



Complementarities between governance and human capital: A comprehensive model of public employees' innovativeness based on evidence from Saudi Arabia

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Abbreviations

<i>IFGGPS</i>	The International Framework: Good Governance in Public Sector 2014
<i>IFAC</i>	The International Federation of Accountants (the global organization for the accountancy profession).
<i>CIPFA</i>	The Chartered Institute of Public Finance and Accountancy.
<i>KSA</i>	Kingdom of Saudi Arabia
<i>HRM</i>	Human Resource Management
<i>HRMP</i>	Human Resource Management Practices
<i>SHRM</i>	Strategic Human Resource Management
<i>PP</i>	Data collection using the conventional paper- and-pencil method
<i>SEM</i>	Structural equation modelling
<i>GAO</i>	United States Government Accountability Office
<i>FEVS</i>	Federal Employee Viewpoint Survey
<i>PO</i>	Psychological Ownership
<i>AMOS</i>	Analysis of Moment Structures
<i>SPSS</i>	Statistical Package for the Social Sciences
<i>CFA</i>	Confirmatory Factor Analysis
<i>AVE</i>	Average Variance Extracted
<i>CR</i>	Composite Reliability Degree
<i>GFI</i>	Goodness-of-Fit Index
α	Cronbach's alpha
<i>CFI</i>	Comparative Fit Index Course
<i>X²/df</i>	Normed Chi-Square

Abstract

In an age of austerity, specifying how governance and innovation interact is an important issue on the agenda of policymakers and scholars when discussing the role of government in dealing with 'wicked problems'. This trend of public sector spending cuts continues unabated in G20 countries, such as the US, Brazil and Saudi Arabia, and is driven by the concurrence of austerity measures and increasing citizen demands for quality public services. As a way to tackle this dilemma, governments have specifically sought, explicitly or implicitly, to urge public sector organisations to become more effective, which calls for innovation in public organisations, which is inextricably linked to performance. For example, Saudi Arabia launched an unprecedented major economic transformation, Vision 2030, which is considered a huge challenge to the public sector, which employs over two-thirds of Saudi nationals, to be innovative.

Although several scholars have tried to prescribe ways to make the public sector more innovative, the theoretical frameworks used explained the effects of governance in unexpectedly parochial terms, and also neglected human capital dynamics, offering scarce insights into why some organisations thrive through innovativeness while others struggle. This study, which extends beyond the traditional high-performance models, examines whether the emphasis on the complementarities between a holistic approach of governance (rather than HRMP) and human capital can drive up human capital's value to produce a relative advantage; in this case, innovativeness.

This study breaks from the traditional, agency conflict between stakeholders and managers and uses a combination of theories (social capital theory, stakeholder theory and institutional theory) to describe where and how organisations' governance drives human capital value creation towards innovativeness. This study suggests that different governance mechanisms may work together in a complementary manner, rather than as substitutes, towards higher organisation performance. The conceptual framework uncovers previously overlooked circumstances, such as underestimating the strategic value of the public organisations' human capital, and offers a new approach to the conceptualisation of governance by developing a cooperation (rather than conflict) model, whereby multi governance mechanisms are intertwined. This research adopts a quantitative methodology, along with the positivist philosophical approach, to investigate the hypothetical relationships within the conceptual framework. To analyse and validate the data, this study applies the structure equation model by using the Statistical Package for the Social Sciences (SPSS) AMOS V. 23.

Based on data gathered from 713 public employees in Saudi Arabia, the findings indicate that public employees' innovativeness is driven by an organisation's complementarities between governance and human capital. In particular, the findings show that the amount of damage caused to trust within public organisations by a poor ethical work climate is greater, whereas good ethical work climate contributes to employees' trust which in turn positively facilitates the effect of psychological ownership on subsequent innovativeness. The findings also suggest that satisfied internal needs are key capabilities that organisations must possess in order to increase the capacity for innovation. Moreover, this study finds a variety of networks modes which provide opportunities for public employees to innovate.

These research outcomes yield several theoretical and practical implications. As a preliminary study, designed to address a complicated phenomenon in the public sector, the results of this study should be considered in the light of some limitations.

Key words: *innovativeness, governance, human capital, complementarities.*

Dedication

I would like to dedicate this thesis to the memory of my father and my sister; to my family who always supported me, especially my wife and my children: Yara, Saleh and Reema, with deepest appreciation.

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First and foremost, I would like to thank Almighty Allah for giving me the ability, health, and patience to complete this work and overcome all of the difficult circumstances that I encountered during my PhD journey.

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Declaration

I hereby declare that this thesis is my original research work and has not been previously submitted for a degree or qualification to any other academic institutions.

I also declare that all information included in this thesis has been obtained following academic rules and ethical conduct.

Some of the material associated with the current study has already been presented or published in the form of the following:

Conference papers

- Albakhiti, M., Nandy, M. (2017) 'Recent changes in governance frameworks and the implication on innovation in public sector', *Brunel Business School Doctoral Conference (2017)*, Brunel University London, UK.
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¹ *Public Administration Review* is recognised as a Journals of Distinction. A small number of grade 4 journals are recognised world-wide as exemplars of excellence (The Association of Business Schools, 2018).

Table of Contents

Abbreviations	ii
Abstract	iii
Acknowledgements	v
Declaration	vi
Table of Contents	vii
List of Tables	xii
List of Figures	xiv
1. Introduction	2
1.1 Introduction	2
1.2 Background of the research	5
1.3 Research problem	7
1.4 Rationale of the research	9
1.5 Aim and objectives of the research.....	12
1.6 Research contribution	12
1.7 Research methodology	14
1.8 Structure of the remainder of the thesis	14
2. Literature review	17
2.1 Governance context.....	17
2.1.1 Definitions of governance	20
2.1.2 Taxonomies of governance	24
2.1.3 The International Framework: Good Governance in the Public Sector	27
2.1.4 Governance constructs	30
Integrity	31
Fairness	33
Respecting the rule of law.....	35
Resilience.....	36
Openness and accountability	38
Governance networks	39
Comprehensive measuring of performance	42
Task Interventions	44
Developing capacity	45
2.2 Human capital context	46
2.2.1 Embedding human capital into the relationship between governance and innovation 48	
2.2.2 Human capital constructs.....	51

Trust as an affective state	51
Job resources: behaviour and cognitive states	54
Empowerment.....	57
Psychological ownership	62
2.3 Innovation context	64
2.3.1 What is innovation?	65
2.3.2 Innovation types.....	68
2.3.3 Pro-innovation bias	70
2.3.4 Measurement.....	71
2.4 Shortcomings in the relevant literature	74
3 Conceptual framework	82
3.1 Introduction	82
3.2 Theoretical perspective.....	84
3.2.1 Governance theories	84
3.2.2 Social Capital Theory	88
Structural Dimension.....	93
Relation dimension	93
Cognitive dimension.....	94
3.2.3 Stakeholder Theory	95
The stakeholder-based perspective of performance	101
3.2.4 The Institutional Theory	111
3.3 Development of the conceptual framework.....	113
3.4 Research hypotheses	119
3.4.1 Ethical climate and trust in the organisation	120
Integrity and Trust.....	120
Fairness and Trust	121
Respecting the rule of law and trust	123
3.4.2 Networks and job resources	124
Resilience and job resources.....	125
Openness and accountability; and job resources	126
Governance network and job resources	127
3.4.3 Interventions and empowerment.....	130
Comprehensive measuring of performance and empowerment	130
Task interventions and empowerment	132

Developing capacity and empowerment	133
3.4.4 Job resources, empowerment and psychological ownership	135
Availability of job resources and psychological ownership.....	135
Empowerment and psychological ownership	136
3.4.5 Trust as a moderator in the relationship between psychological ownership and innovation	137
3.5 Conclusion	139
4. Methodology	142
4.1 Introduction.....	142
4.2 Research philosophy	142
4.2.1 Rationale for adopting positivist paradigm.....	143
4.3 Research design.....	145
4.4 Research approaches	147
4.4.1 Rationale for using the quantitative approach	148
4.5 Research Strategy.....	149
4.5.1 Justification for the use of a survey	149
4.6 Questionnaire survey of public employees.....	150
4.6.1 Sample selection and population.....	150
4.6.2 Sample size	151
4.6.3 Sampling techniques	152
4.6.4 Reasons for adopting convenience sampling.....	154
4.6.5 Operationalisation of the constructs	154
4.6.6 Designing the questionnaire	163
4.7 Pilot testing	165
4.7.1 Demographic profile of the respondents involved in the pilot study	166
4.8 Response rate.....	169
4.9 Data analysis.....	169
4.9.1 Preliminary data analysis statistics	170
Missing data	171
Outliers.....	171
Normality.....	172
4.9.2 Descriptive statistics.....	173
4.9.3 Multicollinearity analysis.....	173
4.9.4 Reliability	173

4.9.5	Factor Analysis.....	174
4.9.6	Validity.....	175
	Convergent Validity.....	175
	Discriminant validity.....	176
4.9.7	Response bias test.....	176
	Common method bias test.....	176
4.9.8	Structure Equation Modelling.....	177
	Measurement model.....	178
	Structural model evaluation and hypothesis testing.....	181
4.9.9	Moderation model.....	181
4.10	Ethical considerations.....	182
4.11	Translation.....	184
4.12	Conclusions.....	186
5	Results.....	190
5.1	Introduction.....	190
5.2	Descriptive statistics.....	190
5.2.1	Key characteristics of the sample.....	190
5.3	Normality.....	193
5.4	Correlation.....	195
5.5	Reliability of scales using Cronbach's alfa.....	197
5.6	Kaiser-Meyer-Olkin (KMO) and Bartlett's Test.....	197
5.7	Confirmatory Factor analysis (CFA) for Measurement Model and Assessment of Construct Validity of the Model.....	198
5.7.1	Convergent Validity.....	198
5.7.2	Discriminant Validity.....	202
5.8	Common Method Bias Analysis.....	204
5.8.1	Harman's Single Factor Analysis.....	205
5.8.2	Common Latent Factor.....	205
5.9	Hypothesis Testing.....	208
5.10	Moderating the effect of trust.....	209
5.11	Conclusion.....	216
6	Discussion.....	218
6.1	Introduction.....	218
6.2	Methodological transparency.....	219
6.3	Discussion of the research hypotheses.....	221

6.3.1	Discussion of the complementarities between the ethical climate context and trust	222
	Integrity	222
	Fairness	223
	Respecting the rule of law.....	224
6.3.2	Discussion of the complementarities between networks' context and job resources	225
	Resilience.....	225
	Openness and accountability.....	226
	Governance network.....	227
6.3.3	Discussion of the complementarities between interventions and empowerment	228
	Comprehensively measuring of performance.....	228
	Task interventions	229
	Developing capacity	230
6.3.4	Job resources and empowerment as routes to psychological ownership	231
6.3.5	The Moderating Effect of Trust	232
6.4	The validation and revision of the research framework	234
6.5	Summary	237
7.	Conclusion	239
7.1	Introduction	239
7.2	Fulfilling the research aim and objectives.....	239
7.3	Summary of the study's procedures and results	240
7.4	Theoretical Implications.....	244
7.5	Empirical contribution.....	248
7.6	Managerial implications and recommendations for practice.....	248
7.7	Study limitations and opportunities for future research	250
	References.....	252
	Appendix.....	309

List of Tables

<i>Table2. 1 Public governance models (generations)</i>	18
<i>Table2. 2 Trends in the definition of governance during the last two decades</i>	23
<i>Table2. 3 2.4 Shortcomings in the related literature</i>	80
<i>Table3. 1 Classification of governance theories according to their purpose</i>	86
<i>Table3. 2 The range and development of the 'stakeholder' definition</i>	97
<i>Table4. 1 Comparison between the research philosophy approaches</i>	143
<i>Table4. 2 Good governance constructs</i>	156
<i>Table4. 3 Integrity construct indicators</i>	157
<i>Table4. 4 Fairness construct indicators</i>	157
<i>Table4. 5 Respecting the rule of law construct indicators</i>	158
<i>Table4. 6 Resilience construct indicators</i>	158
<i>Table4. 7 Openness and accountability construct indicators</i>	159
<i>Table4. 8 Governance network construct indicators</i>	159
<i>Table4. 9 Comprehensive measuring of performance construct indicators</i>	159
<i>Table4. 10 Task-interventions construct indicators</i>	160
<i>Table4. 11 Developing capacity construct indicators</i>	160
<i>Table4. 12 Human Capital context constructs</i>	161
<i>Table4. 13 Trust construct indicators</i>	161
<i>Table4. 14 Job resources indicators</i>	161
<i>Table4. 15 Empowerment indicators</i>	162
<i>Table4. 16 Psychological ownership indicators</i>	162
<i>Table4. 17 Innovativeness indicators</i>	163
<i>Table4. 18 Purpose of the Pilot Survey</i>	165
<i>Table4. 19 Demographic details of the pilot study respondents (N=31)</i>	167
<i>Table4. 20 Cronbach's alpha coefficients for all of the constructs in the pilot study</i>	169
<i>Table4. 21 Goodness of fit statistics in SEM</i>	179
<i>Table4. 22 Measurement Model Estimates</i>	180
<i>Table4. 23 The five-stage translation framework</i>	185
<i>Table5. 1 Gender breakdown of the respondents</i>	190
<i>Table5. 2 Respondents age</i>	191
<i>Table5. 3 Education level of the respondents</i>	191
<i>Table5. 4 Respondents organisation type</i>	192
<i>Table5. 5 Respondents' work experience</i>	192
<i>Table5. 6 Frequency at which the respondents' meet with their managers</i>	193
<i>Table5. 7 Skewness and Kurtosis at the Item Level</i>	194
<i>Table5. 8 Correlation matrix of the research constructs (The Pearson's correlation test)</i>	196
<i>Table5. 9 Cronbach's alpha for each construct</i>	197

<i>Table5. 10 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test.....</i>	<i>198</i>
<i>Table5. 11 Convergent validity.....</i>	<i>201</i>
<i>Table5. 12 Factor correlation matrix with the square root of the AVE.....</i>	<i>203</i>
<i>Table5. 13 Goodness of fit indices for the final CFA.....</i>	<i>204</i>
<i>Table5. 14 Path analyses results.....</i>	<i>209</i>
<i>Table6. 1 Meeting the transparency recommendations by chapter.....</i>	<i>219</i>
<i>Table6. 2 Research hypotheses' results.....</i>	<i>221</i>
<i>Table7. 1 Objectives and the chapters in which these objectives were addressed.....</i>	<i>240</i>

List of Figures

<i>Figure1. 1 Research outline</i>	16
<i>Figure2. 1 The simple model of Strategic Human Capital</i>	48
<i>Figure2. 2 Material resource adequacy and innovation project performance</i>	55
<i>Figure3. 1 Nahapiet and Ghoshal's social capital model</i>	92
<i>Figure3. 2 Stakeholder typology</i>	101
<i>Figure3. 3 Conceptual framework</i>	118
<i>Figure 4. 1 Research Design</i>	146
<i>Figure 4. 2 Sampling Techniques</i>	153
<i>Figure 4. 3 A moderation model</i>	182
<i>Figure5. 1 Confirmatory factor analyses (CFA)</i>	200
<i>Figure5. 2 Common latent factor</i>	206
<i>Figure5. 3 Common Latent Factor Method</i>	207
<i>Figure5. 4 Structural model (overall model)</i>	211
<i>Figure6. 1 Revised framework of the relationships (overall framework)</i>	236

Chapter 1: Introduction

1. Introduction

1.1 Introduction

Today, innovation is fundamental to the public sector and has recently moved to the top of the agenda in public sectors around the world (Torfing and Triantafillou, 2016; Demircioglu and Audretsch, 2017). Governments are particularly eager to improve the public sector's ability to deal efficiently and effectively with a formidable challenge (Sørensen and Torfing, 2018). Certainly, recent budgetary constraints have exposed negative implications on public service efficiency (Elston, MacCarthaigh and Verhoest, 2018). Increasingly, the trend of public sector spending cuts continues unabated in G20 countries, such as the US, Brazil and Saudi Arabia, driven by the concurrence of austerity measures and rising citizen demands for quality public services (Raudla *et al.*, 2015; Dudau, Kominis and Szocs, 2018). Therefore, doing more with less is a central challenge for public organisations. More precisely, governments have concurrently imposed greater work demands on public employees with less resource (Esteve, Schuster and Albareda, 2017). Saudi Arabia represents an intriguing example of such challenges.

To address these challenges, Saudi Arabia launched an unprecedented major economic transformation, Vision 2030, which is considered to be a huge challenge to the public sector to be innovative. Public sector organisations play an important role in Saudi Arabia's economy. Today, the public sector accounts for over 45% of total government spending (Nereim, Mahdi and Zainab, 2017). Additionally, the latest Saudi statistics show that the public sector employs over two-thirds of Saudi nationals (General Authority for Statistics, 2018). In this case of workforce-intensive organisations, human capital is an idiosyncratic resource and remains a nonsubstitutable source of performance-enhancing innovation, or possibly it might be an obstacle to its implementation (Bowen, 2016; Torfing and Ansell, 2017; Campbell, 2018).

