly due to non-represented sample sizes. The location and method of distribution of surveys will significantly impact the number of people who participate. Selection bias is a problem in studies conducted through distribution channels that can only reach a subset of the

target population. Also, participants in online surveys are more likely to have a particular interest in or a close link with the subject matter (De Man et al., 2021). Those who are not interested in the topic and do not have a close connection with the subject matter have very low chances of being included in the study. Despite the fact that online surveys can provide high sample sizes, this does not always compensate for selection bias which might worsen the situation.

Therefore, some measurements are taken in this study to limit the possibility of the worst-case scenario. De Man et al. (2021) in their study have come out with some suggestions and steps to prevent the problems related to online survey. The suggestions are to:

- (i) Provide a balance information to potential participants in the introduction section to avoid interest from the specific subset.
- (ii) Include a broad range of items to measure sociodemographic and other potential participatory factors that will assist the researcher to assess validity of samples and acknowledge the limitations of the study.
- (iii) The distribution of survey is critical. Sample validity demands a customised method that allows all relevant subgroups of the target population to participate equally.
- (iv) Avoiding lengthy questionnaires and collaborate with other researcher to reduce duplication. As the quantity of online survey grows, respondents become more overwhelmed.
- (v) Informing the result of the study to research participants and presenting them as knowledge coproducers may motivate engagement in future efforts.

This study has taken recommendation by De Man et al. (2021) seriously in order to reduce the issues regarding the usage of online survey. The inclusion of important information such as research aims and objectives in the invitation email, a broad range of items to measure sociodemographic, effective distribution procedure, short and precise questionnaire and the availability of result sharing with research participants are some of the steps taken to avoid any issues that will affect the data collection procedure and the data gathered in this study.

3.5.5 Sample Frame

Sampling frame is used to specify the target population for a study. The sampling frame specifies the elements from which a representative sample of the study population can be derived. The population of interest in this study is Administrative and Diplomatic Scheme Officers in the Malaysian public service. The department in charge for service matter of this scheme is Public Service Department. The personal information is managed using Human Resources Management Information System (HRMIS). In order to gather geographic information of the officer's related geographic information was requested from Public Service Department for the purpose of this study. Next, samples of this study are drawn from the sample frame received.

The Qualtrics online survey link was sent directly to potential respondents which has been selected from a stratified random sampling technique to obtain sample population that best represents the entire population being studied. Broad range of items to measure sociodemographic and other potential participatory factors are also included in this study to assist researcher to assess validity of samples and acknowledge the limitations of the study.

In order to address the shortfall of online survey used in this study, the researcher applied some suggestions by De Man et al. (2021). For instance, the invitation emails to the selected respondents have a balance information in the introduction section in order to avoid interest from the specific subset. The questionnaire contains pertinent information about the study, including research objectives, target group, ethical consideration, and anonymity of respondents, to ensure that respondents understand the significance of the research, which may increase the response rate.

This study employs a shorter version scale to encourage participants to answer all questions in this survey to address the issue of lengthy questionnaire that might cause participants fatigue and can affect the quality of data collection. The instruments used in this study are (i) 7-item Global Transformational Leadership scales (ii) 5-item Global Public Service Motivation scales, and (iii) 9-item Employee engagement scales. Although all the scales employed are short and precise, the reliability and validity of the instruments were not compromised, and they are still the top priority in this study.

Moreover, the measurement in this study have gone through a rigour and strict process to ensure the reliability and validity of the survey including pre-test, expert review and pilot test that were carried out before the actual data collection was conducted.

In addition, the respondents were informed in the invitation email that result obtained from this study will be shared and submitted to Public Service Department. Respondents who are interested to know the study findings can write directly to the researchers to get the information. Prior knowledge and understanding that this study is an initiative to improve government delivery system can motivate engagement. This initiative encourages respondents to complete the questionnaires as they acknowledge the significance of the study and also prevent other issues from arising as a result of the use of online questionnaires.

3.5.6 Ethical Consideration

Research ethics is a moral principle that researchers should adhere in their respective research fields to give maximum benefit to research participants. Research ethics is closely related to the ethical principles of social responsibility. Therefore, research should be designed, reviewed, and carried out in such a way as to ensure its integrity, quality, and contribution to the development of understanding and knowledge. A shared collective commitment to the well-being of people both within and outside the society must be recognised. Research should be reviewed from the perspectives of the research participants in order to avoid potential risks to their mental well-being, mental health, personal values, and dignity besides possible physical or psychological damage, discomfort, or stress.

To proceed with the study, the researchers strictly adhere to the Code of Research Conduct and Research Ethics by the University of Nottingham throughout the data collection process. Research ethics application was submitted, and the ethical approval was received from the Nottingham University Business School Ethics Committee on 1st March 2021 and 29th March 2021 before proceeding with the preliminary study and pilot survey. The guidelines reflect the commitment of the university to maintain the highest levels of integrity, rigour, and excellence in all aspects of research, as well as to

conduct research in accordance with applicable ethical, legal, and professional frameworks and standards (University of Nottingham, 2020). In accordance with University Statutes (Section 35), the Code ensures that researchers have academic freedom in law to question and test the knowledge they obtain and to present new, controversial, and unpopular ideas and viewpoints, without jeopardising the loss of their positions or privileges. Researchers engaging in university research owes a duty of accountability to society, profession, the University, research participants, and also their funders.

Nottingham University Business School requires all research involving human subjects to be approved by the Nottingham University Business School Ethics Committee. This requirement is to ensure that research is being carried out ethically, in accordance with the principles of informed consent, respect for privacy, truthfulness, and avoidance of conflict of interest, and cultural sensitivity. Therefore, this research is conducted strictly based on the code of conduct underlined by the University of Nottingham. In addition, the approval given was only for the research work that the researchers have described in the application. Any changes in the research design (i.e., the research questions, the methodologies, or the respondents) will require another ethical approval by the ethics committee.

All participants in this study were well informed about the voluntary involvement, and they know that their involvement can be withdrawn at any stages of the research if they had a change of mind. All of the information about the withdrawal from the research was provided in the consent form included in the questionnaire. The respondents need to give their permission by responding on the informed consent (consent forms) before participating in the interview and online survey. The questions in this survey are completely generic. Thus, there are no sensitive or personal questions, apart from demographic data. Aside from that, the respondent's participation is treated as anonymous. Privacy and confidentiality principle are acknowledged in this study.

Before beginning the data collection process, respondents are required to read the information page. They are deemed to have agreed to participate in this research by participating in the interview session and the online survey. During the data collection process, participants may withdraw their responses at any time, even after signing the

consent form. They are informed that their involvement in this study is entirely voluntary, and that any data collected would be kept anonymous. Also, the information gathered about the participants is kept completely private. No information regarding participants in the interviews and the survey is identified in any report or publication resulting from this study.

3.6 Preliminary Interview

The main issue was explored in depth in the previous chapter, supported with facts and data from previous studies, official reports, publications, and news. However, there is a possibility that they were interpreted differently than the actual situations. Besides, the researchers could not depend too much on past studies as the studies involved a particular sample in a specific geographic area, that could not be generalised to the other population due to many factors. Therefore, semi-structured interviews were carried out as part of the study to understand the underlying issues and problems being studied, to clarify and validate the antecedents of public sector employee engagement that were selected based on literature findings.

The semi-structured interview findings have provided clear insights of the real issues discussed in the study before the researchers embarked on developing a research instrument to measure the constructs in this study. Getting input from the human resource personnel and the actual respondents themselves have validated the existence of real issues when developing the research framework and research instrument. This initiatives have reduced the risk of unreliable collected data because of the imprecise issues of variables studied.

In this preliminary study, semi-structured interview questions were developed (see Appendix 6) to get insights from the human resource personnel and potential respondents selected from the population of the study. In this procedure, the interviewees were asked about the factors that could increase employee engagement among Administrative and Diplomatic Officers in the public sector. Other additional questions included in this semi-structured interview are about transformational leadership style, talent management practices, and public service motivation. The semi-structured interviews were carried out in two methods: physical and online interviews.

Physical interviews were held at participants' request time and convenience place such as at their office, or nearby café, or restaurant. Meanwhile, online interviews were conducted using the online platforms at participants' convenience, such as Google Meet, Zoom, and Microsoft Teams.

In the interview, participants were firstly greeted formally before the researcher started the session with introduction of the study including the objectives and definition of the key terms in the study. Then, the semi-structured interview questions were asked to the participants. The main questions that were asked to the participants are:

- i) Do employee factors play a major role on organisational outcomes?
- ii) What are the factors that influence Administrative and Diplomatic Officers' engagement level?
- iii) What are the leaders' behaviours or attributes that may increase employee engagement among Administrative and Diplomatic Officers?

Semi-structured interviews allow further discussions between interviewer and interviewee; hence the interviewer did not strictly follow the prepared list of questions.

In total, eleven participants among Administrative and Diplomatic Officers have taken part in the interviews. Five of the participants serve as human resource personnel in public organisations. Responses from the actual sample of the study who also in charge of human resources is significant to get the information from the target population based on the real experience and feelings. The selection of participants was through the researcher's own networking contact based on the participants working experiences as an Administrative and Diplomatic Officers and human resource personnel. All of the participants have at least five years of working experience in the public service. Experience as a human resource personnel is needed as they have a better understanding of human resource system and procedure in the public sector. Besides, the participants have a wide experience dealing with public employees, which includes Administrative and Diplomatic Officers. Potential participants were contacted through emails and phone calls. Participants who are selected to take part in this interview sessions are those who are ready and agreed to be interviewed during the scheduled time. All of them are based in the public service organisations in Putrajaya. The interview sessions have taken

place within ten days, from 1st March 2021 to 10th March 2021. Participants' detail is presented in Table 3.4:

Table 3. 4 Participants in the semi-structured interview

No	Position	Ministry/ Department
P1	Principal Assistant Secretary	Ministry of Housing and Local Government
P2	Principal Assistant Secretary (HR)	Ministry of Housing and Local Government
P3	Principal Assistant Director (HR)	Public Service Department
P4	Principal Assistant Director	Ministry of Home Affairs
P5	Principal Assistant Director (HR)	Public Service Department
P6	Principal Assistant Director	The Malaysian Administrative Modernisation and Management Planning Unit
P7	Chief Assistant State Secretary	State Secretary Malacca
P8	Principal Assistant Secretary	Public Service Department
P9	Assistant Director (HR)	Public Service Department
P10	Assistant Director (HR)	Public Service Department
P11	Assistant Director	Implementation and Coordination Unit

In the preliminary study, responses about the factors that will influence employee engagement in the public sector were gathered in order for the researchers to understand the real situations of engagement issues in the public sector. Participants were experienced human resource officers responsible in managing public sector employees, therefore the responses received deemed to be reliable and valid to be included in the study before the researcher proceed to the next research procedures.

In this interview, participants were asked about (1) the effect of public sector employees' performance on organisational outcomes, (2) the effect of employee engagement on organisational outcomes, (3) the factors that could influence Administration and Diplomatic Officers' engagement, (4) the attributes of leaders that can increase Administration and Diplomatic Officers' engagement, and (5) the other factors that will influence Administration and Diplomatic Officers' engagement.

This study found that majority of the participants agreed that employees are the most important factor that will affect organisational outcomes. Employee engagement is found to have an influence on organisational outcomes, including organisational

competitiveness and efficiency. In addition, public leaders who managed to increase their subordinate's engagement level have excellent and positive leadership attributes including visionary, strategic thinker, leading by example, supportive towards their subordinates, provide guidance and opportunity for others to learn, capable to develop new leaders and have a high morale and integrity. Participants were also asked about the other constructs in the study; transformational leadership style, talent management practices, public service motivation and how these factors affect employee engagement among Administrative and Diplomatic Officers. This study found that majority of participants agreed that transformational leadership style, talent management practices, and public service motivation are the antecedents of employee engagement. The participants agreed that human factors are the most important aspect for organisational outcomes and increasing employee engagement among public officers might increase the effectiveness and productivity of government organisations.

3.7 Survey Instruments and Operationalisation of Research Constructs

Survey research method gather information from a specific group of people by questioning and gathering their responses in various ways such as through interviews, online surveys, phone calls, and paper questionnaires. To collect data in the study, researchers distribute the questionnaires to a random selection of people based on their sampling technique. Participant recruitment, instrumentation, and data collection can all take many forms in this field of study. This survey method is common in the fields of social science and psychology because of the convenience in describing and explaining human behaviour.

From literature in the related area and the preliminary interview conducted earlier in this study, a questionnaire was developed to measure the latent variables in this study. The development of instrument to measure the research constructs is crucial to ensure the achievement of research objectives and to answer research questions. Therefore, the measures selected in this study to examine the constructs; transformational leadership style, public service motivation, talent management practices, and employee engagement have been widely employed and tested in previous studies. However, the instruments need modification for better clarity and understanding among the population in this study without changing the original meaning. The research instrument

in this study was developed by adapting items from the validated existing measurements. The items were selected based on the relevancy to the Malaysian public sector context. The items were carefully modified in order to ensure that respondents would comprehend the items, and the researchers could receive the optimal response. Furthermore, the wordings and length of items were modified to ensure they address the real issues in this study.

The design of questionnaire, selection of words and language used are based on the guidelines developed by Podsakoff, Mackenzie, Lee, and Podsakoff (2003). The wording of the items was carefully selected so the respondents can fully understand the questions. It is very important to ensure the questions are clear, simple, easy to comprehend, and straight to the point. There is also a need to avoid ambiguity, confusion, vagueness, and double-barrelled questions by ensuring each question focuses on one topic only. Both languages used; English and Malay language should also be simple and not too complicated to cater people of all levels of understanding.

Furthermore, all items in the questionnaire were adapted from surveys mostly conducted in western countries that use English language as a medium of communication. Therefore, the questionnaire was translated into Malay language for better understanding as Malay language is the medium of communication in the Malaysian public sector. In this process, English version questionnaire was translated into Malay language by a certified translator from the Malaysian Institute of Translation and Books (certificate enclosed in Appendix 7). After the translation process has been completed, five participants among public officers were invited to pre-test the English and Malay version questionnaires in order to assess the accuracy and to ensure the instruments are fit and appropriate to be employed in the Malaysian public service context.

The questionnaire items in this study were measured using a 5-point Likert scale of agreement and frequency ranging from Strongly disagree (1) to Strongly agree (5) and Not at all (1) to Always (5). Based on the interview conducted in the preliminary study, there were participants who highlighted about the lengthiness of the scales used in empirical studies. The implications of this issue can be seen during the data collection procedure to get sufficient respondents to complete the research survey, especially when

it involves an online survey. Therefore, this study has taken the participants' view seriously and developed a short and practical scale without compromising the constructs' reliability and validity.

The following sections discuss the constructs that have been measured in this study. The measurement items used in this study consist of six sections including demographic profile, three independent variables, mediating variable, and dependent variable. All items are closed-ended questions that enable respondents to make informed, yet quick decisions by selecting the most relevant option. The used of closed-ended questions are convenient for the researcher to analyse the data collected. Aside from that, all items in the questionnaire are positive statements to avoid confusion and problems during data analysis procedure. Other than that, the researcher has taken the necessary actions to ensure the questions in this study were easily understood by eliminating vagueness, simplify the questions and the usage of simple and easy language and words as suggested by Podsakoff et al. (2003).

3.7.1 Endogenous Construct: Employee Engagement

In this study, employee engagement is selected as the endogenous construct. There are several instruments that have been employed in order to operationalise the employee engagement construct such as Gallup 12-item, Utrecht Work Engagement Scale (UWES) 24 item, 12-item, 9-item, 6-item and 3-item (ultra-short), Chartered Institute of Personnel and Development (CIPD), and other customised employee engagement survey developed by researchers in this area.

For the scales used to measure employee engagement in the public sector, the prominent scale UWES by Schaufeli et al. (2004) was selected to examine employee engagement features, including vigour, dedication, and absorption. In this study, a shorter version of UWES with nine items scale (UWES 9-item) was employed. The previous study found that this short version is as efficient as the longer 15-item version in terms of the scale's reliability and validity. The scale is also found to have an acceptable psychometric property and can be employed to measure positive organisation behaviour (Schaufeli et al., 2006). Therefore, the 5-point Likert scale ranging Not at all (1) to Always (5) was used to measure the items.

Vigour refers to high levels of energy and resilience, as well as readiness to put out effort, not easily fatigued, and perseverance in the face of adversity and challenges. This component is assessed by three items:

- (i) When I wake up in the morning, I feel like going to work.
- (ii) At my work, I feel myself bursting with energy.
- (iii) At my jobs, I feel strong and vigorous.

Dedication refers to getting a sense of purpose of work, being excited and proud of it, and being inspired and challenged by it. This component is assessed by three items:

- (i) I am enthusiastic about my job.
- (ii) My job inspires me.
- (iii) I am proud of the work that I do.

Absorption refers to being completely and enthusiastically absorbed in one's job, with difficulty disconnecting oneself from it such that time goes swiftly, and one forgets about everything else. This component is measured by three items:

- (i) I am immersed in my work.
- (ii) I get carried away when I am working.
- (iii) I feel happy when I work intensely.

3.7.2 Exogenous Construct: Transformational Leadership Style

There are three independent variables or also known as exogenous constructs in this study, and the first construct is the transformational leadership style of manager. Based on the literature, there are several instruments used to measure transformational leadership style. The Multifactor Leadership Questionnaire (MLQ) developed by Bass and his associates has been used in most of the transformational leadership research (e.g., Bass, 1985; Bass and Avolio, 1994). Transformational leadership, as suggested by Bass, contains four dimensions (i) Idealised influence, (ii) Individual consideration, (iii) Intellectual stimulation, and (iv) Inspirational motivation. However, MLQ is seen as problematic as there is a high correlation between transformational leadership dimensions, for instance, idealised influence and inspirational motivation (Yammarino & Dubinsky, 1994). Other scales to measure transformational leadership are Congo-

Konunger scale (Conger & Kanungo, 1994), Leadership Practices Inventory (Kouzes & Posner, 1990) and Global Transformational Leadership Scale (Carless et al., 2000).

Other than issue of high correlations of the dimensions, other drawbacks of most of the scales are they are too lengthy, hence more time-consuming to be completed. The consequence of using a lengthy questionnaire are the respondents might easily get bored, feeling too fatigue to complete the questionnaire and also lose focus towards the end of the survey. They would possibly neglect the context of the items or giving up as there are too many items in the questionnaire. This issue raises the possibility of delay in completing the survey and resulting in loss of information from the hasty responses (Adiguzel & Wedel, 2008; Chipperfield, 2011; Rodrigues et al., 2005). During the pre-test session, some participants commented on the lengthiness of many research survey they have participated. They suggested that researchers employ a shorter version of research scales, especially when the study involves high-level personnel on a tight schedule and time constraints such as Administrative and Diplomatic Officers who are the managerial level officials.

Due to the above reasons and to avoid respondent fatigue issue that could lead to a negative effect such as low data quality, low response rate and missing data, this study employed a short version of scales to measure constructs as it is more practical and easier to be administered while still reliable and valid. In this study, transformational leadership style construct was measured using the seven-items Global Transformational Leadership developed by Carless et al. (2000) which is based on seven behaviours of transformational leaders. The transformational leadership behaviours that have been measured are communicating a vision, staff development, supportive leadership, empowerment, innovative thinking, leading by example, and charismatic. The advantage of this scale is due to the short length yet practical to measure transformation leadership. Hence, easy for the researchers to administer the survey and the possibility to receive more responses is high. Furthermore, based on the literature, this scale has a reliable, valid constructs and a broad range of potential. Also, it is highly correlated with other established transformational leadership scales, including Multifactor Leadership Questionnaire (Avolio et al., 1995) and Leadership Practices Inventory (Kouzes & Posner, 1990).

In this study, in order to examine the transformational leadership constructs, the researcher has divided the scale into two sections to examine (i) transformational leadership style of manager in the public service, and (ii) self-perceived transformational leadership style of Administrative and Diplomatic Officers. The 5-point Likert scale of frequency ranging from Strongly disagree (1) to Strongly agree (5) was used to measure the items. The Global Transformational Leadership 7-item to measure the transformational leadership style of manager in the public service. The items are:

- (i) My manager communicates a clear and positive vision of the future.
- (ii) My manager treats their subordinates as individuals, supports and encourages their development.
- (iii) My manager gives encouragement and recognition to their subordinates.
- (iv) My manager fosters trust, involvement, and cooperation among team members.
- (v) My manager encourages thinking about problems in new ways and questions assumptions.
- (vi) My manager is clear about their values and practises what they preach.
- (vii) My manager instils pride and respect in others and inspires me by being highly competent.

The second construct that has been measured in this study is self-perceived transformational leadership style of Administrative and Diplomatic Officers. The Global Transformational Leadership 7-item was used to measure the perception of Administrative and Diplomatic Officers towards their transformational leadership style. The same scale was employed, however, the phrase 'My manager' was replaced with 'I', which is more appropriate for measuring this construct. Administrative and Diplomatic Officers were invited to complete the items in this study to measure their transformational leadership style. The items to measure this construct are:

- (i) I communicate with a clear and positive vision of the future to my subordinates.
- (ii) I treat my subordinates as individuals, supports, and encourages their development.
- (iii) I give encouragement and recognition to my subordinates.
- (iv) I foster trust, involvement, and cooperation among my team members.
- (v) I encourage thinking about old problems in new ways and questions assumptions.
- (vi) I am clear about my self-values and practise what I preach.

(vii) I instil pride and respect in others and inspires them by being highly competent.

The third exogenous construct in this study is talent management practices. After conducting a comprehensive literature review, a number of appropriate instruments were identified. As a result, in selecting items for talent management practices construct in this study, the researchers used an approach that involved extracting the practises from existing literature. Therefore, talent management practice scales used in this study was developed using multiple sources instrument developed by Chen (2012), Jayaraman et al. (2018), and Civil Service People Survey (2020). These instruments are comprehensive scales that have been established to measure the talent management practises construct. The scales have been validated by many researchers, hence, there is no issue with the reliability and construct validity of the instrument.

In this study, there are five dimensions of talent management practices that have been measured: (i) talent identification, (ii) talent development, (iii) career enhancement, (iv) performance management, and (v) reward management. The total number of items in this scales is 19. This instrument is developed in such a way in order to become the most appropriate instrument to measure talent management practise in the Malaysian public sector. The items in this instrument were modified without changing the meaning. The modification aims to improve clarity and comprehension across respondents.

The 5-point Likert scale of frequency ranging from Strongly disagree (1) to Strongly agree (5) was used to measure the items. Talent Identification refers to the process to identify high potentials in the public service. The items used to measure this construct are:

- (i) My organisation builds up talent pool for high potentials in the public service.
- (ii) My organisation identifies talents that make the highest impact on organisation success.
- (iii) My organisation differentiates the contribution level of talents in the workplace.
- (iv) Talent identification and evaluation programmes implemented in my organisation are effective in identifying high potentials.

Training and development refer to the process to increase abilities and skills for career growth in the public service. The items used to measure this construct are:

- (i) Talent identification and evaluation programmes implemented in my organisation are effective in identifying high potentials.
- (ii) I have the opportunity to participate in related seminars, workshops, conferences, and training if I need particular skill development.
- (iii) Training and development programmes provided in my organisation help improve my work performance.
- (iv) The training and development programmes are implemented continuously in my organisation.
- (v) The content of the training and development programmes implemented in my organisation are based on job performance.

Career Enhancement refers to the opportunity to move ahead and advance in career path. The items used to measure this construct are:

- (i) Identified high potentials in my organisation have better opportunities for upward mobility.
- (ii) I have clear career paths in this organisation.
- (iii) I have more than one avenue for promotion.
- (iv) There are opportunities for me to grow my career at my organisation.

Performance Management refers to the process of communicating and giving feedbacks to employees to improve their job performance. The items used to measure this construct are:

- (i) I receive feedbacks on my work performance from time to time.
- (ii) The feedbacks I receive helps me to improve my work performance.
- (iii) I think that my performance is evaluated fairly.

Reward Management refers to the motivational process to reward employees based on their great performance and achievement. The items used to measure this construct are:

- (i) My organisation values my work contribution.
- (ii) I feel that my pay adequately reflects my work performance.
- (iii) The organisation I serve provides recognition to me.

Other than exogenous and endogenous constructs, another factor, public service motivation, is measured as a mediating factor in the model. Public service motivation was measured using a 5-item Global Public Service Motivation scale developed by Alonso and Lewis (2001). The 5-point Likert scale of frequency ranging from Strongly disagree (1) to Strongly agree (5) was used to measure the items. The items to measure this construct are:

- (i) Meaningful public service is very important to me.
- (ii) I am not afraid to go to bat for the right of others, even if it means I will be ridiculed.
- (iii) Making a difference in society means more to me than personal achievements.
- (iv) I am prepared to make enormous sacrifices for the good of society.
- (v) I am often reminded by daily events about how dependent we are on one another.

3.8 Pre-Testing Procedure

Pre-testing is a method used to determine the appropriateness and understandability of questions included in the actual study using a small group of participants to answer the questionnaire (Sekaran & Bougie, 2016). Pre-test procedures were employed to avoid problems in the actual data collection and data analysis and facilitate ad hoc prevention. This method is essential to avoid poor data quality and to minimise or eliminate the possibility of item deletion during the measurement model evaluation process (Memon et al., 2017). There are six approaches to pre-test the questionnaire before the process of distributing the questionnaire to the respondents.

The first approach is the respondent debriefing where the evaluation questions (open-ended or closed-ended) are added at the end of the instrument aimed to gain feedbacks from the respondents. The responses that are gathered in this approach is the survey content, duration or time, satisfaction, and difficulty level of the questions. The second approach of pre-testing procedure is the cognitive interviewing. It is a process to understand the minds of respondents in a typically face-to-face session. A small number

of respondents is given the option of "thinking aloud," which involve paraphrasing and offer confidence judgements on the meaning of the question. The third approach is expert evaluation. In this process, the questionnaire is being reviewed by two types of experts: experts in the field of survey methodology and subject matter experts who have deep knowledge in the area being studied. The experts in this study know which items should be included in the questionnaire to measure the construct and how to collect the most relevant data possible. The feedbacks received from these experts can improve the nature and scope of the survey, leading to higher-quality data and more insightful conclusions.

The fourth approach is the focus group discussion. In this process, the focus group assist in refining the survey instrument through semi-structured discussion and debate. The aims of this approach are to better explaining the survey's fundamental concepts and gauging the respondent's feeling about the survey's length and difficulty. Next, the fifth approach is research experiments where the pre-test respondents were divided into groups to test several variations of survey design and content. The results of these tests shed light on the effects of various methodological options, including variations in question wording, questionnaire design, visual layout, question sequence on the data collected. This approach can be quite helpful to anticipate the findings of the main survey. The final approach is pilot test which is similar as conducting a dry run before rolling out the survey to the entire sample. It is a good practice to include evaluative questions in the pilot study, such as the opinion of respondent about the length or complexity of the questionnaire, and the satisfaction of the respondent who participate in the survey.

In this study, the pre-test procedure was conducted to ensure the rigour of this study. During the pre-test, survey instrument or questionnaires were distributed to experts for expert evaluation and review to measure content validity of the instrument, and to a small group of samples among Administrative and Diplomatic Officers to test the time duration to answer the survey and comprehensibility of items. This is to ensure the participants in the research sample to not only understand the questions but also to understand the questions in the same way. Then, pilot test is conducted in this study to get some idea of the responses that the researcher will get from the potential respondents and if there is any problem emerge during the actual survey time.

In order to determine the instrument's content validity, the experts will review the questionnaire to ensure all questions are appropriate, and any necessary modification had been made before moving further (Zikmund et al., 2013). The experts should examine and check each of the item in the questionnaire, paid close attention, spotted problems, and provide suggestions to improve the questionnaire items. For a pre-test study, there is no established rule on the sample size needed. However, a longer or more complicated instrument requires larger samples than a shorter or more straightforward instrument.

3.8.1 Expert Evaluation and Review

The panel of content experts in this study is selected among human resource personnel in the public sector who have more than five years of experience in the human resource department in the public sector and academicians in social science and psychology area. A minimum of three experts is advocated for content validation, according to Lynn (1986). However, the selection of more than ten experts was probably unnecessary. Therefore, in this study, a panel of experts comprising five professionals, three from the public sector and two from the private sector, were invited to validate the scale items used in this study. The experts' names, designation, and expertise areas are presented in Table 3.4. The panels were given a task to assess each of the items in the questionnaire constituting the domain for content relevance, representativeness, and technical quality. Two experts among Administrative and Diplomatic Officers were also invited to take part in this phase to validate the questionnaire. The experts were contacted through emails, telephone calls, and messaging applications. Selection of experts is based on their willingness to participate in this study and to spend some time providing review during the scheduled time.

Expert Content Validation Form (See Appendix 8) was emailed after the participants agreed to participate in this study. The panel of experts were given three to four weeks to review the questionnaire to provide response on the relevancy and clarity of the statements. The panel of experts who participated in this study are presented in Table 3.5.

Table 3. 5 Panel of experts involved in assessing the content validity

No	Name	Designation/ Company	Expertise area
1.	Dr. Christopher Abas	Psychology Officer, Public Service Department	Industrial and Organisational Psychology. Research in the public sector.
2.	Dr. Siti Khadijah Zainal Badri	Assistant Professor, University Nottingham Malaysia	Health and Wellbeing/Organisational Behaviour/IO Psychology.
3.	Dr. Mohammad Nurul Alam	Research Consultant, Academy for Research Skills Development	Human Resource Management/ Social Science.
4.	Ms Sazailina Saleh	Head of Unit, Public Service Department	Human Resource Management in the public sector. Administrative and Diplomatic Officer.
5.	Ms Shamzarina Abdul Razak	Head of Unit, Public Service Department	Human Resource Management in the public sector. Administrative and Diplomatic Officer.

3.8.2 Expert Validation Guide

The items in the questionnaire were rated based on the relevancy to the construct being measure, the clarity, and comprehensibility of the items statement. The items rating scales are on a 4-point ordinal scale, whereby for relevance ranging from Not relevant (1) to Highly relevant (4). On the other hand, comprehensibility is ranging from Unclear/ Not Comprehensible (1) to Very Clear/ Comprehensible (4). The rating scale for expert validation is presented in Table 3.6.

Table 3. 6 Rating scale for expert validation

Relevance	Comprehensibility
Are the items relevant to the concept/ construct being measured?	Is the wording of the items clear and comprehensible?
1 = Not Relevant	1 = Unclear / Not Comprehensible
2 = Somewhat Relevant	2= Somewhat Clear/ Comprehensible
3 = Quite Relevant	3 = Quite Clear / Comprehensible
4 = Highly Relevant	4 = Very Clear / Comprehensible

The panel of experts were also requested to provide further written feedbacks or comments through open-ended questions for each item (if there is any) in order to enhance the comprehensibility and relevancy of the items of the targeted construct. To assist with the validation process, the panels could also consider the criteria given in the form as below:

- (i) **Clarity** : The questions are direct and specific/ only one question is asked at a time/ the participants can understand what is being asked/ there are no double-barrelled questions (two questions in one).
- (ii) **Wordiness** : Questions are concise/ there are no unnecessary words.
- Negative Wording** : Questions are asked using the affirmative.
- (iii) **Overlapping Responses** : No response covers more than one choice/ all possibilities are considered/ there are no ambiguous questions.
- Balance** : The questions are unbiased and do not lead the participants to a response. The questions are asked using a neutral tone.
- (iv) **Use of Jargon** : The terms used are understandable by the target population/ there are no clichés or hyperbole in the wording of the questions.

- (v) **Appropriateness of Responses Listed** : The choices listed allow participants to respond appropriately.

3.8.3 Content Validity

Content validity is the degree to which a measurement tool reflects the measured construct, and it is a vital evidence to affirm the validity of measurement tools such as questionnaires (Yusof, 2019). Content validity should be done in a systematic manner based on evidence and best practice since it is important in ensuring overall validity. Content validity is the focus during the expert reviews process. A survey questionnaire may have the face validity if the instrument's content seems relevant to the person taking the test. To establish the content validity in this study, the questionnaire that has been developed is being evaluated based on the feasibility, consistency of style, formatting, readability, and clarity of the language used. In this procedure, experts are invited to review and validate the questionnaire.

According to Yusof (2019), there are six steps of content validation in a study which are:

(i) **Preparing Content Validation/ Expert Review Form**

This step is conducted to ensure the experts have a clear understanding and expectation about the content validation objective. Domain definitions were provided in the form for the experts to ease the scoring process.

(ii) **Selection of Expert**

Selection for panel of expert is based on the expert's area of expertise and knowledge of the subject.

(iii) **Content Validation**

Two approaches of content validation: face-to-face or non-face-to-face with the expert review panel. In the face-to-face approach, the researchers organise a meeting with the experts and facilitate the content validation process. Meanwhile, in the non-face-to-face approach, the content validity forms with clear instructions

and construct definitions will be emailed to the experts to be completed within the stipulated time. The cost incurred, time, and the response rate is the most critical factors to be considered when considering which approach should be selected. In this study, the non-face-to-face approach is conducted since it is more convenient for experts on a tight schedule. The experts were given an ample time to validate the items in the questionnaire.

(iv) Reviewing Construct/ Domain and Items

Experts are requested to review the constructs and items to measure the constructs critically before providing the score to each item. The experts are also needed to provide written feedbacks or comments for each item in order to enhance the comprehensibility and relevancy of the items to the targeted construct.

(v) Score for Each Item

A panel of content experts provide a score on each scale item based on the guide and scale given and submit the content validation form after completing the content validity form.

(vi) Calculating the Content Validity Index

The Content Validity Index (CVI) is a measure of inter-rater agreement. There are two methods where CVI can be computed from each item or the scale and the overall scale. Experts are invited to rate the relevance and comprehensibility of each item (see Appendix 9) on a 4-point scale to calculate an item-level CVI (Item Content Validity Index-I-CVI).

3.8.4 Calculation of Content Validity Index

This study employed the content validity approach to validate the research instrument. The researchers gather the content validity form after three to four weeks the expert review panel received the form. After all the forms were received, item content validity was calculated. Then, revisions were made to the questionnaire based on the comments and suggestions received from the experts.

The Content Validity Index for each particular item (Lynn, 1986) is the percentage of the panel of experts' score 3 or 4 (by the scale of 1 to 4 where 4 is outstanding). The content validity of the item score is then calculated for each item by dividing the number of experts who rated 3 or 4 by the total number of experts. Lynn (1986) offers widely cited guidance on what an appropriate item content validity should be based on the number of experts. If there are five or fewer experts, the author advocates that the item content validity should be 1.00, meaning that all experts must accept that the item is content correct. There could be a small amount of disagreement when there are more than five experts. If there are six experts, the item content validity must be at least 0.83, indicating one disagreement.

In this study, the content validity of the item for relevancy aspect ranged between 0.8 to 1, and the mean content item content validity is 0.89. Whereas for comprehensibility aspect, the item content validity ranged between 0.8 to 1, and the mean item content validity is 0.85. The Content Validity Index calculation is presented in Appendix 10.

The revision of the instrument in this study is conducted based on the Content Validity Index score and feedbacks received. Following that, the items were improved accordingly to ensure the quality of the instrument used in this study.