Accordingly, public sector organisations are labour-intensive, with public employee the 'factor of production' (Storey, 1987). Therefore, the dilemma for public organisations seeking innovation is to know how to determine the level of value that can be tied to human capital. The fundamentals of the human capital constructs have been developed in an

interdisciplinary manner, mainly scholars from psychology and economics (Ployhart and Moliterno, 2011). Also in management, the human capital construct has been studied by human resource and organisational behaviour scholars at both the micro and macro levels (e.g., Schmidt and Hunter, 1998; Peteraf, 1993). Perhaps more important, the dominant view of human capital in public sector governance is central to the accomplishment of potentially competing quality and cost objectives (Konzelmann *et al.*, 2006). Ployhart and Moliterno (2011) famously defined human capital context as a “resource that is created from the emergence of individuals’ knowledge, skills, abilities and other characteristics (KSAOs)” (p. 127-128). Additionally, this range of unique characteristics encompasses beliefs, feelings, psychological states, and traits (Murphy, 2012; Ployhart *et al.*, 2014).

A natural convergence across fields emerges regarding content that have strategic importance of human capital (Wright, Coff and Moliterno, 2014; Nyberg and Wright, 2015). For example, trust in the organisation is a key factor for creating human capital value that has generated a consolidated stream of research (Schuh *et al.*, 2018). Trust in the organisation plays a crucial role for the effective functioning and success of organisations through fosters employee cooperation and performance (Colquitt *et al.*, 2013; Ozyilmaz, Erdogan and Karaeminogullari, 2018). This study considers trust in organisation as a relevant moderator following Avey *et al.* (2009) contention that under strong disincentives, the individuals will be overly possessive and territorial about their organisational targets of ownership. Accordingly, trust in organisation is likely to be important in understanding the effects of psychological ownership on innovativeness (Dawkins *et al.*, 2017). In light of those studies conclusions, this study focus on the key constructs of human capital, that are, trust in the organisation, job resources, empowerment, and psychological ownership within organisation.

It is important to acknowledge here that, although human capital is a unique resource, it is important to appropriate its value in use (Chadwick, 2017). Human capital, like other resources, is not valuable in itself but, rather, weighed for the value that it can render to organisations (Penrose, 1995). In particularly, human capital poses unique challenges and management dilemmas in pursuing its value because employees’ utility functions encompass not only the economic exchange dimension, but also the affective relationship (free will) dimension (Baron and Kreps, 1999). Consider, for instance, that employees’

feelings and thoughts have a direct influence on how hard they are willing to work, which makes the management of human capital less predictable (Coff, 1997; Chadwick and Dabu, 2009). One recommended resolution of this dilemma is for human capital to be strategic by being placed at the centre of any model (Wright, Coff and Moliterno, 2014). From this perspective, human capital can generate higher value through the existence of complementarities with idiosyncratic organisation conditions (or antecedents, as Wright, Coff and Moliterno (2014) call them), such as management practices and organisational processes (Ployhart and Moliterno, 2011; Chadwick, 2017).

Previous studies have presented a limited view of the antecedents that can create complementarities with human capital, as Human Resource Management Practices' (HRMP) distortions from many species make it difficult to determine how much value can be tied to human capital. Indeed, the emphasis on HRMP has tended to limit strategic human capital scholars' attention to a specific circumstance out of a broader class of conditions where human capital complementarity can drive value in use. Therefore, researchers currently must "expand the relevant practices to those beyond the control of the HR function" (Wright, Dunford and Snell, 2001, p. 705), where the antecedents should not come from the traditional perspective, in order to examine deeper explorations of practices (Wright, Coff and Moliterno, 2014). A suitable model of human capital complementarities should thus draw upon governance, whose structures are "most amenable to human capital complementarities" (Chadwick, 2017, p. 515). Consequently, the governance paradigm may offer fresh insights into the nature of human capital investment and produce fresh solutions that will outperform the existing ones based on human resource management perspective (Su, Wright and Ulrich, 2015; Aguilera, Florackis and Kim, 2016; Torfing and Triantafyllou, 2016). Hence, this study directly answers the calls to reveal the thinking beyond HRMP choices by testing a typology of governance rather than the typical HRMP paradigm (Martin *et al.*, 2016).

Governance is an important component in the future public sector system, and plays a key role in public sector development by improving organisational leadership, management, and oversight, resulting in more effective interventions and, ultimately, better outcomes (IFAC and CIPFA, 2014; Radelet, 2016). The impact of governance's practices on the organisational environment and employees is an important consideration in determining governance's

relative implementation success. The governance structure has implications beyond its mechanistic function, as it affects the behaviour within the organisation beyond those usually ascribed to the system (Birnberg, 2011). However, governance requires a mechanism and practices in order to be incorporated into public services (Dagdeviren and Robertson, 2016; Bingham, Nabatchi, and O’Leary, 2005).

To summarise, this study generates new insights about the design of governance for an organisation where human capital is a more important resource than financial capital. Human capital can be strategically valuable by raising human capital’s value in use closer to its potential value in which potential value is the maximum possible value in use that human capital can generate for its organisation. To this end, human capital value in use can be enhanced through complementarities between human capital and other organisation resources. Given the importance of governance as a resource in the public sector, the fundamental argument in this thesis is that, for public organisations to garner innovation, they must leverage human capital through the existence of complementarities with their governance structures.

1.2 Background of the research

Innovation strategies and activities seem to be growing rapidly in the public sector. There is a growing interest in public innovation amongst students of governance, who are currently working to analyse the barriers to, and drivers of, innovation in the public sector, and also prescribe ways of making the public sector more innovative (Sørensen, 2017; Hartley, Sørensen, and Torfing 2013; Ansell and Torfing 2015). The process and organisational innovation in the public sector share important similarities with the private sector. Notably, the public sector is widely recognised as an area of inherent complexity (Lapsley and Skærbæk, 2012), which may exhibit greater complexity in the case of public services (Scupola and Zanfei, 2016). As a consequence, “more complex service contexts require employees to fill roles as ‘Innovators’; ‘Differentiators’; ‘Enablers’ and ‘Coordinators’” (Bowen, 2016, p.5). Notably, a new public sector approach to innovation focuses on how the public sector itself can become more innovative. Therefore, “the public sector must become more effective, and that calls for innovation” (Sørensen, 2017, p. 3).

As discussed above, due to the budget austerity and social challenges with which governments are wrestling, innovation today is the top priority of public organisations and public leaders (Torfing and Triantafyllou, 2016). Such circumstances give innovation greater attention; arguably it is considered to be a 'magic concept' in the public sector (Pollitt and Hupe 2011). In fact, internal factors in the public sector are strongly associated with innovation (Demircioglu and Audretsch, 2017). More specific, public employees may be more fruitful and vital than other resources under this context of widespread financial constraint (Kruyen and Genugten, 2017). Innovation at the individual level is known as work-role innovation, including the introduction and implementation of novel ideas to improve the existing work processes or routines; and sometimes it has been implicitly defined as employee engaging in extra-role behaviour (Kiazad, Seibert and Kraimer, 2014; Axtell et al., 2000; Welbourne, Johnson and Erez, 1998).

The importance of human capital as a resource has a long tradition in literature. It began when Adam Smith identified "the acquired and useful abilities" of individuals as a source of "revenue or profit" (Smith 1963/1776, p. 213-214). Scholars have developed the fundamentals of human capital construct in an interdisciplinary sense: psychology and economics (Ployhart and Moliterno, 2011). In the management field, the human capital construct has been studied by human resource and organisational behaviour scholars at both the micro and macro levels (e.g., Schmidt and Hunter, 1998; Peteraf, 1993). By bridging the levels of analysis, Ployhart and Moliterno (2011, p. 127-128) define human capital as a "unit-level resource that is created from the emergence of individuals' knowledge, skills, abilities and other characteristics (KSAOs)."

Scholars usually explore how complementarities, with a variety of antecedents in addition to human capital, can enhance value in use, an overwhelming number of the studies investigating the human capital construct focus on how organisations invest in human capital through Human Resource Management Practices (HRMP) as the antecedent (Huselid, 1995; Delery and Doty, 1996; Guthrie, 2001; Raineri, 2017). However, human capital complementarities bases and HRMP do not perfectly coincide. Indeed, there is a rich opportunity for other complementarities between human capital and other, idiosyncratic organisation resources, to exist (Chadwick, 2017). Accordingly, the essential argument in strategic human capital literature is that a suitable model of human capital

complementarities should thus draw upon governance, with its structures that are “most amenable to human capital complementarities”, a view that is consistent with the arguments in this thesis (Chadwick, 2017, p. 515).

Governance is an evergreen issue for scholars in different disciplines, such as leadership, finance, economics, accounting, and law. Recently, Google Scholar access over 3 million references for the term ‘Governance’. Although governance has existed within the academy’s vocabulary for some time, recently it has gained increased importance in the public sector (Rose-Ackerman, 2017), possibly due to the significant and dramatic changes that have taken place in practice of governance over the past 30 years (Bouckaert, 2017). Accordingly, the definition of governance has been a matter of ongoing discussion among scholars from various disciplines, and several alternative definitions have been proposed (Rose-Ackerman, 2017). In other words, the term has been used, often loosely, to capture a family of somewhat related meanings (Williamson, 2010).

In recent years, the regulations of governance in the public sector have been developing steadily. For instance, a new set of good governance in the public sector guidelines was issued jointly by the International Federation of Accountants (IFAC), the global organisation for the accountancy profession, and the Chartered Institute of Public Finance and Accountancy (CIPFA): The International Framework: Good Governance in Public Sector 2014 (IFGGPS). Indeed, IFGGPS reconceptualised the governance term by considering a wide range of functions and disciplines: effectiveness, accountability, ethics, law, stakeholders’ relations and a crucial leadership role. Drawing on a IFGGPS perspective on public governance, this thesis considers issues related to the governance paradigm, including integrity, fairness, respecting the rule of law, resilience, openness and accountability, governance networks, comprehensive measuring of performance, task intervention, and developing capacity.

1.3 Research problem

The pressure on public sector organisations ‘to do more with less’ has led them to redefine their traditional roles and responsibilities, and examine effective methods of increasing performance (Schwarz *et al.*, 2016). Indeed, “outcomes are what give the role of the public sector its meaning and importance, and it is fitting that they have this central role in public

sector governance” (IFAC and CIPFA, 2014, p. 5). Public innovation has risen to the top of the agenda of governments all over the world. Hence, “the message is clear: the public sector needs to become more innovative in order to meet the demands of modern society” (Sørensen, 2017, p. 1). In a nutshell, under such growing fiscal austerity and rising citizen demands for public services, it seems that the public sector is experiencing an endemic difficulty in the adoption of much-needed innovation.

In an age of austerity, governments in particular are facing reduced resources, increased workplace costs, and growing demands for services. Balancing these challenges, alongside the recognition the difficulty of hiring additional staff, requires the public leaders to think critically about how they are using their workforce. In service organisations, public employees represent a significant, albeit it not the most significant, expenditure for public organisations (Pynes, 2008; Esteve, Schuster and Albareda, 2017). Hence, public managers across various countries are faced with the challenge of enhancing and sustaining employee motivation and innovation in the context of widespread financial constraint (Chordiya, Sabharwal and Goodman, 2017).

Compared to the private sector, the innovation process may exhibit greater complexity in the case of public services (Scupola and Zanfei, 2016). In fact, this complex context requires public employees “to fill roles as ‘innovators’” (Bowen, 2016, p.5) because, in such circumstances, public employees’ inclination to make discretionary effort is related primarily to many outcomes such as performance and efficiency (Hollenbeck and Jamieson, 2015). Such effectiveness has reinforced the need to enhance public employees’ affective. Under high motivation conditions, employees are likely to be able to operate with greater autonomy, in which case, “employee identification enhances ownership and the likely quality of effort applied” (Christensen, Paarlberg and Perry, 2017, p. 532).

From this perspective, public employees will reciprocate with a stronger affective commitment towards their organisation only when they perceive that their organisation cares for them (Chordiya, Sabharwal and Goodman, 2017). However, recent headlines have highlighted the failure of the traditional incentives to motivate the public employees (Moynihan, DeLeire, and Enami, 2015; Christensen, Paarlberg and Perry, 2017). In this type of work, this study contends that public employees can be motivated not only by extrinsic

rewards or sanctions but by a variety of other factors (Perry, Engbers, and Jun 2009; Jacobsen and Andersen, 2017).

To summarise, if public sector leaders transform public governance in the right way, public innovation may be boosted to the benefit of users, citizens, employees, stakeholders and society at large (Torfing and Triantafillou, 2016). In such circumstances, the success of the governance may largely be dependent on whether it is properly administered by various actors within the organisation. Tihanyi, Graffin and George (2014) refer to governance as leadership systems, managerial control protocols, decision rights, and other practices that give organisations their authority and mandate for action. As a consequence, the impact of governance's practices on the organisational environment and employees is an important consideration in determining the governance's relative implementation success. Torfing and Ansell (2017) argue that different managerial and governance practices regarding human capital enable organisations to achieve stellar returns while maintaining a cadre of highly-committed, energised employees and making a positive social impact on the stakeholder communities.

1.4 Rationale of the research

Although scholars have attempted to prescribe ways of making the public sector more innovative (Sørensen, 2017; Hartley, Sørensen, and Torfing 2013; Ansell and Torfing 2015; Kruyen and Genugten, 2017), the conceptual frameworks adopted to explain the effects of governance are unexpectedly parochial, treating governance mechanisms individually and offering scarce insights into why some organisations thrive through innovation while others struggle (Misangyi and Acharya, 2014; Scupola and Zanfei, 2016; De Vries, Bekkers and Tummers, 2016). Therefore, a broader paradigm of governance is needed to provide an improved concept, which may be called 'good' governance (Tihanyi, Graffin and George, 2014; Rose-Ackerman, 2017).

Indeed, broadening the focus of the governance research from the unexpectedly parochial to a wide range of functions and disciplines (effectiveness, accountability, ethics, law and stakeholders' relations and engagement) shifts our theoretical attention to yield a fresh understanding of the governance approach. Millar (2014) argues that the coherence of bundles, which include both formal and informal governance mechanisms, reflects the

culture and ethical demands of the society in which the organisations operate. Aguilera and Cuervo-Cazurra (2009, p. 385) find that “studies on codes of good governance have focused on the codes issued in each country rather than on codes issued by transnational institutions that have a wider applicability and speak to the important debate of global governance”. Additionally, they suggest that future studies might improve researchers and practitioners understanding of the consequences of the codes issued by transnational institutions. However, worldwide or international codes of good governance cannot fit each country perfectly. Grindle (2017) agrees that “there is no one right configuration that leads to competence and effectiveness in the public sector” (p.19). Given this, Haxhi and Aguilera (2017) believe that an international code of good governance would allow different countries or organisations to adjust the best practices to suit their own specific characteristics and peculiarities. To the researcher’s knowledge, this study is the first to give sufficient consideration to IFGGPS.

Additionally, it is important to pause here to consider the impact of governance practices complementary to human capital. This complementarity enables organisations to achieve stellar returns while maintaining a cadre of highly committed, energised employees and making a positive social impact on their stakeholder communities (Torfing and Ansell, 2017). However, previous studies underestimate the strategic value of the organisation’s human capital because they have overlooked the versatility of this notion and its far-reaching impact (Mahoney and Kor, 2015).

The notion of this study comes from a relatively small body of literature that is concerned with governance in the public sector, and the published findings do not take account of differences in national culture and governance traditions. Millar (2014) assumes there exists a significant difference regarding studying governance in developed and emerging economy countries, respectively. Moreover, researchers have recently devoted greater attention to innovation in public organisations, albeit often drawing on western countries. Almost half of the studies on public sector innovation investigated in De Vries, Bekkers and Tummers’ (2016) comprehensive literature review are conducted in the US (e.g. Osborne and Gaebler 1992; Light 1998; Borins 2000) and UK (e.g. Hood 1991; Walker *et al.* 2002; Hartley 2005; Walker 2006). Arguably, the American-Anglo-Saxon perspective is central in those studies, so a question is raised regarding how relevant their findings may be to non-Western

countries (De Vries, Bekkers and Tummers, 2016). This argument may be explained by the fact that developed countries, over a considerable period of time, have built up stable, informal institutions that influence almost every organisation in the country, which is the key to understanding governance. Conversely, developing countries may have various informal institutions that vary internally or are shared on a multi-country basis (Millar, 2014).

More specific to the context of this study, the World Bank's (2016) Saudi Arabia's economic outlook report pointed to several characteristics that make Saudi Arabia superior to the other developing countries. Saudi Arabia is an active member of many worldwide organisations, such as the World Trade Organisation (WTO). Moreover, Saudi Arabia occupies the eighth Quotas and Voting Power position, as the highest decision-making body of the International Monetary Fund (IMF) (IMF website). Also, 3.01% of the total World Bank shares are owned by Saudi Arabia. Additionally, Saudi Arabia is one of the largest countries not only in the Middle East, but also in the Middle East and North Africa (MENA) area. As a member in the Organisation of the Petroleum Exporting Countries (OPEC), Saudi Arabia is the largest producer and exporter of total petroleum liquids in the world (Eid and Awad, 2017). These elements lend the study more importance in its analysis of how good governance mechanisms in the public sector can affect a high-income, emerging economy.