3.9 Statistical Technique

In quantitative research, a variety of statistical software are available for researchers to run statistical analysis. The first-generation statistical technique, Statistical Package Software System (SPSS), is widely used in quantitative research. However, there are limitations of SPSS compared to the latest statistical software. SPSS uses the Ordinary Least Square Method (OLS) for regression modelling. As a consequence, many quantitative researchers recently have shifted to a more advanced statistical technique.

Structural Equation Modelling or also called covariance structure analysis or covariance structure modelling is a second-generation statistical technique that has become more significant nowadays as this technique reduces the limitations of the first-generation statistical technique. Researchers can use Structural Equation Modelling to examine the model's overall fit as well as examine the structural model as a whole (Chin, 1998b;

Gefen et al., 2000). Structural Equation Modelling assesses the hypothesised structural links between variables and the connections that exist between the variables and associated measure.

In this study, the researchers employ a combination of the first-generation and the second-generation statistical techniques. First, SPSS is used to run Exploratory Factor Analysis to check the dimensionality of the items and to assess the Cronbach Alpha of the variables. Secondly, Structural Equation Modelling is used to assess the measurement model in this study, which includes convergent validity and discriminant validity of the research model. Thirdly, Structural Equation Modelling is used to assess the structural model in this study.

3.9.1 Structural Equation Model

In Structural Equation Modelling, a variable is called latent construct, which means an unobserved variable. Latent construct needs indicators or items to observe the constructs. The independent variable in Structural Equation Modelling is called exogenous construct, whereas the dependent variable is called endogenous construct.

Structural Equation Modelling is a powerful statistical technique that is generally being used to:

- (i) Run Confirmatory Factor Analysis to validate the construct.
- (ii) Estimating and modelling many regression equations simultaneously.
- (iii) Modelling and assessing regression with multi-collinearity problem.
- (iv) Estimating the correlation and covariance in a model simultaneously.
- (v) Estimate the inter-relationships among the constructs simultaneously.

The advantage of Structural Equation Modelling is that it allows evaluation of theoretical relationships while simultaneously assessing the measurement model, which is the correlation between constructs and measures (indicator or scale items), and the path model, which is the correlation between the constructs. As a result, researchers have been able to analyse the relationships that would otherwise be difficult to disentangle and study because of structural equation modelling's ability to estimate

direct, indirect, and moderating effects of multiple constructs while accounting for measurement error (Ringle et al., 2018).

Structural Equation Modelling that is utilised appropriately, has more advantages than the first generation of analytical tools in that it allows researchers to explore with theory and data more freely (Chin, 1998). There are two types of Structural Equation Modelling, namely Covariance-based or full Structural Equation Modelling and Variance-based Structural Equation Modelling or also called Partial Least Square Structural Equation Modelling (PLS-SEM). The difference between Covariance-Based Structural Equation Modelling (CB-SEM) and Partial Least Square Structural Equation Modelling is presented in Table 3.7.

Table 3. 7 The difference between PLS-SEM and CB-SEM (Hair et al., 2013)

Criteria	PLS-SEM	CB-SEM
Objective	Focus on prediction/ non-parametric. Theory development/ theory prediction/ exploring theory.	Parameter-oriented. Theory testing/ theory comparison/ theory confirmation.
Type of study	Exploratory – develop a new model based on a lack of evidence or fact.	Confirmatory – replicating on established theory into a new domain.
Model complexity	Complexity is high.	Complexity ranges from simple to moderate.
Sample size	The portion of the model with the most predictors is used to perform the power analysis. From 30 to 100 cases are recommended as a minimum.	Minimum guidelines range from 200 to 800, ideally based on a power analysis of a particular model.
Model Assessment	No fitness indexes.	Reflect the fitness of the model.
Software	e.g., Smart PLS, Warp PLS, Visual PLS	e.g., AMOS, LISREL, MPLUS, SIMPLIS, SAS

3.9.2 Partial Least Square Structural Equation Modelling

In the literature, Partial Least Square Structural Equation Modelling (PLS-SEM) is an approach to examine relationships between variables less rigorous and not acceptable (Rouse & Corbitt, 2008). However, despite the criticisms, the use of PLS-SEM in marketing and other business disciplines has been expanding recently (Henseler et al., 2009). PLS-SEM is widely used in management disciplines research such as organisational study (Sosik, Kahai, & Piovoso, 2009) and strategic management (Hair, Sarstedt, Pieper, & Ringle, 2012). PLS-SEM approach is currently accepted as a more solid structural model estimation. PLS-SEM is also considered an alternate way to fulfil distributional assumptions of CB-SEM. PLS-SEM could handle a complex model with several indicators and constructs, estimate formative constructs, and analyse small sample sizes with the appropriate degree of care. Lastly, it can derive determinate latent variable scores, which can be used in subsequent analyses (Richter, Cepeda, Roldán, & Ringle, 2016).

In PLS-SEM, two models; the measurement model and the structural model will be assessed. In the measurement model, the correlations between construct and indicator will be evaluated. Meanwhile, the structural model will assess the correlations between various constructs in terms of path coefficients.

PLS-SEM statistical software, such as Smart Partial Least Square, provided with many useful features and with the latest option to upgrade the statistical ability from time to time. For example, it allows researchers to estimate complex models consisting of several latent and observed variables and obtain solutions with limited sample sizes without identifying and converging concerns (Hair et al., 2019). This feature is particularly useful considering recent research that suggests researchers can include more observed variables when measuring factors for conceptual variables, regardless of whether they use common factor or composite factors (Hair et al., 2019).

For this study, Partial Least Square Structured Equation Modelling is the statistical software used to measure the proposed theoretical model, which is the relationship between the variables (transformational leadership style, talent management practices,

public service motivation, and employee engagement) and the impact of the proposed model on employee engagement.

3.9.3 CB-SEM or PLS-SEM Selection

There are many factors to consider when selecting which statistical techniques to be used in a study. The researchers could determine which statistical method is appropriate based on the understanding of the assumptions underpinning various statistical approaches. Hair et al. (2011) proposed that researchers should consider using these five essential rule of thumb during the process of selecting between PLS-SEM and CB-SEM. The rule of thumb is presented in Table 3.8:

Table 3. 8 Rule of thumb of selecting CB-SEM or PLS-SEM

Rule of thumbs	Statistical Methods
Research objective	<p>CB-SEM: To test or to confirm a theory.</p> <p>PLS-SEM: Prediction and theory development.</p>
Measurement model type used in the study	<p>CB-SEM: can be used to examine research models with reflective construct only.</p> <p>PLS-SEM: can be used to examine a research model that has reflective and/ or formative constructs simultaneously (Chin, 1998).</p>
Structural model	<p>CB-SEM: Non-recursive structural model.</p> <p>PLS-SEM: Complex structural model.</p>
Data characteristics	<p>CB-SEM: Meet distributional assumption, large sample size, and normal distribution.</p> <p>PLS-SEM: Data do not fulfil distribution assumptions, small/ large sample size, non-normal/ normal distribution.</p>
Model evaluation	<p>CB-SEM: Global goodness of fit criterion and testing for measurement model invariance is required.</p> <p>PLS-SEM: Latent variable scores are used in subsequent analyses.</p>

Urbach and Ahleman (2010) argue that researchers used Partial Least Square as a statistical method for evaluating structural equation models due to many reasons. The reasons are:

- (i) PLS has a lower minimum sample requirements than other methods.
- (ii) PLS does not require data that is normally distributed and also work well with data that is not normally distributed.
- (iii) PLS can be applied to complex structural equations models with a large number of constructs.
- (iv) PLS can handle both reflective and formative constructs.
- (v) PLS better suited for theory development rather than theory testing.
- (vi) PLS is useful for prediction.

This research employed PLS-SEM to assess the research model in this study. PLS-SEM was selected over other structural equation modelling statistical method such as AMOS or LISREL due to many reasons. Firstly, this is an exploratory research aims to develop an integrated model of factors (transformational leadership style, talent management practices, and public service motivation) that predict employee engagement in the Malaysian public service. PLS-SEM is used as the nature is prediction oriented, whereas other SEM tools such as AMOS and LISREL are parameter oriented and used to confirm a theory. The ability of PLS-SEM to estimate residual correlations and assess their impact on the model makes it the best option in this study. Furthermore, PLS-SEM is a statistical software that has the ability to assess mediation factor of public service motivation on the relationship between the exogenous variable and endogenous variable.

Secondly, PLS-SEM is selected in this study due to the characteristics of the data. PLS-SEM can be used to assess data that do not fulfil distribution assumptions. Meanwhile, CB-SEM tools could only assess data that meet distributional assumptions. According to Hair (2016), PLS-SEM makes no assumptions regarding the distribution of data in general. It also does not require the premise of normality since the research survey is not normally distributed in most cases (Chin et al., 2003). Furthermore, PLS is well suited for handling a small sample size. PLS-SEM has minimal requirements in terms of sample size of the study while CB-SEM can only evaluate a large sample size. In PLS-SEM, the sample size required for testing the research model is equal to the largest

of the two possibilities: (i) On the most complex formative construct, ten times the number of indicators (ii) The number of separate constructs leading to an endogenous construct is multiplied by ten (Chin, 1998: Chin & Newstead,1999).

Thirdly, PLS-SEM handles latent constructs that are modelled as a formative measurement model. According to Chin (1998), CB-SEM can only examine research models with reflective construct. Using CB-SEM for formative measures may lead to identification problems (Henseler et al., 2009) and circumstances where all indicators' covariance cannot be explained (Chin, 1998). In contrast, PLS-SEM can be used to measure both reflective and formative in the same model simultaneously (Chin, 1998). Therefore, PLS-SEM's ability to assess both formative and reflective indicators make it more appropriate for the researcher to opt for this statistical tool. Fourthly, PLS-SEM does not require multivariate normality when analysing a structural model and take measurement error into consideration.

Fifth, PLS-SEM is the best option for this study because, according to Henseler et al. (2009), PLS-SEM is suitable for a complex model with many latent variables. Furthermore, this model is considered a complex model because it has five variables, a mediating variable and also a higher-order construct.

There are systematic procedures that research can follow in order to use PLS-SEM effectively. The systematic procedure for applying PLS-SEM is shown in Table 3.9.

Table 3. 9 A systematic procedure for applying PLS-SEM

Stage	Description
1	Development of structural model.
2	Development of measurement model.
3	Data collection and data cleaning.
4	PLS path model estimation.
5a	Assessment of reflective measurement model.
5b	Assessment of formative measurement model.
6	Assessment of structural measurement model.

This study involves the first order constructs and a higher-order construct (talent management practices) hence, it is considered a complex model. To assess this model, disjoint two-stage approach was employed which involve two stages in analysing the data. In the first stage, measurement model was being assessed. Following the disjoint two stage approach, the second order construct for talent management practices construct in this study was deleted, and all the exogenous variable arrows were pointed out to the dimensions of talent management practices. Next, the arrows from the dimensions were pointed out to the mediation variable and endogenous variable. This measurement model assessment procedure aims to assess the reliability and validity of the model where in this stage Factor Loadings, Average Variance Extracted, Composite Reliability, Cronbach Alpha, and Heterotrait-Monotrait values were evaluated. The model has no formative construct; therefore, assessment of formative construct is not needed to be carried out in this study. The first stage of measurement model assessment in Smart PLS for this study is shown in Figure 3.3.

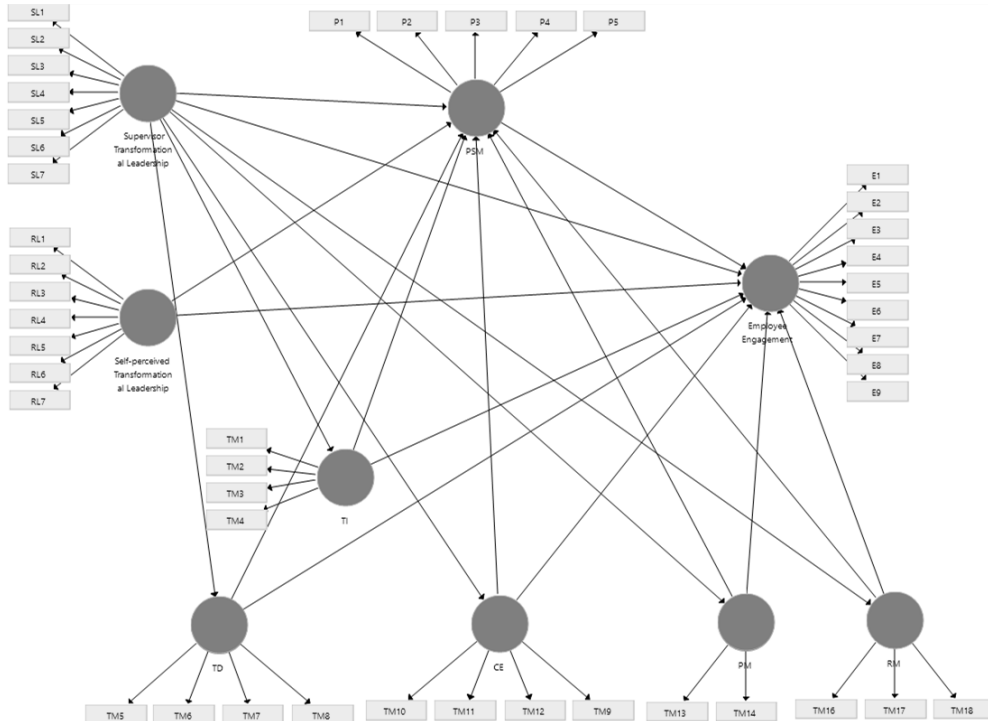


Figure 3. 3 Measurement model in Smart PLS (Using Disjoint Two-Stage Approach)

Next, after the measurement model assessment, in second stage, the structural model has been assessed. The values for each dimension will be derived from the first stage of assessment. In the second stage, the dimensions will become the items for talents management practices constructs. The talent management practices construct become a first order construct and the model at this stage only has the first order construct. The second stage of structural model assessment in Smart PLS for this study are shown in Figure 3.4.

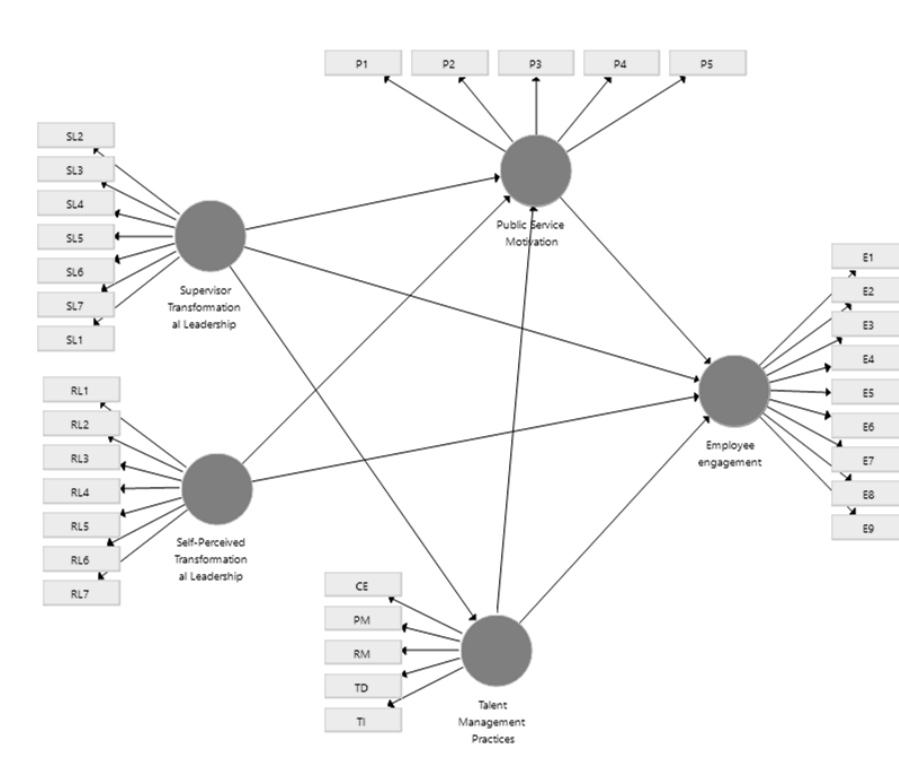


Figure 3. 4 Structural model in Smart PLS (Using Disjoint Two-Stage Approach)

3.10 Reflective and Formative Construct

In Structural Equation Modelling, there are two types of latent construct: reflective and formative construct. Formative or reflecting indicators can be used to model latent variables in a study. However, the formative or reflective nature of the constructs always receives minimal attention during theoretical development. Three issues may result from this lack of attention on the measurement model development, such as misspecification, identification, and validation of the construct. The construct is a reflective construct if the latent construct is the cause of indicators of the latent construct. In contrast, formative construct occurs when indicators are the cause of the latent construct. A number of items were used to measure a latent construct categorised as a reflective or formative construct.

Most of the extant studies in business literature with multiple constructs are measured as a reflective construct. In contrast, there are only a few examples of formative models in business literature (Coltmen et al., 2008). Proper specification of a measurement model is required in order to assign meaningful relationships in the structural model. Therefore, the distinction between formative and reflective measures is crucial (Anderson & Gerbing, 1988).

Three criteria to determine whether the construct is reflective, or formative are (i) causality direction, (ii) interchangeability of items, and (iii) correlation between items. The differences between reflective and formative constructs are further discussed in Table 3.10.

Table 3. 10 The difference between reflective and formative construct

Criterion	Reflective construct	Formative construct	Reference
Construct characteristics	The existence of a latent construct is independent regardless of the measures used. The construct is a trait and explaining the indicators.	The presence of latent constructs is formed by a combination of its indicators (items).	Borsboom et al., 2004; Rossiter, 2002; Fornell & Bookstein, 1982
Direction of Causality	Arrow is drawn from latent construct to indicator.	Arrow is drawn from indicator to latent construct.	Bollen and Lennox (1991); Edwards & Bagozzi (2000); Rossiter (2002); Jarvis et al. (2003);
Causality Priority	Variation in the construct cause variation to the indicator.	Variation in the indicator cause variation to the construct	MacKenzie, Podsakoff, & Jarvis, 2005
Internal Consistency	Internal consistency should be presented in indicators.	There is no implication of internal consistency.	Hair, 2018
Correlations	Because all reflective items reflect the same underlying construct, their correlation should be high.	Formative indicators should not need to be correlated.	Hair, 2018; Bollen & Lennox, 1991
Property of items that used to measure the latent construct	Items share common themes and are interchangeable. Adding or removing an item may not change the construct's conceptual domain.	Items do not share common themes and are not interchangeable. Adding or removing an item may change the construct's conceptual domain.	Rossiter (2002); Jarvis et al. (2003)

A reflective construct can include a few dimensions (not all dimensions) in the model simply because eliminating dimensions does not change the essential feature of the construct. The absence of one of two equally reliable items from the measurement model should have no effect on the construct's meaning. As a result, in a reflective measurement model, items can be interchanged and share a common theme.

The misspecification of the model may be related to the failure to distinguish the theoretical basis between formative and reflective management models (Thien et al., 2014). In this study, the latent constructs in the research model are transformational leadership style (manager and self-perceived), talent management practices, public service motivation, and employee engagement. In this study, latent variables are modelled as reflective. Each latent variables' causality flows in this study are decided based on information obtained during the literature review phase. According to Henseler et al., 2009, the usage of prior knowledge is critical in determining the causation flow to avoid measurement model misspecification.

3.10.1 Measurement Model in This Study

The type of latent constructs in this study was determined based on the criterion discussed earlier in Table 3.10. Other than this criteria, in order to determine whether the latent constructs are reflective or formative, the researchers could refer to literature related to the constructs. According to Hanseler et al. (2009), to avoid misspecification of the measurement model, the use of previous knowledge to determine causality flow is highly recommended. Therefore, the criterion of constructs in this study is presented in Table 3.11.

Table 3. 11 Type of construct

Latent Construct	Description
Transformational Leadership	<p>Reflective:</p> <p>All of the items reflect the same underlying construct. Furthermore, each construct causality flows in this study are based on the prior knowledge collected during the literature review phase.</p>
Talent Management Practices	<p>Reflective:</p> <p>Literature of talent management practices treated the construct as a reflective measure (Jyoti & Rani, 2014). The variations in the latent construct led to changes in the indicator. A latent variable is stated as the common cause of item or indicator behaviour in a reflective model. It is used when the observed variables are chosen and measured with the expectation that they would represent the prior theoretical latent construct (Coltman et al., 2008).</p>
Public Service Motivation	<p>Reflective:</p> <p>The public service motivation construct is reflective rather than formative. Items share common themes, and interchangeable. No studies have yet been conducted to test such formative specification (Coursey et al., 2008). The findings in Wright et al. (2013) indicate that the global public service motivation measures are highly correlated with one another and have a comparable pattern and degree of associations with major public service motivation correlations.</p>
Employee Engagement	<p>Reflective:</p> <p>The items under this construct reflect the same underlying construct. The correlation between items is high. The change of construct will have an effect on the indicator. Items share common themes and interchangeable. Adding or removing an item may not change the construct's conceptual domain.</p>

3.10.2 Common Method Bias

In this study, both independent and dependent variables were gathered simultaneously from a single-source data. However, based on the literature, a single-source data for data collection should have been a concern as it leads to common method bias. These problems emerge as data from the same respondent might produce a positive relationship between the independent variable and dependent variable (Jakobsen & Jensen, 2015) due to various factors such as social desirability, consistency, leniency bias, and tendency to rate in positive manner. Therefore, to address the problem of common method bias, two methods could be used, which are full collinearity test as suggested by Kock and Lynn (2012) and Kock (2015) and marker variable technique introduced by Podsakoff et al. (2003).

Through full collinearity assessment, all variables are regressed against a common variable in this method. According to Kock and Lynn (2012), for full collinearity analysis, the recommended threshold of Variance Inflation Factor (VIF) is 3.3. Thus, if the VIF is less than 3.3, there is no bias from the single-source data in the study.

A marker variable is included in this study to assess the common method bias. According to Podsakoff et al. (2003), marker variable is a technique used to determine common method bias by measuring the assumed source of common method bias as a covariate in statistical analysis. The marker variable should be theoretically unrelated to the variables and framework under the study. For this study, the researcher utilised a marker variable unrelated to transformational leadership style, talent management practices, public service motivation, and employee engagement. The marker variable items were adapted from Lin et al. (2015), which consist of three items. It is a 5-point Likert scale ranging from 1=Strongly disagree to 5= Strongly agree. The items are included in the survey but not in the model being tested before a method factor is created using the marker indication as an exogenous variable predicting each endogenous construct in the model (Lin et al., 2015). The marker variable items included in this study are:

- (i) Marker Question 1: Once I have come to a conclusion, I am not likely to change my mind.

- (ii) Marker Question 2: I don't change my mind easily.
- (iii) Marker Question 3: My views are very consistent over time.

3.11 Pilot Study

A pilot study was conducted to improve the substances, techniques, and parameters used in the actual research. Furthermore, a pilot study is important to assess the validity, language, and relevancy of the questions included in the survey. Conducting a pilot test may increase the instrument's validity and quality (Hair et al., 2015; Nunnally, 1994).

Pilot studies have saved innumerable survey studies from disaster by taking the respondent's suggestions to identify and improve confusing, unpleasant, or offensive questions and techniques (Cooper & Schindler, 2008). Conducting a pilot test enable the researcher to identify any questions that are confusing and too hard to comprehend. In addition, the researcher will get the information on the duration of time to complete the survey in real-time.

A pilot study is frequently served as a dry run and were conducted right before the actual survey is administered to a whole sample of respondents. A pilot test aims to ensure that research participants comprehend and interpret the questions in the same way. The results provide a sense of which kind of responses you will obtain and any problems that may arise throughout the duration of the actual study. A pilot test allows the researcher to see whether there is any questions in the survey that may cause the respondents to feel uncomfortable or any ambiguous and difficult questions included in the questionnaire. Moreover, the researcher is able to find out the duration of time needed by the participants to complete the survey in real-time.

Data from the pilot study were examined to explore the usefulness and reliability of each item in the questionnaire. Once the items are finalised, the instrument was used for actual study. The data derived from this pilot study was used to conduct an exploratory factor analysis and also to measure the measurement model. These are important procedures to test the usefulness and effectiveness of the model, such as the reliability and validity for each item and constructs, discriminant issues, the relevancy of the model using the Structural Equation Modelling procedure.

There is a rule of thumb that can be used to determine the number of samples sufficient for a pilot study. According to Isaac and Michael (1995), 10 to 30 samples are sufficient while Hair et al. (2017) suggested 100 samples are sufficient for a pilot study. Hertzog (2008) suggested 10 per cent of the sample used in the main study is considered valid for a pilot test. According to Krejcie Morgan's table of sample size determination, the study where the population is above 9000, 368 samples is needed for the actual study sample. Hence, 10 per cent of 368 is 37. Therefore, 37 samples are needed if Krejcie Morgan's table is used. The final number of samples for the pilot study is 56, which is sufficient according to many scholars.

In this study, the pilot study is conducted using an online survey. The researchers used a convenience sampling technique to select samples from the population. Respondents who took part in this study were selected from the researcher's personal contact. For the pilot study purposes, the questionnaire was not distributed through emails and group online social platforms of Administrative and Diplomatic Officers as the researchers aim to include many of them later in the actual study. Respondents in the pilot study were informed about the objectives of the study. In the beginning of data collection, the respondents were needed to give their consent in the consent form included in the study before they started to answer the questionnaire.

3.11.1 The Result of Pilot Study

The pilot study was conducted from April 2021 to May 2021, which involved 56 Administrative and Diplomatic Officers serving in various government organisations in Putrajaya. Respondents were selected randomly from the researcher's contacts and referrals from the respondents who took part earlier in this pilot study. The sampling technique employed during the pilot study was convenience sampling technique.

The respondents were invited to participate in this study through emails and text messages. The hyperlink to the Qualtrics Online Survey web page was inserted in the emails and online text messages. The online survey form started with the introduction about the researchers, background, and objectives of the study. Furthermore, the significance of this study to the public service and the importance of getting responses from respondents was explained explicitly. The respondents are required to give their

consent in the form included in the online survey. The respondents' duration to complete the survey is within 15 to 30 minutes, as anticipated by the researcher.

During the pilot study, respondents were asked about the questionnaire used to measure the constructs in the study. Participants are requested to provide feedbacks on the study instrument through emails, online text messages, or telephone calls. According to the respondents, there are no significant difficulties to comprehend the online survey instructions and the survey items in general. Some respondents commented on the excessive length of the survey. On the other hand, most of the respondents agreed with the number of items included in the questionnaire. Moreover, several minor changes were also recommended by respondents.

Although feedbacks were received from the respondents, none of the items were excluded because the researcher considered all items in the research instrument were important to be included to measure the constructs. The items have already undergone a rigorous process during the pre-test procedure. However, improvements were made based on the feedbacks received to ensure the phrasing of the items were precise, short, and the phrase were relevant to the Malaysian public service context. All items were retained because the instrument was developed based on findings from the preliminary study and content validity procedure conducted earlier in this study.

3.11.2 Demographic of the Pilot Study Respondents

Demographic factors of respondents consist of personal information such as gender, age, marital status, race, highest education level, salary grade, and length of service. Among 56 respondents who took part in the pilot study, 40 (71.4%) are female, and the remaining 16 (28.6%) are males. In terms of age, 25 (44.6%) of them are between 41 to 45, 23 (41.1%) are between 36 to 40, 5 (8.9%) are between 31 to 35, and 3 (5.4%) aged between 46 to 50. In terms of race, majority of the respondents, 51 (91.1%), are Malay, while 3 (5.4%) are Chinese, the remaining 2 (3.6%) are Indian. The highest education level of 39 respondents (69.6%) are master's level, 16 (28.6%) are bachelor's degree holders while 1 (1.8%) is a doctorate holder. Of all respondents, 25 (44.6%) respondents are in grade 48, 15 (26.8%) in grade 44, 10 (17.9%) in grade 52, 4 (7.1%) in grade 54, and 2 (3.6%) in grade 41.

In terms of working experience, 38 (67.9%) respondents have between 6 to 10 years working experience, 12 (21.4%) have between 11 to 15 years working, 3 (5.4) have between 1 to 5 years working, and 3 (5.4) have between 16 to 20 years working experience. The respondents were also asked whether they are listed in the talent pool. Most respondents, 29 (51.8%), stated that they are not listed in the talent pool; meanwhile, another 21 (37.5%) respondents stated that they are not sure. Meanwhile, 6 (10.7%) of the respondents stated they are listed in the talent pool. The demographic information of the respondents is provided in Table 3.12.

Table 3. 12 Demographic of respondents in the pilot study

Demographic	Frequency (N=56)	Percentage (%)
Gender		
Male	16	28.6
Female	40	71.4
Age		
Below 25	0	0
26-30	0	0
31-35	5	8.9
36-40	23	41.1
41-45	25	44.6
46-50	3	5.4
51-55	0	0
Above 56	0	0
Marital Status		
Single	7	12.5
Married	47	83.9
Others	2	3.6
Races		
Malay	51	91.1
Chinese	3	5.4
Indian	2	3.6
Highest Education Level		
Bachelor's degree	16	28.6
Masters	39	69.6
Doctorate	1	1.8
Salary Grade		
41	2	3.6
44	15	26.8

48	25	44.6
52	10	17.9
54	4	7.1
Length of Service		
1-5 years	3	5.4
6-10 years	38	67.9
11-15 years	12	21.4
16-20 years	3	5.4
Listed in Talent Pool		
Yes	6	10.7
No	29	51.8
Not Sure	21	37.5

3.11.3 Demographic of Managers in the Pilot Study

The transformational leadership style of leaders in the public service is assessed in this study. Therefore, the respondents are required to provide demographic information of their manager. The demographic factors of managers consist of the manager's gender, salary grade, marital status, and race.

In terms of gender, the majority of the leaders, 35 (62.5%), are male, and the remaining 21 (37.5%) are female. Most managers, 47 (83.9%) are Malay, 4 (7.1%) are Indian, 3 (5.4%) are Sarawak natives the remaining 1 (1.8%) each are Chinese and Sabah native. Most of the managers, 29 (51.8%) in grade 54, 11 (19.6%) in premier grade, 9 (16.1%) in grade 48, and remaining 7 (12.5%) in grade 52. The demographic information of the manager is presented in Table 3.13.

Table 3. 13 Demographic of managers in the pilot study

Demographic	Frequency (N=56)	Percentage (%)
Gender		
Male	35	62.5
Female	21	37.5
Salary Grade		
48	9	16.1
52	7	12.5
54	29	51.8
Premier	11	19.6
Marital status		
Single	3	5.4
Married	51	91.1
Others	2	3.6
Races		
Malay	47	83.9
Chinese	1	1.8
Indian	4	7.1
Sabah Natives	1	1.8
Sarawak Natives	3	5.4

3.11.4 Data Analysis

The pilot study data were entered directly into IBM SPSS Statistics Version 27 to be analysed using descriptive statistics, principal component analysis, reliability test, and normality test. First, descriptive statistics were used to analyse the demographic factors of respondents and their managers. Second, principal component analysis was conducted to investigate the nature of scores when the instruments were used to measure the transformational leadership construct in this study. Finally, the instruments were used to measure the participants' public service motivation, talent management practices, and engagement level of the Administrative and Diplomatic Officers in the public service. The aims of data analysis in the pilot study is to assess the reliability, validity of the constructs and whether the item scores provide evidence of measurement of a single underlying construct.

3.11.5 Adaptation of the Instruments

Malay language is the standard formal language used in the public organisations. Therefore, the questionnaires in this study were made available in two languages: English and Malay versions. The Employee Engagement Scales, Global Transformational Leadership Scales, Public Service Motivation Scales, and Talent Management Practices Scales were initially adapted from English version questionnaires. Therefore, Malay translation was conducted as the study recruitment was held in Malaysian public service.

The translation process from English to Malay language inevitably required some syntactic adjustments. Nonetheless, a back-translation validation method was used to maintain conceptual equivalence between items from the original English version and the Malay version. The back-translation method means the original version questionnaires were translated to the Malay language and then retranslated to English to ensure the meaning of each item was consistent as the original version. To ensure the accuracy of translation in this study, the translation from English version to Malay version was conducted by a professional bi-lingual ITBM certified translator. The process of translations involved back translation procedure and series of discussion between the translator and researchers. The Malay translated version was also being tested in the pre-testing procedure before pilot test was conducted. This additional procedure of pre-testing was carried out to minimise the problem during the pilot study. The English and Malay versions' questionnaires are presented in Appendix 11.

During the data collection procedure, the respondents were invited to complete the questionnaire in the language which they feel most comfortable with or the language they communicate in their daily lives.

3.11.6 Data Preparation and Assumption Testing

The collected data has undergone data preparation and assumption testing before they were analysed. During this procedure, all data were examined to see if there were any missing values and same values in one row. Based on the thorough examination of the data, there was no issue with missing data in this study since the Qualtrics online survey

allows the researcher to set the response requirements as a force response. Participants are required to answer all questions in order to submit their responses. Incomplete questionnaires were also recorded but was not taken into the report. Based on pilot data examination, no respondent has given the same rating to any of the items. In conclusion, there are no issues with the data, and the researcher proceeded to the next step in the process which is the exploratory data analysis.

3.11.7 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) is a statistical method widely used to go beyond individual items of questionnaires to reveal the dimensionality of items that may have been modified from previous studies. According to Green et al. (2016), EFA could be performed if the structure of factor and the number of factors is little understood. This approach is therefore used primarily in the scale development process and used to specify the dimensions of the construct (Pallant, 2007; Reise et al., 2000; Thompson, 2004). According to Rahlin et al. (2019), Shkeer and Awang (2019), and Yahaya et al. (2018), it is necessary to conduct EFA for individual variables in order to examine the data for any changes that may occur in the dimensionality of items from previous research due to differences in the characteristics of the population. In this study, EFA was performed as some adjustments have been made to the instruments developed by previous studies. Some of the items have been subjected to adaptation in line with the current research needs. The original version of the questionnaire has also been translated to other languages and the study targeted a different population than the previous study.

The Exploratory Factor Analysis procedure contains the mean score for each item along with the standard deviation, the Kaiser-Meyer-Olkin (KMO) sampling adequacy measure, the total variance explained for individual constructs, the loading factor for all items, and the dimensionality of items in their respective components. Finally, the consistency score for the construct was calculated using Cronbach's Alpha.

However, the issue of sample size has garnered a great deal of attention due to the fact that insufficient sample size has frequently hindered the applications of EFA (MacCallum et al., 1999). MacCallum presented a theoretical framework for the

impacts of sample size on factor recovery, laying the basis for the claim that there are no absolute minimum sample size thresholds. The framework shows that factor recovery improves as (1) sample size increases, (2) communalities increase, and (3) per factor increases. The effect of per factor diminishes as communalities increase, and it may also interact with sample size. Mundfrom et al. (2005) indicate that factor analysis could be reliable for sample sizes below 50 if communalities are high and the number of factors is small. The literature on factor analysis includes a wide range of basic guidelines on sample size. Most of them constantly advise large samples for factor analysis to provide high-quality results. A minimum sample size of 200 was recommended by Guilford (1954) for consistent factor recovery. However, some researchers suggested a lower range minimum sample, from 50 to 1000 (Comrey, 1973; Gorsuch, 1974; Winter et al., 2009). Other researchers focus on the number of cases per variable (Cattell, 1978; Hair et al., 1979).