Perhaps more importantly, as a member of the G20, Saudi Arabia has launched a new long-term economic strategy, vision 2030. The national transformation plan, Vision 2030, heralds an unprecedented major economic transformation. The Saudi government hopes that the public sector, which employ over two-thirds of Saudi nationals in which its wage bill today accounts for over 45% of total government spending, improves its ability to deal efficiently and effectively through raising its capacity to innovate. Vision 2030 expects individuals, especially public sector employees, to work hard in return for their wages by adopting critical and innovative thinking. El-Katiri (2016) argues "to address the human capital challenges faced by the Kingdom, the government desperately needs much more capacity for midlevel planning and reform oversight" (p.4). The Saudi government's human capital is one of the most important existing public assets, which can be utilized to contribute to a fast-growing economy. Williamson's contracting framework, which serves as a guide for organisations that wish to promote innovation, indicates that innovation organisations

should decide which complementary assets they should own in order not only to commercialize an innovation, but also to do so profitably (Williamson, 2010).

1.5 Aim and objectives of the research

The primary aim of this study is to investigate the effects of complementarities between the holistic approach to governance and human capital on public employees' innovativeness in the context of Saudi Arabia. Also it discusses whether and how trust in organisations acts as a moderator in facilitating the relationship between psychological ownership and innovativeness. This study examines the link between this complementarity and innovativeness at the individual level.

The specific objectives of the study are as follows:

1. To provide a critical review of the governance, human capital and innovation literature to identify the research gaps, deficiencies in the literature, and the main constructs of this research, and also to address the research questions.
2. To develop a conceptual framework and associated hypotheses to address the research gaps and questions.
3. To evaluate empirically the proposed hypotheses and validate the proposed framework using the Structural Equation Modelling (SEM) technique.
4. To discuss and link the findings to previous research, identify the managerial and theoretical implications of the key findings and offer a conclusion and recommendations for future research.

These objectives form the basis of the following research questions:

- What are the effects of the complementarities between a holistic approach of governance and human capital on public employees' innovativeness?
- How does trust in the organisation influence the impact of a sense of psychological ownership on public employees' innovativeness?

1.6 Research contribution

The theoretical contribution of this study rests, more or less explicitly, upon the theoretical underpinnings and insights from three broad theoretical fields that are rooted in different social science disciplines but have cross-disciplinary relevance, and offer a new way of

seeing and investigating the relationship between governance and innovation in the public sector (Shaw *et al.*, 2018; Makadok, Burton and Barney, 2018). The arguments in this thesis suggest that interdependency and collaboration, rather than conflict, should be the primary mind-set. This study will break from the traditional, agency conflict between stakeholders and managers and use a combination of theories (social capital theory, stakeholder theory and institutional theory) to describe where and how an organisation's governance drives human capital value creation toward innovation.

The governance typology developed in this study is based on a more holistic approach of governance, whereby multi governance mechanisms are intertwined and several disciplines taken into account, making the contribution of this thesis more novel in nature. The discussion about the governance paradigm has recently broadened significantly. A number of new themes have developed out of this conversation, including stakeholder engagement, networks, effectiveness, ethics, and transparency. This thesis weaves these disparate themes together to create a more holistic view of governance. This study suggests that different governance mechanisms may work together as complements to enhance organisational performance (Tihanyi, Graffin and George, 2014; Misangyi and Acharya, 2014).

The framework of the impact of the complementarities between governance structure and human capital on public employees' innovativeness offered in this study will have important implications for public managers:

- A more holistic approach to governance influences public employees' innovativeness positively by fostering their sense of psychological ownership.
- Public managers should structure complementarities between governance structure and human capital in order to maximise innovativeness.
- Under the context of widespread financial constraint, complementarities between governance structure and human capital can increase human capital value in use with relatively small concurrent increases in the cost of human capital.
- To improve employees' behaviour and performance, public sector organisations should not only invest in increasing their employees' capabilities, but also invest in

building trust, that stresses the importance of leaders acting as entrepreneurial role models.

- More frequent intra and inter-contact with stakeholders tends to address complex public problems in providing access to the necessary information and encourages bilateral coordination.
- It is more fruitful for organisations to invest in capabilities that create human capital instead of employing inherently scarce human capital.

1.7 Research methodology

Research aims and objectives dictate the choice of methodology philosophy, research strategy and methods. In the current study, the conceptual framework is developed based on a literature review. Different factors from various theories and models will be applied in the current study to investigate the complementarities' effect between the holistic approach to governance and human capital on public employees' innovativeness in Saudi Arabia. Accordingly, a set of baseline hypotheses have been developed about how the complementarities between governance and human capital translate to innovativeness.

The study is designed under a positivist paradigm. Under this paradigm, "theories provide the basis of explanation, permit the anticipation of phenomena, predict their occurrence and therefore allow them to be controlled" (Collis and Hussey, 2014, p. 44). This study adopts a deductive approach, in which a theoretical framework is developed and tested with empirical data. A survey methodology is used and the convenience sampling technique is applied to collect primary data from a sample with a view to analysing the data statistically and generalizing the results to a population (Collis and Hussey, 2014). The data analysis employed the Statistical Package for the Social Sciences (SPSS) V 23.0 and AMOS. Reliability and validity, as well as structural equation modelling analysis, are performed.

1.8 Structure of the remainder of the thesis

The study is structured into seven chapters, including this introductory chapter. A summary of the research outline is shown in Figure 1.1. The seven chapters of the current research are previewed in the following paragraphs.

The next chapter reviews the relevant studies in order to identify the gaps and deficiencies in the literature. It outlines the recent developments and implementation of the governance

concept. It also discusses the implementation of IFGGPS. It provides an overview of the recent discussion of innovation's adoption in the public sector and the importance of human capital. This is followed by **Chapter 3** which presents an introduction based on the literature gap. This leads to the development of a conceptual framework and associated hypotheses.

Chapter 4 provides the background on the methodology. It describes and justifies the research design and establishes the appropriateness and credibility of the methodology used to address the research questions. It also presents the measurement scale for this study's questionnaire. Furthermore, the chapter discusses the methods for selecting a sample, and collecting and analysing the research data in detail, together with ethical considerations and the pilot study.

The main study's critical analysis is presented in **Chapter 5**. This chapter presents the results based on a statistical analysis of the data drawn from the questionnaire survey of Saudi public employees. This chapter also outlines the sample characteristics of the respondents and then the reliability and validity of the instrument. This permits a descriptive analysis of the key characteristics of the public sector organisations' governance in the sample and the results of the multivariate analysis, based on the structural equation modelling (SEM) method. This is followed by a detailed discussion of the results.

Chapter 6 aims to present the research findings in depth. Additionally, in this chapter, the findings are presented and discussed in light of the literature review presented in chapters two and three. This chapter also presents a brief summary of the research methodology along with a review of the research objectives. **The final chapter** draws conclusions regarding the theoretical contribution of the study and the implications of the results. It also offers recommendations for practice, discusses the limitations of the study, and offers suggestions for future research.

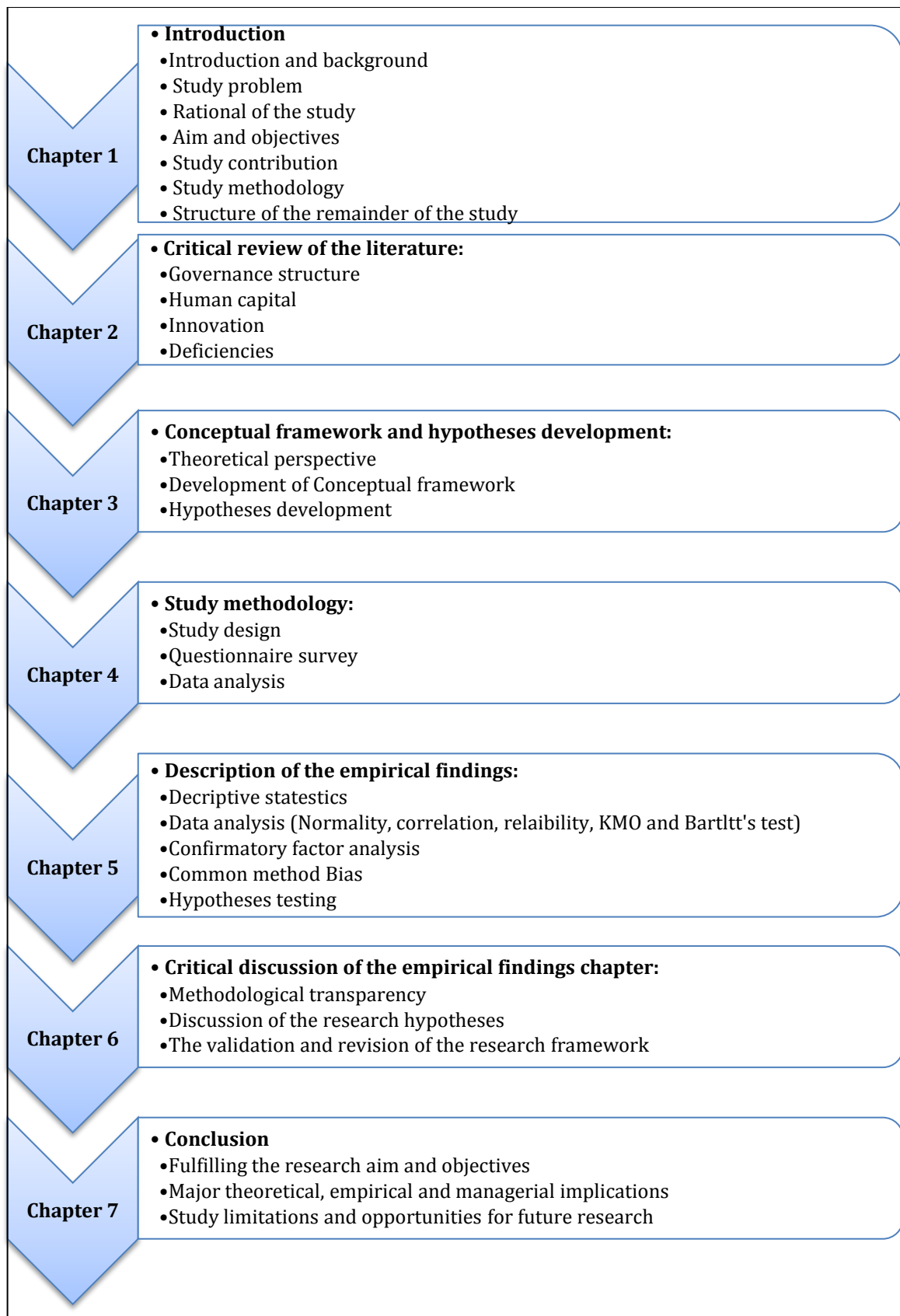


Figure1. 1 Research outline

Chapter 2: Literature Review

2. Literature review

This chapter reviews the relevant studies on the development and implementation of governance and innovation to identify the gaps and lack of evidences in the literature. This chapter describes the emergence of public sector innovation and explains the shortcomings of the previous studies in addressing the importance of the human capital factor in the sector. In this context, good governance is discussed in terms of innovation, public employees' trust, empowerment, the availability of enough resources, and psychological ownership. The chapter provides an overview of the prominent role of complementarities between governance and human capital within public sector organisations and concludes by drawing together the main themes of this part of the literature.

2.1 Governance context

Governance is not a new term in the public sector literature but the practice of governance has changed significantly and dramatically over the past 30 years (Osborne, 2006; Bouckaert, 2017). Such changes have begun to attract increasing attention from scholars in the current discussions of legal and moral philosophy (Rose-Ackerman, 2017). As shown in table 2.1, three distinguished models (or generations) of conceptualising public governance are found by blending the previous literature (e.g. Hartley, 2005; Pollitt and Bouckaert, 2011; Osborne, 2006; Scupola and Zanfei, 2016), each of which can be associated with specific patterns of public sector innovation.

Table 2.1 gives an overview of this transformation in conceptualising public governance. In this table the transformation starts with the 'traditional' or 'classical' public administration model, which is based on the characteristics of Weber's Bureaucracy of how hierarchy is a functional response to work in the modern world (Weber, 1946). Then, the 'New Public Management' approach introduces strategic performance management and market logics to the public sector (Hartley, Sørensen and Torfing, 2013). Eventually, the governance model, which aims to develop integrative leadership and collaborative forms, is raised as an alternative discourse (Osborne, 2006). In other words, the New Public Management constitutes a transitory stage in the evolution from traditional Public Administration to what is here called Governance. Governance's logic brings together the relevant and affected

actors from different levels and sectors with greater involvement of employees and users in order to find solutions to joint problems (Bouckaert, 2017).

Table 2. 1 *Public governance models (generations)*

<i>Paradigm</i>	<i>Started</i>	<i>Explanation</i>	<i>Innovation drivers</i>
The traditional public administration	Originated after the Second World War. This model is originally posited by Robson (1928)	This model is based on largely hierarchical administrative relations within public administrations. It has its foundations in the traditional political science and public policy ideology. This paradigm focuses on top-down decision-making.	<ul style="list-style-type: none"> • Clear rules and job security support the exploration and exploitation of new ideas • Administrative silos stimulate knowledge development among professional, trained employees
The New Public Management	Emerged in the mid-1980s	This paradigm relies on the idea of emulating the private sector and introducing market mechanisms. Latterly, this approach is developed by Hood (1991) as a managerial perspectives' theory.	<ul style="list-style-type: none"> • Competition between public and private service providers stimulate innovation • Devaluation, deregulation and strategic management • Customer orientation and performance measurement create strong incentives for public managers to improve performance and thereby induce innovation
The Governance	Originated in the early 2000s	Under the governance paradigm, the public sector is far more attentive to the pressure, motivation and opportunities created by society, with a greater involvement of employees and users in the service development process. This model is based on the institutional theory applied to the public sector (Newman, 2001; Røste, 2005).	<ul style="list-style-type: none"> • Multi-actor collaboration facilitates mutual learning and creation to produce fresh, bold solutions • Trust-based management means that public employees have more room to use their skills and competences • The experience, resources and ideas of stakeholders are used in the process of co-production and co-creation

Source: Hartley (2005); and Torfing and Triantafillou (2016)

It is important to acknowledge here the importance of governance structure to public organisations. By assuming that the new governance involves not simply tools but also practices and processes to be implemented in the government entities' work, it is described as "the watchword for the next millennium" (Bingham, Nabatchi, and O'Leary, 2005, p. 547). Admirably, governance plays a fundamental role in allocating resources and responsibilities

within organisations, thereby affecting strategic choices as well as value creation (Aguilera, Florackis and Kim, 2016). Capano, Rayner and Zito (2012) argue that “while governments clearly remain in the business of governing, they do so increasingly by experimenting with new modes of governance that share authority, use a variety of novel policy instruments and result in new kinds of institutions” (p.56).

Marland, Lewis and Flanagan (2017) argue that the master brand in public sector entities is the evoked set of communications impressions associated with the government overall, including intangibles such as impressions of good governance. In sum, to answer important questions related to governance in the public sector, such as role of humankind, leadership, stakeholders, tool-makers and tool users, it is necessary to understand the framework supporting the governance processes. However, the academic field, both in research and teaching related to the public sector, is lagging practitioners regarding the degree of attention paid to governance. Hence, it is necessary to address new governance processes in the academic field to encourage the public sector to develop and implement informed best practices (Bingham, Nabatchi, and O’Leary, 2005).

As discussed above, the historical transformations in the public governance modes are likely to have an impact on the patterns of public sector innovation. In fact, such historical transformations provide broad avenues that help to identify the priorities within, and hence influence, the direction and intensity of the organisational innovation that will eventually take place (Acemoglu and Robinson, 2012; Arthur, 2009). Public sector innovation may generate complex processes of social change that will lead to the emergence of new modes of public governance. Grindle (2017) argue future discussions of governance “should continue to explore important questions related to pathways to improved performance” (p.22). However, the individually treatment of governance mechanisms is redundant and cannot determine the effectiveness of governance. Moreover, governance structure has become a way of drawing scholars’ attention to the institutional aspects of development and addressing sensitive issues, such as leadership (Grindle, 2017). Yet, paradoxically, the link between governance and leadership is still considered something of a ‘black box’ (Bentley, Pugalis and Shutt, 2017). Perhaps the most significant recent work that points out pathways to improved governance is that by Grindle (2017), who suggests the need for more effective governance through the combination of a variety of mechanisms.