Small sample data sets are quite common in social and behavioural research. According to Winter et al. (2009), EFA is typically used with high sample sizes, with 50 cases being a reasonable absolute minimum (Winter et al. 2009). This pilot study has 56 samples. Therefore, the researcher conducted EFA for this study to explore the items in order to determine underlying factors for each of the variable.

After EFA was conducted for each construct, a reliability test was performed for each of the components derived from the EFA. The reliability test is used to determine how dependent or consistently a test evaluates a characteristic in order to ensure that the item is reliable and valid. The components were measured for scale reliability using Cronbach's Alpha coefficient. Cronbach's Alpha is the most popular and frequently used statistic in reliability analysis (Rosnow & Rosenthal, 1998). According to a commonly referenced rule of thumb, a coefficient above 0.7 is considered adequate for psychological constructs (Kline, 1999). Reliability analysis has the advantage of allowing a researcher to treat a group of variables on the same subject as a single scale variable, simplifying future analysis and reducing the likelihood of Type I errors (Samuels, 2015).

The transformational leadership style of manager construct was measured using the 5-point Likert scale of frequency ranging from Strongly disagree (1) to Strongly agree (5)

was used to measure the items. Table 3.14 shows the mean score, standard deviation, and statement for the transformational leadership construct's item. The result shows the mean score and standard deviation for each item, demonstrating the consistency of the score distribution with a standard deviation less than 1.5. The mean score ranged from 3.73 to 3.98. Item statement, mean and standard deviation for transformational leadership style of manager is presented in Table 3.14.

Table 3. 14 Item statement, mean and standard deviation for transformational leadership style of manager construct items

Item No	Item Statement	Mean	SD
TLM1	My manager communicates a clear and positive vision of the future.	3.75	.900
TLM2	My manager treats their subordinates as individuals, supports and encourages their development.	3.98	.824
TLM3	My manager gives encouragement and recognition to their subordinates.	3.75	.785
TLM4	My manager fosters trust, involvement, and cooperation among team members.	3.92	.809
TLM5	My manager encourages thinking about problems in new ways and questions assumptions.	3.87	.986
TLM6	My manager is clear about his/her values and practises what he/she preaches.	3.83	.875
TLM7	My manager instils pride and respect in others and inspires me by being highly competent	3.73	.884

In order to retain items in the construct, the acceptable value of factor loading for individual items should be more than 0.6 (Awang et al., 2018; Ehido et al., 2020). Table 3.15 shows the components or dimensions for each item. From the findings, seven items under the transformational leadership construct belong to one component. Therefore, it is a unidimensional construct that is consistent with the literature. All factor loadings of the items were higher than 0.6, with TM6 being the highest value (0.883) and the lowest value was item TLM3 (0.740). Table 3.14 indicates the components for transformational leadership construct and factor loading for each item.

**Table 3. 15 The factor loading for each item and their components
(transformational leadership style of manager construct)**

Component Matrix	
	Component
TLM1	.844
TLM2	.814
TLM3	.740
TLM4	.808
TLM5	.875
TLM6	.883
TLM7	.838

Table 3.16 shows that Bartlett’s Test of Sphericity is highly significant (sig .000), which is not greater than 0.05. Meanwhile, KMO Measure of Sampling Adequacy is 0.887, greater than the minimum threshold of 0.6 (Awang, 2012), indicating that the sample size is adequate (Bahkia et al., 2019; Hoque et al., 2017; Shkeer & Awang, 2019). Therefore, based on this finding of both values (KMO is greater than 0.6) and Bartlett Test are significant (P<0.05) indicates that the current data used in this study was adequate. The KMO and Bartlett’s Test Value for transformational leadership style is shown in Table 3.16.

Table 3. 16 KMO and Bartlett’s Test Value for transformational leadership style of manager construct items

KMO and Bartlett’s test		
Kaiser-Meyer-Olkin Test for Sample Adequacy		.887
Bartlett’s Test of Sphericity	Approx. Chi-Square	519.729
	Df	21
	Sig.	.000

Cronbach's Alpha value for the component derived from EFA is more than 0.7. Furthermore, Cronbach's Alpha value for all 24 items exceeded the 0.7 thresholds. Hence, the validation and development scale verified that the instrument is consistent and stable across samples. Table 3.17 indicates the internal reliability value for each component under the transformational leadership construct.

Table 3. 17 Internal reliability value for transformational leadership style of manager construct items

Reliability Statistics			
Component	Name	Number of Items	Cronbach Alpha
1	Transformational leadership style of manager.	7	0.924

Self-perceived transformational leadership style construct was measured using the 5-point Likert scale of frequency ranging from Strongly disagree (1) to Strongly agree (5) to measure the items. The findings show the mean score and standard deviation for each item, demonstrating the consistency of the score distribution with a standard deviation less than 1.5. The mean score is ranged from 4.10 to 4.42. Table 3.18 indicates the mean score and standard deviation for self-perceived transformational leadership style.

Table 3. 18 Item statement, mean and standard deviation for self-perceived transformational leadership style construct items

Item No	Item Statement	Mean	SD
TLS1	I communicate with a clear and positive vision of the future to my subordinates.	4.10	.690
TLS2	I treat my subordinates as individuals, supporting, and encourages their development.	4.38	.596
TLS3	I give encouragement and recognition to my subordinates	4.42	.634
TLS4	I foster trust, involvement, and cooperation among my team members.	4.50	.575
TLS5	I encourage thinking about old problems in new ways and questioning assumptions.	4.10	.770
TLS6	I am clear about my self-values and practise what I preach.	4.35	.587
TLS7	I instil pride and respect in others and inspire them by being highly competent.	4.38	.596

Table 3.19 shows the component for the item and the factor loading for each item. From the findings, seven items under self-perceived transformational leadership construct belong to one component. All factor loadings of the items were higher than 0.6. The highest value was TLS7 (0.853). The lowest was TLS3 (0.656). Furthermore, the Cronbach's Alpha of all items was greater than 0.70.

Table 3. 19 The factor loading for each item and their components (self-perceived transformational leadership style construct)

Component Matrix	
	Component
TLS1	.799
TLS2	.827
TLS3	.656
TLS4	.735
TLS5	.736
TLS6	.822
TLS7	.853

Table 3.20 shows that Bartlett’s Test of Sphericity is highly significant (sig .000), which is not greater than 0.05. Meanwhile, KMO Measure of Sampling Adequacy is 0.828, greater than a minimum threshold of 0.6 (Awang, 2012), indicates that the sample size is adequate (Bahkia et al., 2019; Hoque et al., 2017; Shkeer & Awang, 2019). Therefore, based on this finding of both values, KMO is greater than 0.6 and Bartlett Test are significant ($P < 0.05$) indicates that the current data used in this study was adequate. The KMO and Bartlett’s Test value for self-perceived transformational leadership style construct is shown in Table 3.20.

Table 3. 20 KMO and Bartlett’s Test Value for self-perceived transformational leadership style construct

KMO and Bartlett’s test		
Kaiser-Meyer-Olkin Test for Sample Adequacy		.828
Bartlett’s Test of Sphericity	Approx. Chi-Square	384.644
	Df	21
	Sig.	.000

Cronbach's Alpha value for the component derived from EFA is 0.886, more than 0.7 thresholds. Furthermore, the Cronbach's Alpha value for all 24 items exceeded the 0.7 thresholds. Hence, the validation and development scale verified that the instrument is consistent and stable across samples. Table 3.21 indicates the internal reliability value for self-perceived transformational leadership style.

Table 3. 21 Internal reliability value for self-perceived style construct

Reliability Statistics			
Component	Name	Number of Items	Cronbach Alpha
1	Self-perceived Transformational Leadership Style	7	0.886

The third exogenous variable is the talent management practices construct measured using a 5-point Likert scale, ranging from Strongly disagree (1) to Strongly agree (5). Table 3.22 shows the mean score, standard deviation, and statement for talent management practices. The result shows the mean score and standard deviation for each item, demonstrating the consistency of the score distribution with a standard deviation less than 1.5. The mean score ranged from 2.96 to 3.93.

Table 3. 22 Item statement, mean and standard deviation for talent management practices construct items

Item No	Item Statement	Mean	SD
TI1	My organisation builds up talent pool for high potentials in the public service.	3.64	.819
TI2	My organisation identifies talents that make the highest impact on organisation success.	3.61	.802
TI3	My organisation differentiates the contribution level of talents in the workplace.	3.34	.837
TI4	Talent identification and evaluation programmes implemented in my organisation are effective in identifying high potentials.	3.34	.978
TD1	I have the opportunity to participate in related seminars, workshops, conferences, and training if I need particular skill development.	3.77	.809
TD2	Training and development programmes provided in my organisation help improve my work performance.	3.93	.657
TD3	The training and development programmes are implemented continuously in my organisation.	3.80	.883
TD4	The content of the training and development programmes implemented in my organisation are based on job performance.	3.39	.888

CE1	Identified high potentials in my organisation have better opportunities for upward mobility.	3.71	.780
CE2	I have clear career paths in this organisation.	3.39	.802
CE3	I have more than one avenue for promotion.	2.96	.873
CE4	There are opportunities for me to grow my career at my organisation.	3.41	.890
PM1	I receive feedbacks on my work performance from time to time.	3.57	.871
PM2	The feedbacks I receive help me to improve my work performance.	3.88	.764
PM3	I think that my performance is evaluated fairly.	3.82	.741
RM1	My organisation values my work contribution.	3.82	.636
RM2	I feel that my pay adequately reflects my work performance.	3.64	.903
RM3	The organisation I serve provides recognition to me.	3.79	.756

Table 3.23 shows the components or dimensions for each item. From the findings, 18 items belong to four components. There are five items that have factor loadings less than 0.6 and should be deleted from the talent management practices construct, which were TD1, TD2, TD3, and another two with cross-loading, which are TD4, and CE2. However, the five items were retained as they are essential to measuring talent management practices. Furthermore, the Cronbach's Alpha of all items is greater than 0.70. Therefore, all items that were utilised to measure talent management practices construct are included in the actual data collection.

Table 3. 23 The factor loading for each item and their components (talent management practices construct)

Items	Rotated Component Matrix			
	Component			
	1	2	3	4
TI1	.818			
TI2	.813			
TI3	.674			
TI4	.705			
TD1	.533			
TD2				
TD3	.539			
TD4	.547	.596		
CE1		.677		

CE2	.588	.554	
CE3		.719	
CE4		.767	
PM1			.848
PM2			.716
PM3		.668	
RM1		.843	
RM2		.670	
RM3		.619	

Note: Total variance explained: 68.31% Extraction Method using Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation (Rotation converged in 12 iterations)

Table 3.24 shows that Bartlett's Test of Sphericity is highly significant (sig .000), which is not greater than 0.05. Meanwhile, KMO Measure of Sampling Adequacy is 0.698, greater than the minimum threshold of 0.6 (Awang, 2012), indicating that the sample size is adequate (Bahkia et al., 2019; Hoque et al., 2017; Shkeer & Awang, 2019). Therefore, based on this finding of both values, KMO is greater than 0.6, and Bartless Test are significant ($P < 0.05$) indicates that the current data used in this study was adequate. The KMO and Bartlett's Test value for talent management practices construct is shown in Table 3.24.

Table 3. 24 KMO and Bartlett's Test Value for talent management practices construct items

KMO and Bartlett's test		
Kaiser-Meyer-Olkin Test for Sample Adequacy		.698
Bartlett's Test of Sphericity	Approx. Chi-Square	1218.943
	Df	153
	Sig.	.000

Cronbach's Alpha values for the four components range from 0.762 to 0.887, higher than the 0.7 thresholds. Hence, the validation and development scale verified that the instrument is consistent and stable across samples. Table 3.25 indicates the internal reliability value for each component for talent management practices construct.

Table 3. 25 Internal reliability value for each component (talent management practices construct)

Component	Number of Items	Cronbach Alpha
1	5	0.879
2	4	0.887
3	3	0.823
4	2	0.762

As discussed earlier, five items were retained as they are important to measuring talent management practices. In addition, Cronbach's Alpha was rerun according to the original factors. Based on the findings, all items were greater than 0.70. Therefore, all items shown in Table 3.26 that were used to measure talent management practices construct were included in the actual data collection.

Table 3. 26 Internal reliability value for each component (talent management practices construct)

Factors	Number of Items	Cronbach Alpha
Talent Identification	4	0.882
Talent Development	4	0.834
Career Enhancement	4	0.805
Performance Management	3	0.700
Reward Management	3	0.656

Cronbach's Alpha values for the five components derived from EFA is ranging from 0.656 to 0.882. Cronbach's Alpha value for four components exceeded the 0.7 thresholds while one component was lower than 0.7 (reward management). Hence, the validation and development scale verified that most components in the instrument are consistent and stable across samples. However, although reward management construct has a lower Cronbach's Alpha than threshold of 0.7, the researcher decided to include the construct in actual data collection as the construct and items have undergone a rigour procedure during pre-test procedure. The items were found to be relevant and important to measure talent management practices construct.

Public service motivation construct was measured using a 5-item scale Global Public Service Motivation (Alonso & Lewis, 2001). In addition, the 5-point Likert scale of frequency ranging from Strongly disagree (1) to Strongly agree (5) was used to measure

the items. Table 3.27 shows the mean score, standard deviation, and statement for the public service motivation construct's item. The result in Table 3.27 shows the mean score and standard deviation for each item, demonstrating the consistency of the score distribution with a standard deviation less than 1.5. The mean score ranges from 3.71 to 4.58.

Table 3. 27 Item statement, mean and standard deviation for public service motivation construct items

Item No	Item Statement	Mean	SD
PSM1	Meaningful public service is very important to me.	4.58	.496
PSM2	I am not afraid to go to bat for the rights of others, even if it means I will be ridiculed.	3.71	.821
PSM3	Making a difference in society means more to me than personal achievements.	4.04	.835
PSM4	I am prepared to make enormous sacrifices for the good of the society.	4.00	.763
PSM5	I am often reminded by daily events about how dependent we are on one another.	3.96	.812

Table 3.28 shows the components or dimensions for each item. From the findings, five items under public service motivation construct belong to one component. Factor loadings of four items were higher than 0.6, with PSM4 was the highest (0.866). There is only one item that has factor loading less than 0.6, which is PSM5 (0.470). This lower loading item should be deleted from the public service motivation construct. However, the item was retained as it is important to measure public service motivation construct. Furthermore, Cronbach's Alpha of all items is greater than 0.70. Therefore, all items that were brought further to measure public service motivation construct are included in the actual data collection.

Table 3. 28 The factor loading for each item (public service motivation construct)

Component Matrix	
	Component
PSM1	.696
PSM2	.652
PSM3	.840
PSM4	.866
PSM5	.470

Table 3.29 shows that Bartlett's Test of Sphericity is highly significant (sig .000), which is not greater than 0.05, whereas KMO Measure of Sampling Adequacy is 0.758. Therefore, based on this finding of both values, KMO is greater than 0.6) and Bartlett Test are significant ($P < 0.05$) indicates that the current data used in this study was adequate. The KMO and Bartlett Test for public service motivation construct is presented in Table 3.29.

Table 3. 29 KMO and Bartlett's Test Value for public service motivation construct items

KMO and Bartlett's test		
Kaiser-Meyer-Olkin Test for Sample Adequacy		.758
Bartlett's Test of Sphericity	Approx. Chi-Square	140.326
	Df	10
	Sig.	.000

Cronbach's Alpha value for the component derived from the EFA is 0.743, which is more than 0.7. Hence, the validation and development scale verified that the instrument is consistent and stable across samples. Table 3.30 indicates the internal reliability value for components under public service motivation construct.

Table 3. 30 Internal reliability value for each component (public service motivation construct)

Reliability Statistics			
Component	Name	Number of Items	Cronbach Alpha
1	Public Service Motivation	5	0.743

Employee engagement construct was measured using the 9-item Utrecht Work Engagement Scale by Schaufeli et al. (2004). In addition, the 5-point Likert scale ranging from Not at all (1) to Very often (5) was used to measure the items. Table 3.31 shows the mean score, standard deviation, and statement for the public service motivation construct's item. The result shows the mean score and standard deviation for each item, demonstrating the consistency of the score distribution with a standard deviation less than 1.5. The mean score is ranging from 3.52 to 4.10.

Table 3. 31 Item statement, mean and standard deviation for employee engagement construct items

Item No	Item Statement	Mean	SD
EE1	When I wake up in the morning, I feel like going to work.	3.85	.721
EE2	At my work, I feel myself bursting with energy.	3.83	.703
EE3	At my jobs, I feel strong and vigorous.	3.90	.842
EE4	I am enthusiastic about my job.	3.79	.797
EE5	My job inspires me.	3.77	.873
EE6	I am proud of the work that I do.	4.10	.661
EE7	I am immersed in my work.	3.98	.668
EE8	I get carried away when I am working.	3.52	1.01
EE9	I feel happy when I work intensely.	4.02	.847

From the findings, nine items under the employee engagement construct belong to one component. Most factor loadings of the items were higher than 0.7. EE8 was the highest loadings value (0.842). One item has factor loadings less than 0.6 (EE1: 0.508) and should be deleted from the employee engagement construct. However, the item was retained as it is significant to measure employee engagement construct. Furthermore, the Cronbach's Alpha of all items was greater than 0.70. Therefore, all items were used to measure employee engagement construct and are included in the actual data collection. Table 3.32 shows the components or dimensions for each item.

Table 3. 32 The factor loading for each item (employee engagement construct)

Component Matrix	
	Component
EE1	.508
EE2	.814
EE3	.803
EE4	.791
EE5	.806
EE6	.706
EE7	.722
EE8	.842
EE9	.765

Table 3.33 shows that Bartlett’s Test of Sphericity is highly significant (sig .000), which is not greater than 0.05. Meanwhile, KMO Measure of Sampling Adequacy is 0.832, which is greater than the minimum threshold of 0.6 (Awang, 2012), indicating that the sample size is adequate. Therefore, based on this finding of both values, KMO is greater than 0.6 and Bartlett’s Test are significant ($P < 0.05$) indicates that the current data used in this study was adequate. The KMO and Bartlett’s Test for employee engagement construct is presented in Table 3.33.

Table 3. 33 KMO and Bartlett’s Test value (employee engagement construct)

KMO and Bartlett’s test		
Kaiser-Meyer-Olkin Test for Sample Adequacy		.832
Bartlett’s Test of Sphericity	Approx. Chi-Square	571.924
	Df	36
	Sig.	.000

Cronbach's Alpha value for the component derived from EFA is 0.900, which is more than the threshold of 0.7. Hence, the validation and development scale verified that the instrument is consistent and stable across samples. Table 3.34 indicates the internal reliability value for each component for employee engagement construct.

Table 3. 34 Internal Reliability value for each component (employee engagement construct)

Reliability Statistics			
Component	Name	Number of Items	Cronbach Alpha
1	Employee engagement	9	0.900

3.11.8 PLS-SEM Software: Smart PLS

Smart PLS is a statistical software developed by Ringle et al. (2015) used to facilitate the analytical process to evaluate the measurement model in this pilot study. Smart PLS is a milestone in latent variable modelling. It combines cutting-edge technologies (such as PLS-POS, IPMA, and complicated bootstrapping processes) with a user-friendly and intuitive graphical user interface.

3.11.9 Reliability and Validity of the Study

Other than Cronbach's Alpha in SPSS software, Composite Reliability in Smart PLS was also used to assess the constructs' reliability. At first, the entire model was evaluated, and indicators with factor loadings less than 0.6 were deleted. The Cronbach's Alpha and Composite Reliability values were all greater than the recommended value of 0.7. Furthermore, Composite Reliability values were ranging from 0.839 to 0.941, respectively, confirming the convergent validity.

Consequently, validity assessment needs to be carried out to ensure latent construct in this study measuring what they intended and required to measure. There are two types of validity: convergent validity and discriminant validity. Convergent validity was assessed using Average Variance Extracted (AVE). AVE is employed to assess the items to determine whether they converged and come together to measure the latent construct. The researcher is interested to know how well the items work together to measure and present the construct and how much variance can be extracted from the items to measure the latent construct. Therefore, the AVE should be greater than 0.50. AVE greater than 0.50 meaning it is converging as AVE should be at least 50 percent of the variance. In this study, AVE values were between 0.512 and 0.761.

After measuring convergent validity, discriminant validity was then evaluated. Discriminant validity is about the differentiation in the construct. The constructs should have their own identity and must be different from the other construct in the study. It could be assessed using discriminant validity. There are three ways discriminant validity could be established, by examining Fornell Lacker criterion, cross-loading, and Heterotrait-Monotrait method. This study has five constructs: transformational leadership style of manager, self-perceived transformational leadership style, talent management practices, public service motivation, and employee engagement.

The square root of AVE should be higher than its correlation with all the other constructs. Other than that, to assess discriminant validity, Heterotrait-Monotrait method was employed as reported. To establish discriminant validity using Heterotrait-Monotrait method, the ratio value should be less than 0.85.

3.11.10 Assessing the Measurement Model

The measurement model was the first stage to be analysed in structural equation modelling analysis to test the construct's validity (convergent and divergent validity) and reliability employed according to Hair et al. (2019) and Ramayah et al. (2018) guidelines.

In order to assess convergent validity in the study, the loadings, average variance extracted (AVE) and composite reliability, and Cronbach's Alpha were assessed and then were reported (Hair et al., 2010). Loading values should be greater than 0.55, AVE at least 0.5, Composite Reliability, and Cronbach's Alpha should be greater than 0.7. As shown in Table 3.35, the values of loadings and AVE for transformational constructs (manager and self-perceived) are greater than 0.5, whereas values for composite reliability and Cronbach's Alpha are greater than 0.7. The findings of the study established that convergent validity for transformational leadership constructs (manager and self-perceived) was confirmed as the AVE and composite reliability of each construct were beyond the threshold (Hair et al., 2010).

Table 3. 35 Result for reflective measurement model (transformational leadership style constructs)

Result Summary for Reflective Measurement Model					
Latent Variable	Indicators (items)	Convergent Validity		Internal Consistency Reliability	
		Loadings	AVE	CR	Cronbach's Alpha
		>0.55	>0.5	0.7	0.7
TLM	TLM1	0.852	0.695	0.941	0.927
	TLM2	0.786			
	TLM3	0.739			
	TLM4	0.835			
	TLM5	0.879			
	TLM6	0.893			
	TLM7	0.842			
TLS	TLS1	0.821	0.616	0.918	0.896
	TLS2	0.823			
	TLS3	0.699			
	TLS4	0.716			
	TLS5	0.729			
	TLS6	0.849			
	TLS7	0.841			

Secondly, the measurement model of talent management practices construct was assessed. Talent management practices was the only second-order construct in this study. The convergent validity of this construct was assessed. Based on the findings, factor loadings values talent management practices (first order and second order) are greater than 0.55, AVE values are greater than 0.5, whereas values for Composite Reliability and Cronbach's Alpha are greater than 0.7, as shown in Table 3.36. Findings of the study established that convergent validity for talent management practices construct was confirmed as the AVE and Composite Reliability of each construct were beyond the threshold (Hair et al., 2010).

Table 3. 36 Result for reflective measurement model (talent management practices)

Result Summary for Reflective Measurement Model						
Latent Variable		Indicators (items)	Convergent Validity		Internal Consistency Reliability	
First Order	Second Order		Loadings	AVE	CR	Cronbach Alpha
			>0.55	>0.5	0.7	0.7
TI		TI1	0.917	0.761	0.927	0.893
		TI2	0.920			
		TI3	0.868			
		TI4	0.776			
TD		TD1	0.802	0.685	0.897	0.847
		TD2	0.791			
		TD3	0.854			
		TD4	0.863			
CE		CE1	0.718	0.638	0.876	0.811
		CE2	0.823			
		CE3	0.814			
		CE4	0.836			
PM		PM1	0.779	0.622	0.829	0.730
		PM2	0.830			
		PM3	0.796			
RM		RM1	0.861	0.643	0.844	0.690
		RM2	0.648			
		RM3	0.839			
	TMP	TI	0.866	0.512	0.927	0.926
		TD	0.865			
		CE	0.823			
		PM	0.844			
		RM	0.829			

Thirdly, the researcher assessed convergent validity for public service motivation and employee engagement constructs. The loadings values for public service motivation and employee engagement are greater than 0.55, and AVE values are greater than 0.5. Meanwhile, Composite Reliability and Cronbach's Alpha values are greater than 0.7, as presented in Table 3.37. The findings of the study established that convergent validity

for public service motivation, and employee engagement construct was confirmed as the AVE and Composite Reliability of each construct were beyond the threshold (Hair et al., 2010).

Table 3. 37 Result for reflective measurement model (public service motivation and employee engagement)

Result Summary for Reflective Measurement Model					
Latent Variable	Indicators (items)	Convergent Validity		Internal Consistency Reliability	
		Loadings	AVE	CR	Cronbach's Alpha
		>0.55	>0.5	0.7	0.7
PSM	PSM1	0.677	0.520	0.839	0.758
	PSM2	0.622			
	PSM3	0.824			
	PSM4	0.838			
	PSM5	0.593			
EE	EE1	0.602	0.575	0.923	0.908
	EE2	0.820			
	EE3	0.836			
	EE4	0.834			
	EE5	0.780			
	EE6	0.765			
	EE7	0.752			
	EE8	0.614			
	EE9	0.782			

The findings of the study established that convergent validity was confirmed as the AVE and Composite Reliability of each construct were beyond the threshold, as shown in Table 3.38.

Table 3. 38 Convergent validity results of the individual constructs

Construct	AVE	CR	Construct Validity
Transformational Leadership Style of Manager	0.695	0.941	Confirmed
Self-Perceived Transformational Leadership Style	0.616	0.918	Confirmed
Talent Management Practices	0.512	0.927	Confirmed
Public Service Motivation	0.520	0.839	Confirmed
Employee Engagement	0.575	0.923	Confirmed

The second stage of the measurement model assessment is to examine the discriminant validity in the study. According to Hair et al. (2010), divergent validity is how the construct is strictly different from others. In this study, the discriminant validity of the data was examined using the Heterotrait-Monotrait criterion proposed by Henseler et al. (2015) and was updated by Franke and Sarstedt (2019). The stricter criterion of Heterotrait-Monotrait values should be ≤ 0.85 , while the lenient criterion should be ≤ 0.90 .

Table 3. 39 The discriminant validity

	1	2	3	4	5
1. EE					
2. PSM	0.432				
3. TLM	0.297	0.217			
4. TLS	0.447	0.732	0.316		
5. TMP	0.444	0.377	0.417	0.271	

As presented in Table 3.39, Heterotrait-Monotrait values are within the acceptable range, 0.217 to 0.732, and all are lower than the stricter ≤ 0.85 thresholds. As such, the researcher conclude that all respondents understood the five constructs in this study are distinct. Therefore, divergent validity in this study is confirmed, which indicates that the five constructs are different. The findings show that when combined, both validity tests demonstrated that the measurement items are valid and reliable.

CHAPTER 4: DATA ANALYSIS

4.1 Introduction

This chapter presents the explanation of the data analysis conducted based on the official data collection procedure and empirical results to test the research hypotheses relationship among variables. This study examined the relationship between transformational leadership style, talent management practices, public service motivation, and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector. According to previous studies, public service motivation has a significant impact on employee engagement. Therefore, this study predicts the mediating effect of public service motivation on the relationships between transformational leadership style, talent management practices, and employee engagement. The interaction effects are explored further in this study.

This chapter provides a statistical assessment of the study. The first phase details out preliminary data analysis and the second phase discusses measurement and structural model assessment. The first phase begins with an overview of the chapter, including data collection procedure, data screening to detect missing data and data presentation, data preparation, data cleaning, response pattern, and detection of outliers. The next section discusses normality of the data, response rate, demographic data of respondents, and demographic data of managers in the public service. The second phase consist of the measurement and structural model assessment. Firstly, in the second phase, measurement model of this study was examined to measure the convergent and divergent validity. Secondly, common method bias assessment was discussed in this chapter including the use of marker variable approach to treat the common method bias issue. Thirdly, the collinearity issues in the study were explained in this section. Fourthly, in the next section, results of the structural model to test the hypotheses developed in Chapter three are reported. The results of hypothesis testing are reported which include the direct effect and indirect effect using the bootstrapping the indirect effect approach. Finally, a short chapter summary concludes this chapter. Figure 4.1 shows the summary of data analysis procedure in this study.

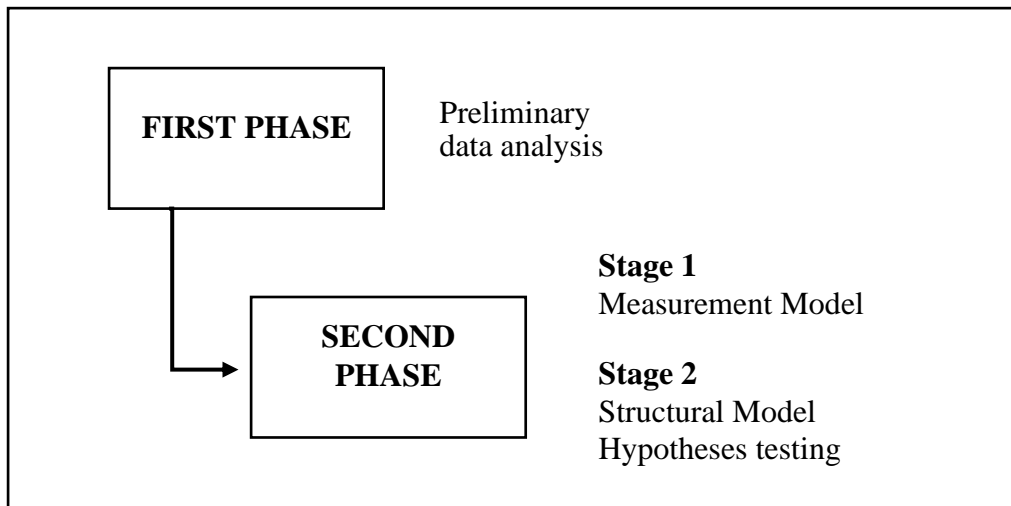


Figure 4. 1 Summary of data analysis procedure

4.2 Data Analysis: An Overview

In the first phase of analysis, this research employed Statistical Package for Social Science (SPSS) to screen the data for coding, and outliers. This software was also used to determine the frequencies, means, and standard deviations to better understand the data. Then, Structural Equation Modelling using SmartPLS was employed in the second phase to assess the measurement model (reliability and validity), and the structural model including hypotheses testing in this study. The Structural Equation Modelling approach is useful especially in the behavioural and social sciences as many constructs are unobservable.

4.3 Data Collection Procedure

Respondents were chosen using a stratified sampling technique randomly from the population of Administrative and Diplomatic Officers in public organisations, as a major source for official data collecting. The sample frame including personal data of Administrative and Diplomatic Officers including grades and email address received from the Public Service Department was used to compile a list of 1800 identified random respondents. The sample frame was divided into different grades (M41, M44, M48, M52, M54) and random selections was conducted for each grade using Microsoft Excel. The Qualtrics online questionnaire was distributed through emails to the selected respondents. The final response rate was 17.9 per cent, corresponding to 322 valid

responses. According to Saunders et al. (2012), the large sample size of over 300 respondents indicates an acceptable level of establishing evidence. Therefore, the collected data was analysed further in this study.

4.4 Descriptive Analysis

Descriptive analysis is the first procedure of statistical analysis in this study. This procedure is important to determine the distribution of data, descriptive statistic (mean, standard deviation), detection of outliers and to analyse the demographic data of respondents and managers.

4.4.1 Screening the Data: Detection of Missing Data and Data Presentation

The collected data was automatically derived from the Qualtrics in Microsoft Excel format. The template was transferred to SPSS software version 27 for further analysis. To avoid biased statistic inferences and distortion of the outcomes, the data screening procedure and data entry were conducted simultaneously utilising frequencies for checking data discrepancies coming from individual cases and variable cases. Each case was checked to see whether there were any missing data. The result found that there were no unanswered items, particularly items with multiple selections and unengaged responses detected. The result indicated that all 322 cases were usable for the analysis phases. Furthermore, the sample size was sufficient to be assessed in the study as it fulfilled the requirements for Structural Equation Modelling analysis.

4.4.2 Data Preparation

Before analysing the study model, the first step in data analysis is to prepare the data. Editing, coding, and data input are steps in the data preparation process that ensure precision and adequacy.

4.4.3 Data Cleaning

In this study, data cleaning entails checking for data entry errors, straight-lining data, and missing values. There were no issues with straight-lining data from the data

collected. Qualtrics software has filtered the missing data during the data collection process. Therefore, the final data received has a complete data ready to be assessed. Qualtrics has also recorded the incomplete survey in this study.

4.4.4 Response Pattern

The descriptive analysis is carried out after all the data has been cleansed and tested in accordance with the assumptions made.

4.4.5 Detection of Outliers

Outlier detection and treatment is an important aspect of data screening and a requirement for inferential statistical approaches (Hair et al., 2010). Thus, the complete data set in this study was examined for multivariate outliers. Outliers may skew parameters and statistical estimates, as well as the generalisability of statistical results. Outliers can also cause Structural Equation Modelling model's results to have a misspecification issue (Hair et al., 2010). However according to Van Den Broeck et al. (2005), outliers do not exist in Likert scales, especially in a five-point Likert scale. Even if respondents answer at the extreme (either 1 or 5), it does not constitute outlier behaviour.

In this study, outliers across all the variables were identified using the Mahalanobis test through regression based on Chi-square distribution. According to Kline (2016), a significantly high D-squared value with the low p-value in the corresponding Chi-square distribution ($p.001$) is potentially an outlier.

Based on the test, there are four outliers identified from the data (Chi-square below 0.001) The outliers were deleted from the dataset before next step was taken. The extract of result of Mahalanobis D squared test for the first 20 cases is presented in Table 4.1.

Table 4. 1 The extract of result of Mahalanobis D squared test for the first 20 cases

Respondent	MAH	Outliers
269	38.74086	.00000
37	31.48368	.00000
291	25.52019	.00004
152	24.32020	.00007
123	17.04751	.00189
35	16.83777	.00208
148	15.85565	.00322
220	14.41675	.00608
281	14.38245	.00617
265	14.27387	.00647
315	14.11573	.00693
133	13.66502	.00844
19	12.17749	.01608
57	10.91449	.02754
85	10.54676	.03216
309	10.45383	.03344
212	10.43437	.03371
248	10.26593	.03618
312	9.82725	.04344
147	9.47329	.05030
.....

4.4.6 Normality: Multivariate Normality

Test of assumptions underlying the statistical bases for multivariate analysis was carried out. The reasons for conducting test of assumptions are firstly, the potential distortions and bias that may occur due to the complexity of the relationship from a large set of variables. Second, the analysis' and findings' complexity may obscure the indicators of assumptions violations that are visible in simpler univariate analysis.

The initial assumption in multivariate analysis is normality that represent the normal distribution assumption in each item and all linear combinations of items (Tabachnick & Fidell, 2012). Multivariate normality is used to determine whether a set of

multivariate observations could have come from a multivariate normal distribution. The multivariate skewness and kurtosis were assessed as suggested by Hair et al (2017) and Cain et al. (2017) using the software available in statistical analysis website online namely [Webpower](https://webpower.psychstat.org/models/kurtosis/results.php?url=d4c4e0b77d063cd37e5332575fcb2cc3) <https://webpower.psychstat.org/models/kurtosis/results.php?url=d4c4e0b77d063cd37e5332575fcb2cc3>.

Based on the result, both Mardia's multivariate skewness ($\beta = 4.32, p < 0.01$) and Mardia's multivariate kurtosis ($\beta = 41.89, p > 0.01$) of the data indicate that the data is not normally distributed. As the data did not follow a normal distribution and all of the tests produced the same findings, indicating that a non-parametric analytic tool like Smart PLS is needed in this study to examine the data. Thus, following the suggestion of Hair et al. (2019) path coefficients, the standard errors, t-values and p-values for the structural model is reported using a 5000 samples re-sample bootstrapping procedure (Ramayah et al, 2018).

Next, Table 4.2 shows the mean score, standard deviation, and statement for the construct's item in this study.

Table 4. 2 Descriptive statistics (mean and standard deviation)

	Items	Mean	SD
Transformational leadership style of manager			
TLM1	My manager communicates a clear and positive vision of the future.	3.585	1.156
TLM2	My manager treats their subordinates as individuals, supports and encourages their development.	3.887	1.09
TLM3	My manager gives encouragement and recognition to their subordinates.	3.78	1.044
TLM4	My manager fosters trust, involvement, and cooperation among team members.	3.903	1.058
TLM5	My manager encourages thinking about problems in new ways and questions assumptions.	3.701	1.117

TLM6	My manager is clear about his/her values and practises what he/she preaches.	3.783	1.105
TLM7	My manager instils pride and respect in others and inspires me by being highly competent.	3.664	1.161
Self-perceived transformational leadership style			
TLS1	I communicate with a clear and positive vision of the future to my subordinates.	4.006	0.718
TLS2	I treat my subordinates as individuals, supporting, and encourages their development.	4.365	0.554
TLS3	I give encouragement and recognition to my subordinates.	4.277	0.643
TLS4	I foster trust, involvement, and cooperation among my team members.	4.377	0.595
TLS5	I encourage thinking about old problems in new ways and questioning assumptions.	4.22	0.674
TLS6	I am clear about my self-values and practise what I preach.	4.283	0.605
TLS7	I instil pride and respect in others and inspire them by being highly competent.	4.286	0.617
Talent Management Practices			
TI1	My organisation builds up talent pool for high potentials in the public service.	3.255	0.949
TI2	My organisation identifies talents that make the highest impact on organisation success.	3.321	0.954
TI3	My organisation differentiates the contribution level of talents in the workplace.	3.179	0.892
TI4	Talent identification and evaluation programmes implemented in my organisation are effective in identifying high potentials.	3.101	0.93

TD1	I have the opportunity to participate in related seminars, workshops, conferences, and training if I need particular skill development.	3.925	0.813
TD2	Training and development programmes provided in my organisation help improve my work performance.	3.764	0.867
TD3	The training and development programmes are implemented continuously in my organisation.	3.846	0.831
TD4	The content of the training and development programmes implemented in my organisation are based on job performance.	3.135	0.913
CE1	Identified high potentials in my organisation have better opportunities for upward mobility.	3.425	0.928
CE2	I have clear career paths in this organisation.	3.204	0.984
CE3	I have more than one avenue for promotion.	2.877	1.003
CE4	There are opportunities for me to grow my career at my organisation.	3.324	0.977
PM1	I receive feedbacks on my work performance from time to time.	3.525	0.947
PM2	The feedbacks I receive helps me to improve my work performance.	3.758	0.828
PM3	I think that my performance is evaluated fairly.	3.69	0.892
RM1	My organisation values my work contribution.	3.642	0.864
RM2	I feel that my pay adequately reflects my work performance.	3.516	0.983
RM3	The organisation I serve provides recognition to me.	3.506	0.893

Public Service Motivation

PSM1	Meaningful public service is very important to me.	4.547	0.552
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PSM2	I am not afraid to go to bat for the rights of others, even if it means I will be ridiculed.	4.022	0.767
PSM3	Making a difference in society means more to me than personal achievements.	4.226	0.682
PSM4	I am prepared to make enormous sacrifices for the good of the society.	4.013	0.752
PSM5	I am often reminded by daily events about how dependent we are on one another	4.17	0.698
Employee Engagement			
EE1	When I wake up in the morning, I feel like going to work.	3.915	0.829
EE2	At my work, I feel myself bursting with energy.	3.846	0.815
EE3	At my jobs, I feel strong and vigorous.	3.918	0.76
EE4	I am enthusiastic about my job.	3.969	0.812
EE5	My job inspires me.	3.931	0.836
EE6	I am proud of the work that I do.	4.072	0.871
EE7	I am immersed in my work.	4.116	0.724
EE8	I get carried away when I am working.	3.73	0.87
EE9	I feel happy when I work intensely.	4.079	0.767

For the transformational leadership style of manager, the highest mean for the item is TLS4 (3.903), “My manager fosters trust, involvement, and cooperation among team members”, while the lowest is TLS1 (3.585), “My manager communicates a clear and positive vision of the future”. Another construct, self-perceived transformational leadership style, the highest score is TLR4 (4.377), “I foster trust, involvement, and cooperation among my team members” and the lowest is TLR1 (4.006), “I communicate with a clear and positive vision of the future to my subordinates”. Both the assessment of transformational leadership style and the self-perceived of transformational leadership style showed the same trend of highest and lowest score questions.

Furthermore, for talent management practices, the highest mean score is TD1 (3.925), “I have the opportunity to participate in related seminars, workshops, conferences, and

training if I need particular skill development”. Meanwhile the lowest score is CE3 (2.877), “I have more than one avenue for promotion”. The highest mean score for public service motivation construct is PSM1 with mean score 4.547, “Meaningful public service is very important to me”. Meanwhile the lowest is PSM4, mean score 4.013, “I am prepared to make enormous sacrifices for the good of the society”. Finally, for employee engagement construct, the highest mean score is for item EE7, mean score 4.116, “I am immersed in my work”. The lowest is EE8, with mean score 3.73, “I get carried away when I am working”.

4.5 Response Rate

A number of 1800 online questionnaires were randomly distributed to selected Administrative and Diplomatic Officers based on the list received from Public Service Department in order to ensure an adequate response rate. From 1800 distributed questionnaires, 420 respondents have responded to the surveys (including the incomplete response), resulting in a response rate of 23.3 per cent. However, 98 surveys had unanswered items or incomplete items so the total of completed surveys was 322. Based on detection of outliers’ procedure, four surveys have outliers’ issues, resulting in usable sample of 318 (17.7 per cent). Table 4.3 shows a summary of the survey response rate.

Table 4. 3 Summary on the questionnaires’ return rate

	Number (questionnaires)	Percentage (%)
Total distributed.	1800	100
Completed survey recorded.	420	23.3
Unusable survey (Incomplete and outliers).	102	5.67
Usable survey.	318	17.7

4.6 Demographic Data of Respondents

The demographic data section shows the actual sample of 318 respondents for data analysis in this study, including gender, age, salary grades, length of service, and education. Table 4.4 shows the demographic information of the respondents. There are

166 female respondents (52.2%) and 152 male respondents (47.8%), which is quite balanced in gender split. In terms of marital status, 247 respondents (77.7%) are married, 64 respondents (20.1%) are single, 7 respondents (2.2%) are other status. The majority of respondents, 258 (81.1%) are Malay, Indian, 19 (6.0%), Sarawak natives, 14 (4.4%), Sabah natives, 10 (3.1%), Chinese, 10 (3.1%), and others, 7 (2.2%).

Majority of respondents 117 (36.8%) are between the age of 36 and 40, 75 respondents (23.6%) are between the age of 41 and 45, 55 respondents (17.3%) are between the age of 31 and 35, 35 respondents (11.0%) are between the age of 26 and 30, 31 respondents (9.7%) are between the age of 46 and 50, 4 respondents (1.3%) are between the age of 51 and 55, while the smallest group (N=1, 0.3%) is 25 years old and below.

In terms of education, the data collected demonstrates that the majority of respondents 170, (53.5%) are master's degree holder, 139 respondents (43.7%) are bachelor's degree holder, and 9 respondents (2.8%) are doctoral degree holder. Majority respondents, 99 (31.1%) are grade M44, 67 respondents (21.4%) are grade M48, 64 respondents (20.1%) are grade M41, 50 respondents (15.7%) are grade M52, while the smallest group (N=38, 11.9%) are grade M54. About the length of service, majority, 126 (39.6%) respondents' length of service are 11 to 15 years, 76 (23.9%) are 16-20 years, 65 (20.4%) 1 to 5 years, 25 (7.9%) are 6-10 years, 21 (6.6%) are more than 20 years and 5 (1.6%) are less than 1 year.

In terms of working experience in the current organisation, most respondents, 220 (69.2%) have between 1 to 5 years of working experience, 43 (15.4%) have between 6 to 10 years' experience, 40 (12.6%) have less than 1 year working experience in the current organisation, 8 (2.5%) have 16-20 working experience, 6 (1.9%) have 11-15 working experience and 1 (0.3%) have more than 20 years working experience in the current organisation.

The respondents were then asked whether they were listed in the public service talent pool. Most respondents, 155 (48.7%), indicated that they were not sure whether they were listed in the talent pool. Meanwhile, another 117 (36.8%) were not listed in the talent pool. Thus, only 47 (14.8%) respondents indicate that they were listed in the talent pool. The demographic information of the respondents is provided in Table 4.4.

Table 4. 4 Demographic of respondents

Characteristics	Category	Frequency	Percent	Cum Percents
Gender	Female	166	52.2%	52.2%
	Male	152	47.8%	100%
	Total	318		
Marital Status	Single	64	20.1%	20.1%
	Married	247	77.7%	97.8%
	Other status	7	2.2%	100%
	Total	318		
Race	Malay	258	81.1%	81.1%
	Chinese	10	3.1%	84.2%
	Indian	19	6.0%	90.2%
	Sarawak Natives	14	4.4%	94.2%
	Sabah Natives	10	3.1%	97.3%
	Others	7	2.2%	100%
	Total	318		
Age	51-55	4	1.3%	1.3%
	46-50	31	9.7%	11.0%
	41-45	75	23.6%	34.6%
	36-40	117	36.8%	71.4%
	31-35	55	17.3%	88.7%
	26-30	35	11.0%	99.7%
	25 years below	1	0.34%	100.0%
	Total	318		
Education	Doctoral	9	2.8%	2.8%
	Masters	170	53.5%	56.3%
	Bachelor	139	43.7%	100.0%
	Total	318		
Grades	M54	38	11.9%	11.9%
	M52	50	15.7%	27.6%
	M48	67	21.4%	49.0%
	M44	99	31.1%	80.1%
	M41	64	20.1%	100.0%
	Total	318		
Length of Service	More than 20 years	21	6.6%	6.6%
	16-20 year	76	23.9%	30.5%
	11-15 year	126	39.6%	70.1%
	6-10 year	25	7.9%	78.0%
	1-5 year	65	20.4%	98.4%

	Less than 1 year	5	1.6%	100.0%
	Total	318	100.0%	
Length of Service in this organisation	More than 20 years	1	0.3%	0.3%
	16-20 year	8	2.5%	2.5%
	11-15 year	6	1.9%	4.4%
	6-10 year	43	15.4%	19.8%
	1-5 year	220	69.2%	89.0%
	Less than 1 year	40	12.6%	100.0%
	Total	318		
In Talent Pool	Yes	47	14.8%	14.8%
	No	117	36.8%	51.6%
	Not Sure	154	48.4%	100.0%
	Total	318		

4.7 Demographic of Managers

The transformational leadership style of leaders in the public service was assessed in this study. In order to derive demographic information of managers in this study, the respondents were required to provide personal information about their manager such as gender, salary grade, marital status, and race. Based on the information received, in term of the grade, most manager, 97 (30.5%) grades are M54, 85 (26.7%) premier grade, 70 (22.0%) grade M48, and remaining 66 (20.8%) grade M52. In terms of marital status, 280 manager (88.1%) are married, 31 managers (9.7%) are single, while three managers (0.9%) other status. Another 4 (1.3%) respondents were not sure about their manager's status. Of all managers, 182 (57.2%), are male, and the remaining 136 (42.8%) are female. The majority of managers, 284 (89.3%) are Malay, Indian, 15 (4.7%), Chinese, 9 (2.8%), Sarawak natives 6 (1.9%), Sabah natives, 3 (0.9%), and others, 1 (0.3%).

For length of supervision, majority 177 (55.7%) are between 1 to 3 years, 109 respondents (34.3%) less than 1 year, 16 respondents (5.0%) above 10 years, 15 respondents (4.7%) 4 to 6 years, while the smallest group, 1 (0.3%) is 7 to 10 years. The demographic information of manager is presented in Table 4.5.

Table 4. 5 Demographic of managers

Characteristics	Category	Frequency	Percent	Cum Percents
Grade	Premier Grades	85	26.7%	26.7%
	M54	97	30.5%	57.2%
	M52	66	20.8%	78.0%
	M48	70	22.0%	100.0%
	Total	318		
Marital Status	Single	31	9.7%	9.7%
	Married	280	88.1%	97.8%
	Other Status	3	0.9%	98.7%
	Not Sure	4	1.3%	100.0%
	Total	318		
Gender	Female	136	42.8%	42.8%
	Male	182	57.2%	100.0%
	Total	318		
Race	Malay	284	89.3%	89.3%
	Chinese	9	2.8%	92.1%
	Indian	15	4.7%	96.8%
	Sarawak Native	6	1.9%	98.7%
	Sabah Native	3	0.9%	99.6%
	Others	1	0.3%	100.0%
	Total	318		
Length under supervision	Above 10 years	16	5.0%	5.0%
	7-10 year	1	0.3%	5.3%
	4-6 year	15	4.7%	10.0%
	1-3 year	177	55.7%	65.7%
	Less than 1 year	109	34.3%	100.0%
	Total	318		

4.8 Assessment of Measurement and Structural Model

Anderson and Gerbing (1988) recommended testing the model using a two-step modelling approach. The first step entails the development and testing of the measurement model. Meanwhile, the second step is the development and testing of the

structural model. The measurement model is used to develop a structural model that includes a path that represents the hypothesised relationships between the research constructs.

Hair et al. (2019) and Ramayah et al. (2018) suggested that the measurement model should be validated to ensure its validity and reliability. The structural model was then used to test the hypotheses that have been developed. This two-step approach has gained a wide acceptance among researchers. Furthermore, it is important to conduct an accurate value of reliability and validity of the items in each construct using two-step approach to avoid any interaction between the measurement model and structural model.

4.9 Measurement Model Assessment: Convergent Validity

In order to assess convergent validity in the study, the loadings, average variance extracted (AVE) composite reliability (CR), and Cronbach's Alpha (CA) were assessed and then being reported (Hair et al., 2010). In this study, the loadings, average variance extracted (AVE), and composite reliability for the measurement model (CR) were examined. The loadings should be greater than 0.55, the AVE should be greater than 0.5, and the CR should be greater than 0.7.

For the first construct, transformational leadership style, as shown in Table 4.6, the values of loadings are greater than 0.55 and AVE for transformational constructs (manager and self-perceived) are greater than 0.5. In contrast, values for CR and CA are greater than 0.7. The study's finding established that convergent validity for transformational leadership constructs (manager and self-perceived) was confirmed as the AVE and CR of each construct were beyond the threshold (Hair et al., 2010). Result for reflective measurement model (transformational leadership style constructs) is presented in Table 4.6.

Table 4. 6 Result for reflective measurement model (transformational leadership style constructs)

Result Summary for Reflective Measurement Model					
Latent Variable	Indicators (Items)	Convergent Validity		Internal Consistency Reliability	
		Loadings	AVE	CR	Cronbach Alpha
		>0.55	>0.5	0.7	0.7
TLM	TLM1	0.846	0.813	0.968	0.962
	TLM2	0.910			
	TLM3	0.900			
	TLM4	0.931			
	TLM5	0.902			
	TLM6	0.896			
	TLM7	0.926			
TLS	TLS1	0.781	0.656	0.930	0.913
	TLS2	0.780			
	TLS3	0.808			
	TLS4	0.829			
	TLS5	0.819			
	TLS6	0.837			
	TLS7	0.813			

Following that, the measuring model of talent management practices was assessed. The single construct in the second-order model is the talent management practices component. As indicated in Table 4.7, the convergent validity of this construct was examined, with loadings values for talent management practices (first order) were greater than 0.55, AVE values were greater than 0.5, and values for CR and CA were greater than 0.7. The study's findings demonstrated that convergent validity for the talent management practices construct was validated because each construct's AVE and CR were beyond the threshold (Hair et al., 2010).

Table 4. 7 Result for reflective measurement model (talent management practices)

Result Summary for Reflective Measurement Model					
Latent Variable	Indicators (Items)	Convergent Validity		Internal Consistency Reliability	
First Order		Loadings	AVE	CR	Cronbach Alpha
		>0.55	>0.5	0.7	0.7
TI	TI1	0.944	0.756	0.924	0.889
	TI2	0.932			
	TI3	0.661			
	TI4	0.910			
TD	TD1	0.820	0.667	0.889	0.832
	TD2	0.872			
	TD3	0.834			
	TD4	0.735			
CE	CE1	0.737	0.684	0.896	0.845
	CE2	0.848			
	CE3	0.827			
	CE4	0.887			
PM	PM1	0.882	0.787	0.917	0.865
	PM2	0.913			
	PM3	0.867			
RM	RM1	0.904	0.693	0.869	0.775
	RM2	0.673			
	RM3	0.899			

The validity and reliability of the second order construct, which is talent management practices were also being examined, as shown in Table 4.8. The measurements of the second order were also found to be valid and reliable based on the convergent validity of this construct examined, with loadings values were greater than 0.55, AVE values greater than 0.5, and values for CR and CA were greater than 0.7. The study's finding established that convergent validity was confirmed as the AVE and CR of each construct were beyond the threshold, as shown in Table 4.8.

Table 4. 8 Measurement model for the second order constructs

Result Summary for Reflective Measurement Model					
Latent Variable	Indicators	Convergent Validity		Internal Consistency Reliability	
Second Order		Loadings	AVE	CR	Cronbach Alpha
		>0.55	>0.5	0.7	0.7
TMP	TI	0.827	0.732	0.932	0.909
	TD	0.821			
	CE	0.876			
	PM	0.863			
	RM	0.888			

Furthermore, the researcher examined the public service motivation and employee engagement components' convergent validity. As indicated in Table 4.9, public service motivation and employee engagement loadings are both greater than 0.55, and AVE values are greater than 0.5. The CR and CA values are both greater than 0.7. Therefore, the study's findings showed that the public service motivation and employee engagement constructs had convergent validity because their AVE and CR were both over the threshold as suggested by Hair et al., 2010.

Table 4. 9 Result for reflective measurement model (public service motivation and employee engagement)

Result Summary for Reflective Measurement Model					
Latent Variable	Indicators (items)	Convergent Validity		Internal Consistency Reliability	
		Loadings	AVE	CR	Cronbach Alpha
		>0.55	>0.5	0.7	0.7
PSM	PSM1	0.675	0.570	0.868	0.809
	PSM2	0.750			
	PSM3	0.830			
	PSM4	0.828			
	PSM5	0.678			
EE	EE1	0.815	0.641	0.941	0.928

EE2	0.831
EE3	0.870
EE4	0.891
EE5	0.882
EE6	0.815
EE7	0.774
EE8	0.584
EE9	0.695

4.10 Measurement Model: Divergent Reliability

The discriminant validity in this study was examined in the second stage of the measurement model evaluation. Divergent validity, according to Hair et al. (2010), refers to how the construct is distinct from others. The HTMT criterion, proposed by Henseler et al. (2015) and updated by Franke and Sarstedt (2018), was used to assess the discriminant validity of the data in this study. The more stringent HTMT value requirement should be lower than 0.85, whereas the more lenient criterion should be lower than 0.90.

Table 4. 10 HTMT values

	CE	PSM	PM	RM	TLM	TLS	TD	TI
CE								
PSM	0.302							
PM	0.778	0.365						
RM	0.859	0.347	0.907					
TLM	0.525	0.237	0.683	0.568				
TLS	0.206	0.563	0.265	0.205	0.325			
TD	0.816	0.369	0.694	0.793	0.433	0.236		
TI	0.831	0.284	0.658	0.736	0.486	0.249	0.761	
EE	0.487	0.523	0.497	0.599	0.366	0.429	0.447	0.377

Table 4.10 above shows that HTMT values are within the range of 0.205 – 0.907. There is one construct which has a value greater than 0.90. That indicates the discriminant issue in the data among two constructs which are performance management (PM) and reward management (RM). Therefore, the discriminant issue should be dealt with before proceeding to the structural model assessment. After further examination on cross loading, one item under performance management (PM3) under talent management practices construct must be deleted to treat the discriminant issues. The deleted item is presented in Table 4.11.

Table 4. 11 The deleted item due to discriminant issue

Items			
	Talent management practices	Cross loading	Status
PM1	I receive feedback on my work performance from time to time.	0.882	
PM2	The feedback I receive helps me to improve my work performance.	0.915	
PM3	I think that my performance is evaluated fairly (deleted)	0.867	Deleted

The discriminant issue in the study has been solved after deletion of the item. The HTMT values after deletion of PM3, are presented in Table 4.12.

Table 4. 12 HTMT after deletion of item TM15

	CE	PSM	PM	RM	TLM	TLS	TD	TI
CE								
PSM	0.302							
PM	0.76	0.339						
RM	0.859	0.347	0.788					
TLM	0.525	0.237	0.629	0.568				
TLS	0.206	0.563	0.259	0.205	0.325			
TD	0.816	0.369	0.674	0.793	0.433	0.236		
TI	0.831	0.284	0.656	0.736	0.486	0.249	0.761	
EE	0.487	0.523	0.449	0.599	0.366	0.429	0.447	0.377

Based on the result in Table 4.12, the deletion of item PM3 has improved the data and treated the discriminant issue. After deletion of PM3, HTMT values are within the permitted range of 0.205 – 0.859. At this stage, all respondents recognised the five constructs studied are distinct from one to another. Therefore, divergent validity in this study was confirmed, which indicates that the five constructs were different. The results suggest that when both validity tests are used together, the measurement items are valid and reliable.

4.11 Common Method Bias Assessment

The measurement of the research constructs in this study is purely based on the perceptions of the Administrative and Diplomatic Officers in the Malaysian public service. According to Podsakoff et al. (2012), common method bias is an issue because the data for the entire model is collected from a single survey instrument. Common method bias may jeopardise the construct validity and create systematic bias into a study. Lindell and Whitney (2001) indicate that the marker variable test is useful for determining the extent of common method bias. A significant correlation between any of the principal constructs and this marker variable indicates a common method bias.

This study used marker variable assessment to assess the common method bias. According to Lindell and Whitney (2001), a marker variable can be selected among the study's variables by selecting the one with the lowest correlation. However, it is advised to include other scales that is theoretically unrelated to the study. Therefore, to test the common method bias in this study, three marker variable items were included from the scale that is theoretically unrelated to any variables in the study to adjust the correlations among the principal constructs. The marker variable are only proxies and do not directly measure the common method variance, therefore, their variance with the factors should be small or non-existent (Simmering et al., 2015). The marker variable employed in this study was adapted from Lin et al.'s (2015) scale which is from the cognitive rigidity construct. The marker variable items are presented in Table 4.13.

Table 4. 13 Marker variable items

No.	Questionnaires Item
1	Once I have come to a conclusion, I am not likely to change my mind.
2	I don't change my mind easily.
3	My views are very consistent over time.

When conducting the analysis, a method factor model was created with the marker variable act as an exogenous variable predicting the endogenous variable in the model. Finally, the method factor model was compared to the baseline model. The result found that significant paths in the baseline model remain significant in the method factor model. Therefore, based on the result, there is no issue with the data when R squared (R^2) value was examined. If the R^2 changes is more than 10 per cent, there is an issue with the data called consistency bias because the respondents consider the marker variable is part of the model.

Table 4. 14 Comparison of path coefficient (β)

Relationship	Path Coefficient (β)		
	Baseline (without marker variable)	Marker variable	Difference
TLM-EE	0.009	0.049	0.04
TLS-EE	0.174	0.114	0.06
TMP-EE	0.396	0.327	0.069
PSM-EE	0.218	0.192	0.026
TLM-PSM	-0.089	-0.078	0.011
TLS-PSM	0.422	0.403	0.019
TMP-PSM	0.250	0.229	0.021
TLM-TMP	0.604	0.605	0.001

Based on the findings, there is no significant difference in the Beta (β) value, as indicated in Table 4.15 where the differences found between 0.000 and 0.065. Hence, this result has provided another clue to common method bias's insubstantiality. The result indicates that common method bias is not a significant problem in this study.

Table 4. 15 Comparison of R² value between baseline model and marker included model

Relationship	Path Coefficient (β)		
	Baseline (without marker variable)	Marker variable	Difference
EE	0.365	0.430	0.065
PSM	0.257	0.262	0.005
TMP	0.365	0.365	0.000

4.12 Assessing Collinearity Issues in the Study

Before proceeding with the structural model assessment, collinearity issues in the study were being evaluated. Specifically, collinearity occurs when the predictor or exogenous variables in the model are linearly related to one another or with the intercept term. This relationship may negatively affect the estimated model parameters, particularly the regression coefficients and their associated standard errors. This means the correlation between pairs of independent variables is very high. Thus, collinearity issue is a type of disturbance in the data. When collinearity issues exist, the statistical findings obtained are likely to be unreliable.

The collinearity issues should be solved before the latent variables in a structural model can be analysed. In order to achieve this, the variance inflation factor (VIF) value is used to assess the degree of collinearity. Following Hair et al. (2006), the threshold value for the assessment is 5, meanwhile Diamantopoulos and Siguaw (2006) indicated the threshold value for the assessment is 3.3.

Based on Table 4.16, collinearity is not an issue in this study as the results show that all inner VIF values for the constructs are within 1.000 to 1.688, which is less than 5 or 3.3, respectively.

Table 4. 16 Inner Variance Inflation Factor (VIF)

	EE	PSM	TMP
PSM	1.346		
TLS	1.336	1.096	
TLM	1.618	1.607	1.000
TMP	1.688	1.604	

4.13 Analysis and Result of Structural Model

After the measurement model was established, the researcher proceeded with structural model evaluation to determine the model's ability to predict one or more target constructs (Hair et al., 2017). The main hypotheses were tested to see the relationships between the variables using the procedure in the partial least square. Each path relationship in the model was examined. The bootstrapping procedure was performed as it involves a sequence random sampling with replacement from the original sample in order to build a bootstrap sample and to provide standard errors for hypothesis testing purposes.

The structural model assessment in this study aims to assess the direct effects of (i) transformational leadership style of manager on employee engagement, (ii) self-perceived transformational leadership style of Administrative and Diplomatic officers on employee engagement, (iii) talent management practices on employee engagement, (iv) transformational leadership style of manager on talent management practices (v) public service motivation on employee engagement. Next, the structural model assessment was employed to assess the mediating effects of public service motivation on the relationship between (i) transformational leadership style of manager and employee engagement (ii) self-perceived transformational leadership style and employee engagement, and (iii) talent management practices and employee engagement. List of the hypotheses in this study is presented in Table 4.17.

Table 4. 17 List of hypotheses in this study

Hypotheses	
Antecedents of Employee Engagement	
H1	Transformational leadership style of manager will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.
H2	Self-perceived transformational leadership style will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.
H3	Talent management practices will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.
H4	Transformational leadership style of manager will significantly predict talent management practices in the Malaysian public service.
H5	Public service motivation will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.
The Mediating Effect of Public Service Motivation	
H6	Public service motivation mediates the relationship between transformational leadership style of manager and employee engagement in the Malaysian public service.
H7	Public service motivation mediates the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officer in the Malaysian public service.
H8	Public service motivation mediates the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.

4.14 Significance of the Structural Model Assessment

For this study, eight hypotheses were developed. In order to test the significance level, T-statistics for all paths are generated using the Smart PLS 3.0 bootstrapping method to assess the significance level of this study. The bootstrapping technique was set at a significance level of 0.05, a two-tailed test, and 5,000 subsamples. Hair et al. (2014) indicated that the bootstrap samples should be at least larger than the number of valid observations in the original data set, although 5,000 was suggested.

According to Hair et al. (2017), estimated path coefficients close to +1 indicate strong positive correlations. In contrast, values closer to 0 indicate weaker relationships. As shown in Table 4.18, the path coefficients values in this study have a standardised value between -1 and +1 (values from 0.009 to 0.604). Therefore, this result shows a small to a strong positive relationship between the variables.

Using T-test, most of the relationships are found to have t-value ≥ 2.33 , thus significant at 0.05 level of significance for self-perceived transformational leadership style ($\beta=0.174$, $t=3.122$, $p<0.05$), talent management practices ($\beta=0.396$, $t=6.118$, $p<0.05$), and public service motivation ($\beta=0.218$, $t=3.713$, $p<0.05$) on employee engagement are statistically significant at the 0.01 level of significance. Thus, H2, H3 and H5 were supported.

Furthermore, relationships between transformational leadership style of manager and talent management practices are found to have t-value ≥ 2.33 , thus significant at 0.05 level of significance ($\beta=0.604$, $t=15.553$, $p<0.05$). Thus, H4 was also supported.

Meanwhile, the relationship between transformational leadership style of manager and employee engagement are found to be statistically insignificant ($\beta=0.009$, $t=0.129$, $p>0.05$). Thus, H1 was not supported in this study. Table 4.18 presents hypothesis testing of direct effects in this study.

Table 4. 18 Hypothesis testing direct effects

Hypo-thesis	Relation-ship	Std Beta	Std Error	t-values	p-values	f2	VIF
H1	TLM-EE	0.009	0.059	0.129	0.897	0.000	1.586
H2	TLS-EE	0.174	0.056	3.122	0.002	0.035	1.397
H3	TMP-EE	0.396	0.065	6.118	0.000	0.146	1.614
H4	TLM-TMP	0.604	0.039	15.553	0.000	0.576	1.00
H5	PSM-EE	0.218	0.059	3.713	0.000	0.056	1.407

Note: 95% confidence interval with a bootstrapping of 5,000 was used

4.15 The Coefficient of Determination (R^2 value)

R Square (R^2) value is a statistical measure that explain the proportion of endogenous variable's variance explained by an exogenous variable or variables (independent variable). There is a different rule of thumb on the interpretation of the R^2 values. For instance, Hair et al. (2011) and Hair et al. (2013) suggested that in academic research focuses on marketing concerns, the rule of thumb for R^2 values are 0.75, 0.50 or 0.25 for endogenous latent to be respectively described as substantial, moderate, or weak. While Chin (1998) suggested R^2 values for endogenous latent of 0.67 is substantial, 0.33 is moderate and 0.19 is weak. Another scholar, Cohen recommended the R^2 values for endogenous latent to be assessed as 0.26 for substantial, 0.13 for moderate and 0.02 for weak.

Table 4. 19 R Square (R^2) value

Relationship	R^2 value
Employee engagement	0.365

Based on Table 4.19 above, R^2 values for the employee engagement model in this study is 0.365. The R^2 value is considered as substantial according to Cohen (1992) and moderate according to Chin (1998). This study discovered the variance in employee engagement has been explained by transformational leadership style of manager, self-perceived transformational leadership style, talent management practices and public service motivation. The effect of all four predictors on employee engagement have been tested. The R^2 value, 0.365 shows that all the predictors explained 36.5 per cent of the variance in employee engagement construct. Therefore, there are other variables that contribute to public sector employee engagement that are not included in the model.

To conclude, the employee engagement model in this study is able to predict up to 36.5 per cent of factors influencing employee engagement, which is considered good enough for social science study as research related to human behaviour cannot be accurately predicted.

4.16 Mediating Factor

Mediation is a common approach and procedure for testing theories and determining the causal relationship (Baron & Kenny, 1986; Preacher & Hayes, 2004; Shrout & Bolger, 2002). Mediation model are at the centre of social science and business research and evidently has become the emphasis among scholars to study the model. It frequently referred to as crucial to theory development, also critical to the scientific status of the field, and an "indispensable tool" for fostering a better scientific understanding of the mechanisms that intervene in the relationship between exogenous and endogenous variables (Pieters, 2017; Rucker et al, 2011; Wood et al., 2008). As a result, the mediation model has become increasingly "ubiquitous" and "nearly compulsory" in current literature and research. The conceptualisation of a mediation relationship requires careful consideration of the relationships between the variables of interest as well as the theoretical significance of those relationships (MacKinnon et al., 2012).

There has been an increase interest among the researchers to include mediator in their model in order to understand the causal relationship. Although there is a growing of mediation literature, however, till now many researchers were still following the outdated mediation method (Aguinis et al, 2016; Ruckker et al, 2011). According to Memon et al. (2018), the issue of using the outdated method have been observed in Malaysia as due to a lack of understanding of mediation analysis among researchers in Malaysia. Therefore, in order to assess mediation factor in this study, both methods are used. Firstly, the more recent method suggested by Preacher and Hayes (2004) is used followed by the older method by Baron and Kenny (1986).

One of the more rigorous and powerful techniques for assessing the mediating effect is known as bootstrapping technique, a nonparametric resampling procedure (Hayes, 2009; Shrout & Bolger, 2002; Zhao et al., 2010). Bootstrapping is a statistical technique for estimating a population parameter by conducting repeatedly sampling from the population and then replacing some of the samples. When estimating a parameter directly from the data source is impractical or unattainable, this method can be used to provide a reasonable approximation. Hair et al. (2014) advocated this bootstrapping method, suggested that future researchers to assess the mediating effect by sampling the distribution of the indirect effect using the technique introduced by Preacher and Hayes

(2008). This approach is applicable to both simple and multiple mediation models. There are no assumptions made regarding the distribution of the variables or the sampling distribution of the statistic. This method is also stated to be well-suited for PLS-SEM, therefore it can be applied even when working with relatively small sample sizes (Hair et al., 2014; Preacher & Hayes, 2008). By using this technique, independent variable is not needed to have a significant impact on the dependent variable when the mediator is not present. Therefore, total effect is not required to be significant for the occurrence of mediation effect in a model. The most important factor is the significance of the indirect effects by using the bootstrapping technique other than the size of the indirect effect.

4.16.1 Public Service Motivation as a Mediator

In general, mediation effect is thought to occur when an independent variable's causal influence on a dependent variable is transmitted through a mediator. A variable is called a mediator if it explains the relationship between the predictor and the criterion (Baron & Kenny, 1986). Whilst Baron and Kenny (1986) suggested that a significant correlation between the predictor and criterion variables is required to allow for mediation effects, this is no longer the case as recent research argues that a mediation effect can be established even when the predictor variable and the criterion variable have insignificant direct relationship. In this study, public service motivation is modelled as a mediator between the relationship between transformational leadership style and employee engagement, and the relationship between talent management practices and employee engagement. The mediation model is developed based on the Self-Determination Theory that suggests people may become self-determined when their demands for competence, relatedness, and autonomy are met. Pursuing tasks that are intrinsically motivating and linked to the individual's goals not only can make them feel happier but also more responsible of the outcomes because they are spending time doing what they truly appreciate and loves. Hypotheses H6, H7 and H8 were developed to test public service motivation as a mediator. Illustration of mediation model in this study is presented in Figure 4.2.