Although scholars has tried to prescribe ways to make the public sector more innovative (Sørensen, 2017; Hartley, Sørensen, and Torfing 2013; Ansell and Torfing 2015; Kruyen and Genugten, 2017), the theoretical frameworks used to explain the effects of governance adopted are unexpectedly parochial, as they treat the governance mechanisms individually, offering few insights into why some organisations thrive through innovation while others struggle (Scupola and Zanfei, 2016; De Vries, Bekkers and Tummers, 2016). Therefore, a broader paradigm of governance is required to improve this concept, which may then be called 'good' governance, because scholars have paid insufficient attention to how the existing governance mechanisms might interact (Tihanyi, Graffin and George, 2014; Rose-Ackerman, 2017). Indeed, there is an analogous propensity to understand governance as a cooperative process (Konzelmann *et al.*, 2006). More specific to the arguments in this article, researchers have underestimated the strategic value of the organisation's human capital because they have overlooked the versatility of this notion and its far-reaching impact (Mahoney and Kor, 2015), even though the literature provides valuable insights into the role of employees within the governance mode (Torfing and Triantafillou, 2016).

2.1.1 Definitions of governance

As a still-maturing concept, a surfeit of conceptual definitions exists for identical governance while the various uses of this term do not necessarily share the same meaning (e.g. Kooiman, 1999; Torfing and Triantafillou, 2016; Bouckaert, 2017). The term has been used, often loosely, to capture a family of somewhat related meanings. This concern about the governance paradigm has been expressed by a number of observers: no utter definition (e.g. see IFAC (2013)-Appendix B), a 'thematic issue' per se (Tihanyi, Graffin and George, 2014), 'the overarching concept' (Williamson, 2010), 'not well established' (Fukuyama, 2013), 'ambiguous' (Rose-Ackerman, 2017), or sometimes 'buzzword' (Jessop, 1998; Chengzhi, 2015). Grindle (2017) explains this phenomenon, "like a balloon being filled with air, definitions of ideal conditions of governance were progressively inflated" (p. 17). Notwithstanding these differences, Rose-Ackerman (2017) finds governance, in essence refers, "to all kinds of institutional structures that promote both good substantive outcomes and public legitimacy" (p. 23).

As discussed above, table 2.2 reveals that there have been various definitions of governance because it embodies a multitude of concepts. Starting with the wider definition, Williamson

(2010) defines governance as “is the means by which to infuse order, thereby to mitigate conflict and realize mutual gain.” (p.674). Both Bingham, Nabatchi, and O’Leary (2005, p. 548) and Rosenau (1992) adopt an almost identical definition of governance, in which governance and government are not synonymous terms: “to the creation, execution, and implementation of activities backed by the shared goals of citizens and organisations, which may or may not have formal authority and policing power”. Kooiman (2003) argues the concepts of government and governance have changed the paradigm of the communities of development. He defines government as “those activities of the social, political and administrative actors which may be regarded as deliberate efforts to guide, to direct, to control or manage” fields, or aspects of societies, whereas governance as a model “derives from the activities of ruling of social, political and administrative actors”. Fredrickson (1999) explains governance as “occurring at the institutional, organisational or managerial, and technical or work levels, including formal and informal rules, hierarchies, and procedures and influenced by administrative law, principal–agent theory, transaction cost analysis, leadership theory, and others” (p. 705–6).

With a different point of view, ‘Self-organizing and inter-organisational networks’ is used by Kickert (1993) and Rhodes (1997) to define governance, which functions both with and without government to provide public services. Marsh and Rhodes (1992) and Kickert *et al.* (1997) point out that governance is a way of exploring the workings of policy communities and networks. Kettl (2000) presents governance as a concept through which to explore the internal processes and workings of the New Public Management. Recently, scholars have developed further interpretations regarding governance. According to Fukuyama (2013), governance is “a government’s ability to make and enforce rules, and to deliver services, regardless of whether that government is democratic or not” (p. 350).

The concept of governance is related to that of public action and, consequently, to that of public management. Governance issues are limited to the coordination and efficacy of collective action for the amendment of market weaknesses. Governance may also be understood, from the perspective of political economy, as “stabilized articulation of regulations” (Le Gales, 2006). Perhaps a fuller definition is provided by Torfing *et al.*, (2012) who define governance as “the complex process through which a plurality of actors with diverging interests interact in order to formulate, promote and achieve common objectives

by means of mobilizing, exchanging and deploying a range of ideas, rules and resources” (p. 14). Scholars continually pay considerable attention to expanding the types of governance. For example, Sandu and Haines (2014) explain a new concept, governance’s public space, which is framed within the trend of adopting new business methods for the market economy.

In an analysis of governance in the public sector, Wiesel and Modell (2014) define the key performance aspect of governance in the public sector as effectiveness and citizen/customer satisfaction. Moreover, the main focus of control in governance is inter-organisational processes and outcomes. Therefore, Rose-Ackerman (2017), in his comprehensive biography of governance in the public sector, chose to refer to good governance as “all kinds of institutional structures that promote both good substantive outcomes and public legitimacy” (P. 23). One of the most intuitive and powerful ways of demonstrating the uneven definition of governance observed in the literature is proposed by Torfing and Triantafillou (2016) and Bouckaert (2017), which will be discussed in the next section (2.1.2).

In sum, governance is a commonly-used notion in research and yet is a concept that is difficult to define with any precision. Hence, since the definition of governance varies among researchers, it is important to clarify how the term is used in this research. The definition adopted in this study is based on that employed in the United Nations Development Programme (1997) and presented in Scupola and Zanfei (2016, p. 238): “governance is a set of structural arrangements of public administrations (PAs) affecting the allocation of public resources and the degree of efficiency and effectiveness of their activities”.

Table 2. 2 Trends in the definition of governance during the last two decades

<i>Source</i>	<i>Definition</i>
Marsh and Rhodes (1992); Kickert <i>et al.</i> (1997)	A way to explore the workings of policy communities and networks.
Kickert (1993); Rhodes (1997)	Self-organizing and inter-organizational networks, which function both with and without government to provide public services.
Fredrickson (1999, p. 705–6)	“Occurring at the institutional, organizational or managerial, and technical or work levels, including formal and informal rules, hierarchies, and procedures and influenced by administrative law, principal–agent theory, transaction cost analysis, leadership theory, and others”
Kettl (2000)	A concept with which to explore the internal processes and workings of the New Public Management.
Kooiman (2003)	A model which derives from the activities of the ruling of social, political and administrative actors.
Bingham, Nabatchi, and O’Leary (2005, p. 548)	“To the creation, execution, and implementation of activities backed by the shared goals of citizens and organizations, which may or may not have formal authority and policing power”.
Le Gales (2006)	The stabilized articulation of regulations.
Williamson (2010, p.674)	“The means by which to infuse order, thereby to mitigate conflict and realize mutual gain”.

- Torfinn *et al.*, (2012, p. 14) “The complex process through which a plurality of actors with diverging interests interact in order to formulate, promote and achieve common objectives by means of mobilizing, exchanging and deploying a range of ideas, rules and resources”.
- Fukuyama (2013, p. 350) “A government’s ability to make and enforce rules, and to deliver services, regardless of whether that government is democratic or not”.
- Wiesel and Modell (2014) Effectiveness and citizen/customer satisfaction.
- Rose-Ackerman (2017, p. 23) “All kinds of institutional structures that promote both good substantive outcomes and public legitimacy”

Source: the author

2.1.2 Taxonomies of governance

Although the discussion above reveals multiple definitions of governance, even less agreement exists regarding the taxonomies of the governance construct. Governance, like other low-paradigm-agreement fields, suffers from dissimilar forms of construct identification fallacy and proliferation, including jingle and jangle (Larsen and Bong, 2016; Shaw *et al.*, 2018). Distinct from the private sector, the term governance for the public sector is about execution (Fukuyama, 2013), thus it is widely used by practitioners as well as academics to better understand and address new challenges emerging in the changing world (Chengzhi, 2015; Pollitt and Hupe, 2011; Kickert, 1997); for instance, ‘co-governance’ (Toonen, 1990), ‘new governance’ (Rhodes 1997), ‘institutional co-governance’ (Greca 2000), ‘hybrid governance’ (Hupe and Meijs 2000), ‘multiple governance’ (Hupe and Hill 2006), ‘governance networks’ (Klijn 2008), ‘operational governance’ (Hill and Hupe 2009), and ‘meta-governance’ (Peters 2010), to name but a few. This situation leads to the complex and ambiguous meaning of governance when applied to the public sector (Chengzhi, 2015).

Consequently, Wiesel and Modell (2014) provide a comprehensive explanation of the elusive notion of public governance; their reasoning is that public governance “has been

conceptualized in a variety of ways by scholars, adopting narrower or wider definitions of this phenomenon” (p. 177). One might argue that this is the case because governance plays an important role in the different social science disciplines, such as accounting, economics, political science, and public administration (Newman, 2001; Osborne, 2006; Peters and Pierre, 1998; Rhodes, 1996 and 2007). However, this use has resulted in a complex and ambiguous meaning of governance when it is applied to the field of public administration. Two elegant summaries of the classification of governance in the public sector are provided in the work of Bouckaert (2017) and Torfing and Triantafillou (2016). The next section will describe these two classifications in detail.

By attributing different purposes to the different types of governance, Bouckaert (2017) draws our attention to distinctive categories of public sector governance often observed in the literature: corporate governance, holding governance, public service governance, supra-structure governance, and systemic macro governance. He finds that each type of governance is related to a different purpose. The first type is corporate governance which is concerned the management of single public sector organisation. Corporate governance, like many management instruments has moved to the public sector from the private sector, such as quality models, business process reengineering, and human resources management. The second type is holding governance, which is related to managing a network cluster of organisations that belong together, which usually contributes to a specific policy field (health, education, security, etc.), and needs a consolidated type of governance. There is a temptation to call this type ‘network governance’, in both the public and private sectors. However, holdings are still a variation on hierarchy, and therefore are more than simply networks. In addition, holdings governance remains a difficult exercise in both practice and theory (Bouckaert, 2017).

Public service governance is the third type; it refers to the premise that public sector delivery is part of public service delivery. Public service governance is related to the need to manage the interfaces with both the private sector and the third sector. In particular, there is a need to ensure there is sufficient governance capacity in both the private and third sector to guarantee high quality public services. Nevertheless, there have been some negative comments about public service governance. One suggestion has been the need to clearly define the responsibilities and accountability in situations of contracting out,

partnerships, and delegations. Another is the means of the mechanisms and rules of the game for these interfaces should be defined clearly. Given this, public service governance needs to be further developed (Bouckaert, 2017). The fourth type is Supra-structure governance. Bouckaert (2017) defines this as what lies beyond institutional infrastructure governance. Each element (ideas, ideologies, values, and culture) are equally part of the governance agenda. According to Supra-structure governance, interaction is increasingly in tension, even in conflict, and should be turned into a synergy. Such an approach, combining consequence logic with inappropriateness logic (corruption, fraud, lack of transparency, a culture of irresponsibility, and an absence of accountability) affects the trust and legitimacy of systems. The last type of governance is systemic governance. This is the system design at the macro level, including major checks and balances, fair resource allocation mechanisms, decision-making, and the distribution of power in society. Needless to say, it also implies a Whole of Government approach, and cannot be applied to single public sector organisation.

The second category of classification is provided by Torfing and Triantafyllou (2016) who, by drawing on the concept of orders of governance, are able to demonstrate three different orders of governance. First-order governance, here, refers to the different modes of governance that produce specific governance outcomes. Second-order governance is “all those reflexive and strategic interventions that aim to improve the functioning of the different modes of governance so that they may contribute to goal attainment in terms of effective problem solving, efficient service production, democratic legitimacy, enhanced solidarity, etc.” (p.12). The third and last order governance is a context-sensitive choice between different combinations of modes of governance regarding how govern society and the entire economy through one ‘hegemonic’ idea.

Also, another way to classify public governance is through potential distinction between two generations of governance research (Torfing and Triantafyllou, 2016). The first generation is devoted to establish the fact that something novel exists about governance in the public sector, and spend time explaining why it is formed, how it differs from other modes of governance, and how it contributes to effective public sector. The next generation focus on the need to extract the maximum from their formation, functioning, impact and development; the sources of their failure and success; and how they can be regulated. Together, the discussion above puts a finer point on where public governance currently

stands in research. A number of new themes have grown out of this discussion, including networks, ethics, leadership, stakeholders' relations, and so forth. In the next section I discuss the *International Framework: Good Governance in the Public Sector* (IFGGPS) more closely which weaves these disparate themes together into a more comprehensive view of public governance.

2.1.3 The International Framework: Good Governance in the Public Sector

Governance codes can be designed at three hierarchical levels: the international, national, and individual organisation level. An international code is issued by transnational institutions to promote the diffusion of good governance practices and increase governance standards around the world (Cuomo, Mallin and Zattoni, 2016). Transnational codes are undoubtedly a key influence on the development of national governance around the world through the principles and guidelines that they offer (Aguilera and Cuervo-Cazurra, 2009). However, there is still relatively scarce number of studies investigating codes at the international level (Cuomo, Mallin and Zattoni, 2016). Generally, higher code compliance can enhance organisations' performance (Fernández-Rodríguez, Gómez- Ansón and Cuervo-García, 2004; Luo and Salterio, 2014; Renders *et al.*, 2010). However, while some studies find no association between these two phenomena (Haniffa and Hudaib, 2006; Price *et al.*, 2011), others provide mixed results (Weir, Lang and McKnight, 2002).

In July 2014, the International Federation of Accountants (IFAC), the global organization for the accountancy profession, and the Chartered Institute of Public Finance and Accountancy (CIPFA) jointly developed an international framework for good governance in the public sector. IFAC and CIPFA (2014) assume IFGGPS should prove useful for all members associated with governance, such as senior managers, and those involved in scrutinising the effectiveness of governance. The aim of IFGGPS is "to encourage better service delivery and improved accountability by establishing a benchmark for aspects of good governance in the public sector. IFGGPS "is intended to apply to all entities that comprise the public sector" (IFAC and CIPFA, 2014, p. 7). In a nutshell, IFGGPS provides a resource for public entities to challenge substandard governance in the public sector. IFGGPS is developed following a review of the relevant previous governance literature. Additionally, IFGGPS is specifically built on earlier works on public governance by the IFAC and CIPFA, including Governance in

the Public Sector: A Governing Body Perspective (IFAC, 2001) and Good Governance Standard for Public Service Organisations (CIPFA/OPM, 2004).

The primary aim of IFGGPS is to encourage better service delivery and improved accountability by establishing a benchmark for measuring good, robust governance in the public sector. The key focus of the good governance processes and structures proposed in IFGGPS is the attainment of sustainable economic, societal, and environmental outcomes. More precisely, to achieve these goals, governing bodies and individuals, who work for public sector entities, must try to ensure that entities achieve their intended outcomes while acting in the public interest at all times (IFAC and CIPFA, 2014). Notably, IFGGPS is intended to be applied to all entities that comprise the public sector, even those with national and sectoral governance codes. Additionally, “where codes and guidance do not exist, the Framework will provide a powerful stimulus for positive action” (IFAC and CIPFA, p. 7).

Based on their experience, IFGGPS points out that the most important challenge for the public sector entities is interpreting the principles in a way that is appropriate to their structure: “the real challenge for public sector entities, however, remains in the implementation of such codes and guidance, as it is often their application that fails in practice” (IFAC and CIPFA, 2016, p.7-8). Note that public sector entities around the world operate within different legislative frameworks, standard organisational structures, shapes, and sizes (IFAC, 2001). Moreover, the public sector consists of a different set of constraints and incentives compared with the private sector. Hence, the worldwide framework of good governance cannot perfectly fit each country.

Accordingly, Haxhi and Aguilera (2017) assert the enforcement of codes of governance is distinguished from other forms of regulations. IFGGPS is voluntary in nature, which is claimed in the literature to be a key feature of the codes because “different compliance mechanisms and highly politicized processes of practice-setting often produce vague and inappropriate practices” (Haxhi and Aguilera, 2017, p. 297). They argue international codes of good governance reduce their complexity by allowing countries or organisations to adjust best practices to suit their own peculiarities. In this vein, Torfing and Triantafillou (2016, p. 3) state: “how the system of public governance is reformed obviously depends on the

context and varies between countries". IFAC and CIPFA recognise this diversity in developing IFGGPS by setting out a principles-based framework for good governance in public sector entities, rather than prescriptive requirements. Therefore, it is clearly stated in IFGGPS that "public sector entities will put these into practice in a way that reflects their structure and is proportionate to their size and complexity" (IFAC and CIPFA, 2014, p. 22). Contently, a principles-based framework orientated towards the public sector internationally was needed to take account of the features specific to the public sector, such as the wide range of functions, with a complex range of political, economic, social, short-, medium- and longer-term environmental objectives (Ace, 2014).

The term 'governance' is defined in the framework as a phenomenon that "comprises the arrangements put in place to ensure that the intended outcomes for stakeholders are defined and achieved" (IFAC and CIPFA, p.8). Interestingly, this term is reconceptualised within IFGGPS by dealing with a wide range of functions and disciplines: effectiveness, leadership, political, economic, social, accountability, ethics, law, and stakeholder relations. This argument is in line with Tihanyi, Graffin and George (2014), who encourage scholars to rethink their approach to governance research by considering a broadened conceptualization that embraces stakeholder engagement. They argue that an expanded view of governance is required, by involving stewardship and leadership. By doing so, scholars revisit the core constructs of governance. This "evolution of governance arrangements over time is centrally important to their continuing relevance and to the performance of organizations" (Tihanyi, Graffin and George, 2014, p. 1541). In a nutshell, IFGGPS can "improve organizational leadership, management, and oversight, resulting in more effective interventions and, ultimately, better outcomes" (IFAC and CIPFA, 2017, p. 6).

The board of directors is the main institutional device required by corporate governance to control the organisation in the private sector. In the public sector, the 'governing body' is a new idea provided in *Governance in the Public Sector: A Governing Body Perspective* (IFAC, 2001). The idea is shaped in IFGGPS as "the person(s) or group with primary responsibility for overseeing an entity's strategic direction, operations, and accountability" (IFAC and CIPFA, 2014, p.9). In addition, the new definition of "governing body" assumed that every public sector entity needs at least one individual, executive or non-executive, to be responsible for providing strategic direction in addition to oversight while also being

accountable to the stakeholders. On an ongoing basis, it is necessary for the governing body to review and amend the governance practices. As mentioned before, the most important challenge for public sector entities is interpreting the principles in a way that is appropriate to their structure. Therefore, IFGGPS provides a guidance section on implementing the principles that explains the underlying rationale and offers a supporting commentary.

IFGGPS lists seven principles, divided into two groups. The first group consists of two principles that must be followed to act in the public interest:

- A. Behaving with integrity, demonstrating strong commitment to ethical values, and respecting the rule of law.
- B. Ensuring openness and comprehensive stakeholder engagement.

The second group includes an additional five principles that must be followed to achieve good governance in the public sector:

- C. Defining outcomes in terms of sustainable economic, social, and environmental benefits.
- D. Determining the interventions necessary to optimize the achievement of the intended outcomes.
- E. Developing the entity's capacity, including the capability of its leadership and the individuals within it.
- F. Managing risks and performance through robust internal control and strong public financial management.
- G. Implementing good practices in transparency, reporting, and audit, to deliver effective accountability.

2.1.4 Governance constructs

Governance scholars argue that the international codes are undoubtedly a key influence on the development of national governance around the world. Furthermore, international codes or the codes issued by transnational institutions have a wider applicability and contribution to the important debate of global governance (Aguilera and Cuervo-Cazurra,

2009; Mallin, 2013). However, despite the importance of the international governance frameworks or codes in influencing the diffusion of governance practices, the data show that the current academic research and empirical articles are still limited in this respect. “It is interesting to note that our review of previous studies shows that there is still a relatively scarce number of studies investigating codes at international level” (Cuomo, Mallin and Zattoni, 2016, p. 231). Nevertheless, international codes cannot fit perfectly because of the heteroscedasticity between different countries. Regarding the latter, Haxhi and Aguilera (2017) argue flexible modes of self-regulation, such as IFGGPS, leave the “door open for different plausible national/local interpretations of the principle” (p. 163). In other words, they believe worldwide or international code of good governance provides a flexible mode that allows countries or organisations to adjust the best practices to suit their own peculiarities. In addition, they argue different countries can achieve the same governance result through the combination of different practices. Interestingly, none of the previous studies developed constructs for evaluating IFGGPS or testing them statistically. Therefore, this study will overcome these limitations. The constructs are drawn from various academic disciplines, and reflect the importance and relevance of all of the explained principles within IFGGPS. In this study, the labelling of most of the governance constructs is drawn from IFGGPS, as I discuss below.

Integrity

Integrity is defined as “the observance of a shared set of values or sound acceptable principles” (Hewlin, Dumas and Burnett, 2017, p. 181). This definition had attracted a great consensus because it is in line with the scholars’ view that includes moral or ethical principles within the definition of integrity to broaden the concept beyond mere consistency with stated values (Colquitt and Rodell, 2011; Mayer and Davis, 1999; Hewlin, Dumas and Burnett, 2017).

A number of perspectives on integrity feature are emerged in the organisational behaviour literature. In reviewing the literature, five primary themes encompassing the meaning of integrity are identified, including wholeness, consistency of words and actions, consistency in adversity, being true to oneself, and moral/ethical behaviour (Palanski and Yammarino, 2007). Krylova, Jolly and Phillips (2017) argue that, during the past decade, there has been an important divergence with the definition of the concept of integrity. Two dominant

schools of thought have emerged, the first ('behavioural integrity') assume that integrity does not necessarily encompass a moral value component, and the second ('moral integrity') assume that it does. Behavioural integrity defines an individual's trustworthiness by the extent to which promises are kept. A leader's behavioural integrity is "the perceived pattern of alignment between the leader's words and deeds" (Simons, 2002, p. 19). In contrast to behavioural integrity, moral integrity (see Bauman, 2013 for a discussion of the concept) does, indeed, preclude immoral or amoral ideals and values, and is judged on the basis of one's beliefs about the purity of the agent's motivation. Word and action alignment remain important, but moral integrity also considers whether an actor's values and moral principles are congruent with the values and principles of the observer in question (Tomlinson *et al.*, 2014). This value congruence has been endorsed by other authors (e.g., Frazier, Johnson, Gavin, Gooty, and Snow, 2010).

Stakeholder theory reinforced the importance of the perception of the integrity of an organisation from the stakeholder perspective (Harrison and Wicks, 2013). Simultaneously, Overeem (2015), crucially, believes "One very important aspect of a government's quality is its moral integrity" (p. 824). Integrity features in the literature as one of the fundamental components of effective leadership. Additionally, integrity has become an integral ingredient of many modern popular leadership perspectives, such as: Authentic Leadership, Transformational Leadership and Ethical Leadership (Brown and Trevino, 2006; Krylova, Jolly and Phillips, 2017). The terms 'tone at the top' and 'leading by example' are used by IFGGPS to explain the role of a governing body in keeping the entity's values at the forefront of its own thinking and behaviour and using them to guide its decision making and other actions. Moreover, integrity is identified by the U.S. Office of Personnel Management (OPM) as one of the five fundamental competencies that are prerequisite for entry to the Senior Executive Service (SES) (OPM, 2006). Indeed, federal managers have also identified integrity as the most important competence among the 26 specific competences required for the SES (National Academy of Public Administration, 2003).

Without exception, "governing body members should behave with integrity" (IFAC and CIPFA, 2014, p. 13). In addition, the Framework argues that individuals who manage public service provision and public spending should take the lead in establishing, and living up to, specific values for the entity and its subordinates. This action is referred to as leading by

example or tone-at-the-top. Moreover, managers should build on established principles regarding behaviour in public life, such as honesty, where these values should be exceeding the minimum legal requirements. The well-implemented integrity policy should be consistent with organisational culture and ethics, and clearly understood by the organisation employees and support the employees' anti-corruption efforts (Overeem, 2015). Such results include definition and communication through codes of conduct, frequent staff consultations and communication, and exemplary behaviour (IFAC and CIPFA, 2014).

“Creating a feedback mechanism (often known as “whistleblowing”) whereby staff can report non-ethical behavior of a governing body member or another staff member can be useful in achieving the goal of acting in the public interest at all times” (IFAC and CIPFA, 2014, p. 13). Whistleblowing refers to the disclosure by employees of malpractice together with illegal acts or omissions at work (Lewis, 1997). However, unless appropriate procedures are put in place, any moral obligation to disclose malpractice will continue to be in conflict with and submerged by the staff's self-interest in retaining their job. Additionally, conflicts can arise between the personal interests of individuals involved in decision-making and the decisions that benefit the employees. Therefore, processes should enable individuals or groups to question the management's decisions without fear of reprisal and to draw formal attention to practices that are unethical or violate the policies, rules or regulations (Overeem, 2015; IFAC and CIPFA, 2014).

Further, the public organisation's leadership should work to develop norms whereby employees feel positive about the organisation's efforts to encourage ethical conduct and believe that their organisation is an ethical workplace. Palanski and Yammarino (2011) consider integrity as a type of currency which engenders the motivation to reciprocate within a social exchange. “Surprisingly little is known about the judgmental processes that followers use to assess leaders' violations of their presumed integrity” (Krylova, Jolly and Phillips, 2017, p. 196).

Fairness

Interactional justice is fostered when decision-makers treat people with respect and sensitivity, and explain the rationale behind their decisions (Colquitt, 2001). Crucially, “all stakeholders care about fairness” (Bridoux and Stoelhorst, 2014, p.107). Organisational

justice is considerable because people reciprocate, and value being treated fairly (Harrison and Wicks, 2013). By the same token, Shalley and Gilson (2004) argue a vital component of the organisational climate, which leaders should consider as a priority, is the fairness or justice climate. Similarly, IFGGPS considers the way in which public entities relate to their stakeholders to be a vital value (IFAC and CIPFA, 2014). To measure ethical performance, IFAC and CIPFA (2014) propose employee surveys as a useful evaluative approach, which “provide important feedback on how an entity is performing in leadership, ethics, and culture” (p. 14).

Drawing on the incomplete contracting theory, Mahoney and Kor (2015) argue managers must treat stakeholders with fairness when seeking to develop a reputation. Ethical values, such as the appointment of staff on merit and performing job responsibilities properly, should underpin the personal behaviour of all employees. Indeed, the institutionalized environments in which the public managers operate impose strong demands for fairness and the equitable treatment of employees and service recipients (Rainey, 2003). Additionally, fair treatment leads individuals to focus on their work because it is unnecessary for them to monitor how individuals are being treated or decisions made (Shalley and Gilson, 2004). Interestingly, fairness has not been considered in many studies of creativity (Bosse, Phillips and Harrison, 2009; Shalley and Gilson, 2004), and the individual’s response to a lack of fair/equal treatment is missing in the literature (Birnberg, 2011).

Another dimension related to fairness is diversity. Recently, the extant literature shows the importance to continuously adopt diversity orientation or egalitarianism dimension in behavioural research (Rousseau *et al.* 1998; Birnberg, 2011). The current data regarding the increasing diversity within organisations highlight the importance of paying attention to the benefits and risks associated with diversity (Shalley and Gilson, 2004). In the public sector, governance is not only a matter of increasing effectiveness and efficiency, but also of guarding legality and legitimacy (Kickert, 1997). Therefore, fairness towards all stakeholders is found to be the central value in the public sector (Hood, 1991). To this end, IFGGPS insists on “protection for rights and entitlements, offering redress for those harmed, and guarding against corruption or other crimes and unethical behavior” (IFAC and CIPFA, 2014, p. 15). However, even though egalitarianism is an important dimension related to fairness and equity, it is not explicitly discussed in behavioural management research (Birnberg, 2011).

The organisation's strategy should aim to harness diversity as an informational resource (Guillaume *et al.*, 2017). Generally speaking, the literature argues that work group diversity should result in more solutions, increased communication both within and outside the work team and, ultimately, increased creativity (Shalley and Gilson, 2004). Leaders should work to help to develop a group lens in a diversity group because having a shared mental model helps in understanding the value of the different ideas that are generated in workplaces (Mumford *et al.*, 2001; Shalley and Gilson, 2004).

Integrative leaders, who are mindful and attentive regarding diversity, create the potential for enhancing the value of the organisation through the human capital represented by the knowledge, skills and experience of diverse stakeholders (Fernandez, Cho and Perry 2010; Barney and Wright, 1998). However, "It may not always be easy to objectively measure factors affecting an entity's performance in leadership, ethics, and culture" (IFAC and CIPFA, 2014, p. 14). In addition, Shalley and Gilson (2004) believe that leaders should establish human resource practices to avoid conflict, while Tajfel (1982) finds, in his intergroup relations study, that employees usually choose to work with others similar to themselves. "HR practices might also play an important role in developing diversity mind-sets as recruitment, selection, training, appraisal, reward, and promotion practices might enable and motivate employees to develop and apply relational coordination and information/decision-making capabilities" (Guillaume *et al.*, 2017, p.294).

Respecting the rule of law

Lawfulness value, which is defined as acting in accordance with the existing laws and rules, is ranked by public sector executives as the second most important actual value in the public sector (Van der Wal *et al.*, 2008). In fact, following government rules and regulations plays a key role in public administration value and is considered a factor in the ethical climates scale (DeHart-Davis, 2009; ötken and Cenkci, 2012). Moreover, Lane (1994, p. 144) notes that "public administration is at its core about implementing the rule of law". Crucially, all levels of public sector entities may be involved in interpreting, applying or enforcing laws (IFAC and CIPFA, 2014). Furthermore, IFGGPS insists on the importance of a high standard of conduct to prevent these roles from becoming tainted and losing their credibility (IFAC and CIPFA, 2014). To this end, Tummers and Knies (2016) define rule-following with respect to public leaders' roles, as "leaders who encourage their employees to act in accordance with

governmental rules and regulations” (p. 437). Likewise, Bozeman and Bretschneider (1994) assume that not only encouraging employees to adhere to governmental rules and regulations but also preventing them from breaking them is an important role of leaders in high publicness organisations.

Accordingly, IFGGPS sheds light on the important role of leaders: “Adhering to the rule of law also requires the governing body to ensure that there are effective mechanisms to deal with breaches of legal and regulatory provisions” (IFAC and CIPFA, 2014, p. 15). In essence, rule-following is related to the traditional rational-legal authority of a bureaucratic system (Tummers and Knies, 2016). Truly rule-following is that public sector management and employees demonstrate a strong commitment to the rule of law and also comply with all relevant laws and regulations. Additionally, they should strive to utilise their powers for the full benefit of their communities and other stakeholders and avoid corruption or any other misuse of power.

Resilience

In contrast to the traditional risk management approaches, resilience can enable employees to achieve greater connectedness, generate more access to resources, use their collective resources, process information, and consequently help the organisation to flourish (IFAC and CIPFA, 2014; Branicki, Steyer and Sullivan-Taylor, 2016). Resilience is defined as the “capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, progress, and increased responsibility” (Luthans, 2002, p. 702), while organisational resilience is “an organisation’s ability to absorb strain and preserve or improve functioning, despite the presence of adversity” (Kahn *et al.*, 2018). From this point of view, resilience is anchored in the collective processing of information and rallying members collectively to support one another (Powley, 2009; Kahn *et al.*, 2018).

Accordingly, the primary actors regarding organisation resilience are the organisation’s internal system and hierarchy structure (Van Der Vegt, *et al.*, 2015). Internal control, as “a process that depends upon the gathering dissemination of reliable and valid information” (Ouchi, 1978, p. 191), can provide reasonable assurance regarding information and implement corrective actions (Weibel *et al.*, 2016). Internal controls are defined as “a process effected by an entity’s oversight body, management, and other personnel that provides reasonable assurance that the objectives of an entity will be achieved” (United

States Government Accountability Office, 2014, p. 5). Similarly, van der Vegt *et al.* (2015) argue “risk management approaches focus on the identification of risks and alleviating the level of vulnerability to external disturbances” (p. 972). IFGGPS sheds light on this intertwined mechanism. In an age of austerity, it is important to ensure that “appropriate systems are in place so that expenditures against milestones and deliverables can be properly managed” (IFAC and CIPFA, 2014, p. 17).

Another way in which an organisation can generate higher resilience is through the formal organisation hierarchy. This structure harks back to Ouchi’s (1978) oft-cited point that hierarchy aids the process of communication. Indeed, the structure of an entire organisation’s network affects the knowledge flows and connectedness among the employees (Tsai, 2001; Phelps *et al.*, 2012). Harrison and Klein (2007) and Hays and Bendersky (2015) famously defined hierarchy as the vertical differences between members regarding their possession of socially-valued resources, whereas hierarchy form is defined as the degree to which the members within the team’s hierarchy are arrayed in a centralised, acyclical or inequitable manner (Bunderson *et al.*, 2016). Because hierarchy takes many shapes and forms, the way in which it is structured may affect its outcomes (Halevy, Chou and Galinsky, 2011; Bunderson *et al.*, 2016).

Four different categories of hierarchy are proposed by Bunderson *et al.* (2016): (1) centralization, (2) steepness, (3) acyclicity, and (4) mixed. Greer *et al.* (2018) explained these forms as follows. Centralization is captured through measures of concentration (e.g., power, status), whereas steepness is captured through measures of Euclidian distance and standard deviation; acyclicity is a network of directed influence relations, and finally mixed is operationalised as multiple forms of hierarchy. The impact of such a hierarchy form can cause possibly substantial differences in terms of effectiveness and performance. Accordingly, the hierarchy form is an important factor in explaining when a hierarchy is most likely to enhance or damage effectiveness (Bunderson *et al.*, 2016). Evans (1975) suggests a problematic loss of control may arise with organisations of more than three hierarchical levels. Therefore, organisations with a decentralised structure appear to foster more internal communication (Ouchi, 1978).

Openness and accountability

Openness is the most important actual value in the public sector (Van Der Wal, Graaf and Lasthuizen, 2008). According to IFGGPS, it is crucial that public sector entities are as open as possible regarding all of their actions, decisions, plans, etc., and not only explain these to all stakeholder groups but also allow their stakeholders to express their views about them (IFAC and CIPFA, 2014). Moreover, they argue trusted channels of communications must be developed in order to engage effectively with the stakeholders. In the literature, the terms 'openness' and 'accountability' are used interchangeably to mean "act willingly to justify and explain actions to the relevant stakeholders" (Van Der Wal, Graaf and Lasthuizen, 2008, p. 470). In this heuristic, providing a clear reasoning for public sector entities' decisions, in both their recording of these decisions and in explaining them to the stakeholders, is inevitable (IFAC and CIPFA, 2014).