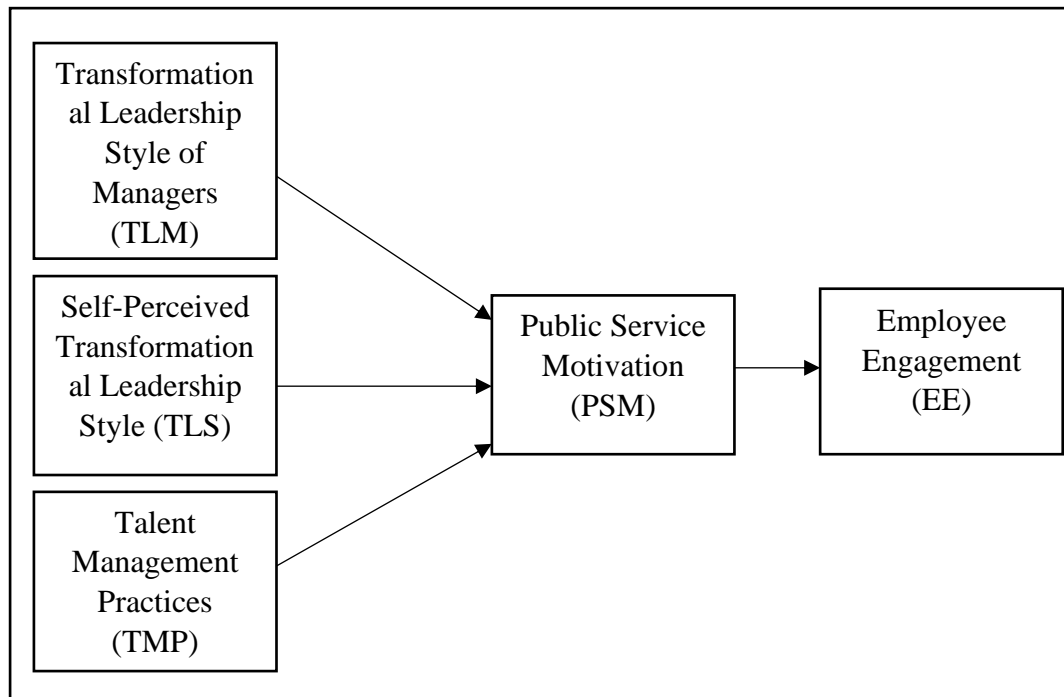


Figure 4. 2 Illustration of mediation model

To test the mediation hypotheses, as suggested by Preacher and Hayes (2004; 2008), the bootstrapping method is used to get the indirect effect. Bootstrap samples are created by estimating the coefficients repeatedly with at 5,000 bootstrap samples, each of which comprises N=318 cases randomly picked with replacement from the original sample. The effect is considered significant if the lower and upper bounds of the 95 per cent confidence interval value does not straddle between the value of 0. To conclude, significant mediation occurs if the confidence interval does not straddle 0 in between.

In this study, the indirect effect of transformational leadership style of manager on employee engagement through public service motivation ($\beta=-0.019$, $p>0.05$) is insignificant. The confidence intervals bias corrected 95 per cent show the intervals straddling a 0, validating our findings. On the other hand, the indirect effect of self-perceived transformational leadership style on employee engagement through public service motivation ($\beta=0.092$, $p<0.05$) is significant. The indirect effect of talent management practices on employee engagement through public service motivation ($\beta=0.054$, $p<0.05$) are also significant. The confidence intervals bias corrected 95 per cent did not show any intervals straddling a 0, validating our findings.

As a result, H6 was not supported, meanwhile H7, and H8 were supported. Table 4.20 presents the results of hypotheses H6, H7 and H8.

Table 4. 20 Hypotheses testing indirect effects

Hypot thesis	Relation ship	Std Beta	Std Error	t-value	p-value	BCI LL	BCI UL	Result
H6	TLM- PSM-EE	-0.019	0.016	1.210	0.226	-0.055	0.008	Not supported
H7	TLS-PSM- EE	0.092	0.028	3.309	0.001	0.042	0.151	Supported
H8	TMP- PSM-EE	0.054	0.021	2.596	0.009	0.019	0.101	Supported

Note: 95% confidence interval with a bootstrapping of 5000 was used.

4.17 Dimensions of Talent Management Practices

This study indicates that talent management practices have a significant and positive relationship with employee engagement. The findings show that the construct has the highest influence on Administrative and Diplomatic Officers' engagement in this research model. To understand more about talent management practices, construct, therefore, this study assessed further the correlation between dimensions of talent management practices and employee engagement.

Table 4.21 presents the direct effect of talent management practices' dimensions on employee engagement. The path coefficients values in this study have a standardised value between -1 and +1 (values from -0.063 to 0.362). T-values used to determine the size of differences in comparison to the variation in the sample data set found to have $t\text{-value} \geq 2.33$, thus significant at 0.05 level of significance for reward management ($\beta=0.362$, $t=4.580$, $p<0.05$) on employee engagement is statistically significant at the 0.05 level of significance. The study found that reward management, is the only dimension of talent management practices that has a positive and significant effect on employee engagement.

Meanwhile, T-values for talent identification, talent development, and performance management found to have t-value ≤ 2.33 . Therefore, career enhancement ($\beta=0.135$, $t=1.869$, $p>0.05$), talent identification ($\beta= -0.063$, $t=0.861$, $p>0.05$), talent development ($\beta=0.041$, $t=0.483$, $p>0.05$), and performance management ($\beta=0.009$, $t=0.114$, $p>0.05$) on employee engagement are statistically insignificant. The direct effect of talent management practices' dimensions on employee engagement is presented in Table 4.21.

Table 4. 21 Direct effect of talent management practices dimensions on employee engagement

Relation	Std Beta	Std Error	t-values	p-values	VIF
ship					
TI-EE	-0.063	0.073	0.861	0.389	2.421
TD-EE	0.041	0.085	0.483	0.629	2.273
CE-EE	0.135	0.075	1.869	0.062	3.114
PM-EE	0.009	0.076	0.114	0.909	2.362
RM-EE	0.362	0.079	4.580	0.000	2.567

4.18 PLS Predict to Test Prediction Power of this Study

Shmueli et al. (2016) introduced PLS predict in SmartPLS to test prediction of the study. PLS predict method uses training and a holdout sample-based technique to generate and evaluate prediction from PLS path model estimations. Assessing the model's predictive relevance requires analysing in-sample prediction and out of sample prediction. To put it simply, PLS predict is a way to determine whether the model has a good predictive quality to predict variables better than average or better than random. In PLS predict, the data has been divided into two parts, one of which is used as a training set to find the parameters that assist explain the variance in the model. The remaining data is used as a test, with the prior portion's results used to predict the remaining data. If the data can accurately predict the variables, that means the model is good. If it doesn't predict well, though, the model is not very good at predicting and was possibly not specified correctly (Gaskin, 2022).

In this study, PLS-Predict with a 10-fold procedure as suggested was used to verify for predictive relevance. This study has a unimodal data as it is symmetrically distributed, hence the RMSE can be reported. According to Shmueli et al. (2019), a strong predictive power is achieved if all item differences (PLS-LM) are lower than the LM model. If all items' differences are higher, predictive relevance is not confirmed. Meanwhile, if majority is lower, there is a moderate predictive strength, and if the minority is lower, there is a poor predictive power.

Table 4.22 shows that the PLS model's errors were all lower than the LM model's, indicating that this model has a strong predictive power according to Shmueli et al. (2019). Another statistical measure that can be used to measure predictive relevance of the endogenous construct is Q square (Q^2). Q^2 above 0 indicates that the model is well constructed. Q^2 in this study are above 0 shows that the model has a predictive relevance.

Table 4. 22 PLS predict

	PLS	LM	PLS-LM	Q^2_{predict}
	RMSE	RMSE	RMSE	
E9	0.743	0.763	-0.02	0.105
E2	0.763	0.755	0.008	0.151
E4	0.749	0.765	-0.016	0.172
E1	0.784	0.792	-0.008	0.136
E8	0.863	0.885	-0.022	0.038
E5	0.772	0.79	-0.018	0.178
E7	0.693	0.7	-0.007	0.106
E3	0.719	0.73	-0.011	0.152

4.19 Summary of Hypotheses Testing

During the conduct of this research, eight hypothesised relationships were tested. Six of the hypotheses are found to be supported by the findings. Two hypotheses (H1 and H6) were not supported. The findings are summarised in Table 4.23. As can be seen in Figure 4.3, supported hypotheses are significant at least at the level of 0.05, have expected significant directions, which is positive, and consist of coefficient value (β) between 0.174 and 0.604. The implications of these results are discussed in further depth in the following chapter.

Table 4. 23 Summarise of findings

	Hypotheses	Result
H1	Transformational leadership style of manager will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.	Not supported
H2	Self-perceived transformational leadership style will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.	Supported
H3	Talent management practices will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.	Supported
H4	Transformational leadership style of manager will significantly predict talent management practices in the Malaysian public service.	Supported
H5	Public service motivation will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.	Supported
H6	Public service motivation mediates the relationship between transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.	Not supported
H7	Public service motivation mediates the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officer in the Malaysian public service.	Supported
H8	Public service motivation mediates the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysia public service.	Supported

Results of the direct effect of transformational leadership style, talent management practices and public service motivation on employee engagement (dotted line indicates non-significant effects) is presented in Figure 4.3.

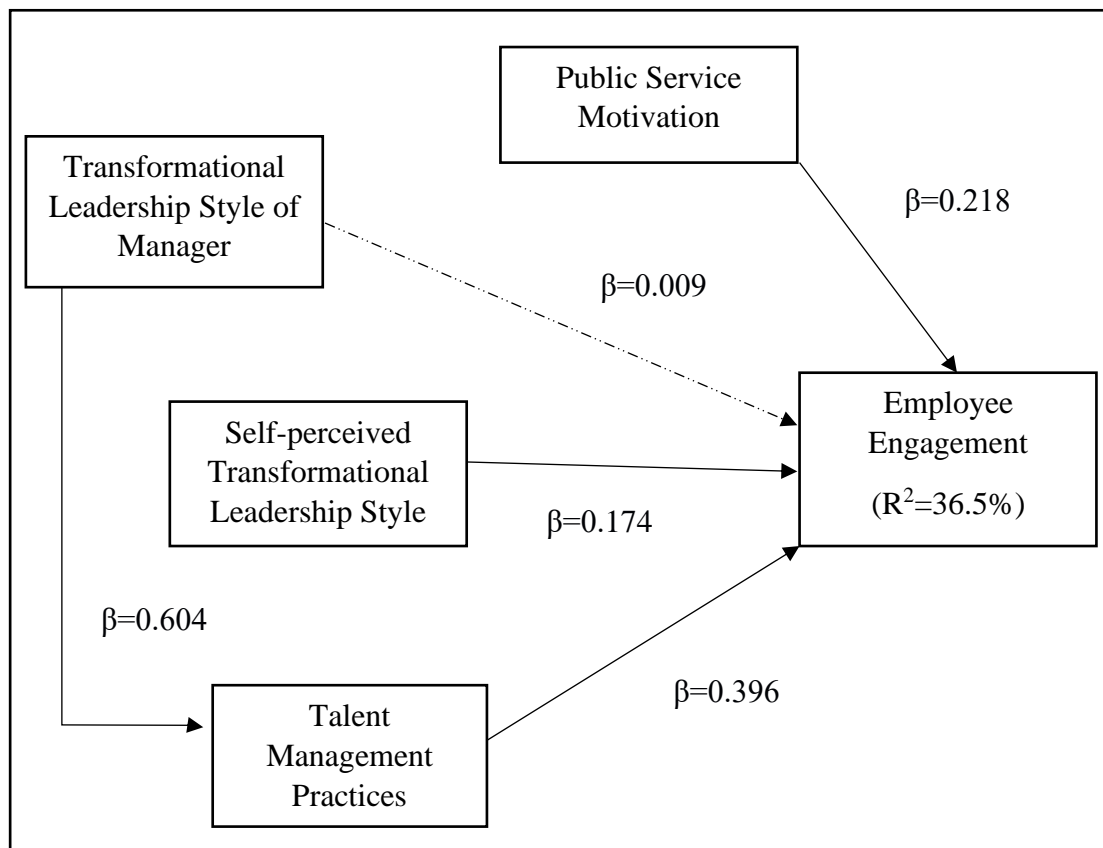


Figure 4. 3 The direct effect of employee engagement's antecedents

CHAPTER 5: RESEARCH FINDINGS AND DISCUSSION

5.1 Introduction

This chapter discusses the findings derived in the previous chapter based on the research questions. This chapter is divided into sub-sections. The first section will present discussion of the major findings and overall conclusion based on the results. This is followed by an in-depth overview of the theoretical implications, practical contributions and limitations of the study. Finally, the recommendations for future research are presented such as the other variables, context, methodology or framework that can be studied further that possibly could provide different result and contribute for a comprehensive public sector employee engagement model.

5.2 Recapitulation of the Study

The present study uses both parsimonious and comprehensive model of employee engagement that have been verified through a measurement model evaluation approach to survey a larger sample of Administrative and Diplomatic Officers in the Malaysian public sector. The public service motivation's role in mediating the nexus between individual variables and employee engagement is similarly under-studied in the literature. Therefore, the possible mediating influence of public service motivation on the relationship between transformational leadership style, talent management practices, and employee engagement was examined in this study.

The literature of the relationship between transformational leadership style and employee engagement has mixed findings. Although many studies found a positive relationship between transformational leadership style and employee engagement (e.g., Ancarani et al. 2020; Gyensare et al., 2017; Obuobiso-Darko, 2019), there are some studies that found the relationship to be insignificant (Christian, Garza, & Slaughter, 2011; Smit, Schultz & Hoek, 2021). In this study, transformational leadership style of manager was found to have an insignificant effect on employee engagement. The potential reasons that can lead to these findings are because this study was conducted when Malaysia was under the Movement Control Order implemented by the

government. During this non-normal or unusual working situation, less supervision has taken place as majority of public employees were working from home. Furthermore, the public sector work setting may also be the reason that contribute to the study's findings as the bureaucracy and organisational structure in the public sector does not allow public managers to fully practise transformational leadership behaviours at work.

In contrast, another transformational leadership style construct, self-perceived transformational leadership style is found to have a positive significant effect on employee engagement. The result means that higher levels of self-perceived transformational leadership style among Administrative and Diplomatic Officers was associated with high levels of employee engagement. Our findings are one of the earliest few that confirm this proposition. Transformational leaders persuade their employees to align their personal values with the goals that have been set for them (Bono & Judge, 2003), therefore possessing transformational behaviours also allow those with the characteristics to become engaged to achieve their goal.

This study is one of the first few that established the link between talent management practices and employee engagement in the Malaysian public service. The results validate the proposition that talent management practices have a positive significant effect on employee engagement among Administrative and Diplomatic Officers. The higher or more effective talent management practices are, the more likely employee engagement increase. Therefore, public sector should also focus on improving the practice of talent management especially providing an effective reward management practice to improve Administrative and Diplomatic Officer's engagement level. Public employees are more likely to be engaged if the organisation they work at value their contributions and provide recognition to the employees.

Moreover, this study found that public service motivation successfully mediated the link between self-perceived transformational leadership style and employee engagement. The study also revealed that public service motivation successfully mediated the relationship between talent management practices and employee engagement. However, we also found that public service motivation did not mediate the relationship between transformational leadership style of manager and employee engagement in the public sector.

5.3 Research Objectives and Hypotheses

The antecedents of employee engagement in the public sector were the primary focus of this research study. This study is of particular interest due to the findings that employee engagement is one of the factors that can increase both individual and organisational performance. Based on this concern, this study developed a research model in order to examine the relationships that occur between the variables using a wide range of different theories and models. The results are used to substantiate the research objectives in this research, as summarised below:

- i. To examine the relationship between transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.
- ii. To examine the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.
- iii. To examine the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.
- iv. To examine the relationship between transformational leadership style of manager and talent management practices in the Malaysian public service.
- v. To examine the relationship between public service motivation and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.
- vi. To examine the mediating effect of public service motivation on the relationship between transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.
- vii. To examine the mediating effect of public service motivation on the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.

- viii. To examine the mediating effect of public service motivation on the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.

A preliminary study was conducted prior to the final survey to gain a thorough understanding of the issues raised in this study, which also contribute to the questionnaire development procedure. The preliminary study also aims to clarify and validate the employee engagement antecedents selected based on literature findings to see if they fit in the context of this study. According to the preliminary study, the majority of participants stated that human factor or employees are the most important factor that will influence organisational outcomes. Employee engagement has been found to have an impact on organisational outcomes such as competitiveness and efficiency.

Following that, the instrument development procedure in this study was implemented. To begin, a questionnaire was developed to measure the latent variables in this study based on the literature in the related area and the preliminary interview conducted earlier in this study. The development of research instrument to measure the research constructs is critical to ensure research objectives in this study are met. As a result, the measures used to examine the constructs in this study, which are employee engagement, transformational leadership style, and public service motivation and talent management practises, were selected from the combination of instruments that have been widely used and validated in the previous studies. For the purpose of this study, the instruments were modified for better clarity and understanding among the population without changing the original meaning. Next, to ensure the comprehensibility of the questionnaire, the questionnaire is made available in dual language which is English and Malay language. A certified translator was appointed to translate the survey instrument into Malay language by using a back translation method.

Finally, the content validity of the instrument was determined by having methodology experts and field experts among human resource personnel in the public sector to review the questionnaire to double-check that all questions were relevant, and any necessary adjustments had been made. The panel of experts examined each item on the questionnaire, spotted any problems, and made suggestions to improve the

questionnaire. They agreed that all items are accurate in terms of content, and the instrument has a sufficient content validity for the study purposes. The experts also provide comments and recommendations to improve the contents. Therefore, the questionnaire was revised and improved based on the comments and reviews received from the experts.

There are eight hypotheses that have been developed to examine the antecedents of employee engagement in this study. Table 5.1 presents the hypotheses and summary of results in this study.

Table 5. 1 Hypotheses and summary of result

	Hypotheses	Result
H1	Transformational leadership style of manager will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.	Not supported
H2	Self-perceived transformational leadership style will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.	Supported
H3	Talent management practices will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.	Supported
H4	Transformational leadership style of manager will significantly predict talent management practices in the Malaysian public service.	Supported
H5	Public service motivation will significantly predict employee engagement among Administrative and Diplomatic Officers in the Malaysian public service.	Supported
H6	Public service motivation mediates the relationship between transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officer in the Malaysian public service.	Not supported
H7	Public service motivation mediates the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officer in the Malaysian public service.	Supported
H8	Public service motivation mediates the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysia public service.	Supported

Based on the findings, the relationship between transformational leadership style of manager and employee engagement was found to be insignificant. The result did not support the hypothesis that transformational leadership style of manager significantly predicts employee engagement among Administrative and Diplomatic Officers.

Generally, previous research confirms Job Demands-Resources Theory that stated job resources reduce job demands, hence increase employee engagement. However, transformational leadership style of manager which is considered a job resource found to have insignificant effect on employee engagement among Administrative and Diplomatic Officers in the Malaysian public service in this study.

5.4 Discussion on the Major Findings

There is lack of studies on the concept of employee engagement in the public sector that proposed a comprehensive model that include all relevant public sector employee engagement's antecedents (Zahari & Kaliannan, 2022). This is due to the complexity to include every factors that influence employee engagement in a single model. Therefore, this study aims to develop a comprehensive model to examine the concept of employee engagement in the public sector that include leadership, organisational and work factor (talent management practices), and individual factor (self-perceived leadership and public service motivation). The study's findings have enlightened the understudied antecedents of employee engagement in the public sector that contribute to the body of knowledge in this area. This study also adds new knowledge to the current employee engagement literature in the public sector by including the indirect effect of public service motivation on the relationship between leadership, organisation and individual factor and public sector employee engagement. The following section discussed the study findings and provided the answers to the research questions.

5.4.1 Research Question 1

What is the relationship between transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?

5.4.1.1 Transformational Leadership Style of Manager and Employee Engagement

H1: Transformational leadership style of manager has a significant effect on employee engagement.

Hypothesis 1 is not supported. Based on the findings, the direct effect of transformational leadership style of manager on employee engagement is insignificant although the effect is positive. Therefore, the result suggests that transformational leadership style of manager has no influence on Administrative and Diplomatic Officers' engagement level in the public sector. This result is inconsistent with the previous studies measuring transformational leaders of leaders and employee engagement in the public sector. Previous studies found a positive relationship between transformational leadership style and employee engagement (Amor et al., 2020; Ancarani et al., 2020; Balwant et al., 2019; Ghadi et. al., 2013; Gyensare et al., 2017; Irianto & Basbeth, 2021; Islam et al., 2020; Ismail et. al., 2021; Khan et al., 2022; Mauno et al., 2016; Milhem et al., 2019; Obuobisa-Darko, 2019). A very few studies found insignificant relationship between transformational leadership style and employee engagement (Christian, Garza, & Slaughter, 2011; Smit, Schultz & Hoek, 2021) which supported the findings of this present study. Smit, Schultz and Hoek (2021) in their study found that transformational leadership style has a negative and insignificant relationship with work engagement. Furthermore, there are studies that found insignificant relationship between transformational leadership style and other employee outcomes. Lutfi and Siswanto (2018) discovered that transformational leadership style did not directly affect employee performance, supported by other studies that found similar results (Handoyo et al., 2015; Nurdin & Rohendi, 2016; Trang, 2013). The finding is inconsistent with prior literature that found the significance of transformational leadership style on employee engagement, given the fact that the nature of public sector may not allow the public leaders to exhibit transformational leadership style at work. The structure of public organisations may have bureaucratic characteristics that may hinder the practice of transformational leadership behaviours. Moreover, organisational hierarchy made it difficult for a public leader to become a transformational leader. It is widely assumed that bureaucratic organisations' structure will make it harder for transformational leaders to make an impact, but few studies have

tested this hypothesis (Wright & Pandey, 2010) In general, transformational leaders are thought to be less common and less effective in public sector organisations than in private sector organisations, on the assumption that bureaucratic control mechanisms play a larger role in the public sector (Bass & Riggio 2006; Howell 1997; Pawar & Eastman 1997; Shamir & Howell, 1999).

Due to the nature of public service as discussed above, public leaders may have difficulties to exhibit transformational leadership style in the public organisations. Formalisation and centralisation reduce the likelihood that organisational leaders will exhibit transformational leadership behaviour, according to studies in the United States and among public sector employees in Australia (Rafferty & Griffin, 2004; Sarros et al. 2002). The other potential reasons are public leaders may not possess the transformational characteristics due to the lack of exposure of transformational leadership style in the public sector other than unavailability of relevant trainings to develop them to become an effective leader and to practise transformational leadership style. According to Barling et al. (1996), training had a significant impact on subordinates' perceptions of leaders' transformational leadership style. Leadership behaviours are developed based on one exposure in their life for instance the experience working under and with other leaders, mentoring, coaching, and trainings. Therefore, whether someone practice one or more leadership styles is based on their personal experience and knowledge on the effectiveness of leadership styles. Dvir et al. (2002) found that followers whose leaders received transformational leadership training had significantly more positive personal development and performance. According to the research by Parry and Sinha (2005), when they exposed middle-level managers to a training programme designed to improve all of the aforementioned characteristics of transformational leaders, the results were positive. The managers' abilities to inspire their teams to greater levels of effort and to help their employees to set and achieve more ambitious goals were all enhanced.

Other potential reasons for the insignificant finding of the relationship between transformational leadership style of manager and employee engagement is due to the traits of population being studied. The respondents of this study are Administrative and Diplomatic Officers who serve at managerial level and at higher grades where they play leadership and supervisory roles at work. They are public leaders that have integral responsibilities in the public sector, therefore, leadership style of their manager may not

be too significant and crucial for them as they can work independently with minimum supervision. Kelly (2003) and Yukl (1989) indicate that transformational leaders managed to move people from low levels of need, centred on survival based on Maslow's hierarchy, to higher levels of need. As the higher ranked officers, they had already pursued their lower needs and currently trying to reach their higher needs. Therefore, they may not depend too much on leadership style of their superior. They may require other supports such as talent management practices through reward management, performance management, and career development to be more engaged and perform better at work.

5.4.2 Research Question 2

What is the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?

5.4.2.1 Self-Perceived Transformational Leadership Style and Employee Engagement

H2: Self-perceived transformational leadership style has a positive significant effect on employee engagement.

This study found that self-perceived transformational leadership style has a positive and significant effect on Administrative and Diplomatic Officer's engagement. This is based on the direct effect of self-perceived transformational leadership style on employee engagement is significant. This result is consistent with the previous studies measuring transformational leadership style and employee engagement. Transformational leadership style has a significant positive relationship with employee engagement in many studies. The result from this study supports the previous findings (Amor et al., 2020; Ancarani et al., 2020; Balwant et al., 2019; Ghadi et. al., 2013; Gyensare et al., 2017; Irianto & Basbeth, 2021; Islam et al., 2020; Ismail et. al., 2021; Khan et al., 2022; Mauno et al., 2016; Milhem et al., 2016; Obuobisa-Darko, 2019).

This study supports the Self-Leadership Theory notions that self-influence or individual factor is the most significant element that motivate people to perform. Self-leadership

defined as the capacity to exert one's own influence in pursuit of one's own objectives (Mustaffa & Ghani, 2019). According to Bandura's theories (1977, 1986), people have the power to shape their own motivation, thoughts, and behaviour. People's ability to regulate their own behaviour allow them to keep track on the gaps and compare their results to their own expectations or the goal they set themselves (Carver & Scheier, 2002). Therefore, self-leadership motivates them to be engaged at work. The significance of positive relationship between self-leadership and work engagement are found in many studies (Gomes et al. 2015; Schultz, 2021).

This present study findings indicate that Administrative and Diplomatic Officers who practise transformational leadership behaviours have better employee engagement's levels. Transformational leaders motivate their followers by enhancing the follower's self-awareness on the importance of high goals, encourage them to prioritise the organisation's needs over their own, and assisting followers in refocusing their attention on more special needs (Antonakis, Avolio, & Sivasubramaniam, 2003; Bass, 1985; Bass & Avolio, 1994). Possessing self-transformational leadership behaviours will encourage the leaders to put the organisation's needs ahead of their own and assist in shifting their team's attention to achieve organisational goals. Therefore, the leaders will encourage, provide support to their employees and co-worker to work together and create better environment at work. By being engaged the leader managed to influence others to be engaged too. According to the findings by Bakker et al. (2006), a transformational leader is an engaged leader who continuously inspire and motivate their followers. Another trait of transformational leadership style is to enhance and facilitate others' growth. This trait will most likely have a growth effect on transformational leadership agents as well. When middle managers display transformational leadership behaviours, their roles shift from being the one in charge to assisting others in becoming in charge and making the necessary decisions (Bass & Riggio, 2006).

5.4.3 Transformational Leadership Style and Employee Engagement

Although, the significance of transformational leadership behaviour in generating employee engagement outcomes in the public sector have been discussed in many studies (Ancarani et al. 2020; Gyensare et al., 2017; Malik & Khan, 2019; Nel et al.,

2015; Obuobiso-Darko, 2019; Soieb, 2018), this recent study found a mixed findings of the nexus between transformational leadership style and employee engagement among Administrative and Diplomatic Officers. This present study discovered that (i) transformational leadership style of manager have insignificant relationship on employee engagement, while (ii) self-perceived transformational leadership style has a positive and significant relationship with employee engagement.

Transformational leadership style of manager found to have an insignificant relationship on employee engagement among Administrative and Diplomatic officers. This result is contradicting theories and previous research indicate that transformational leadership style has a positive significant effect on employee engagement. Gallup study (2013) stated that poor leadership is the leading cause of employee disengagement. Other extant research consistently found that effective leadership skills of the transformational leaders enable them to exhibit favourable behaviours that will increase employee outcomes. The significant relationship between transformational leadership style and employee engagement have also been found by public sector researchers in many countries. However, this present study found that transformational leadership style of leader in the Malaysian public sector have insignificant impact on employee engagement among Administrative and Diplomatic Officers. The result implies that the increase in public leader's transformational leadership behaviours in the public sector does not lead to the enhancement in employee engagement. The contrasting results in this study could have been contributed by the unusual working conditions due to the Movement Control Order implemented by the Malaysian government. The influence of public leaders' transformational leadership style might be lesser during pandemic than in the normal setting because majority of public employees were working from home.

The other potential reasons to accommodate the inconsistency of the study findings with the previous studies are due to the scope of study including job responsibilities and salary grades of Administrative and Diplomatic Officers. They are public managers in public organisations; therefore, they have the ability to carry out their responsibilities under minimum supervision. They have supervision responsibilities, and they are required to give direction to their subordinates. As a leader, they also need to make decisions for their branch, division, or team within the division. Furthermore, the lack of transformational leadership behaviours applied by the public leaders could also lead

to this result. As stated by Bass and Avolio (1993), transformational leadership style is closely related to the organisational culture. The existence of red tape in public administration resulted by legislative branch in order to control the executive power practices in the government organisations could be the factors that discourage public leaders to apply transformational behaviours at work. However, the study found that Administrative and Diplomatic Officers are still engaged at work although, their leaders do not display transformational leadership style in the public service.

This study also implies that the increase of self-perceived transformational leadership style has a significant and positive relationship with employee engagement among Administrative and Diplomatic Officers. Specifically, the increase in transformational leadership behaviours displayed by public leaders leads to the positive effects on employee engagement. However, there are very limited studies in the context of employee engagement that focuses on the self-perception of transformational leadership style among managers to support these findings. The possible reason for this result is that the positive behaviours of transformational leaders increase their engagement level at work at the same time will engage others too. The notion behind transformational leadership theory is that having leaders who are concerned with emotions, mission, vision, goals, ethics, values, addressing follower needs, and growing their leadership ability boosts an organisation's effectiveness (Northouse, 2007). Transformational leadership theory discusses how leaders influence, motivate, stimulate, and consider the needs of individual followers to transform their companies, followers, and even themselves (Bass & Riggio, 2006). The application of transformational leadership behaviours among public leaders will not only moves themselves but also people who work with them to accomplish more than their expectations at the same time increase organisational outcomes. Therefore, this research demonstrates that transformational leadership style characterised by positive traits enables individuals to change for the better, which may benefit organisations.

To gain more information to support the research findings, semi-structured interviews were conducted to validate the findings. Participants were asked these questions “Does transformational leadership style influence Administrative and Diplomatic Officers’ engagement? If yes, how?”. The interview results found that majority of participants agreed that transformational leadership behaviours affect Administrative and

Diplomatic Officers' engagement in the public sector. According to participants, transformational leaders managed to influence employee engagement because positive leadership traits of transformational leaders will have a positive effect on employee engagement. Transformational leaders' traits such as positive mindset, set clear directions, leading by example, understand individual's different needs, empathy, accept other people opinions, inspire, and motivate others are some of the contributing factors that boost employee engagement. Besides, positive traits possess by transformational leaders managed to influence them to be engaged at work and at the same time motivate them to inspire their followers to be engaged and give their discretionary effort at work. Therefore, this study supports the previous findings that considered transformational leaders as job resources, in line with the Job Demands-Resources Theory.

5.4.4 Research Question 3

What is the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?

5.4.4.1 Talent Management Practices and Employee Engagement

H3: Talent management practices have a positive significant effect on employee engagement. Talent management practices construct consists of talent identification, talent development, career enhancement, reward management and performance management. Based on the result, the direct effect of talent management practices on employee engagement is significant and the result is positive. The result confirms the hypothesis that talent management practices have a positive significant effect on the employee engagement. The findings of this study have supported the prior studies that linked talent management practices and employee engagement. Numerous studies found that talent management practices have a positive and significant relationship with employee engagement (Bairkhuizen et. al., 2014; Bhatnagar 2007; Fahmi & Mohamed, 2020; Ishiyama, 2022; Pandita & Ray, 2018; Taneja et al., 2015; Tensay & Singh, 2020).

This present study found that talent management practices was found to significantly influence employee engagement and the effect was positive among Administrative and Diplomatic Officers in the context of Malaysian public service. Specifically, the increase of effectiveness of talent management practices in the public service leads to the positive effect on employee engagement. Although literature found a link between talent management practices and employee engagement, there are only a few studies in recent years that applies the specific concept of talent management practises on employee engagement especially in the public sector.

Literature on employee engagement which involve organisational factor mostly focus on human resource practises and not specifically on talent management practices. Nonetheless, research focuses on one or several specific practices of talent management practices for instance, training and development, career enhancement and performance and reward management found that the results in the studies were inconclusive. Many studies found positive relationships between training and development (Pradhan et al., 2019; Tensay & Singh, 2020; Wushe & Shenje, 2019), career enhancement, performance, reward management and employee engagement. However, some studies found insignificant relationships between the practise of talent management and employee engagement, for instance, Johari et al. (2013) indicates that training and development have no influence on employee engagement. This result was supported by Almotawa and Shaari (2020) that found training and development insignificantly and negatively affect work engagement.

This study indicates that talent management practices have the highest effect on employee engagement. Therefore, further assessment was carried out to examine the influence of talent management practices' dimensions construct on employee engagement. Based on the results showed in the previous chapter, reward management is the only talent management practices' dimension that has a significant positive effect on Administrative and Diplomatic Officers' engagement in the public service. Therefore, public organisations should improve their reward management to improve public officers' engagement to ensure they give their best effort to achieve organisational missions and visions. Public officers will be engaged and appreciate their leader more if they feel their leader and organisations value their work contributions,

give recognition to them, and provide salary adequately based on their work performance. These elements are very crucial to increase employee engagement based on the findings.

Meanwhile other dimensions of talent management practices construct, career enhancement, talent development, and performance management are found to have a positive relationship with employee engagement, however, the relationships found to be insignificant. On the other hand, talent identification found to have a negative relationship with employee engagement, but the result is insignificant. Talent identification in the Malaysian public sector involved evaluation programmes that aim to identify high performers among Administrative and Diplomatic Officers to be listed in the talents pool. The high potential officers will highly be in the talent pool highly be considered to fill in the higher position in the public service. Majority of respondents in this study are from those who are not listed in the talent pool, most probably they did not consider themselves involve entirely in the talent management practices implemented in the public sector.