Notably, the term 'openness' is used in the public administration literature to refer to "leaders who encourage employees to justify and explain their actions to stakeholders" (Tummers and Knies, 2016, p. 436). More strikingly, more so than organisations in the private sector, the public sector organisations have more relevant stakeholders, such as citizens, politicians, the media, non-governmental organisations, society as a whole, etc. (IFAC and CIPFA, 2014; Karsten, 2015). IFAC and CIPFA (2014) define the stakeholders within IFGGPS as "any person, group, or entity that has an interest in a public sector entity's activities, resources, or output, or that is affected by that output" (p. 40). Generically, stakeholder value is generally measured in financial terms, even though societal or environmental benefits are salient traits in the measurement of public sector organisations.

The existing research recognises that the critical role played by structures in promoting openness and ongoing contact with external stakeholders or information-seeking from various sources are related to innovation (Dougherty and Hardy, 1996; Ancona and Caldwell, 1992). Ordanini and Parasuraman (2011) find that the more contact-employees participation involved in the service process, the greater the innovation volume produced. Moreover, importantly, Florida, Cushing and Gates (2002) assume organisations that foster openness may be more successful in motivating creative employees and encouraging innovative collaboration. Such effectiveness requires communication to be balanced and fair by "allowing stakeholders to express their views freely and make informed decisions based

on unbiased information” (IFAC and CIPFA, 2014, p. 16). Shalley and Gilson (2004) also believe employees should be encouraged to be more open regarding communicating and seeking input from others about new ideas, which leads to creative outcomes. The assumption, in social capital theory, is that different functional groups need to share information across functional boundaries because the groups hold different information and views (Seibert, Kraimer and Liden, 2001).

The communication of ideas and information along with contact with diverse others should lead to higher levels of creativity (Shalley and Gilson, 2004; Perry-Smith and Shalley, 2003; Woodman *et al.*, 1993). Furthermore, Monge, Cozzens, and Contractor (1992) find a positive relationship between group communication and the generation of innovative ideas. Additionally, Andrews and Smith (1996) find that interactions with other functional areas enhanced creativity. Therefore, creative performance may be enhanced, as others’ views are brought into the group discussion via outside communication (Shalley and Gilson, 2004). Shalley and Gilson (2004, p. 43) note that, “Given this, leaders should think of different ways to encourage employees to come into contact with others. This can be done in formal ways; such as composing project teams or setting up meetings, or it can be done more informally by having areas where people can meet that may encourage more spontaneous interactions”.

Governance networks

In the last two decades, there has been an impressive growth in the governance networks literature, which built on a history that spans at least 40 years of organisational science, public administration and political science. Research on network governance originated in organisational theory, beginning with the work of Rogers and Whetten (1982): *Interorganizational coordination: Theory, research, and implementation*. Latterly, the most plausible argument for this increasing amount of literature is that governance network theory admirably provides the ideas and management practices that have resulted in the rise of a new philosophy: New Public Governance (Klijn, 2008). As Kickert (1997) puts it, “public governance is the 'management' of complex networks” (p.735). Arguably, network governance is aligned with the shift from ‘government’ to ‘governance’ (Tummers and Knies, 2016).

Governance networks arise simply because a public sector entity can achieve more appropriate, more efficient solutions by combining the resources and knowledge of many different actors and stakeholders (Klijn, 2008). Critically, collaboration is necessary among a network of government agencies (Hollenbeck and Jamieson, 2015). Klijn and Koppenjan (2012, p. 588-589) explain, “it assumes that organisations need resources from other organisations for their survival and therefore interact with these organisations (and thus networks emerge)”. Moreover, the tendency of organisations to connect preferentially to the more highly connected nodes in the network leads to the phenomenon whereby the rich get richer (Dagnino, Levanti and Destri, 2016; Gulati and Gargiulo, 1999; Powell, Koput and Smith-Doerr, 1996). However, Gulati *et al.* (2012) find that network dynamics follow an inverted U-shaped pattern.

Public sector leaders, nowadays, work in contexts where they must operate in networks. Ulibarri and Scott (2017) argue public managers increasingly use collaborative, networked forms of governance to address complex public problems. IFGGPS argues that it is vital for public sector entities to engage comprehensively with ‘institutional’ stakeholders because they are often a partner in collaborative networks and cannot achieve their goals unaided (IFAC and CIPFA, 2014). In addition, Social Capital theory suggests that, “an employee's contact with members of other organisational functions will provide access to information not available within his or her own functional group. Although other functions may also possess unique resources, these resources are less likely than is information to be available for transfer and of use across functional boundaries” (Seibert, Kraimer and Liden, 2001, p. 223).

In order for public sector entities effectively to achieve their outcomes, they need to develop both formal and informal communications with their institutional stakeholders which requires different behaviour from public employees (IFAC and CIPFA, 2014). Networks are facilitated by a partial overlap of sets of resources and knowledge that are owned or controlled by the organisations and individual involved (Dagnino, Levanti and Destri, 2016; Mowery *et al.*, 1998). Building network governance necessitates public sector leaders encouraging their employees actively to connect with relevant stakeholders: other entities, departments, etc. (Shalley and Gilson, 2004; Tummers and Knies, 2016).

Regarding networks levels, Phelps *et al.* (2012) show three different level of analysis: interpersonal, intra-organisational and inter-organisational. Regarding the latter, Laosirihongthong, Prajogo and Adebajo (2013, p. 1232) argue that, “other studies on innovation have placed more emphasis on the external factors affecting organisations. Among several external factors, interorganisational relationships have received considerable attention”. The majority of studies regarding network governance distinguish between emergent networks and orchestrated networks (Provan and Kenis, 2008). In the orchestrated network literature, both formal and informal ties between organisations are considered, and attention is paid to the different mechanisms and actions that the network orchestrators may adopt in order to nurture the formation and development of these ties (Dagnino, Levanti and Destri, 2016).

Formal ties support the co-generation of new resources, knowledge and capabilities between organisations (Phelps, 2010; Tiwana, 2008; Kale, Singh and Perlmutter, 2000; McEvily and Marcus, 2005), and require considerable commitment, time and investment of financial and human resources (Gulati and Singh, 1998). The establishment of formal ties requires specific coordination and mechanisms that can support repeated interactions (Grandori and Soda, 1995) by dealing with the action problem (Burt, 2004; Obstfeld, 2005) in order to develop and grasp network opportunities: new resources, knowledge and capabilities. Nevertheless, notably, network overload may occur when organisations manage and sustain an extensive number of inter-organisational ties (Elfring and Hulsink, 2007). In other words, occurrences of interactions among organisations embedded in formal ties tend to lead to the homogenization of their sets of knowledge, resources and capabilities (Rowley *et al.*, 2000; Uzzi, 1997) and so, consequently, to network redundancy (Burt, 1992). Network redundancy is then frequently coupled with a reduction in the innovation capabilities of the participating actors (Gargiulo & Benassi, 2000; Uzzi, 1997; Uzzi & Gillespie, 2002).

Informal ties help to connect a wide range of heterogeneous organisations and support the accomplishment of timely, efficient processes (Tiwana, 2008; Levin and Cross, 2004; Gargiulo and Benassi, 2000; Hansen, 1999; Reagans and McEvily, 2003). Networks of informal ties generally stem from “social and business activities that organisations (and individuals involved in them) spontaneously carry out to pursue a wide range of purposes”

(Dagnino, Levanti and Destri, 2016, p.363); and ‘deliberate activities’; namely, that network actors search for ideas, information, knowledge and solutions (Mariotti and Delbridge, 2012; Burt, 2004). Informal ties are flexible, relatively inexpensive (McFadyen *et al.*, 2009; Hansen, 1999), do not entail the implementation of coordination mechanisms, and require low tie-specific investment (Williamson, 1985) and effort in terms of resources, time and commitment. As a result, the network actors face limited constraints in managing and sustaining an extensive number of inter/intra-organisational informal ties and low risks of incurring overload problems (Mariotti and Delbridge, 2012). However, because organisations are becoming increasingly structured around teams (Ilgen *et al.*, 2005), a less in-depth examination of the relationships between individuals has appeared in the literature (Hollenbeck and Jamieson, 2015).

Dagnino, Levanti and Destri (2016, p. 367) argue that, “leveraging the typical traits of the networks of formal and informal ties, and the advantages and pitfalls they originate, the networks’ lead organisation may pursue different aims as regards the two (formal and informal) tie networks and implement specific mechanisms to exert its intentional governance action”. To conclude, through network governance, public agencies can build stakeholder trust, overcome long-standing conflicts and foster the acceptance of decisions. Furthermore, it allows participating organisations to share resources and integrate diverse types of information into their decisions (Ulibarri and Scott, 2017).

Comprehensive measuring of performance

Performance measures quantitatively express job performance, which encompass both individual and group measures (Groen, Wilderom and Wouters, 2017), for example, efficiency, client satisfaction, and the amount of work completed in a certain amount of time. According to IFGGPS, public sector entities should contain appropriate performance indicators or key performance indicators for measurement and evaluation, whereby the level of resilience is an important factor in determining the appropriate performance indicators (IFAC and CIPFA, 2014). Indeed, Groen, Wilderom and Wouters (2017) consider measurement quality as a promising construct because it determines whether or not the performance measures adequately reflect employee performance. Measurement quality is defined as the extent to which employees find the measures of performance sufficiently precise in measuring relevant aspects of their performance, sensitive to their actions and

verifiable (Moers, 2006). For instance, employee attitudes are negatively affected when performance appraisal is abused for political purposes (Cho and Poister, 2013).

Cho and Poister (2013, p. 823) argue that, “accurate performance appraisal is a critical part of performance management. For effective implementation of any incentive system, a basic condition is an evaluation that accurately reflects employee performance”. Concurrently, employees’ perceptions of their own participation in relation to their job performance are paramount because better perceived measurement quality can increase their autonomous work motivation (Deci, Koestner and Ryan, 1999; Kuvaas, 2006) and so increase their attitude towards performing well (Burney *et al.*, 2009; Groen, Wilderom and Wouters, 2017).

IFGGPS proposes that it is important for public sector organisations to adopt appropriate performance indicators in terms of economic, social and environmental benefits, whereby the, “outcomes may be viewed as the impact of the goods and services, including the redistribution of resources, that a public sector entity provides in delivering its objectives” (IFAC and CIPFA, 2014, p. 19). However, employees in many public settings carry out tasks that are difficult to evaluate accurately using quantifiable performance metrics. By the same token, Cavalluzzo and Ittner (2004) find that the ability to define and assess metrics that capture the desired public employees’ actions and outcomes is a controversial issue, as highlighted in the literature.

With respect to the public sector, the dynamics play out differently than in the private sector. Previous empirical and theoretical studies (e.g., Tirole, 1994; Dixit, 1997; GAO, 1997) have considered the reasons why the public sector faces a problem in selecting appropriate metrics and interpreting the results. First, the government activities and objectives are complicated. Second, the outcomes influence complex systems which largely lie outside government control. Third, in many cases, it is notoriously hard to develop measurable outcomes for the missions to attribute results to a particular function. Fourth, there are obvious difficulties in measuring many dimensions of the governmental goals, such as social welfare.

Task Interventions

Task-interventions or oriented is operationalised latterly which involves communicating and clarifying the organisational goals, evaluating employee performance, offering suggestions and feedback for improvement, and promoting inter-department communication regarding work projects, goals, and resource needs (Moldogaziev and Silvia, 2015). Fernandez, Cho and Perry (2010) define task-orientation practice as “setting and communicating goals and performance standards; planning, directing and coordinating the activities of subordinates; maintaining clear channels of communication; monitoring compliance with procedures and goal achievement; and providing feedback” (p. 311). This definition is similar to the definition proposed by Bass (1990, p. 472), who writes “successful task-oriented leaders are instrumental in contributing to their groups' effectiveness by setting goals, allocating labour, and enforcing sanctions. They initiate structure for their subordinates, define the roles of others, explain what to do and why, establish well-defined patterns of organisation and channels of communication, and determine the ways to accomplish assignments”. Providing employees with performance feedback is a key function with which many managers struggle (Fernandez, Cho and Perry, 2010). Crucially, providing feedback can be particularly relevant in enhancing performance (Cho and Poister, 2013; Shalley and Gilson, 2004). However, task interventions might matter little to employees who have low or very low levels of affective commitment to the organisation (Moldogaziev and Silvia, 2015).

IFGGPS assumes public sector entities needs to provide a mixture of legal, regulatory and practical interventions to enable effective and efficient operations and so achieve their goals (IFAC and CIPFA, 2014). Goal-setting theory (Locke 1968) has been rated as the most important among 73 management theories by organisational behavior scholars (Miner 2003; Locke 2004). “The main premise of the theory is that specific challenging goal leads to higher task performance than setting no goals or a vague goal” (Lee and Wei, 2016, p. 280). Thus, managing performance through monitoring and review is a mechanism suggested by IFGGPS (IFAC and CIPFA, 2014). It is also suggested that the leaders need to make performance, goals and objectives sufficiently SMART to allow their effective management. Importantly, IFGGPS posits that public sector entities need to develop practices in a way that reflects their structure and is proportionate to their complexity and size (IFAC and CIPFA, 2014).

Developing capacity

A critical source of capacity for organisations is contained in the characteristics of their employees (Luthans, Youssef and Avolio, 2007), because “organisational capabilities and routines, in turn, are derived from a combination of individual level knowledge, skills, abilities and other attributes” (Lengnick-Hall, Beck, and Lengnick-Hall, 2011, p. 245). “Many employee characteristics might be important in this regard, including individuals’ skills and abilities, cognitions, affect, behaviours, and self-regulatory processes” (van der Vegt, Essens, Wahlström, and George, 2015, p. 973). Additionally, “Subsequent training and development need to be driven by matching organisational and individual development requirements. Sufficient opportunities and resources will also need to be given to individuals for meeting the ongoing professional development requirements of their professional bodies” (IFAC and CIPFA, 2014, p. 26). Hence, Strategic human resource management systems are instrumental in developing the requisite knowledge, skills, abilities and other attributes (Lengnick-Hall, Beck, and Lengnick-Hall, 2011).

In particular, public employees actually perform the task and ensure its quality. Hence, it is better to focus on employees than the direct service (Van Wart, 2003). Given this, public sector leadership has been defined as the process of developing/supporting followers, which serves as a ‘category anchor’ definition (Orazi, Turrini and Valotti, 2013). IFGGPS states that, “public sector entities need appropriate structures and leadership, as well as people with the right skills, appropriate qualifications and mindset, to operate efficiently and effectively and achieve their intended outcomes within the specified periods” (IFAC and CIPFA, 2014, p. 23).

Providing subordinates with opportunities for personal growth is one of the most frequently stated types of behaviour in the leadership literature (Fernandez, Cho and Perry, 2010). Moreover, to mitigate the negative relationship between work stress and task performance, leaders should initiate a highly supportive climate (Bliese and Halverson, 2002), that welcomes ideas and suggestions, responds to the employees’ views, and explains decisions to help the management team to create an environment in which the staff can perform well and deliver effective services (IFAC and CIPFA, 2014). However, Shalley and Gilson (2004) find previous studies have identified uneven results regarding supportive supervision, depending on different personality characteristics.

“There will be a continuous need to develop the entity’s capacity as well as the skills and experience of the leadership of individual staff members” in order to ensure that the public sector entities remain fit (IFAC and CIPFA, 2014, p. 23). Furthermore, IFGGPS assumes the chief executive should share the leadership role. Importantly, all levels of employees should be held to account for their personal contribution through regular performance reviews, which must be taken seriously and not simply regarded as a ‘tick box’ exercise. In a nutshell, IFGGPS insists that creating personal development opportunities and potential career progression should be key considerations in building an engaged, competent workforce (IFAC and CIPFA, 2014).

In sum, this broad conceptualization of governance is driver of human capital value for public organisations because such broadening conception of governance considering managerial roles, organisational contexts, ethics, internal and social processes and other forms increase value in use in ways that cannot be achieved from other resources. Under the context of widespread financial constraint, complementarities between governance structure and human capital can increase human capital value in use with relatively small concurrent increases in the cost of human capital.

2.2 Human capital context

The importance of human capital as a resource has a long tradition in literature. It began when Adam Smith identified “the acquired and useful abilities” of individuals as a source of “revenue or profit” (Smith 1963/1776, p. 213-214). Scholars have developed the fundamentals of human capital construct in an interdisciplinary sense: psychology and economics (Ployhart and Moliterno, 2011). In the management field, the human capital construct has been studied by human resource and organisational behaviour scholars at both the micro and macro levels (e.g., Schmidt and Hunter, 1998; Peteraf, 1993). By bridging the levels of analysis, Ployhart and Moliterno (2011, p. 127-128) define human capital as a “unit-level resource that is created from the emergence of individuals’ knowledge, skills, abilities and other characteristics (KSAOs).”