Reward management is the only dimension that has a positive significant relationship with Administrative and Diplomatic Officers' engagement. This result is consistent with the findings of numerous studies that found reward and recognition to have a positive correlation and also an important contributor to engagement (Cooper-Thomas et al, 2018; Fairlie, 2011; Presbitero, 2017; Robinson et al., 2004; Saks, 2006; Soliman & Wahba, 2018; Taneja et al., 2015; Tensay & Singh, 2020). However, Almotawa and Shaari, (2020) found that reward and recognition have a negative and insignificant relationship with employee engagement. Furthermore, training and development are found to be elements to enhance employee engagement (Wushe & Shenje, 2019; Pradhan et al., 2019; Sendawula et al., 2018; Tensay & Singh, 2020; Robinson et al., 2004; Sundaray, 2011). However, this present study found that training and development have a positive but insignificant relationship with employee engagement. Other studies that support this finding is a study by Almotawa and Shaari (2020) that found training and development are negatively and insignificantly related to employee engagement. Johari et al. (2013) in his study discovered that training and development have insignificant effect in exerting employee engagement in Malaysia.

Semi-structured interviews with a number of Administrative and Diplomatic Officers have been conducted in Putrajaya to support the current findings. Participants were asked “Does talent management practices influence employee engagement? If yes, how?”. The findings from the semi-structured interviews demonstrate that majority of the participants agreed that talent management practices have a positive impact on employee engagement. Several participants also mentioned about rewards management being one of the most important elements of talent management practices. Therefore, the quantitative result in this study has been supported by the semi-structured interview being conducted. The finding of this study established a positive relationship between talent management practices and employee engagement, suggesting that employees become engaged in their jobs when they feel their contributions are recognised and appreciated. They believe that they are well treated, valued, and trusted (Alfes et al., 2013; Rich et al., 2010; Saks, 2006). The findings are consistent with the Social Exchange Theory's arguments that employees' levels of engagement are largely influenced by the reaction from their organisational practises. Social Exchange Theory argues that performance and productivity rise when workers feel valued and appreciated by their employers. As a result of their efforts, public employees deserve recognition and rewards. In addition to providing incentives for employees to perform well, this also encourage high performers to align with the public organisation's strategy and aids in retaining the highly engaged employees in the organisation. Employee engagement and overall human resource strategy can be better integrated with the support of a good reward and recognition programme.

Other than Social Exchange Theory, this present study also confirms the Job Demand-Resources Theory that indicates job resources will reduce job demands and increase individual outcomes. Talent management practices construct found to have a positive and significant relationship with Administrative and Diplomatic Officers' engagement in the public service. That means, the implementation of talent management strategies in the Malaysian public sector may improve employee outcomes, notably employee engagement, as being revealed in this study. To conclude, talent management practices are paramount for employees in the public sectors especially at managerial level. At this level, the officers have fulfilled their lower-level needs, hence they are more focused on their self-esteem and career growth. Therefore, public leaders and organisations should value public officers' contributions, give recognition and develop

their knowledge and skills to expand their potential and strengthened their leadership skills especially on the area they need to improve as an effort to increase their engagement level.

5.4.5 Research Question 4

What is the relationship between transformational leadership style of manager and talent management practices among Administrative and Diplomatic Officers in the Malaysian public sector?

5.4.5.1 Transformational Leadership Style of Manager and Talent Management Practices

H4: Transformational leadership style of manager have a positive significant effect on talent management practices.

Results of this research established the relationship between transformational leadership style and talent management practices in the public sector. Based on the result, the direct effect of transformational leadership of manager on employee engagement is significant. This is consistent with previous research that found positive significant relationship between transformational leadership style and talent management practices (Brown & May 2012; Onyango, 2015; Sadeli, 2012). The result suggests that transformational leadership of manager has a positive significant effect on the talent management practices which is consistent with the previous studies measuring transformational leaders of manager and the component of talent management practices for instance talent management programmes, career development, trainings, and career management. Brown and May (2012) in their study found a well-established link between transformational and contingent reward leadership behaviours and desired organisational outcomes. The present findings also in line with Ahmad and Mohamed's (2019) study which revealed that one of the transformational dimensions, individualised influence, is significantly related to succession planning which is the subset of talent management practices. As a result, the authors proposed that the public sector should emphasise on their senior management's leadership styles in order to assure the success of the succession-planning programme in the organisation. Moreover, another study by

Leng (2018) discovered that leadership factor is critical for the efficiency of talent management, which is consistent with earlier research on recruitment, retention, development, and reward practices. The author discovered that all three dimensions of leadership competencies (leading an organisation, leading others, and leading oneself) are crucial and correspond with talent management success.

This study supports that the roles of leaders are crucial to support talent management practices in the organisation. Transformational leaders have positive characteristics that provide continuous supports, encouragement, and career development for their employees. Transformational leadership behaviours tend to enhance employee engagement in a way that the leaders who apply this behaviour will focus on developing their employees. Therefore, they will ensure talent management practices in public organisations to be effective and efficient. Leaders with the right behaviours will drive talent management strategies toward employee engagement.

Employees, especially the talented ones, will appreciate more if their employer invests in their development, objectively analyse their performance, and provide job promotions and retention strategies. These behaviours are the known characteristics of transformational leaders. To be a great leader, they must constantly analyse and adapt their leadership style and behaviour. If organisations aim to groom potential future leaders, they should not just focus on the employees' succession planning programme, but also on the leader. Leaders should be developed with transformational leadership style in order to enhance talent management practices in the organisation. It is critical to have leaders with the right behaviours to drive talent management strategies toward employee engagement. As transformational leaders tend to enhance talent management practices by focusing on employees' development, they will ensure human resource practices in public organisations to be effective and efficient. Employees will appreciate more if their employer invest in their development, evaluate their performance objectively, provide job promotions and retention strategies. These leaders' behaviours are the known characteristics of transformational leaders.

5.4.6 Research Question 5

What is the relationship between public service motivation and employee engagement

among Administrative and Diplomatic Officers in the Malaysian public sector?

5.4.6.1 Public Service Motivation and Employee Engagement

H5: Public service motivation has a positive significant effect on employee engagement. The result from this study found that public service motivation has a positive significant effect on the employee engagement. This finding is consistent with previous research on public service motivation and employee engagement. Many researchers discovered the positive relationships between these two variables. Recent research on public service motivation established a significant positive relationship between public service motivation and employee engagement (Bashir et al. 2021; Borst, 2018; Borst et al. 2019; Cooke et al., 2019; De Simone et al., 2016; Levitats & Vigoda-Gadot, 2019; Luu, 2019; Peretz, 2020; Ugaddan & Park, 2017). However, a study by Borst et al. (2018) found that a dimension of public service motivation which is attraction of public policy have insignificant effect on employee engagement in certain organisations such as education and healthcare.

One potential explanation for this result is that a person who sense that his or her work makes a difference to the community, can indeed make them be more dedicated, enthusiastic, and proud of their work, which are all signs of engagement (Brewer & Selden, 1998; Crewson, 1997). Cooke et al. (2019) postulate that public service motivation may act as a buffer against the demand of the job as public sector employees often accept red tape and other work requirements as part and parcel of public sector employment. Similarly, Quratulain and Khan (2015) discovered that public service motivation mitigates the detrimental impacts of bureaucracy as a work requirement.

This study reinforced that public service motivation among public officers will lead to the increase of their employee engagement level. According to public service motivation research, public servants who have a high level of public service motivation are more committed because of the perceived fit between their own characteristics and the organisation (Moynihan & Pandey, 2007; Park & Rainey, 2008; Taylor, 2008). The traits of public service motivation which are compassion, self-sacrifice, and commitment to public interest owned by Administrative and Diplomatic Officers enable them to be more engaged at work. Public service motivation is an important public

service-related antecedent of public sector employee engagement due to beliefs, values, and attitudes that go beyond self-interest and organisational interest to energise employees to do good deeds for others and contribute to the well-being of organisations and society. Public service motivation is individual job resources that drive employees to give their best willingly to their organisation because of their own beliefs, values, and attitudes toward serving the people. It accomplishes this by increasing employees' appreciation for the work itself as a result of their strong desire to serve the public.

This present result has been supported by semi-structured interview being conducted to the selected Administrative and Diplomatic officers in Putrajaya. Majority of the participants agreed that public service motivation has a positive influence on employee engagement. They also stated that public service motivation is the most influential antecedents of employee engagement in the public sector. Participants were asked to give their views on how public service motivation can increase employee engagement. The main questions are “Does public service motivation influence employee engagement? If yes, how?”.

The interviews' findings discovered that all participants agreed that public service motivation affect employee engagement. According to the participants, public service motivation enables public employees to be engaged because they feel their work are fulfilling and give impact to people, they will be more engaged at work. The participants agreed that sincerity to serve people is the key element. Administrative and Diplomatic officers who own this type of motivation will always do their best in carrying out their responsibilities. They will always think about welfare of people and pros and cons that will be facing by people whenever they want to implement certain policies. This type of motivation will drive the officers to have more interaction with people in order to get ideas or feedbacks from others. Their decision on matters would always on sound judgment after taking into consideration all aspects and not a unilateral decision.

The results support the notion that employees will become engaged in their jobs when they feel that their job scope meets their personal interest in serving the public, and because this type of employment for them is rewarding (Perry & Wise, 1990). Employees are more likely to be satisfied in their jobs if their personal motives and the organisation's mission are aligned (Harari et al., 2017), which is consistent with the assertion made by Warren and Chen (2013) that working in the public sector allows

people with public service motivation who has a strong desire to serve the public to accomplish their own goals. As a result, they are more dedicated to their work than their co-workers that have a lower public service motivation.

5.5 Assessment of Public Service Motivation as a Mediator

Other than the direct effect of antecedents on employee engagement in the public sector, this study also aimed to investigate the role of public service motivation in the model as a mediator in the relationship between transformational leadership style of manager and employee engagement, self-perceived transformational leadership style on employee engagement and talent management practices on employee engagement. In this study, hypotheses H6, H7 and H8 were developed to test whether public service motivation mediates the relationship between the antecedent variables and employee engagement.

The process of mediation occurs when the causal relationship between independent and dependent variables has transmitted by a mediator. Bootstrapping approach with 5000 re-samples and bias corrected confidence intervals was taken into account to test the significance level of each hypotheses' mediating effect. This study used the recent mediation approach as suggested by Preacher and Hayes' (2004, 2008) as the bias corrected bootstrapping is considered a powerful method in detecting the mediation effect. According to Preacher and Hayes (2004) and Zhao et al (2010), $t\text{-value} > 1.96$, two-tailed, $p < 0.05$, significant indirect should be considered as evidence of mediation. Furthermore, the other way to determine mediation is by looking at the confidence interval, if the confidence interval does not straddle a zero in between, the occurrence of mediation effect is supported (Memon et al. 2018). However, for a model with multiple mediators, researchers should be using specific indirect effects rather than the total indirect effects.

The result of indirect effect in this study is shown in Table 5.2.

Table 5. 2 Hypotheses testing indirect effects

Predictor → Mediator →Criterion	Std Beta	Std Error	T-values	P-values	BCI LL	BCI UL
TLM-PSM-EE	-0.019	0.016	1.210	0.226	-0.055	0.008
TLS-PSM-EE	0.092	0.028	3.309	0.001	0.042	0.151
TMP-PSM-EE	0.054	0.021	2.596	0.009	0.019	0.101

Note: 95% confidence interval with a bootstrapping of 5000 was used

Based on Table 5.2, there is no mediation effect of public service motivation on the relationship between transformational leadership style of manager and employee engagement among Administrative and Diplomatic officers. However, there is a mediation effect of public service motivation on the relationship between self-perceived transformational leadership style and employee engagement. Other than that, there is also a mediation effect of public service motivation on the relationship between talent management practices and employee engagement.

To further assess mediation effects of public service motivation, this study followed Mathieu and Taylor (2006) suggestion in order to determine the degree of mediation, partial or full mediation. Partial mediation occurred if both indirect effect and direct effect are significant. Meanwhile, full mediation occurs if the total effect and indirect effect are significant, but direct effect is not significant. Table 5.3 presents the direct effect, indirect effects, total effect and the degree of mediation of the hypothesised paths.

Extant research on employee engagement in the public sector showed limited studies have been carried out to determine the indirect effects of public service motivation construct on the relationship between employee engagement's antecedents and employee engagement. Therefore, it is essential for public service organisations to determine the impact of public service motivation on employee engagement in the public sector in order to develop effective strategies and programmes that increase public organisational efficiency. The findings of indirect effect of public service motivation in the study is consistent with the empirical evidence from the literature

that found public service motivation is one of the important factors in engaging public sector employees.

Table 5. 3 Degree of mediation

Predictor → Mediator →Criterion	Direct Effect	Indirect Effect	Total Effect	Degree of Mediation
TLM-PSM-EE	0.009*	-0.019*	0.262*	partial
TLS-PSM-EE	0.174	0.092	0.265	partial
TMP-PSM-EE	0.396	0.054	0.450	partial

Note: *p<0.01, **p>0.01 N=318

5.5.1 Research Question 6

Does public service motivation mediate the relationship between transformational leadership style of manager and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?

5.5.1.1 Public Service Motivation, Transformational Leadership Style of Manager and Employee Engagement

H6: Public service motivation mediate the relationship between transformational leadership style of manager and employee engagement.

Based on the table above, the indirect effect of transformational leadership style of manager on employee engagement is insignificant. The result from this study found that H6 was not supported. Therefore, it suggests that public service motivation did not mediate the relationship between transformational leadership style of manager and employee engagement.

Although public service motivation has positively influence employee engagement, however, this present study found that public service motivation did not have significant mediating effects on the relationship between transformational leadership style of manager and employee engagement. Therefore, the hypothesis of public service

motivation mediates the relationship between transformational leadership style of manager and employee engagement is not supported. There is not enough evidence to make conclusion about the presence of mediation effect of public service motivation on the relationship between transformational leadership style of manager and employee engagement. This result has similarities with the study by Handoyo, Hamid and Iqbal (2015) that found transformational leadership style has no significant influence on employee's performance even through work motivation. Align with this present study, transformational behaviours of the manager in the public sector have no influence on Administrative and Diplomatic Officers' engagement level, even though they are public service motivated. As being discussed in previous section, potential reasons of this results are that (i) transformational leadership behaviours are not working effectively on public officer in the Malaysian public sector, public officers prefer another type of leadership or a combination of two or more leadership styles to move them to be engaged at work, (ii) the public leaders do not practise transformational leadership style, due to the public sector nature of bureaucracy and organisation work structure, and the leaders have lack of transformational leadership behaviours due to low exposure or trainings in the Malaysian public service.

5.5.2 Research Question 7

Does public service motivation mediate the relationship between self-perceived transformational leadership style and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector?

5.5.2.1 Public Service Motivation, Self-perceived Transformational Leadership Style, and Employee Engagement

H7: Public service motivation mediates the relationship between self-perceived transformational leadership style and employee engagement.

Based on the result, the indirect effect of self-perceived transformational leadership style on employee engagement is significant. The result from this study found that H7 was confirmed. Public service motivation significantly mediates the relationship between self-perceived transformational leadership style and employee engagement.

The relationship between transformational leadership style of manager and employee engagement is because of Administrative and Diplomatic officers in the Malaysian public service are public service motivated. The motivation to serve the people has bridged the gap between self-perceived transformational leadership style and employee engagement.

In this study, it was clear that a focus on public service motivation within the public sector is critical. The findings highlighted the significant role of public service motivation as a predictor that boost employee engagement as discussed by many studies (Bashir et al. 2021; Borst, 2018; Borst et al. 2019; De Simone et al., 2016; Levitats & Vigoda-Gadot, 2019; Luu, 2019; Peretz, 2020; Ugaddan & Park, 2017) and supported by the interviews that has been conducted to validate this research findings. Therefore, this result indicate that employee engagement can be enhanced if Administrative and Diplomatic Officers practise transformational leadership behaviours at work supported with their public service motivation. Furthermore, transformational leadership behaviours that they practise increase their public service motivation, which in turn positively predict employee engagement. Hence, public service motivation helps in underlying the effects of self-perceived transformational leadership style on employee engagement. The result of this study supported the extent research regarding the specific context of mediating role of public service motivation, self-perceived transformational leadership style, and employee engagement in the public sector of developing countries.

5.5.3 Research Question 8

Does public service motivation mediate the relationship between talent management practices and employee engagement among Administrative and Diplomatic Officers in the Malaysian public sector.

5.5.3.1 Public Service Motivation, Talent Management Practices and Employee Engagement

H8: Public service motivation mediates the relationship between talent management practices and employee engagement.

The result from this study confirmed H8. The indirect effect of public service motivation on the relationship between talent management practices and employee engagement is significant (indirect effect is 0.054, lower bootstrap CI is 0.019, upper bootstrap CI is 0.101, $p < 0.05$). Public service motivation found to mediate the relationship between talent management practices and employee engagement.

5.5.3.2 Public Service Motivation Mediates the Relationship between Talent Management Practices and Employee Engagement

Results of this research established the mediation effect of public service motivation on the relationship between talent management practices and employee engagement in the public sector. In other words, the findings highlighted the significant role of public service motivation as a predictor that boost employee engagement. Simply put, the relationship between talent management practices and employee engagement is due to public service motivation of the Administrative and Diplomatic Officers in the Malaysian public service. The motivation to serve people and provide excellent public services has increase their employee engagement.

The result has suggested that public service motivation is important in explaining how talent management practices may increase Administrative and Diplomatic Officers' engagement. Therefore, this result indicate that employee engagement can be enhanced if talent management practices conducted by the Malaysian public service is supported by the mediating role of public service motivation among Administrative and Diplomatic Officers in the public service. Furthermore, talent management practices that have been carried out in the public sector increase public service motivation among Administrative and Diplomatic Officers, which in turn positively predict employee engagement.

Hence, public service motivation helps in underlying the effects of talent management practices on employee engagement. Improving public employees' motivation to serve the people will increase their engagement level. The result of this study supported the extent research regarding the specific context of mediating role of public service motivation, talent management practices and employee engagement in the public sector of developing countries.

5.6 Level of Employee Engagement, Public Service Motivation and Transformational Leadership Style in the Public Sector

This study indicates the level of transformational leadership style, public service motivation and employee engagement level among Administrative and Diplomatic officer. This information is important for the public sector human resource personnel to come out with a strategy to improve the employees' outcomes.

Based on Table 5.4, range of mean score and the composite score indicate that the level of employee engagement, public service motivation and transformational leadership style among Administrative and Diplomatic officer in the public sector can be divided into three level (low, medium, and high).

Table 5. 4 Mean score range level

	Criteria	Range	Composite range
Level	High	4-5	$4 \leq x < 5$
	Moderate	3	$3 \leq x < 4$
	Low	1-2	$0 \leq x < 3$

In order to assess engagement level among Administrative and Diplomatic Officers, this study used Utrecht Work Engagement Scale (UWES 9-item). 5-point Likert scale ranging Not at all (1) to Always (5) was used to measure the items related to vigour, dedication and absorption. The questions that were included in this study (i) When I wake up in the morning, I feel like going to work, (ii) At my work, I feel myself bursting with energy, (iii) At my jobs, I feel strong and vigorous, (iv) I am enthusiastic about my job, (v) My job inspires me, (vi) I am proud of the work that I do, (vii) I am immersed in my work, (viii) I get carried away when I am working, and (ix) I feel happy when I work intensely. The highest score is 5 (highly engaged), and the lowest score is 1 (least engaged). The mean score was calculated by dividing the total score of all items by the number of items. Respondents who have a mean score between 5 and 4 in the items were highly engaged, moderately engaged if they scored 3, and lowly engaged if they scored 2 and 1. The Administrative and Diplomatic Officers' engagement level is presented in Table 5.5.

Table 5. 5 Administrative and Diplomatic Officers’ engagement level

	Criteria	Frequency	Percentage
Level	High	255	80.2%
	Moderate	55	17.3%
	Low	8	2.5%
	Total	318	100%

Understanding the level of employee engagement among public sector managers is critical for public sector organisations in order to ensure that highly engaged and high potential officers are retained as they are valuable assets to the public organisations. Having high engaged officers is essential as they work hard to serve the public, to improve the service delivery system and achieve the organisational vision and mission. Gallup (2017) study indicates that employee engagement is crucial to create productive organisation. Engaged employees are more energetic, innovative, and consistent in executing their duty. Based on the study, the level of employee engagement among Administrative and Diplomatic officers in the public sector is high. Majority of the respondent, 80.2 per cent (255) have a high level of engagement. The result aligned with the Public Service Engagement Index conducted in 2018 which indicates a value of 71.9 per cent.

However, Soieb, Z (2015) in his study found that only a slight majority of public sector employees, or 56 per cent have a high level of engagement, 44 per cent have a moderate level while only 0.4 per cent have a low level of engagement. The study used Gallup to assess the engagement level of public sector employees. The result shows that the percentage of highly engaged public sector employee has increased drastically however the percentage of low level has also increased. Although only a small percentage of Administrative and Diplomatic Officers are found to have a low level of engagement, further investigation is required to determine the reasons for their low engagement. Public sector organisations must find solutions to improve their engagement level as according to Rayton et al. (2012) managing low engaged employees incur high costs.

Another important construct that has been emphasised on in this study is public service motivation. The result confirmed that public service motivation drives employees to be more engaged at work. Therefore, this study also examined the level of public service

motivation among Administrative and Diplomatic Officers. The findings in Table 5.6 shows that 90.3 per cent or 287 of respondents have a high level of public service motivation, while 9.7 per cent or 31 respondents have a moderate level of public service motivation. This information is critical in order for the government to introduce engagement strategies by improving public service motivation among public officers.

Public service motivation construct in this study was assessed using a 5-item scale. ranging Likert scale of frequency ranging from strongly disagree (1) to strongly agree (5) was used to measure the items. The questions that were included in this study (i) Meaningful public service is very important to me, (ii) I am not afraid to go to bat for the right of others, even if it means I will be ridiculed, (iii) Making a difference in society means more to me than personal achievements, (iv) I am prepared to make enormous sacrifices for the good of society, (v) I am often reminded by daily events about how dependent we are on one another.

The highest score is 5 (highly public service motivated), and the lowest score is 1 (least public service motivated). The mean score was calculated by dividing the total score of all items by the number of items. Respondents who have a mean score between 5 and 4 in the items have a high level of public service motivation, moderate level of public service motivation if they scored 3, and low level of public service motivation if they scored 2 and 1. The level of public service motivation among Administrative and Diplomatic Officers is shown in Table 5.6.

Table 5. 6: Level of public service motivation

	Criteria	Frequency	Percentage
Level	High	287	90.3%
	Moderate	31	9.7%
	Low	0	0%
	Total	318	100%

Other antecedents of employee engagement included in this study are transformational leadership style of the manager and self-perceived transformational leadership style. This research sought to determine whether the positive characteristics of individuals exhibiting transformational leadership behaviours have a positive impact on the

engagement level of their subordinates or on their own engagement level. Employee engagement literature usually focus on the leadership behaviours of the leaders; however, this study examines the different perspective as it also aims to identify the relationship of transformational leadership attributes on individual engagement. In this case leadership behaviours of the respondents themselves as they are the main interest in this study. Literature indicates the influence of transformational leadership style on employee engagement have been supported by this study. This present study also found that self-perceived transformational leadership style among Administrative and Diplomatic Officers have a positive effect on their engagement level.

To assess the level of transformational leadership style of manager, 5-point Likert frequency ranging from Strongly disagree (1) to Strongly agree (5) was used to measure the items. The questions used to assess transformational leadership style of manager are, (i) My manager communicates a clear and positive vision of the future, (ii) My manager treats their subordinates as individuals, supports and encourages their development, (iii) My manager gives encouragement and recognition to their subordinates, (vi) My manager fosters trust, involvement, and cooperation among team members, (vii) My manager encourages thinking about problems in new ways and questions assumptions, (vii) My manager is clear about their values and practises what they preach, (viii) My manager instils pride and respect in others and inspires me by being highly competent.

The highest score for this scale is 5 (high level of transformational leadership style), and the lowest score is 1 (low level of transformational leadership style). The mean score was calculated by dividing the total score of all items by the number of items. Respondents who have a mean score between 5 and 4 in the items have a high level of transformational leadership style, moderate level of transformational leadership style if they scored 3, and low level of transformational leadership style if they scored 2 and 1.

Based on the result in Table 5.7, 71.4 per cent or 227 respondents stated that their managers have a high level of transformational leadership style, while 15.4 per cent or 49 respondents stated that their managers have a moderate level of transformational leadership behaviours and another 13.2 per cent, or 42 respondents stated that their managers show a low level of transformational leadership behaviours. Based on the

result, there is a significant number of managers who, according to their subordinates, demonstrate a low level of transformational leadership style, therefore, government organisations should come up with strategies to develop transformational leadership behaviours among public leaders in order to improve employee engagement.

Table 5. 7 Level of transformational leadership style of manager

	Criteria	Manager		Self-perceived	
		Frequency	Percentage	Frequency	Percentage
Level	High	227	71.4%	303	95.3%
	Moderate	49	15.4%	15	4.7%
	Low	42	13.2%	0	0%
	Total	318	100%	318	100%

To assess the level of self-perceived transformational leadership style among Administrative and Diplomatic Officers, 5-point Likert frequency ranging from Strongly disagree (1) to Strongly agree (5) that was used to measure the items. The questions used to assess self-perceived transformational leadership style are, (i) I communicate with a clear and positive vision of the future to my subordinates, (ii) I treat my subordinates as individuals, supports, and encourage their development, (iii) I give encouragement and recognition to my subordinates, (iv) I foster trust, involvement, and cooperation among my team members, (v) I encourage thinking about old problems in new ways and questions assumptions, (vi) I am clear about my self-values and practise what I preach, (vii) I instil pride and respect in others and inspires them by being highly competent. The highest score for this scale is 5 (high level of transformational leadership style), and the lowest score is 1 (low level of transformational leadership style). The mean score was calculated by dividing the total score of all items by the number of items. Respondents who have a mean score between 5 and 4 in the items have a high level of transformational leadership style, moderate level of transformational leadership style if they scored 3, and low level of transformational leadership style if they scored 2 and 1.

Meanwhile for self-perceived transformational leadership style, based on Table 5.7, majority of Administrative and Diplomatic Officer, or 95.3 per cent (303 respondents) rated themselves as having a high level of transformational leadership behaviours, and

4.7 per cent or 15 respondents have a medium level of transformational leadership behaviours. No respondent stated they have a low level of transformational leadership behaviours.

5.6.1 Theoretical Implications

In general, this study makes several significant theoretical contributions. This research discusses the gaps in the literature by examining the antecedents of public service employee engagement, specifically in the Malaysian public sector.

First of all, this is the earliest study to develop and test an integrated model that examines the effects of transformational leadership style, talent management practices, public service motivation on employee engagement in the Malaysian public sector. As a significant contribution to this study, an additional constructs were tested as direct and indirect determinants of employee engagement. The model developed for this study also takes into account organisational (talent management practices), individual (public service motivation), and leadership (transformational leadership style of manager and self-perceived transformational leadership style) factors to provide a solid theoretical understanding of employee engagement's antecedents in the public sector. This study provides a better understanding on the concept of transformational leadership style, talent management practices and public service motivation, as minimal evidence was found in the topic area. Hence, this study adds to the body of knowledge on the determinants of employee engagement in the public sector.

Second, this study is one of the first to combine Social Exchange Theory and Self-Determination Theory into a single research model. This study supports the integration of these two theories' applicability in explaining the factors that influence public sector employee engagement, particularly in a developing nation like Malaysia. The concepts of employee engagement and the factors affecting it were clearly explained by both the Self-Determination Theory and Social Exchange Theory. Based on the results, employee engagement is found to be influenced by leadership behaviours, talent management strategies, and public service motivation, according to the research. Self-Determination Theory was found as an important underpinning theory to the employee engagement model as the result of this study found the significant influence of self-

perceived transformational leadership style and self-motivation on employee engagement.

Thirdly, this study contributes to the literature by adding a new construct in the model. This study distinguishes itself from other studies that examined antecedents of employee engagement by putting forth a model that investigates the indirect effect of self-motivation to influence employee engagement. Additionally, it offers some preliminary insight into the roles of public service motivation as a mediating factor between transformational leadership style-employee engagement and talent management practices-employee engagement. The results explain the importance of self-motivation and motivation related to the public service to raise employee engagement in the public sector besides other significant factors such as leadership and organisational factors.

Last but not least, this study makes a significant contribution by improving our understanding of employee engagement in the public sector, particularly in the context of developing countries. To the best of the researcher's knowledge, most studies on employee engagement are based on organisational in western countries, and there is still a dearth of data on Malaysian public service employees. Therefore, it is crucial to conduct local context-specific research because results from western contexts could not be generalised to other regions, particularly Asia and Malaysia.

5.6.2 Contributions to the Public Sector

This study shed light on the concept of employee engagement, particularly on its antecedents in the public sector. Given their critical role in the growth and development of the nation, public sector organisations should place a high priority on factors that might increase employee engagement. This study opens for numerous contributions to the public service especially to the public service engagement model of public managers. According to the literature, there is a need to clearly understand the drivers and consequences of employee engagement because having disengaged workforce can be very costly (Rayton et al. 2012).

This study found that talent management practices, public service motivation, and self-perceived transformational leadership behaviours among Administrative and Diplomatic Officers have a positive significant effect on their engagement level. Therefore, in order to boost employee engagement among public officers, public organisations need to concentrate on the elements particularly talent management practices in the public sector which found to have the highest influence on employee engagement of Administrative and Diplomatic Officers followed by public service motivation, and self-perceived transformational leadership style.

Public organisations in Malaysia have been focusing on talent management practices to increase effectiveness of public service managers. Numerous talent development programmes have been introduced and planned to ensure public managers have the enough support, skills and capability to carry out their responsibility and duty to the organisation. The best effort to manage employees is by focusing on the talent management practices and transformational leadership style in the organisation. Talent management practices was found as the most important driver of employee engagement in the public sector. Therefore, public organisations should continue to improve their reward management and career enhancement to provide better package to public managers who contribute to the public sector. Improving talent management practices especially reward management is crucial to increase public sector efficiency. This result is consistent with Wushe and Shenje (2019) study that discovered a significant positive relationship between compensation, incentive programmes and career development on employee engagement in the public sector. The study also found that employee engagement has a positive association with service delivery in the public sector. The result also indicates the importance of effective career development and reward management practices in public organisations as it may assist in raising employee engagement levels among public employees.

The result of present study found that talent development (including training) has an insignificant relationship with employee engagement. The result is inconsistent with Job Demands-Resources Theory supported by numerous studies that found a positive relationship between training and employee engagement (e.g., Chang & Chen, 2002; Wushe & Shenje, 2019). However, this present study finding is consistent Johari et al.'s (2013) study which indicates that training and development was insignificant factor in

exerting employee engagement in Malaysia. This result is also supported by a more recent study by Almotawa and Shaari (2020) that discovered training and development to have an insignificant and negative effect on employee engagement. Therefore, comprehensive trainings that provide employees with necessary knowledge and skills to perform their job more effectively found to be insignificant to increase employee engagement. However, more research needs to be carried out to support this finding as it is not in line with the prominent Job Demands-Resources Theory.

In order to improve employee engagement, public sector should provide training and development programme to enhance public service motivation and transformational leadership skills among their public managers. Andrews (2016) indicates that public service motivation can be enhanced. Study by Barling et al (1996) suggested that transformational leadership element (intellectual stimulation) can be change through training and feedbacks Kelloway et al. (2000) in their study indicates that training and feedbacks influence transformational leadership. Therefore, public sector organisations should include trainings and development programmes as a strategy to increase public service motivation and transformational leadership skills among public managers.

Public organisations should create environment that allow the practices of transformational leadership style. The importance of leading by example is important, therefore public managers should be encouraged to practise transformational leadership behaviours. The importance to have great leaders, particularly transformational leaders, who can overcome fear and are prepared to take action toward organisational transformation (Idris Jala, 2017). Transformational leaders are known to be visionary leaders. Ismail Adam (2007) the former Director General of Public Service stated that public leaders must have visionary mindset as the government is responsible to set a new vision of the country in the future (Ismail Adam, 2007).

Furthermore, transformational leadership characteristics are essential to enhance public managers' engagement at work. This present study found that self-perceived transformational leadership style among Administrative and Diplomatic Officers increases their level of job engagement. Positive characteristics from transformational leadership style seems to motivate them to go beyond their job scopes and requirements in order to contribute to the organisation's goals and performance outcomes.

There are numerous strategies that can be implemented to develop transformational leadership style among public managers and to encourage them to practice transformational leadership style. For instance, public organisations should identify public leaders who have transformational leadership qualities to be a role model and to show good leadership quality example as well as to train future leaders as a mentor or coach. Invention programmes such as training and onboarding session can also be implemented to instil transformational leadership values among public managers. To improve employee engagement, it is important for the public managers to be continuously trained and motivated to practise transformational leadership behaviours when performing their job at work. The value and behaviours of a transformational leader will guide them to be a visionary leader. They will be more concern towards others and accept people as they know every person is different and unique. As a leader they will encourage and support their subordinates to perform better at work and provide relevant training and development programmes needed for them to excel at work. These positive behaviours of transformational leadership style will not only raise positive outcomes and improve employee engagement of their followers but at the same time increase their engagement level.

Self-Determination Theory is fully supported in this study as self-perceived transformational leadership style and public service motivation has found to have positive significant effect on employee engagement. This study demonstrates that public officers' engagement depends on their own positive leadership attributes. Therefore, public organisations should develop transformational leadership skills among public leaders at all stages, from junior leaders, middle managers and senior managers as transformational leadership behaviours are important to motivate them to achieve organisational goals, to increase skill and capability at the same time provide reward based on their achievement. The result of this study supports Self-Determination Theory notion that is crucial in the public sector context. The importance of improving employee engagement among public officers cannot be overstated; thus, public administrators should implement appropriate intervention measures such as expanding employee training and development programmes. Developing effective leadership styles among public leaders, such as transformational leadership style are important to improve public sector employee engagement giving public managers positive leadership qualities will enable them to be visionary and people-centric leaders.

In this study, transformational leadership style of manager found to have insignificant relationship with employee engagement which is inconsistent with numerous research's findings. The likelihood of the practice of other leadership styles in the public sector setting such as transactional leadership is high as public organisations involved rigid procedures, excessive formal rules, and regulation. Most tasks in public organisations demand specific processes, protocols, and timelines that should be fulfilled, which makes transformational leadership practises among public leaders difficult to fully practised. The leaders in the public sector might be demonstrating more than one leadership style depends on situations. These provide justification for the insignificant impact of transformational leadership style of managers on employee engagement. Therefore, to increase transformational leadership practices among leaders, public organisations should improve their work procedures, reduce red tape and bureaucracy that could hinder the effort to encourage the practices of transformational behaviours among public leaders.

The importance of public service motivation among the public officers has also been supported in this study. The concept of public service motivation has become more relevant and important as the public sector related issues become more complex faces increasing pressures and demands for greater efficiency, effectiveness, and accountability (Zubair et al, 2021). Public service motivation is not always viewed as job resources. Studies by Quratulain and Khan (2015) and Giauque et al. (2012) considered public service motivation as job demand based on their findings. The studies discovered that employee with a high level of public service motivation can be discouraged and demoralised as the impact of red tape, they encountered in order to serve for public interest. This study shed light on the direct and indirect influence of this public service motivation on Administrative and Diplomatic officer's engagement level.