Employees are the most important part of organisations (Van der Vegt, *et al.*, 2015, p. 973). Bowen (2016, p. 8) agrees that, “human capital remains a nonsubstitutable source of innovation and creativity” because “development presumably depends on the accumulation

of human capital” (Becker, Murphy and Tamura, 1990). Hence, managers concerned with the performance of their organisations will exploit the available administrative, social, and human capital resources (Compton and Kenneth, 2016). Arguably, in many public sector entities, human capital is “the most important capital” (IFAC and CIPFA, 2014, p. 25). Therefore, effectively recruiting, motivating, and retaining staff is vital if public sector entities are to be successful (IFAC and CIPFA, 2014). More precisely, the dominant view of human resources in public sector governance is central to the accomplishment of potentially competing quality and cost objectives (Konzelmann *et al.*, 2006).

In many public services, the key resource is their human capital, expertise, and capacity for problem solving and policy implementation (Arnaboldi, Lapsley and Steccolini, 2015). Public sector organisations are labour intensive, where the public employee is the ‘factor of production’ (Storey, 1987, p. 6), and the dominant stakeholder is the government, on which the organisation depends for its funding. Moreover, the customers’ interests are prioritized in the regulations. Thus, public sector organisations need to deliver high quality products and services at minimal cost (Konzelmann *et al.*, 2006). Arguably, human capital lies at the heart of our understanding of this equation with regard to public sector service provision. Critically, the key to this equation is working closely together: leaders, employees and customers (Konzelmann *et al.*, 2006). However, the effect of human capital on organisation-level performance seems to vary considerably (Newbert, 2007; Crook *et al.*, 2011).

Governments have implemented a broader strategic approach, known as strategic human capital management (SHCM). SHRM emerged from the arguments regarding the critical importance of organisations’ human capital’s skills, knowledge and involvement (Truss and Grattan, 1994; Lundy, 1994; Schuler *et al.*, 1993). As the SHRM logic suggests, an organisation tends to enjoy higher levels of performance when it appropriately adopts and implements designed HR systems to align its employees with its strategic goals (Wright and McMahan, 1992; Jackson and Schuler, 1995). Nevertheless, the impact of such effectiveness has not always been consistent in literature, “leading researchers to question whether this is because intended HR strategy – which has most often been the focus of data collection efforts –differs from the HR practices that actually get implemented in organizations” (Nishii and Paluch, 2018, p. 319). Perhaps more strategically, theoretically, the literature points to human capital as one, but not the main, construct, and then fails to focus on how human

capital resources are created (Ployhart and Moliterno, 2011; Wright, Coff and Moliterno, 2014). Given this, Strategic Human Capital (SHC) emerged as an integrative approach. According to SCH, human capital can be considered strategically only to the extent that it provides value to the organisation and does so in a unique way (Wright, Coff and Moliterno, 2014), which is a closer conceptual match to human capital value in use. Figure 2.1 provides a simple illustration of this conceptual argument. In this figure, the SCH model starts with the antecedents or the phenomena that build or determine human capital. Then, the human capital constructs lies at the centre of the model. The consequence construct, such as innovativeness or performance, comes at the end of the model as the benefit of human capital.

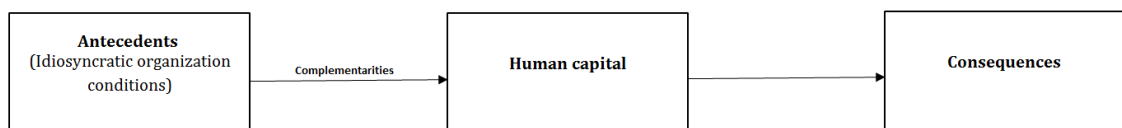


Figure 2.1 *The simple model of Strategic Human Capital*

2.2.1 Embedding human capital into the relationship between governance and innovation

Generically, human capital is an idiosyncratic resource that remains a non-substitutable source of performance-enhancing innovation or might prove an obstacle to its implementation (Bowen, 2016; Torfing and Ansell, 2017; Campbell, 2018). Although human capital is a unique resource, it is important to appropriate its value in use (Chadwick, 2017). Human capital, like other resources, is not valuable in itself but, rather, for the value it can render to organisations (Penrose, 1995). In particular, human capital poses unique challenges and management dilemmas in pursuing its value because employees' utility functions encompass not only the economic exchange dimension, but also the affective relationship (free will) dimensions (Baron and Kreps, 1999). Consider, for instance, that employees' feelings and thoughts have a direct influence on how hard they are willing to work, which makes the management of human capital less predictable (Coff, 1997; Chadwick and Dabu, 2009).

One recommended resolution of this dilemma is for human capital to be strategic by being placed at the centre of any model (Wright, Coff and Moliterno, 2014). From this perspective, human capital can generate higher value through the existence of complementarities with idiosyncratic organisation conditions (or antecedents, as Wright, Coff and Moliterno (2014) term these), such as management practices and organisational processes (Ployhart and Moliterno, 2011; Chadwick, 2017). As the terminology suggests, antecedents are the activities aimed at increasing employees' individual human capital and are required in order to build human capital (Wright, Coff and Moliterno, 2014), whereas complementarities denote a condition where doing more of a certain activity increases the returns on another related activity (Milgrom and Roberts, 1992).

Scholars usually explore how complementarities, with a variety of antecedents in addition to human capital, can enhance value in use, an overwhelming number of the studies investigating the human capital construct focus on how organisations invest in human capital through Human Resource Management Practices (HRMP) as the antecedent (Huselid, 1995; Delery and Doty, 1996; Guthrie, 2001; Raineri, 2017). It is important to pause here to understand that the antecedents are not only single practices, but the multiple practices that impact on employees (Wright, Dunford and Snell, 2001; Wright and Boswell, 2002). In light of the above discussion, this study finesses four deficiencies regarding HRMP as an antecedent for enhancing human capital value that have emerged from the SHRM literature. These are: (1) the impact of HRMP tends to be indirect, complicated and highly context-dependent (Su, Wright and Ulrich, 2015; Nishii and Paluch, 2018), (2) measuring the investment in human capital as a proxy for the actual human capital itself (Combs, *et al.*, 2006), (3) the tendency to highlight people alone as an essential factor for organisations to achieve high performance, whereas rules and procedures, as essential factors, are neglected (Su, Wright and Ulrich, 2015), and (4) heteroscedastic forms of HRMP simultaneously offer complex models and leave the optimal approach an unresolved issue (Guest, 2011; Paauwe, Wright and Guest, 2013; Delery and Roumpi, 2017).

As discussed above, since human capital complementarities bases and HRMP do not perfectly coincide, there is a rich opportunity for other complementarities between human capital and other, idiosyncratic organisation resources, to exist (Chadwick, 2017). Previous studies offered a limited view of the antecedents that can create complementarities with

human capital, as HRMP's distortions from many species make it difficult to determine how much value can be tied to human capital. Therefore, nowadays, it is inevitable to "expand the relevant practices to those beyond the control of the HR function" (Wright, Dunford and Snell, 2001, p. 705), where those antecedents should not come from the traditional perspective in order to engage in a deeper exploration of the practices (Wright, Coff and Moliterno, 2014). Accordingly, the essential argument in strategic human capital literature is that a suitable model of human capital complementarities should thus draw upon governance, with its structures that are "most amenable to human capital complementarities", a view that is consistent with the arguments in this thesis (Chadwick, 2017, p. 515). In doing so, the governance paradigm may offer fresh insights into the nature of human capital investment and bring about new solutions that will outperform the existing ones (Su, Wright and Ulrich, 2015; Aguilera, Florackis and Kim, 2016; Torfing and Triantafillou, 2016). Hence, this study directly answers these calls to reveal these limitations by testing a typology of governance rather than a typical HRMP paradigm (Martin *et al.*, 2016).

Scholars usually investigate the human capital context by trying to capture its optimal characteristics. Wright, McMahan, and McWilliams (1994) introduce the 'human capital pool' to describe the aggregated skills base comprising the entire workforce. More recently, this conceptualisation became overly broad by bridging several levels of analysis: the intra-individual, individual and unit levels. Later, Ployhart and Moliterno (2011) proposed an alternative interpretation of the human capital context as a "resource that is created from the emergence of individuals' knowledge, skills, abilities and other characteristics (KSAOs)" (p. 127-128). Additionally, this range of unique characteristics encompasses beliefs, feelings, psychological states, and traits (Guion, 2011; Murphy, 2012; Ployhart *et al.*, 2014). From this point of view, then, only certain characteristics should be included in the human capital context because their value "may sometimes be contingent upon other constructs" (Wright, Coff and Moliterno, 2014, p. 360-361). This article catalogued the different human capital-related constructs in the public sector and proposed their basic interrelationships, including (1) trust, (2) job resources, (3) empowerment, and (4) psychological ownership.

2.2.2 Human capital constructs

Trust as an affective state

A variety of definitions of the term 'trust' have been suggested in the literature. They include expectation (Hosmer, 1995), belief (Levi, 1998), rational assessment (Hardin, 2006) and a willingness to be vulnerable (Mayer *et al.*, 1995). In a comprehensive literature review of this area, Rousseau *et al.* (1998) find the majority of definitions commonly emphasise a psychological state of trust. Mayer *et al.* (1995) define trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor" (p. 712). This definition is one of the most influential definitions of trust to be found in the leadership literature (Krylova, Jolly and Phillips, 2017; Cho and Poister, 2013). In Mayer *et al.*'s description of trust, they acknowledge the importance of values congruence inasmuch as they suggest that, in order for integrity to be ascribed to someone, the trustor must find the trustee's values acceptable.

Therefore, trust is fundamentally a function of one party's intention to accept being vulnerable because they have chosen to interact with another party (Rousseau *et al.*, 1998). In a perfect free-choice situation, this decision would be guided predominantly by the perceived trustworthiness of the other party. In social capital, a certain level of trust can be established only if "stakeholders believe that they are not instrumentalised for the purpose of maximizing profits but engaged instead to contribute to balanced values creation" (Maak, 2007, p. 338).

Trust may reside in every relationship (Cho and Poister, 2013). Indeed, subordinates trust in the leadership and leaders is gaining increasing importance in organisational research (Palanski and Yammarino, 2009). Trust is a delicate resource in social capital theory (Adler and Kwon, 2002). Hence, a certain level of trust needs to be established for human capital and social capital to emerge (Maak, 2007). Moreover, interchangeable trust can be both a source and a result of social capital (Lin, 2001, Adler and Kwon, 2002, Maak, 2007). In the governance paradigm, the code of governance affects both national and organisational governance competitiveness because they equip organisations with the necessary governance practices to win the stakeholders' trust (Haxhi and Aguilera, 2017). Additionally,

trust is important to both reciprocity and generalised exchange, and is fostered by the presence of fairness within the relationships among the parties.

Cho and Poister (2013, p. 835) argue that, “as long as trust is an important factor influencing employee attitudes in the workplace, we need to develop and manage trust to support healthy and high-performing organizations”. By drawing upon social exchange theory (Blau, 1964), trust plays an important role in leader-follower relationships, because, “in the absence of a comprehensive formal contract, leader–follower relationships have a built-in element of vulnerability which makes trust necessary for such relationships to function” (Colquitt *et al.*, 2007, p. 768). Within social capital, a leader and employees “might share common norms and values and will normally have established a certain level of trust” (Maak, 2007, p. 335). In other words, human capital will not emerge unless the employees work interdependently, communicate, and are willing to trust and share their knowledge with each other (Ployhart and Moliterno, 2011).

Trust has been identified as an important aspect of a variety of theories due to its links with LMX theory, and transformational or charismatic leadership theory (Ötken and Cenkcı, 2012). Thus far, a number of studies suggest a relationship between ‘trust in leader’ and an ‘ethical organisational climate’ (DeConinck 2011; Brown *et al.* 2005; Trevin Weaver 2001). Additionally, in behaviour accounting research, organisational culture and individual ethical behaviour are linked together (Windsor and Ashkanasy 1996). Indeed, the role of an organisation’s culture may affect and/or reinforce other aspects of individual behaviour: trust and honesty (Birnberg, 2011). Solomon and Flores (2003) believe the act of trusting in organisational and interpersonal relationships empowers employees and sends out a message that the leader believes in their abilities.

Furthermore, “Over the last decade, a wide range of events have eroded internal and external stakeholders’ trust in organizations” (Weibel *et al.*, 2016, p. 437). Given this, in today’s fast changing world, people turn to personal relationships for guidance, and the quality of these relationships is mainly determined by the level of trust (Ötken and Cenkcı, 2012). As a consequence, interpersonal trust is fundamental in ensuring effectiveness within organisations (Asencio and Mujkic, 2016). When employees trust in a leader, the employees are confident that their rights will not be abused, so they are willing to be vulnerable to the

leader's actions (Robbins 2002). In other words, "trust involves a decision to accept the risks associated with this dependence based on the positive expectation that the other party will act beneficially, or at least not inflict harm" (Weibel *et al.*, 2016, p. 439). Therefore, both building and maintaining trust in employees are critical for daily workplace interactions as well as the welfare of the customers and public (Ötken and Cenkci, 2012). However, theoretically, interpersonal trust is not always readily transferable into trust in the organisation (Gillespie and Dietz, 2009).

It has been argued that trust is a critical component in public sector organisations. Behn (1995) argues a lack of trust can cause 'bureaucratic pathologies', and identifies the trust issue as one of the big questions of public management by asking "How can public managers reduce the distrust that appears to be inherent in the relationships?" (p. 316). An absence of trust thwarts the development of informal relationships, which results in an excessive reliance on rules and procedures (Ruscio, 1996). A probable result of this is micromanagement, where trust will be "required to soften the perceived need to control all aspects of employees' behaviour" (Cho and Poister, 2013, p. 819). Furthermore, the absence of trust leads to 'the loss of system power, the loss of generalized capacity for authorities to commit resources to attain collective goals' (Gamson, 1968, p. 43).

For many years, trust has been an important area of study and has been linked to a variety of antecedents and outcomes in organisations (DeConinck 2011). For instance, supervisory status and relationships with supervisors are two of the antecedents explored by Carnevale and Wechsler (1992). Fulmer and Gelfand's (2012) review shows that the antecedents and consequences of trust depend on the referent: individual, group or organisation. Trust in these various referents is conceptually and empirically distinct (Weibel *et al.*, 2016). Trust in one's supervisor (individual), management (groups), and suppliers (organisation, and interorganisational relationships) are another classification of the referents proposed by Schoorman, Mayer and Davis (2007).

Scholars in various disciplines have investigated trust as a valuable managerial resource within organisations (Kramer 1999; Meier and O'Toole 2002; Cho and Poister, 2013; Holland, Cooper and Sheehan, 2017; Siddiki, Kim and Leach, 2017). The clear-cut positive effects of trust have increased the interest in understanding its antecedents (Weibel *et al.*,

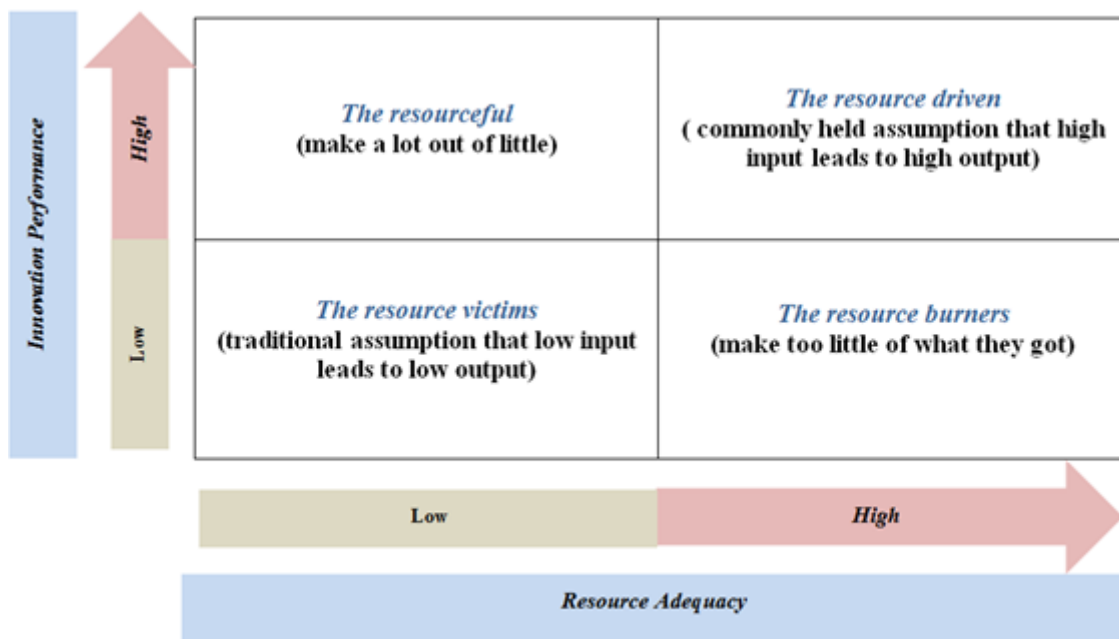
2016; Hodson, 2004; Searle *et al.*, 2011; Whitener, 1997, 2001; Cohen-Charash and Spector, 2001; Colquitt *et al.*, 2001; Zhang *et al.*, 2008). Despite Whitener's (1997) call for greater attention to be paid to the effect of different variables, such as bundles of HR practices, fairness and supervisory support, on trust in the employer, Weibel *et al.* (2016) find little empirical work has been carried out. Because of the importance of trust, it is worth exploring which factors may help to build trust within organisations (Cho and Poister, 2013).