Furthermore, the research that is currently available on public service motivation has been heavily weighted toward factors that are not financial in nature. This is primarily due to the fact that the public sector is unable to offer employees direct monetary incentives, as well as the fact that those working for the government are looking for a clear and meaningful service. As a result, public administrators must devote more attention to developing intervention programmes aimed at instilling these values in

public employees. Extant studies discovered that public service motivation is a dynamic feature that can be improved in his study. Training, mentoring programmes, and social events play an important role in instilling positive values in government employees. It is recommended that public administrators provide adequate intervention programmes to develop positive individual behaviours and values among public employees in order to increase their level of employee engagement.

Other than that, public sector organisation could improve their recruitment and selection process by including additional requirement of public service motivation among new recruits. A useful assessment of motivation levels in public service should be made in the selection of public employees as suggested by some researchers (Perry & Wise, 1990). Furthermore, managers can enrich employees' tasks, giving the meaning to the public service and positively influence employee engagement and job satisfaction by analysing subjective psychological dimension (Brewer & Selden, 1998; Naff & Crum, 1999). Bright (2007) and Mann (2006) suggested that the first step in managing public service values is by identifying qualified candidates who share or are responsive to the public service values. A thorough selection process assist both the organisation and the candidate in determining the fit between the applicant's values and the practises of the organisation.

Other element of talent management practices which is trainings may also boost public service motivation. Therefore, the practises of talent management may improve public service motivation. Reward management and performance management are also the important elements that could enhance public service motivation. Employees will be more motivated to serve for the public interest if they believe their work is valued and appreciated by their leaders and they also receive recognition from their employer. Exploring this relationship in a single model raises a number of unanswered questions that has yet to be addressed in employee engagement, transformational leadership style, talent management, and public service motivation literature. This study also discovered that transformational leadership style has a significant positive relationship on talent management practices. The higher level of transformational leadership attributes possessed by public leaders will have a positive influence on talent management practices in the public sector. This outcome is predictable, as the distinctive features of

transformational leaders, which is primary people-focused, will motivate them to give more emphasis on talent management strategies.

5.7 Study Limitations

Every study has its limitations. Although this is just another employee engagement study to develop understanding of the determinants of employee engagement in the public organisation, this study is no exception to limitations. The first limitation in this study is that employee engagement is a sensitive issue hence subject to socially desirable responses. One might have the urge to present oneself in a positive light in social norms and standards. Other situation is that some respondents might be more willing to give a negative response or lower rating when evaluating their manager or organisation than their own self. It can be seen from the result of this study where the respondents have highly rated themselves as seen in the level of employee engagement, public service motivation and self-perceived transformational leadership style. This biasness might distort the findings of this research. However, the anonymity and confidential responses were carried out to minimise social desirability bias.

The second limitation in the scope of study. The findings of this study are limited to a selected scheme in the public service which is the Administrative and Diplomatic scheme. The Malaysian public service consists of numerous schemes which work together to contributing to the achievement of government organisations' visions and missions. In this study, data was collected from Administrative and Diplomatic scheme officers which is one of hundreds of schemes in the Malaysian public service. The determinants of employee engagement among officers in the public sector have potential to be different when other schemes or backgrounds categories are also included and tested. Therefore, this study can only be generalised to the population of Administrative and Diplomatic officers, but not to the overall Malaysian public sector employees.

The third limitation is that the study conducted was a cross-sectional study. This type of study might not be able to capture the dynamic and hard to predict the public managers as causal effect for employee engagement. The result can lead to some bias since the respondents can only respond to the survey once. In addition, the result may differ if the data were collected periodically several times in certain durations to validate

the results derived from this study. The implementation of other research designs such as longitudinal study might increase the time duration and cost to conduct the research.

The fourth limitation of this study is the unusual working conditions and situations in which data was collected during the global health situation. This study was conducted during a pandemic, at the time the Malaysian government implemented Movement Control Order where majority of respondents were working from home. The officers were in the process of adjustment to their new surroundings and work conditions. This circumstance may cause the results to be inconsistent with previous studies. The relationship between leaders and subordinates may have been affected during this period. There is a high probability that the study findings may differ if this study was conducted under the normal situations. Finally, this study discovered that the sample frame received was not updated. Based on the researcher's record, there are several emails distributed have failed to reach the selected respondents. Therefore, some potential respondents have no opportunity to take part in this study as the online questionnaires were failed to be distributed to them. They were left out from participating in the study although they have been selected earlier using stratified random sampling method.

5.8 Recommendations for Future Research

Though this research has established some of drivers of employee engagement in the public sector, much remains to be understood on public sector employee engagement context other than limitations discussed in the previous section. Future research should adopt a mixed-method approach to examine the antecedents of public sector employee engagement. The integration of qualitative and quantitative approaches could provide more insights on employee engagement among public sector employees. The use of qualitative approach helps to provide in-dept data to support the result of the quantitative approach in this study. In addition, the importance of future research to cross-validate result of the present study needs to be highlighted apart from to determine generalisability of these findings. In addition, the consequences of employee engagement on employees and organisational outcomes in the public sector should also be explored to evaluate the current findings.

Future study should also attempt to use longitudinal approach for data collection to examine the public sector employee engagement that enable a more thorough exploration of how employee engagement changes over time. Longitudinal approach would provide a further insight into the nature of causal link predictors and employee engagement.

Other than that, future research should also attempt to replicate this study by using a research instrument or scale that is distinct from the one used in this study to measure the underlying constructs as being used in this research model. It would be interesting to apply other engagement scales to measure employee engagement to understand the findings from different perspectives. As for predictor's constructs, other scales such as Multifactor Leadership Questionnaire (MLQ) to measure leadership styles and other talent management practice scales than the one used in this study should be employed in the future study. The used of a different research instrument to measure talent management practices construct is significant to get better understanding on the topic as talent management practices is an understudied concept with limited studies discussing its relationship with employees' outcomes.

The mixed findings about the relationship between transformational leadership style and employee engagement in this study are interesting to be further explored, hence, the findings need further clarification in future studies. Transformational leadership style of manager found to have insignificant relationship on employee engagement needs further validation although it is difficult to create a similar environment since the data collection in this study was conducted during unusual or new normal working environment. Therefore, more research should be conducted especially during crises to validate these findings and to identify the potential reasons of such findings. A qualitative method research could be conducted to collect open-ended questions from respondents, as the results might be different from this study since the data collected in this study by using close-ended questions. Study on different population using the same model is highly recommended to examine the relationship between transformational leadership style and employee engagement to verify the findings.

Furthermore, future research should also consider investigating other leadership styles or the combinations of two or more leadership styles in one model to add to the body

of knowledge of how other leadership styles affect employee engagement. To understand leadership styles that may affect employee engagement is a great opportunity for public organisations to plan strategies to increase government efficiency and effectiveness. This initiative is crucial for public organisations to increase public service delivery by enhancing employee's outcomes. Other than that, future research should investigate the possibility that employee engagement may have been influenced by various cultural value and moral. It will be fascinating to investigate how the distinctive cultural traditions of Malaysia might have an effect on the findings.

Other than that, future research should adopt this employee engagement model to re-examine the relationship between the antecedents and employee engagement in the normal situations to validate the findings. Unusual working conditions and situations due to the global health situation may have some effect on the study findings since public managers and other public employees were not working at their normal situation and capacity. However, to have future research being conducted during the crises may validate the research findings.

Future research should also consider including more significant variables to strengthen this public sector employee engagement model. Based on the findings of this study, there are other factors that could influence employee engagement in the public sector such as work life balance, organisational culture, and other leadership styles.

Finally, in the future, the replication of the model to examine the generalisability to different sectors, size of organisation is highly recommended. Also, to test model applicability using samples from different countries, or even sectors in the same country to confirm a robust conclusion of the findings in this study since it is the first empirical study that analyse the proposed relationships.

5.9 Conclusion

Employee engagement is one of the public sector organisations' strategies in order to improve government efficiency, effectiveness and public service delivery. Employee engagement can be a powerful organisational mechanism for increasing employee productivity and improving various organisational performance measures (Richman, 2006).

This study presented the comprehensive examination on the antecedents of employee engagement among Administrative and Diplomatic Officers in the Malaysia Public Service. This study's findings are hoped to be beneficial for the public sector. Based on the research findings, more steps can be taken to improve employee engagement in the public sector. Although employee engagement is a prominent concept and has widely been researched, most research in this area focuses on the private sector and little is known about the antecedents of employee engagement in the public sector. This study investigated the relationship between transformational leadership style and talent management practices with employee engagement and the mediation effect of public service motivation which was beyond the ordinary scope. The findings confirm that self-transformational leadership style, talent management practices and public service motivation are crucial factors in improving employee engagement in the Malaysian public sector.

Furthermore, this research responds to the call to investigate the importance of specific construct of public sector which is public service motivation on employee engagement. This study has made several contributions to the literature of employee engagement in the non-western context. Generally, for the first time, the study analyses the relationship between transformational leadership style, talent management practices and public sector employee engagement by integrating the mediation effects of public service motivation. This mediation effect was analysed using Structural Equation Modelling which is the bootstrapping the indirect effect approach. Significant finding derived from this study is public service motivation discovered as the mediator of self-perceived transformational leadership style - employee engagement and talent management practices - employee engagement relationships. That means, public service motivation is the reasons for the relationships to occur. The indirect effects of public service have

yet to be explored in employee engagement literature. Therefore, public organisations should emphasise on public service motivation as one of the key elements in their strategy to improve public sector employee engagement.

On the other hand, transformational leadership style of leaders in the public service are not a factor that could increase employee engagement among managers in the public service. This finding has paved the way for other researchers to further investigate into different perspectives on employee engagement studies. In addition, talent management practices were found to enhance employee engagement among public managers. The result shed lights on the importance of talent management practices and confirmed results from a previous study that human resource management particularly focuses on talent for instance, talent development, talent identification, and career enhancement are positively related to employee engagement. Furthermore, the significance of transformational leadership style in improving talent management practices in the public sector as discovered in this this study should not being denied in order to enhance organisational and employees' outcomes.

To conclude, by testing all the hypothesised relationships in a non-western country, this research helped to create a more inclusive global picture of employee engagement's antecedents in the public sector. This research provided a useful starting point in investigating employee engagement in non-western countries. Besides adding the new knowledge to the literature of employee engagement, the findings were predicted to assist public sector to deal with public service performance reduction more effectively. As employee engagement approach has become organisational focus to improve public service efficiency and effectiveness, therefore, a robust understanding of employee engagement among managers in the public service could be a valuable research field to venture into in the future.

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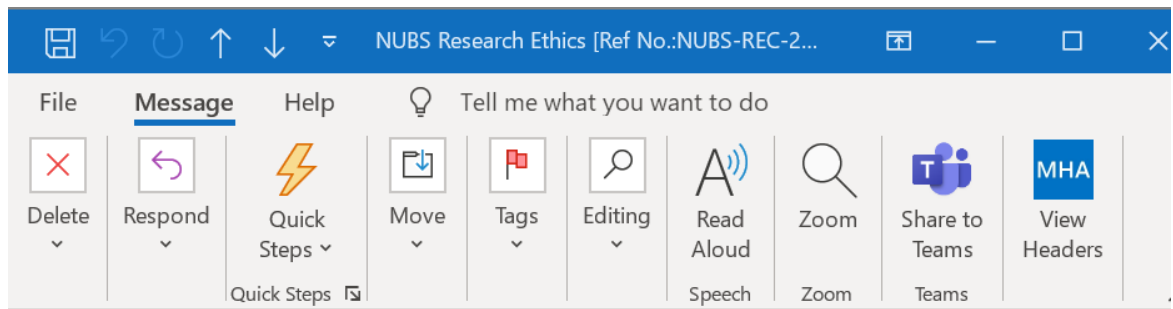
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LIST OF APPENDICES

Appendix 1: Approval letter from Ethics Committee




NUBS Research Ethics [Ref No.:NUBS-REC-2021-2]



ONLINEFORM

To Norfadhilatun Binti Zahari

 You replied to this message on 1/3/2021 9:06 PM.



1/3/2021

1 March 2021

Dear Norfadhilatun Zahari,

Reference Number: NUBS-REC-2021-2

Project Title: The influence of transformational leadership style, talent management practices and public service motivation on employee engagement in the public sector

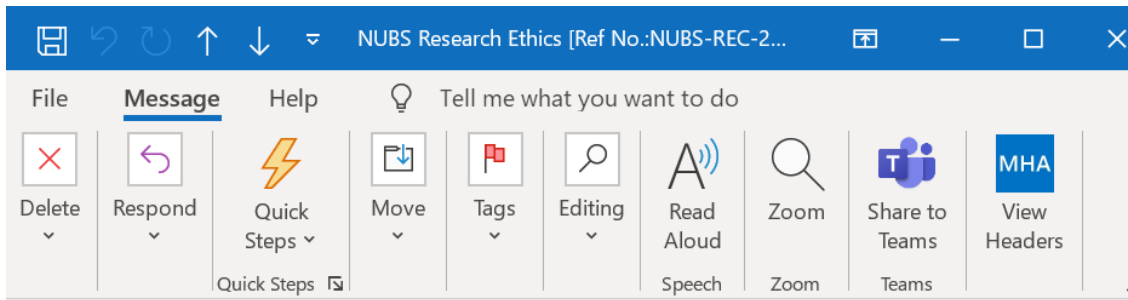
The NUBS Research Ethics Committee approves your application.

Please note that this approval is for the research work you describe in the application. If you change your research design (i.e., the research questions, the methodologies, or the respondents), you would need to apply for an ethical approval again.

We hope you have the best of luck with your research project.

Regards,

Rasyad A. Parinduri
Chair
NUBS Research Ethics Committee



NUBS Research Ethics [Ref No.:NUBS-REC-2021-9]




ONLINEFORM

To Norfadhillaton Binti Zahari



29/3/2021

 You forwarded this message on 29/3/2021 1:48 PM.

29 March 2021

Dear Norfadhillaton Zahari,

Reference Number: NUBS-REC-2021-9

Project Title: The influence of transformational leadership style, talent management practices and public service motivation on employee engagement in the public sector

The NUBS Research Ethics Committee approves your application.

Please note that this approval is for the research work you describe in the application. If you change your research design (i.e., the research questions, the methodologies, or the respondents), you would need to apply for an ethical approval again.

We hope you have the best of luck with your research project.

Regards,

Rasyad A. Parinduri
Chair

Appendix 2: Email Application to Conduct Research

Ketua Pengarah Perkhidmatan Awam
Jabatan Perkhidmatan Awam Malaysia
Aras 11, Blok C1, Parcel C
Pusat Pentadbiran Kerajaan Persekutuan
62510 PUTRAJAYA.

(u.p. YBhg. Datuk Dr. Rose Lena binti Lazemi)

2 Mac 2021

YBhg. Datuk Dr,

MEMOHON KEBENARAN MENJALANKAN KAJIAN PERINGKAT DOKTOR FALSAFAH
(Ph.D.) DI JABATAN DAN AGENSI KERAJAAN

Dengan hormatnya saya merujuk kepada perkara di atas.

2. Sukacita dimaklumkan YBhg. Datuk Dr. bahawa saya, Norfadhillaton binti Zahari merupakan pegawai Kerajaan yang ditawarkan Hadiah Latihan Persekutuan (HLP) bagi melanjutkan pelajaran di peringkat Doktor Falsafah (Ph.D.) di Nottingham Business School, Universiti Nottingham Malaysia (UNM) secara sepenuh masa bermula **17 September 2019**. Kajian saya bertajuk: "***The influence of transformational leadership style and talent management practices on employee engagement among Administrative and Diplomatic Officer in the public sector: the moderating role of Public Service Motivation***" di bawah penyeliaan Dr. Maniam Kaliannan, Associate Professor of Human Resource Management dan Dr. Patricia Ang, Assistant Professor, Faculty of Arts & Social Sciences, UNM.
3. Untuk makluman YBhg. Datuk Dr., kajian saya memfokus kepada gaya kepimpinan transformasional dalam perkhidmatan awam, amalan pengurusan bakat dan motivasi perkhidmatan awam sebagai faktor moderator kepada tahap penglibatan kerja Pegawai Tadbir dan Diplomatik di pelbagai Kementerian/Jabatan/ Agensi Awam. Hasil Analisa kajian ini juga diyakini mampu digunapakai oleh Jabatan Perkhidmatan Awam (JPA) dalam merangka pelan pembangunan dan latihan yang berkesan bagi menarik dan mengekalkan pegawai-pegawai berprestasi tinggi.
4. Memandangkan skop kajian kuantitatif saya ini melibatkan Pegawai Tadbir dan Diplomatik di Kementerian/Jabatan/ Agensi Awam, justeru itu, saya memohon jasa baik YBhg. Datuk Dr. untuk memberikan saya sokongan terhadap kajian yang dijalankan dan memaklumkan kebenaran untuk saya mengedarkan kaji-selidik kepada jabatan-jabatan dan agensi Kerajaan yang terpilih.
5. Bersama-sama ini disertakan sesalinan Borang Soal Selidik, Soalan Temuramah (Kajian Awal) dan *curriculum vitae* (cv) saya sebagai makluman YBhg. Datuk Dr jua.

6. Segala jasa baik YBhg. Datuk Dr. adalah amat dihargai dan didahului dengan ucapan terima kasih.

Sekian.

Yang benar,

NORFADHILLATON BINTI ZAHARI

Pegawai Dalam Jawatan Latihan

Jabatan Perkhidmatan Awam

No. K.P. 800131-06-5150

✉ saxnz2@nottingham.edu.my

Appendix 3: Internal Memo from Public Service Department (PSD)



BAHAGIAN KHIDMAT PENGURUSAN (MEMO DALAMAN)

Ruj Fail : JPA.500-8/4/3 (5)

Tarikh: 10 Mac 2021

TAJUK	KEBENARAN MENJALANKAN KAJIAN PERINGKAT DOKTOR FALSAFAH (Ph.D.) DI JABATAN PERKHIDMATAN AWAM	
DARIPADA	PPT(U)T	Salinan:
KEPADA	PBU	KPP(U)T

Dengan segala hormatnya saya merujuk kepada perkara yang tersebut di atas.

2. Dimaklumkan bahawa, Norfadhilton binti Zahari merupakan pegawai Perkhidmatan Awam yang ditawarkan Hadiah Latihan Persekutuan (HLP) bagi melanjutkan pelajaran di peringkat Doktor Falsafah (Ph.D.) di Nottingham Business School, Universiti Nottingham Malaysia (UNM) secara sepenuh masa bermula 17 September 2019.

3. Untuk makluman jua, kajian beliau bertajuk "*The influence of transformational leadership style and talent management practices on employee engagement among Administrative and Diplomatic Officer in the public sector: the moderating role of Public Service Motivation*" memerlukan kaji selidik yang melibatkan Pegawai Tadbir dan Diplomatik di Jabatan Perkhidmatan Awam.

4. Bersama-sama ini dikemukakan salinan emel permohonan beliau untuk pertimbangan dan keputusan puan jua.

Sekian. Terima kasih.

"PRIHATIN RAKYAT : DARURAT MEMERANGI COVID-19"

(AZLIANA BINTI MOHD SHARIFF)
PPT(U)T

samb. ☎ : 03-88853638
e-mel ✉ : azliana.shariff@jpa.gov.my

KEPUTUSAN : Permohonan Menjalankan Kajian Bertajuk "*The Influence Of Transformational Leadership Style And Talent Management Practices On Employee Engagement Among Administrative And Diplomatic Officer In The Public Sector: The Moderating Role Of Public Service Motivation*" Di Jabatan Perkhidmatan Awam

DILULUSKAN / ~~TIDAK DILULUSKAN~~

Ulasan : _____



.....
(NORSAZILA BINTI NORDIN)

Pengarah

Bahagian Khidmat Pengurusan

Tarikh : 14/3/2021

Appendix 4: Email to Director of Service Division

Pengarah Bahagian Perkhidmatan
Jabatan Perkhidmatan Awam Malaysia
Aras 11, Blok C1, Parcel C
Pusat Pentadbiran Kerajaan Persekutuan
62510 PUTRAJAYA.
26 Mac 2021

YBhg. Datuk,

PERMOHONAN MENDAPATKAN MAKLUMAT PEGAWAI TADBIR DAN DIPLOMATIK M41
HINGGA M54

Dengan hormatnya saya merujuk kepada perkara di atas.

2. Sukacita dimaklumkan YBhg. Datuk bahawa saya, Norfadhilatun binti Zahari merupakan pegawai Kerajaan yang ditawarkan Hadiah Latihan Persekutuan (HLP) bagi melanjutkan pelajaran di peringkat Doktor Falsafah (Ph.D.) di Nottingham Business School, Universiti Nottingham Malaysia (UNM) secara sepenuh masa bermula **17 September 2019**. Kajian saya bertajuk: "***The influence of transformational leadership style and talent management practices on employee engagement among Administrative and Diplomatic Officer in the public sector: the moderating role of Public Service Motivation***" di bawah penyeliaan Dr. Maniam Kaliannan, Associate Professor of Human Resource Management dan Dr. Patricia Ang, Assistant Professor, Faculty of Arts & Social Sciences, UNM.

3. Untuk makluman YBhg. Datuk, kajian saya memfokus kepada gaya kepimpinan transformasional dalam perkhidmatan awam, amalan pengurusan bakat dan motivasi perkhidmatan awam sebagai faktor moderator kepada tahap penglibatan kerja Pegawai Tadbir dan Diplomatik (PTD) di pelbagai Kementerian/Jabatan/ Agensi Awam. Hasil analisa kajian ini juga diyakini mampu digunapakai oleh Jabatan Perkhidmatan Awam (JPA) dalam merangka pelan pembangunan dan latihan yang berkesan bagi menarik dan mengekalkan pegawai-pegawai berprestasi tinggi.

4. Memandangkan skop kajian kuantitatif saya ini melibatkan Pegawai Tadbir dan Diplomatik di Kementerian/Jabatan/Agensi Awam sebagai sampel kajian, justeru itu, saya ingin memohon jasa baik YBhg. Datuk untuk mendapatkan maklumat terkini keseluruhan **bilangan PTD mengikut gred dan penempatan (Kementerian/Jabatan/ Agensi Awam)** untuk tujuan penentuan sampel kajian dan pagedaran borang soal selidik kelak.

5. Bersama-sama ini disertakan curriculum vitae saya untuk perhatian YBhg. Datuk jua. Segala jasa baik YBhg. Datuk dalam urusan ini adalah amat dihargai dan didahului dengan ucapan terima kasih.

Sekian.

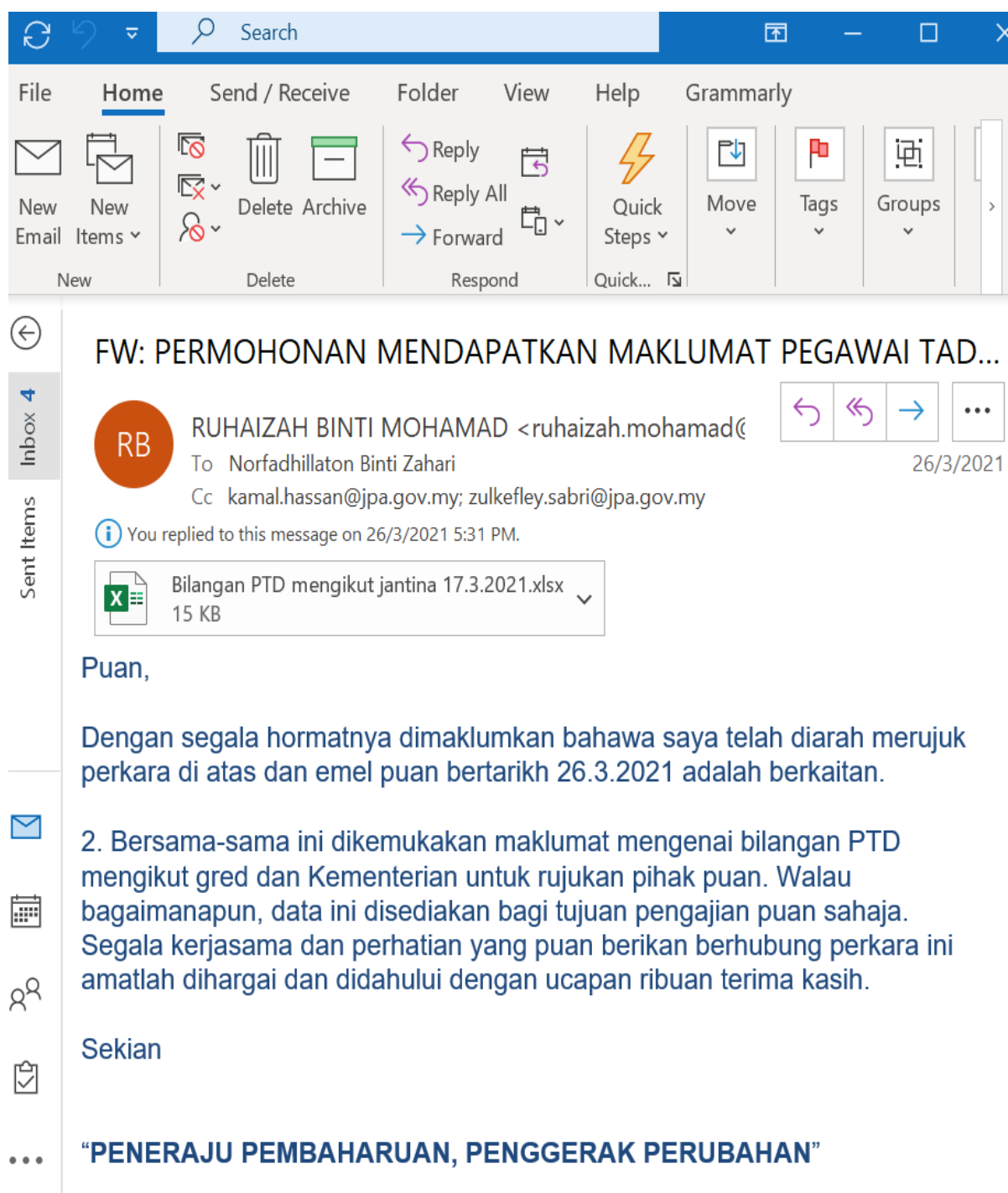
Yang benar,

NORFADHILLATON BINTI ZAHARI

Pegawai Dalam Jawatan Latihan

Jabatan Perkhidmatan Awam

Appendix 5: Email Received from Service Division



The screenshot shows the Outlook interface with the following elements:

- Top Bar:** Search bar and window controls.
- Menu Bar:** File, Home, Send / Receive, Folder, View, Help, Grammarly.
- Home Ribbon:** New Email, New Items, Delete, Archive, Reply, Reply All, Forward, Quick Steps, Move, Tags, Groups.
- Left Navigation Pane:** Back arrow, Inbox (4), Sent Items.
- Email Header:** Subject: FW: PERMOHONAN MENDAPATKAN MAKLUMAT PEGAWAI TAD...; From: RUHAIZAH BINTI MOHAMAD <ruhaizah.mohamad@...>; To: Norfadhilton Binti Zahari; Cc: kamal.hassan@jpa.gov.my; zulkefley.sabri@jpa.gov.my; Date: 26/3/2021.
- Message Body:** A reply notification for 26/3/2021 5:31 PM, followed by an attachment: "Bilangan PTD mengikut jantina 17.3.2021.xlsx" (15 KB).
- Text Content:**

Puan,

Dengan segala hormatnya dimaklumkan bahawa saya telah diarah merujuk perkara di atas dan emel puan bertarikh 26.3.2021 adalah berkaitan.

2. Bersama-sama ini dikemukakan maklumat mengenai bilangan PTD mengikut gred dan Kementerian untuk rujukan pihak puan. Walau bagaimanapun, data ini disediakan bagi tujuan pengajian puan sahaja. Segala kerjasama dan perhatian yang puan berikan berhubung perkara ini amatlah dihargai dan didahului dengan ucapan ribuan terima kasih.

Sekian

“PENERAJU PEMBAHARUAN, PENGGERAK PERUBAHAN”

Appendix 6: Semi-Structured Interview

Semi-Structured Interview Questions

“The Influence Of Transformational Leadership, Talent Management Practices and Public Service Motivation On Employee Engagement In The Malaysian Public Service”

Assalamualaikum and Greetings Dear Dato’/ Dr./ Mr/Miss

I am a Ph.D. student from Universiti Of Nottingham Malaysia. I am conducting a research on the above topic as partial fulfillment for the degree of Doctor of Philosophy (Ph.D. in Business and Administration). The purpose of this research is to examine the influence of transformational leadership, talent management practices, and public service motivation on employee engagement among Administrative and Diplomatic Officers (ADOs) in public service organisations.

Your honest and valuable response to these questions is much appreciated and will contribute towards an improved public service delivery system in Malaysia. All information provided will be stored confidentially, and as such, your identity is not required. Participation in this research is completely voluntary. If you agree to participate, please complete the questionnaire attached. There is no right or wrong answer.

Thank you.

Regards,
Norfadhillaton binti Zahari (20204091)
University of Nottingham Malaysia
H/P: 012-2887504
Email: saxnz2@nottingham.edu.my

Questionnaires:

Employee Engagement: A positive, fulfilling work-related state of mind. In the context of this research, employee engagement will be measured using four dimensions of employee engagement, namely, vigour, dedication, and absorption (Schaufeli et al., 2002)

Keterlibatan Pekerja: Pemikiran positif, dan pemikiran untuk menyelesaikan hal berkaitan dengan pekerjaan dan ciri-cirinya adalah bersemangat (resilient), berdedikasi dan kekhushyukan dalam bekerja.

Employee Engagement

(i) Does human resource (employees) has significant impact on organisational outcomes? Please rate the significant level (1-5) 1: the least important- 5: very important

Adakah sumber manusia (pekerja) mempunyai kesan yang signifikan terhadap penghasilan organisasi? Nyatakan tahap signifikan (1: rendah- 5; sangat tinggi)

(ii) In your opinion, does employee engagement affect individual and organisational outcomes such as organisational competitiveness and efficiency? If so, how does employee engagement affect individual and organisational outcomes such as organisational competitiveness and efficiency?

Pada pandangan anda, adalah keterlibatan pekerja mempengaruhi hasil individu dan organisasi seperti daya saing dan kecekapan organisasi? Sekiranya ya, bagaimanakah keterlibatan pekerja mempengaruhi hasil individu dan organisasi seperti daya saing dan kecekapan organisasi?

(iii) In your opinion, what are other factors that will influence ADOs’ engagement in the public sector?

Pada pandangan anda, apakah faktor-faktor lain yang mempengaruhi keterlibatan PTD di sektor awam?

(iv) What are the characteristics of leaders that will influence ADOs’ engagement in the public sector?

Apakah ciri-ciri pemimpin yang boleh mempengaruhi keterlibatan PTD di sektor awam?

(i) Do you think leaders in the Malaysian Public Service exhibits transformational leadership characteristics? Please elaborate.

Adakah pemimpin organisasi perkhidmatan awam menunjukkan ciri-ciri kepimpinan transformasional? Sila jelaskan.

(ii) Do you think it is important to have such leaders? Please elaborate.

Adakah penting untuk memiliki pemimpin yang mempunyai ciri-ciri sedemikian? Sila jelaskan.

(iii) Do ADOs display the transformational leadership style at work?

Adakah PTD menunjukkan ciri-ciri kepimpinan transformasional di tempat kerja?

Yes/ No (Ya/Tidak)

(iv) Do you think that ADOs will feel more engaged at work if they have transformational leaders? If so, how does this transformational leadership style affect the level of engagement among ADO?

Adakah keterlibatan kerja PTD akan meningkat sekiranya mereka mempunyai pemimpin transformasional. Sekiranya ya, bagaimana kepimpinan transformasional ini mempengaruhi tahap keterlibatan kerja PTD?

(i) In your opinion, does Public Service Motivation (PSM) important for ADOs in the public service? If yes, how does PSM affect the level of engagement among ADOs in the public service?

Pada pandangan anda, adakah MPA penting bagi pegawai PTD dalam perkhidmatan awam. Sekiranya ya, bagaimana MPA mempengaruhi penglibatan kerja PTD dalam perkhidmatan awam.

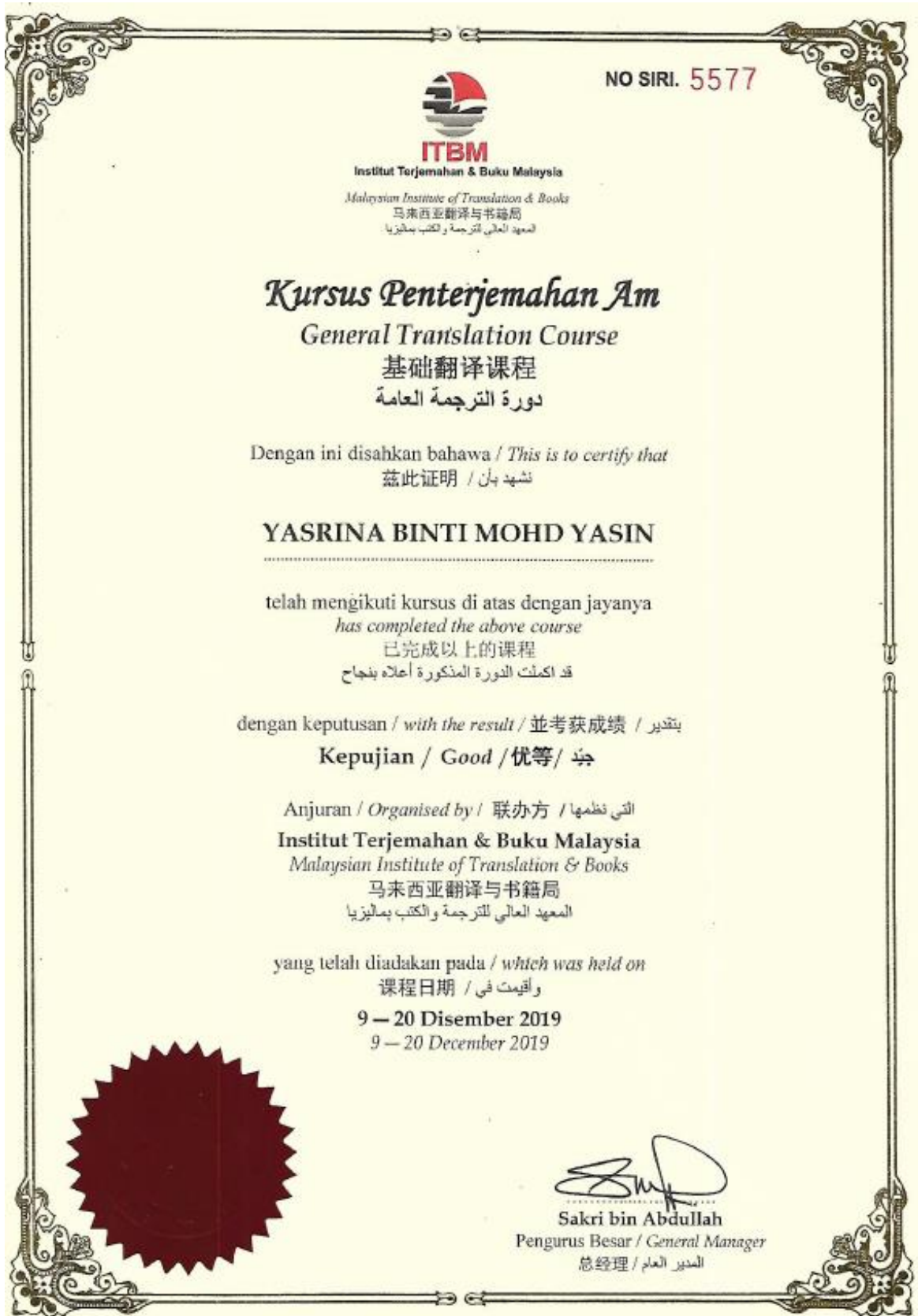
(iii) In your opinion, which factor (between transformational leadership behaviour, TMP and PSM) has the most significant effect on ADOs' engagement level?

Pada pandangan anda, faktor yang manakah (antara pemimpin transformasional, TMP dan PSM) memberi kesan paling signifikan terhadap tahap keterlibatan pekerja PTD?

Terima kasih kerana mengambil bahagian dalam kajian ini.

Thank you very much for participating in this survey.

Appendix 7: Translator ITBM Certificate



Appendix 8: Expert Content Validation Form

EXPERT VALIDATION FORM

Name : _____
Designation : _____
Expertise : _____

Dear Professor/Assoc. Professor/Dr./Mr/Ms,

My name is Norfadhilatun Zahari, a PhD student from University Of Nottingham Malaysia. I am writing to request your kind cooperation to validate my study instrument. For your information, the purpose of this research is to examine the influence of transformational leadership, and talent management practices on employee engagement among Administrative and Diplomatic Officers (ADOs) in the Malaysian public sector and the moderating role of public service motivation. The expert validation guide is as shown below:

Expert Validation Guide

The original English items are italicized below the translation items written in Bahasa Melayu. Please rate each item in terms of i) its relevance to the construct being measured and ii) the clarity of the statement, using the rating scales below:

Relevance	Comprehensibility
Are the items relevant to the concept/construct being measured?	Is the wording of the items clear and comprehensible?
1 = Not Relevant	1 = Unclear / Not Comprehensible
2 = Somewhat Relevant	2 = Somewhat Clear / Comprehensible
3 = Quite Relevant	3 = Quite Clear / Comprehensible
4 = Highly Relevant	4 = Very Clear / Comprehensible

For further comments, the following criteria may be considered:

Criteria	Descriptions
Clarity	<ul style="list-style-type: none"> • The questions are direct and specific. • Only one question is asked at a time. • The participants can understand what is being asked. • There are no <i>double-barreled</i> questions (two questions in one).
Wordiness	<ul style="list-style-type: none"> • Questions are concise. • There are no unnecessary words
Negative Wording	<ul style="list-style-type: none"> • Questions are asked using the affirmative (e.g., Instead of asking, “Which methods are not used?”, the researcher asks, “Which methods <i>are</i> used?”)
Overlapping Responses	<ul style="list-style-type: none"> • No response covers more than one choice. • All possibilities are considered. • There are no ambiguous questions.
Balance	<ul style="list-style-type: none"> • The questions are unbiased and do not lead the participants to a response. The questions are asked using a neutral tone.
Use of Jargon	<ul style="list-style-type: none"> • The terms used are understandable by the target population. • There are no clichés or hyperbole in the wording of the questions.
Appropriateness of Responses Listed	<ul style="list-style-type: none"> • The choices listed allow participants to respond appropriately. • The responses apply to all situations or offer a way for those to respond with unique situations.
Use of Technical Language	<ul style="list-style-type: none"> • The use of technical language is minimal and appropriate. • All acronyms are defined.
Application to Praxis	<ul style="list-style-type: none"> • The questions asked to relate to the daily practices or expertise of the potential participants.
Relationship to Problem	<ul style="list-style-type: none"> • The questions are sufficient to resolve the problem in the study • The questions are sufficient to answer the research questions. • The questions are sufficient to obtain the purpose of the study.

Appendix 9: Expert Review Rating Form

Zoom Out (Cell Widths)

VARIABLE 1: TRANSFORMATIONAL LEADERSHIP (LEADER)

Transformational leadership style: It refers to the interactions between leaders and followers in raising employees' motivation and morale, inspiring employees through their vision, and encouraging them to excel in performance and achieving the organisational goals.

Dimension 1: <i>Idealised influence</i> : Act as a role model and followers try to emulate their actions. The leaders are trusted, respected, and admired by the followers. They manage to build respect, demonstrating confidence, and instilling pride in subordinates									
Items	Relevance				Comprehensibility				Comments
1. Ketua saya jelas mengenai nilai dan amalan yang diluarkannya. <i>My manager is clear about his/her values and practices, which he/she preaches.</i>	1	2	3	4	1	2	3	4	
2. Ketua saya menanamkan rasa bangga dan hormat pada orang lain dan memberi inspirasi kepada saya dengan menjadi lebih cekap. <i>My manager instils pride and respect in others and inspires me by being highly competent.</i>	1	2	3	4	1	2	3	4	
Dimension 2: <i>Inspirational motivation</i> : Inspire others by providing meaning to their work. Shapes a clear future visions of the organisation; setting ambitious goals and high standards; direct and challenge followers to achieve extraordinary outcomes for serving the general mission and vision of the organisation.									
3. Pengurus saya menyampaikan visi masa hadapan yang jelas dan positif. <i>My manager communicates a clear and positive vision of the future.</i>	1	2	3	4	1	2	3	4	
4. Ketua saya memupuk kepercayaan, menggalakkan penglibatan dan kerjasama antara ahli pasukan. <i>My manager fosters trust, involvement, and cooperation among team members.</i>	1	2	3	4	1	2	3	4	

3

Dimension 3: <i>Intellectual stimulation</i> : Increases their follower's innovation and creativity. They encourage and challenge followers to fully engaged in the problem-solving process and think about old problems, assumptions, and the status quo in a new and creative approach.									
5. Ketua saya mendorong pemikiran cara baru dan mempersoalkan andaian. <i>My manager encourages thinking about problems in new ways and questions assumptions.</i>	1	2	3	4	1	2	3	4	
Dimension 4: <i>Individualised consideration</i> : Act as a coach and mentor and providing developmental feedback to their followers. The leader recognised that individuals differ in their abilities and needs for growth and achievement; therefore, they pay equal attention to each individual based on one-to-one interactive relationship between the leader and the follower.									
6. Ketua saya melayan pegawai bawahan sebagai seorang individu, memberi sokongan dan mendorong perkembangan mereka. <i>My manager treats their subordinates as individuals, supports and encourages their development.</i>	1	2	3	4	1	2	3	4	
7. Ketua saya memberi galakan dan pengiktirafan kepada pegawai bawahan <i>My manager gives encouragement and recognition to their subordinates.</i>	1	2	3	4	1	2	3	4	

VARIABLE 1: TRANSFORMATIONAL LEADERSHIP (SELF-EVALUATION)

Transformational leadership style: It refers to the interactions between leaders and followers in raising employees' motivation and morale, inspiring employees through their vision, and encouraging them to excel in performance and achieving the organisational goals.

Dimension 1: Idealised influence: Act as a role model and followers try to emulate their actions. The leaders are trusted, respected, and admired by the followers. They manage to build respect, demonstrating confidence, and instilling pride in subordinates									
Items	Relevance				Comprehensibility				Comments
1. Saya jelas mengenai nilai dan amalan yang saya luhungkan. <i>I am clear about the values and practices that I preach.</i>	1	2	3	4	1	2	3	4	
2. Saya menanamkan rasa bangga dan hormat pada orang lain dan memberi inspirasi kepada mereka dengan menjadi lebih cekap. <i>I instill pride and respect in others and inspires them by being highly competent.</i>	1	2	3	4	1	2	3	4	
Dimension 2: Inspirational motivation: Inspire others by providing meaning to their work. Shapes a clear future visions of the organisation; setting ambitious goals and high standards; direct and challenge followers to achieve extraordinary outcomes for serving the general mission and vision of the organisation.									
3. Saya menyampaikan visi masa hadapan yang jelas dan positif. <i>I communicate a clear and positive vision of the future.</i>	1	2	3	4	1	2	3	4	
4. Saya memupuk kepercayaan, menggalakkan penglibatan dan kerjasama antara ahli pasukan. <i>I foster trust, involvement, and cooperation among team members.</i>	1	2	3	4	1	2	3	4	

5

Dimension 3: Intellectual stimulation: Increases their follower's innovation and creativity. They encourage and challenge followers to fully engaged in the problem-solving process and think about old problems, assumptions, and the status quo in a new and creative approach.									
5. Saya mendorong pemikiran cara baru dan mempersoalkan andaian. <i>I encourage thinking about problems in new ways and questions assumptions.</i>	1	2	3	4	1	2	3	4	
Dimension 4: Individualised consideration: Act as a coach and mentor and providing developmental feedback to their followers. The leader recognised that individuals differ in their abilities and needs for growth and achievement; therefore, they pay equal attention to each individual based on one-to-one interactive relationship between the leader and the follower.									
6. Saya melayan kakitangan sebagai seorang individu, memberi sokongan dan mendorong perkembangan mereka. <i>I treat my subordinates as individuals, supports and encourages their development.</i>	1	2	3	4	1	2	3	4	
7. Saya memberi galakan dan pengiktirafan kepada kakitangan saya <i>I give encouragement and recognition to my subordinates.</i>	1	2	3	4	1	2	3	4	

VARIABLE 2 : TALENT MANAGEMENT PRACTICES

Talent management is an integrated group of organisational human resource methods intended to draw, grow, stimulate, and maintain dynamic, engaged personnel. Activities and processes involve talent identification, training and development, career development, performance management and reward management.

Dimension 1: Talent Identification									
Items	Relevance				Comprehensibility				Comments
	1	2	3	4	1	2	3	4	
1. Organisasi saya membina kumpulan bakat untuk mereka yang berpotensi tinggi dalam perkhidmatan awam <i>My organisation builds up talent pool for high potentials in the public service</i>	1	2	3	4	1	2	3	4	
2. Organisasi saya mengenal pasti bakat yang memberi impak tertinggi pada kejayaan organisasi. <i>My organisation identifies talents that make the highest impact on organisation success.</i>	1	2	3	4	1	2	3	4	
3. Organisasi saya membezakan tahap sumbangan bakat di tempat kerja. <i>My organisation differentiates the contribution level of talents at the workplace.</i>	1	2	3	4	1	2	3	4	
4. Saya berpuas hati dengan program pengenalpastian dan penilaian bakat yang dilaksanakan oleh organisasi saya untuk mengenalpasti mereka yang berpotensi tinggi. <i>I am satisfied with the talent identification and evaluation programmes that my organisation implements to identify high potentials.</i>	1	2	3	4	1	2	3	4	
Dimension 2: Training and Development									
5. Saya berpeluang untuk menyertai seminar, bengkel, persidangan dan latihan yang berkaitan sekiranya saya memerlukan pembangunan kemahiran tertentu.	1	2	3	4	1	2	3	4	

7

<i>I have the opportunity to participate in related seminars, workshops, conferences and training if I need a particular skill development.</i>									
6. Program latihan dan pembangunan yang disediakan di organisasi saya membantu meningkatkan prestasi kerja saya. <i>Training and development programmes provided in my organisation help to improve my work performance.</i>	1	2	3	4	1	2	3	4	
7. Program latihan dan pembangunan dilaksanakan secara berterusan di organisasi saya. <i>The training and development programs are implemented continuously in my organisation.</i>	1	2	3	4	1	2	3	4	
8. Kandungan program latihan dan pembangunan yang dilaksanakan adalah berdasarkan prestasi kerja pegawai. <i>The content of the training and development programmes implemented are based on job performance.</i>	1	2	3	4	1	2	3	4	
Dimension 3: Career Development									
9. Mereka yang dikenal pasti berpotensi tinggi mempunyai peluang yang lebih baik untuk peningkatan kerjaya. <i>Identified high potentials have better opportunities for upward mobility.</i>	1	2	3	4	1	2	3	4	
10. Saya mempunyai laluan kerjaya yang jelas dalam organisasi ini. <i>I have clear career paths in this organisation.</i>	1	2	3	4	1	2	3	4	
11. Saya mempunyai lebih dari satu laluan untuk kenaikan pangkat. <i>I have more than one avenue for promotion.</i>	1	2	3	4	1	2	3	4	
12. Terdapat peluang untuk saya mengembangkan kerjaya di organisasi saya. <i>There are opportunities for me to grow my career at</i>	1	2	3	4	1	2	3	4	

8

VARIABLE 3: PUBLIC SERVICE MOTIVATION- PSM as the beliefs, values, and attitudes that go beyond self interest and organisational interest to energise employees to do good for others and to contribute to the well-being of organisations and society

Items	Relevance				Comprehensibility				Comments
	1	2	3	4	1	2	3	4	
1. Perkhidmatan awam yang bermakna amat penting bagi saya. <i>Meaningful public service is very important to me.</i>	1	2	3	4	1	2	3	4	
2. Saya tidak takut untuk memperjuangkan hak orang lain, walaupun ini bermaksud saya akan persendakan. <i>I am not afraid to go to bat for the right of others, even if it means i will be ridiculed.</i>	1	2	3	4	1	2	3	4	
3. Membuat sesuatu yang berbeza dalam masyarakat lebih bermakna kepada saya berbanding pencapaian peribadi. <i>Making a difference in society means more to me than personal achievements.</i>	1	2	3	4	1	2	3	4	
4. Saya sedia untuk membuat pengorbanan besar demi kebaikan masyarakat. <i>I am prepared to make enormous sacrifices for the good of the society.</i>	1	2	3	4	1	2	3	4	
5. Saya sering diingatkan bahawa kita perlu bergantung antara satu sama lain. <i>i am often reminded by daily events about how dependent we are on one another.</i>	1	2	3	4	1	2	3	4	

VARIABLE 4: EMPLOYEE ENGAGEMENT- A positive, fulfilling work-related state of mind that characterised by vigour, dedication, and absorption.

Dimension 1: Vigor- mental resilience, full of energy, full effort in work and persistence while facing problems and difficulties									
Items	Relevance				Comprehensibility				Comments
	1	2	3	4	1	2	3	4	
1. Apabila saya bangun pagi, saya terasa ingin ke tempat kerja. <i>when I wake up in the morning, I feel like going to work.</i>	1	2	3	4	1	2	3	4	
2. Saya berasa bertenaga dan bersemangat melakukan kerja saya. <i>At my job, i feel strong and vigorous.</i>	1	2	3	4	1	2	3	4	
3. Saya rasa sungguh bertenaga di tempat kerja.	1	2	3	4	1	2	3	4	

Appendix 10: Detail of CVI

Calculating Content Validity Index (CVI)
 Variable : Tangible
 Assessment Aspect: Relevance

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	3 & 4 for all expert	No of Agreement	Item CVI
TLL1	4	4	3	4	4	YES	5	1
TLL2	4	4	3	4	4	YES	5	1
TLL3	4	4	4	4	4	YES	5	1
TLL4	4	4	4	4	4	YES	5	1
TLL5	4	4	3	4	3	YES	5	1
TLL6	4	4	4	4	4	YES	5	1
TLL7	4	3	3	4	4	YES	5	1
TLS1	4	4	4	4	4	YES	5	1
TLS2	4	4	3	4	4	YES	5	1
TLS3	4	4	4	4	4	YES	5	1
TLS4	4	4	4	4	4	YES	5	1
TLS5	4	4	4	4	3	YES	5	1
TLS6	4	4	3	4	3	YES	5	1
TLS7	4	4	4	4	4	YES	5	1
TI1	4	3	4	4	4	YES	5	1
TI2	4	4	3	4	4	YES	5	1
TI3	4	4	4	4	4	YES	5	1
TI4	3	4	3	4	4	YES	5	1
TD1	4	4	3	4	4	YES	5	1
TD2	4	4	3	4	4	YES	5	1
TD3	4	4	4	4	4	YES	5	1
TD4	4	3	3	4	4	YES	5	1
CE1	4	3	3	4	4	YES	5	1
CE2	4	4	4	4	4	YES	5	1
CE3	4	4	3	4	3	YES	5	1
CE4	4	4	3	4	4	YES	5	1
PM1	4	4	4	4	4	YES	5	1
PM2	4	4	4	4	4	YES	5	1
PM3	3	4	4	3	4	YES	5	1
RM1	3	4	4	4	4	YES	5	1
RM2	4	4	4	4	4	YES	5	1
RM3	4	4	4	4	4	YES	5	1
PSM1	4	4	3	4	3	YES	5	1
PSM2	4	2	3	4	4	NO	4	0.8
PSM3	4	4	3	4	3	YES	5	1
PSM4	4	4	4	4	4	YES	5	1
PSM5	4	2	3	4	4	NO	4	0.8
EE1	4	4	3	4	4	YES	5	1
EE2	4	4	3	4	4	YES	5	1
EE3	4	4	4	4	4	YES	5	1
EE4	4	4	3	4	4	YES	5	1
EE5	4	4	4	4	4	YES	5	1
EE6	4	4	4	4	4	YES	5	1
EE7	4	4	3	4	4	YES	5	1
EE8	4	4	3	4	4	YES	5	1
EE9	4	4	4	4	4	YES	5	1
Mean I-CVI								0.894118

Mean Item Content Validity Index >=0.9

Scale Content Validity Index (S-CVI)/Universal Agreement >=0.9

Calculating Content Validity Index (CVI)

Variable : Tangible

Assessment Aspect: Comprehensibility

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	3 & 4 for all expert	No of Agreement	Item CVI
TLL1	4	4	3	4	4	YES	5	1
TLL2	4	4	3	4	4	YES	5	1
TLL3	4	4	4	4	4	YES	5	1
TLL4	4	4	4	4	4	YES	5	1
TLL5	4	4	3	3	3	YES	5	1
TLL6	2	4	3	4	4	NO	4	0.8
TLL7	4	3	4	4	4	YES	5	1
TLS1	4	2	4	4	4	NO	4	0.8
TLS2	4	4	3	4	4	YES	5	1
TLS3	4	3	3	4	4	YES	5	1
TLS4	4	4	4	4	4	YES	5	1
TLS5	4	4	4	3	3	YES	5	1
TLS6	2	4	3	4	3	NO	4	0.8
TLS7	4	4	4	4	4	YES	5	1
TI1	4	2	3	4	4	NO	4	0.8
TI2	4	4	4	4	3	YES	5	1
TI3	4	2	4	2	4	NO	3	0.6
TI4	4	3	4	4	4	YES	5	1
TD1	4	4	4	4	4	YES	5	1
TD2	4	4	4	4	4	YES	5	1
TD3	4	4	4	4	3	YES	5	1
TD4	4	2	3	4	3	NO	4	0.8
CE1	4	2	4	4	4	NO	4	0.8
CE2	4	4	4	4	4	YES	5	1
CE3	4	4	3	4	3	YES	5	1
CE4	4	4	4	4	4	YES	5	1
PM1	4	4	4	4	4	YES	5	1
PM2	4	4	4	4	4	YES	5	1
PM3	4	3	3	4	4	YES	5	1
RM1	4	4	4	4	4	YES	5	1
RM2	4	2	4	4	4	NO	4	0.8
RM3	4	4	4	4	4	YES	5	1
PSM1	4	4	3	4	3	YES	5	1
PSM2	2	3	3	4	4	NO	4	0.8
PSM3	2	4	3	4	3	NO	4	0.8
PSM4	4	4	4	4	4	YES	5	1
PSM5	4	2	3	4	4	NO	4	0.8
EE1	4	4	3	4	4	YES	5	1
EE2	4	4	3	4	4	YES	5	1
EE3	4	4	3	3	4	YES	5	1
EE4	4	4	3	4	4	YES	5	1
EE5	4	4	4	4	4	YES	5	1
EE6	4	4	4	4	4	YES	5	1
EE7	4	4	3	4	3	YES	5	1
EE8	4	4	3	4	3	YES	5	1
EE9	4	4	4	4	4	YES	5	1
Mean I-CVI								0.854902

Mean Item Content Validity Index ≥ 0.9

Scale Content Validity Index (S-CVI)/Universal Agreement ≥ 0.9

Appendix 11: English/ Malay Version Questionnaires

Soal Selidik Questionnaire

“The Influence Of Transformational Leadership, Talent Management Practices and Public Service Motivation On Employee Engagement In The Malaysian Public Service”

Direction: Please answer the questions contained in this questionnaire as accurately as possible. This questionnaire is anonymous and confidential. Your responses will be used for the purpose of academic study and will not be disclosed without your consent.

Bahagian 1A: Demografi Responden Part 1A: Respondent's Demography

Sila tandakan (✓) pada ruang yang disediakan bagi maklumat yang berkaitan dengan anda.
Please tick (✓) the information relevant to you.

1. Jantina/ Gender:

1. Lelaki/ Male
 2. Perempuan/ Female

2. Status/ Marital status:

1. Bujang/ Single
 2. Berkahwin/ Married
 3. Lain-lain/ Other status

3. Umur/ Age:

1. 25 tahun ke bawah/ 25 years old and below
 2. 26 hingga 30 tahun/ 26 to 30 years old
 3. 31 hingga 35 tahun/ 31 to 35 years old
 4. 36 hingga 40 tahun/ 36 to 40 years old
 5. 41 hingga 45 tahun/ 41 to 45 years old
 6. 46 hingga 50 tahun/ 46 to 50 years old
 7. 51 hingga 55 tahun/ 51 to 55 years old
 8. 56 tahun ke atas/ above 56 years

4. Bangsa/ Race:

1. Melayu/ Malay
 2. Cina/ Chinese
 3. India/ Indian
 4. Bumiputera Sabah/ Sabah Natives
 5. Bumiputera Sarawak/ Sarawak Natives
 6. Lain-lain/ Others: _____ (Sila nyatakan/ Please state)

Bahagian 2: Gaya Kepimpinan Penyelia
Part 2: Supervisor's Leadership Style

Soal selidik ini digunakan untuk menghuraikan **gaya kepimpinan penyelia anda** di tempat kerja. Anda dikehendaki untuk menjawab kesemua soalan. Sekiranya terdapat soalan yang tidak berkaitan dengan anda, atau anda tidak pasti akan jawapan kepada soalan berkenaan, anda diminta untuk mengosongkan ruangan jawapan tersebut.

This questionnaire is used to describe your supervisor's leadership styles in your current workplace. Please answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.

Sila tandakan (✓) pada pernyataan berikut. Gunakan skala berikut:
 Please tick (✓) the statements. Use the following rating scale:

Tidak Pernah <i>Not At All</i>	Sekali-Skala <i>Once In A While</i>	Kadangkala <i>Sometimes</i>	Kerap <i>Fairly Often</i>	Sangat Kerap <i>Very Often</i>
1	2	3	4	5

Pernyataan/ Statement	Skala/Scale				
1. Ketua saya menyampaikan visi masa hadapan yang jelas dan positif. <i>My manager communicates a clear and positive vision of the future.</i>	1	2	3	4	5
2. Ketua saya melayan pegawai bawahan sebagai seorang individu, memberi sokongan dan mendorong perkembangan mereka. <i>My manager treats their subordinates as individuals, supports and encourages their development.</i>	1	2	3	4	5
3. Ketua saya memberi galakan dan pengiktirafan kepada pegawai bawahan. <i>My manager gives encouragement and recognition to their subordinates.</i>	1	2	3	4	5
4. Ketua saya memupuk kepercayaan, menggalakkan penglibatan dan kerjasama antara ahli pasukan. <i>My manager fosters trust, involvement, and cooperation among team members.</i>	1	2	3	4	5
5. Ketua saya mendorong pemikiran cara baharu dan mempersoalkan andaian ketika menyelesaikan masalah. <i>My manager encourages thinking about problems in new ways and questions assumptions.</i>	1	2	3	4	5
6. Ketua saya jelas mengenai nilai dirinya dan mengamalkan apa yang dilaungkannya. <i>My manager is clear about his/her values and practises what he/she preaches.</i>	1	2	3	4	5
7. Ketua saya menanamkan rasa bangga dan hormat pada orang lain dan memberi inspirasi kepada saya dengan menjadi lebih cekap. <i>My manager instils pride and respect in others and inspires me by being highly competent.</i>	1	2	3	4	5

Bahagian 3: Gaya Kepimpinan Responden
Part 3: Respondent's leadership Style

Soal selidik ini digunakan untuk menghuraikan **gaya kepimpinan anda** dipejabat. Anda dikehendaki untuk menjawab kesemua soalan. Sekiranya terdapat soalan yang tidak berkaitan dengan anda, atau anda tidak pasti akan jawapan kepada soalan berkenaan, anda diminta untuk mengosongkan ruangan jawapan tersebut.

This questionnaire is to describe your leadership style as you perceive it. Please answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.

Sila tandakan (✓) pada pernyataan berikut. Gunakan skala berikut:
 Please tick (✓) the statements. Use the following rating scale:

Tidak Pernah <i>Not At All</i>	Sekali-Skala <i>Once In A While</i>	Kadangkala <i>Sometimes</i>	Kerap <i>Fairly Often</i>	Sangat Kerap <i>Very Often</i>
1	2	3	4	5

Pernyataan/ Statement	Skala/Scale				
	1	2	3	4	5
1. Saya menyampaikan visi masa hadapan yang jelas dan positif kepada pegawai bawahan saya. <i>I communicate with a clear and positive vision of the future to my subordinates.</i>	1	2	3	4	5
2. Saya melayan melayan pegawai bawahan sebagai seorang individu, memberi sokongan dan mendorong perkembangan mereka. <i>I treat my subordinates as individuals, supports and encourages their development.</i>	1	2	3	4	5
3. Saya memberi galakan dan pengiktirafan kepada kakitangan saya. <i>I give encouragement and recognition to my subordinates.</i>	1	2	3	4	5
4. Saya memupuk kepercayaan, penglibatan dan kerjasama antara ahli pasukan. <i>I foster trust, involvement and cooperation among my team members.</i>	1	2	3	4	5
1. Saya mendorong pemikiran cara baharu dan mempersoalkan andaian ketika menyelesaikan masalah. <i>I encourage thinking about old problems in new ways and questions assumptions.</i>	1	2	3	4	5
5. Saya jelas mengenai nilai diri saya dan mengamalkan apa yang saya laungkan. <i>I am clear about my self values and practise what I preach.</i>	1	2	3	4	5
6. Saya menanamkan rasa bangga dan hormat pada orang lain dan memberi inspirasi kepada mereka dengan menjadi lebih cekap. <i>I instil pride and respect in others and inspires them by being highly competent.</i>	1	2	3	4	5

Part 4: Talent Management Practices

Soal selidik ini digunakan menghuraikan amalan pengurusan bakat di sektor awam. Anda dikehendaki untuk menjawab kesemua soalan. Sekiranya terdapat soalan yang tidak berkaitan dengan anda, atau anda tidak pasti akan jawapan kepada soalan berkenaan, anda diminta untuk mengosongkan ruangan jawapan tersebut.

This questionnaire is used to describe the talent management practices in your current job. Please answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.

Sila tandakan (√) pada pernyataan berikut. Gunakan skala berikut:

Please tick (√) the statements. Use the following rating scale:

Sangat tidak setuju <i>Strongly disagree</i>	Tidak setuju <i>Disagree</i>	Tidak pasti <i>Undecided</i>	Setuju <i>Agree</i>	Sangat setuju <i>Strongly agree</i>
1	2	3	4	5

Pernyataan/ Statement	Skala/Scale				
	1	2	3	4	5
1. Organisasi saya membina kumpulan bakat untuk mereka yang berpotensi tinggi dalam perkhidmatan awam <i>My organisation builds up talent pool for high potentials in the public service</i>	1	2	3	4	5
2. Organisasi saya mengenal pasti bakat yang memberi impak tertinggi pada kejayaan organisasi. <i>My organization identifies talents that make the highest impact on organization success.</i>	1	2	3	4	5
3. Organisasi saya membezakan tahap sumbangan kerja pegawai di tempat kerja. <i>My organization differentiates the contribution level of talents in the workplace.</i>	1	2	3	4	5
4. Program pengenalanpastian dan penilaian bakat yang dilaksanakan di organisasi saya berjaya mengenalpasti pegawai yang berpotensi tinggi. <i>Talent identification and evaluation programmes implemented in my organization are effective in identifying high potentials.</i>	1	2	3	4	5
5. Saya berpeluang untuk menyertai seminar, bengkel, persidangan dan latihan yang berkaitan sekiranya saya memerlukan pembangunan kemahiran tertentu. <i>I have the opportunity to participate in related seminars, workshops, conferences and training if I need particular skill development.</i>	1	2	3	4	5
6. Program latihan dan pembangunan yang disediakan di organisasi saya membantu meningkatkan prestasi kerja saya. <i>Training and development programmes provided in my organization help improve my work performance.</i>	1	2	3	4	5
7. Program latihan dan pembangunan dilaksanakan secara berterusan di organisasi saya. <i>The training and development programs are implemented continuously in my organization.</i>	1	2	3	4	5

Bahagian 5: Penilaian Terhadap Motivasi Perkhidmatan Awam (5 items)
Part 5: Public Service Motivation Evaluation

Soal selidik ini digunakan untuk menghuraikan tahap motivasi perkhidmatan awam anda. Anda dikehendaki untuk menjawab kesemua soalan. Sekiranya terdapat soalan yang tidak berkaitan dengan anda, atau anda tidak pasti akan jawapan kepada soalan berkenaan, anda diminta untuk mengosongkan ruangan jawapan tersebut.

This questionnaire is used to describe your level of public service motivation. Please answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.

Sila tandakan (✓) pada pernyataan berikut berdasarkan pengalaman di jawatan semasa. Gunakan skala berikut:

Please tick (✓) the statements drawing from your experiences in your current job. Use the following rating scale:

Sangat tidak setuju Tidak setuju Neutral Setuju Sangat setuju
Strongly disagree *Disagree* *Neutral* *Agree* *Strongly agree*
 1 2 3 4 5

Pernyataan/ Statement	Skala/Scale				
	1	2	3	4	5
1. Perkhidmatan awam yang bermakna amat penting bagi saya. <i>Meaningful public service is very important to me.</i>	1	2	3	4	5
2. Saya tidak gentar untuk memperjuangkan hak orang lain, walaupun saya akan dipersendakan. <i>I am not afraid to go to bat for the right of others, even if it means i will be ridiculed.</i>	1	2	3	4	5
3. Melakukan sesuatu perubahan dalam masyarakat adalah lebih bermakna bagi saya berbanding dengan pencapaian peribadi. <i>Making a difference in society means more to me than personal achievements.</i>	1	2	3	4	5
4. Saya bersedia untuk melakukan pengorbanan yang besar untuk kebaikan masyarakat. <i>I am prepared to make enormous sacrifices for the good of the society.</i>	1	2	3	4	5
5. Saya sering diingatkan oleh peristiwa yang berlaku seharian betapa kita saling bergantung antara satu sama lain. <i>I am often reminded by daily events about how dependent we are on one another.</i>	1	2	3	4	5

Pernyataan/ Statement	Skala/Scale				
8. Kandungan program latihan dan pembangunan yang dilaksanakan di organisasi saya adalah berdasarkan prestasi kerja pegawai. <i>The content of the training and development programmes implemented in my organization are based on job performance.</i>	1	2	3	4	5
9. Pegawai yang dikenal pasti berpotensi tinggi di organisasi saya mempunyai peluang yang lebih baik untuk peningkatan kerjaya. <i>Identified high potentials in my organization have better opportunities for upward mobility.</i>	1	2	3	4	5
10. Saya mempunyai laluan kerjaya yang jelas dalam organisasi ini. <i>I have clear career paths in this organization.</i>	1	2	3	4	5
11. Saya mempunyai lebih dari satu laluan untuk kenaikan pangkat. <i>I have more than one avenue for promotion.</i>	1	2	3	4	5
12. Terdapat peluang untuk saya mengembangkan kerjaya di organisasi saya. <i>There are opportunities for me to grow my career at my organization.</i>	1	2	3	4	5
13. Saya menerima maklum balas mengenai prestasi kerja saya dari semasa ke semasa. <i>I receive feedback on my work performance from time to time.</i>	1	2	3	4	5
14. Maklum balas yang saya terima membantu saya meningkatkan prestasi kerja saya. <i>The feedback I receive helps me to improve my work performance.</i>	1	2	3	4	5
15. Saya berpandangan prestasi saya dinilai dengan adil. <i>I think that my performance is evaluated fairly.</i>	1	2	3	4	5
16. Organisasi saya menghargai sumbangan kerja saya. <i>My organization values my work contribution.</i>	1	2	3	4	5
17. Saya merasakan gaji yang saya terima bersesuaian dengan prestasi kerja saya. <i>I feel that my pay adequately reflects my work performance.</i>	1	2	3	4	5
18. Organisasi di mana saya berkhidmat memberikan pengiktirafan kepada saya. <i>The organization I serve provides recognition to me.</i>	1	2	3	4	5

Bahagian 6: Penilaian Penglibatan Kerja (9 items)

Part 6: Job Engagement Rater Form

Soal selidik ini digunakan untuk menghuraikan tahap keterlibatan pekerja anda. Anda dikehendaki untuk menjawab kesemua soalan. Sekiranya terdapat soalan yang tidak berkaitan dengan anda, atau anda tidak pasti akan jawapan kepada soalan berkenaan, anda diminta untuk mengosongkan ruangan jawapan tersebut.

This questionnaire is used to describe your employee engagement level. Please answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.

Sila tandakan (✓) pada pernyataan berikut berdasarkan pengalaman di jawatan semasa. Gunakan skala berikut:

Please tick (✓) the statements drawing from your experiences in your current job. Use the following rating scale:

Tidak Pernah <i>Not At All</i>	Sekali-Skala <i>Once In A While</i>	Kadangkala <i>Sometimes</i>	Kerap <i>Often</i>	Sangat Kerap <i>Very often</i>
1	2	3	4	5

Pernyataan/ Statement	Skala/Scale				
	1	2	3	4	5
1. Apabila saya bangun pagi, saya terasa ingin ke tempat kerja. <i>when I wake up in the morning, I feel like going to work.</i>	1	2	3	4	5
2. Saya rasa sungguh bertenaga di tempat kerja. <i>At my work, I feel myself bursting with energy.</i>	1	2	3	4	5
3. Saya memberi tumpuan sepenuhnya dalam kerja saya. <i>I am immersed in my work.</i>	1	2	3	4	5
4. Pekerjaan saya memberi inspirasi kepada saya. <i>My job inspires me.</i>	1	2	3	4	5
5. Saya sangat berminat dengan kerja saya. <i>I am enthusiastic about my job.</i>	1	2	3	4	5
6. Saya terlalu asyik ketika saya bekerja. <i>I get carried away when i am working.</i>	1	2	3	4	5
7. Saya bangga dengan pekerjaan yang saya lakukan. <i>I am proud of the work that i do.</i>	1	2	3	4	5
8. Saya berasa bertenaga dan bersemangat melakukan kerja saya. <i>At my job, i feel strong and vigorous.</i>	1	2	3	4	5
9. Saya rasa gembira bila bekerja dengan tekun. <i>I feel happy when i work intensely.</i>	1	2	3	4	5

Terima kasih kerana mengambil bahagian dalam kajian ini.

Thank you very much for participating in this survey.