Job resources: behaviour and cognitive states

Adequate resources for innovation teams' performance are vital (Hoegl *et al.*, 2008) because resources typically help employees achieve valued outcomes (Halbesleben *et al.*, 2014). 'Sufficient resources' term is described as "access to appropriate resources, including funds, materials, facilities, and information" (Amabile *et al.*, 1996, p. 1166). Although Amabile *et al.* (1996, p. 1156) argue that, "resources refers to everything that the organization has available to aid work in a domain targeted for innovation", information may have higher importance; employees are "often in strong positions to appropriate value based on their access to information" (Wright, Coff and Moliterno, 2014, p. 367). Indeed, in some circumstances and for some reason, employees entail more. For instance, Shalley and Gilson (2004) emphasise the importance of time as a critical resource to which leaders should ensure that their employees have access. To date, scholars have been suggesting employees can pursue innovation from a variety of resources and the broad definitions of resources encompass a large and diverse range of constructs. Perhaps more fully understanding how various types of sector differ is a way to begin to redress that imbalance by focusing explicitly on resources that are depleted on daily basis and that are most proximally related to important job outcomes (Gilbert, Foulk and Bono, 2018). Therefore, Knight, Patterson and Dawson (2017) finds Job resources refer to physical, social or organisational aspects of the job (e.g. feedback, and support) that can reduce job demands (e.g. workload) and help employees to achieve work goals, and stimulate personal learning and development.

Laosirihongthong, Prajogo and Adebajo (2013) view resources as internal and external resources. Internal resources encompass the organisational structure and culture, cross-functional teams, creativity management, and knowledge. In other words, the adoption of internal resources means that innovation performance is largely dependent on the assets or

resources which organisations own internally (Cooper and Kleinschmidt 1987; Gumusluoglu and Ilsev 2009; Brown and Eisenhardt 1995). Prior studies have noted the importance of internal resources for innovation success. More precisely, internal resources have a direct and significant relationship with innovation success. From materialistic perspective, the effect of *material* resources on performance seems to vary considerably. As shown in figure 2.2, Weiss, Hoegl and Gibbert (2013) propose four categories of relationship between material resource adequacy and innovation project performance: resource driven, resource victims, resource burners, and resourceful. While resource driven, and resource victims show the commonly held assumption whereby resources are a key factor of innovation performance, resource burners show low performance with adequate resources, and resourceful shows a relationship between high performance and inadequate resources. Perhaps more important in public organisations is the social influences of others.



Source: Weiss, Hoegl and Gibbert (2013, p. 153).

Figure 2. 2 Material resource adequacy and innovation project performance

Several studies have examined the effect of others on individual creativity. In a human capital context, the coordination, communication, and regulatory processes lead individual KSAOs to become increasingly complementary (Ilgen *et al.*, 2005; Kozlowski and Ilgen, 2006; Ployhart and Moliterno, 2011). There is a very real need for co-worker or managerial support because innovation cannot always occur in isolation (Manz and Sims, 1987). Moreover, leaders should pay close attention to what is happening in their teams to foster

communication among them (Marks, Mathieu and Zaccaro, 2001) and ensure that human resource practices are encouraging minority influence, participative safety, and measurement and recognition (Shalley and Gilson, 2004). In Erez and Arad's (1986) investigation into why participation in goal setting may enhance performance, they find support for the social factors which, according to Groen, Wilderom and Wouters (2017, p. 116), "are the social norms set by significant others. Significant others can be anyone who is important to the employee, such as his or her superior, co-workers, or even clients". Given this, they argue employees seem more enthusiastic about performing well when their significant others do well or tell them to perform well.

Frequently, creativity is a result of the interaction process between team members and co-workers (Mumford and Gustafson, 1988; Agrell and Gustafson, 1994). However, it is important to bear in mind the finding that supportive supervision can vary for employees with different cognitive styles or personality characteristics (Shalley and Gilson, 2004). For example, Tierney *et al.* (1999) find that creativity is affected by leader-member exchange, employees' cognitive style, and intrinsic motivation. Furthermore, they find a significant interaction between employees' creative performance and leaders' intrinsic motivation. In addition, these results are in line with those of Oldham and Cummings's (1996) finding that employees with high scores on the Gough's (1979) Creative Personality Scale, who were supervised in a supportive manner, had the highest numbers of patents. Shalley, Zhou and Oldham (2004) argue the presence of creative ideas of employees in an organisation increases the likelihood that other employees will apply the ideas in their own work, further develop them, and then transfer them to other individuals in the organisation for their own use and development. Moreover, employees who work in groups are more likely to generate creative ideas (Gilson and Shalley, 2004). In a nutshell, the notion is that social capital provides benefits to actors, such as greater and timelier access to information, greater access to financial or material resources, and greater visibility or sponsorship (Seibert, Kraimer and Liden, 2001). In sum, exploring different resource combinations offers new insights into the nature of human capital resources and how these contribute to competitive advantage.

The key to encouraging teamwork is task interdependence (Hon and Lui, 2016), which can subsequently facilitate creativity among individual members (Wageman, 1995). Task

interdependence refers to the extent “to which group members must exchange information and resources or actually work together to complete their jobs” (Vegt *et al.*, 2000, p. 635). Building on prior studies, Hon and Lui (2016) argue that, since task interdependence enhances interpersonal relationships, collaboration, contact, communication and problem-solving, task interdependence should mitigate the negative impact of creative uncertainty at both the individual and group levels. To this end, Campion *et al.* (1993) argue that work teams should be structured to be interdependent when leaders require individual members to support each other by exchanging information, materials and resources to perform their jobs well. Heretofore, the nature of the organisations in practice is changing, with increasing importance placed on knowledge-based resources and capabilities (Mahoney and Kor, 2015).

Empowerment

Does it matter?

One well-known study that is often cited in research on human rationality and behaviour is that by Simon (1985), who stated, “Nothing is more fundamental in setting our research agenda and informing our research methods than our view of the nature of the human beings whose behaviour we are studying” (p.303). Indeed, Nobel Prize winner Oliver E. Williamson expanded Simon’s description of self-interest as follows:

“most people will do what they say (and some will do more) most of the time without self-consciously asking whether the effort is justified by expected discounted net gains. If they slip, it is a normal friction and often a matter of bemusement. The proposition that routines describe the behavior of most individuals most of the time contemplates (nonstrategic) benign behavior” (Williamson, 2010, p.678-9).

In the past three decades, a growing body of evidence has suggested that employee empowerment can be used to improve organisational commitment, innovativeness, and performance. As a consequence, the usage of employee empowerment practices has spread throughout the public and private sectors (Fernandez and Moldogaziev, 2013).

Schumpeter (1942) was one of the first to clarify entrepreneurship and innovation theory. He defines innovation as a process of creative destruction in which new combinations of existing resources are achieved, while entrepreneurship was defined as the will and ability

to achieve new combinations that can compete with established combinations. Hence, entrepreneurship is inherently connected to innovation, as it concerns the will and ability of individuals to achieve new combinations (Vries *et al.*, 2015; Bekkers *et al.*, 2011). Similarly, with regard to human capital, ability “is a more enduring capability that is applicable to a range of job-related tasks” (Ployhart *et al.*, 2014, p. 376). By the same token, Vries *et al.* (2015) and Borins (2000) highlight the importance of creative individual entrepreneurs who are able to break through a risk-averse administrative culture. This finding is also aligned with the notion of empowered employees, who are frequently mentioned as an important source of successful innovation. In this vein, the Bill Clinton Administration’s National Performance Review (NPR) identified employee empowerment as one of the keys to making government more efficient and effective. However, some articles argue that the unique characteristics of the public organisations, such as high level of formalisation, and restrictions on the ability to reward extrinsically, may serve to dampen or even neutralise the beneficial effects of empowerment practices (Rainey, 2009; Fernandez and Moldogaziev, 2011, 2013).

One of the most widely-cited studies on public sector innovation is that by Cavalluzzo and Ittner (2004), who find “the results support institutional theories that claim systems implemented to satisfy external requirements are less likely to influence internal behaviour than are those implemented to satisfy the organization’s own needs” (p.244). Additionally, the more the employees perceive strong support from the top management, the more likely they are to view change favourably. Consequently, it is expected that the top management’s commitment will influence both the extent to which employees feel accountable for outcomes and their use of information for decision-making (Cavalluzzo and Ittner, 2004).

How it works

One well-known study that is often cited in research on empowerment is that of Conger and Kanungo (1988), who find that employees’ motivation to increase their effort is partly a function of two expectancies. First, employees’ efforts will result in the desired level of performance. Second, performance will produce a desired outcome or reward. To sum up, “as employees become more empowered, their self-efficacy expectations will be enhanced, thereby increasing the amount of effort and time they dedicate to performing a task”

(p.476). More subtly, in a way that is analogous to personal resources, empowerment may be understood as employees' sense of their ability to control and impact upon their environment successfully (Knight, Patterson and Dawson, 2017). Consequently, empowerment may make human capital a valuable resource for the organisation by making meaningful individual-level contributions to organisational-level outcomes (Wright, Coff and Moliterno, 2014). Under social capital theory, having access to relevant organisational information and resources, such as promotions, materials, and space, should increase the sense of empowerment (Seibert, Kraimer and Liden, 2001; Spreitzer, 1996).

In the private sector, several studies find many US organisations have adopted employee empowerment programmes to help to maintain their competitive edge in the face of the rising competition between the 1980s and the 1990s (e.g., Bowen and Lawler, 1992, 1995; Conger and Kanungo, 1988; Lawler, Mohrman, and Ledford, 1995; Potterfield, 1999; Spreitzer, 1995, 1996; Thomas and Velthouse, 1990). In this vein, empowerment is linked to improved private sector performance (Kirkman and Rosen, 1999; Lawler, Mohrman, and Ledford, 1992, 1995; Nielsen and Pedersen, 2003; Spreitzer, 1995), job satisfaction (Kirkman and Rosen, 1999; Lawler, Mohrman, and Ledford, 1995) and organisational commitment (Guthrie, 2001; Kirkman and Rosen, 1999; Lawler, Mohrman, and Ledford, 1995). Interestingly, scholars have clearly recognised the role of managerial and supervisory support in employee empowerment (Ramus and Steger, 2000; Amabile, 1993; Bowen and Lawler; 1992; Spreitzer, 1995). In the public sector, empowerment was raised in the government entities and reforms in the UK, US, and several western countries, as a salient trait of the New Public Management reforms (Kettl 2005; Matheson 2007; Peters 1996; Wise 2002). The adoption of empowerment was related positively with performance, job satisfaction, and organisational commitment (Kim, 2002; Lee, Cayer and Lan, 2006; Park and Rainey, 2007; Wright and Kim, 2004; Park and Rainey, 2007; Fernandez and Moldogaziev, 2011; Lee, Cayer and Lan, 2006).

Fernandez and Moldogaziev (2013) suggest empowered employees improve their performance by recovering quicker from errors in service delivery, learning from these recoveries, and generating innovative proposals for redesigning processes and products. Moreover, based on Rainey's (2009) findings, there exists a significance correlation between empowerment and encouragement to innovate. Specifically, empowerment practices aimed

at providing employees with access to job-related knowledge and skills and granting them the discretion to change work processes increase the encouragement to innovate. Through employee empowerment theory, employee empowerment practices influence the performance of employees both directly and indirectly. Similarly, Latham (2012) and Bass and Bass (2008) find that both motivation theory and leadership theory include the influence of managerial interventions on employee attitudes, which, in turn, influences their behaviour. However, when the goal is ambiguity, or there exists a high level of formalization and restrictions regarding the ability to offer extrinsic rewards, this might dampen the effects of empowerment efforts (Rainey, 2009). The empirical results show that “while employee empowerment as an overall approach can increase encouragement to innovate, empowerment practices have divergent effects, and some may even discourage innovation” (Fernandez and Moldogaziev, 2013, p. 155).

Empowerment perspective

Many researchers and scholars have failed to reach a consensus on the precise definition of ‘employee empowerment’, and different theories exist in the literature in this regard (Conger and Kanungo, 1988; Thomas and Velthouse, 1990; Potterfield, 1999). Perhaps the most significant recent work on these mismatches is that by Fernandez and Moldogaziev (2013), who shed light on two salient theoretical perspectives, managerial and psychological, that have been developed in the literature.

Conger and Kanungo’s (1988) definition can be used to explain the managerial perspective whereby employee empowerment is a relational construct that describes how employees with power in organisations (managers) share power and formal authority with employees who lack it (employees). Previous studies show the tendency of scholars in the 1990s regarding the managerial perspective to adopt the empowerment concept exclusively, combined with delegating or sharing decision-making authority with employees through various participative management techniques. However, Bowen and Lawler (1992, 1995), based on a large and growing body of literature is investigating employee empowerment practices among service organisations, observed that sharing authority with employees is necessary but insufficient for realizing the benefits of empowerment. As a consequence, Fernandez and Moldogaziev (2013) believe dissatisfaction existed with this narrow characterization of employee empowerment, leading to two important developments. First,

the view of empowerment came to be viewed as a multifaceted approach to management, involving more than simply sharing authority. Second, empowerment became viewed as a psychological construct.

Around the early 1990s, small-scale research and case studies began to emerge that defined employee empowerment as a psychological construct. From this newer perspective, empowerment is an internal cognitive state that is characterized by enhanced feelings of self-efficacy and increased intrinsic task motivation (Thomas and Velthouse, 1990). Perhaps more important, Bowen and Lawler (1992, 1995) were among the first to propose empowerment as a multifaceted managerial approach. Empowerment, as an integrated approach, might be best understood as a process involving a set of management practices (sharing authority, information, and rewards) that influence performance (effort, productivity) not only directly but also indirectly through their impact on employees' cognition (self-efficacy and motivation) (Bowen and Lawler, 1992, 1995; Spreitzer, 1995, 1996; Thomas and Velthouse, 1990). This model of empowerment assumes that four different elements are shared with employees: "(1) information about the organisation's performance, (2) rewards based on the organisation's performance, (3) knowledge that enables employees to understand and contribute to organisational performance, and (4) power to make decisions that influence organizational direction and performance" (Bowen and Lawler, 1992, p.32). Indeed, they posit that these four elements interact with each other to produce a multiplicative effect on performance.

In this study, Bowen and Lawler's four-dimensional conceptualization of employee empowerment is chosen for several reasons. First, this allows this thesis's results to be compared with and contribute to a growing body of evidence regarding the effects of employee empowerment practices on employees' attitudes and behaviour (Bowen and Lawler 1992, 1995; Fernandez and Moldogaziev 2013; Fernandez and Moldogaziev 2011; Kim 2002; Lawler, Mohrman, and Ledford 1992, 1995; Lee, Cayer, and Lan 2006; Mesch, Perry, and Wise 1995; Perry 2004; Pitts 2005; Savery and Luks 2001; Wright and Kim 2004). Second, this thesis contributes to the literature on employee empowerment in the public sector, where public management scholars have typically treated employee empowerment as a unidimensional construct and measured it using a single indicator (e.g., Mesch, Perry, and Wise 1995; Lee, Cayer, and Lan 2006; Wright and Kim 2007). In this thesis, following

Fernandez and Moldogaziev's (2013) suggestion, a multidimensional measure of employee empowerment is adopted, based on Bowen and Lawler's (1992, 1995) conceptualization of empowerment as a multifaceted.

Psychological ownership

The past few years have witnessed a growth in studies addressing psychological ownership in organisations (Brown, Crossley and Robinson, 2014). Psychological ownership is considered a sense of possessiveness and attachment to a variety of objects within organisations (Pierce, Kostova and Dirks, 2001, 2003; Van Dyne and Pierce, 2004). Psychological ownership as a state of mind can be defined as a sense of ownership over something, even if this does not constitute legal ownership (Pierce *et al.*, 2001, 2003). Psychological ownership differs notably from legal ownership because it is most commonly conceptualized as a self-derived perception, and thereby recognized primarily by the individual (Dawkins *et al.*, 2017). In other words, psychological ownership refers to a state in which individuals feel as though the target of ownership, material or immaterial in nature, or at least a part of it is 'theirs' (McConville, Arnold and Smith, 2016).

Moreover, psychological ownership comprises both cognitive and affective elements (Dawkins *et al.*, 2017). Psychological ownership is defined by Pierce, Kostova and Dirks (2003, p. 86) as "the state in which individuals feel as though the target of ownership or a piece of theirs", so it can be described as a 'cognitive-affective' construct (Avey *et al.*, 2009), which reflects "an individual's awareness, thoughts, and beliefs regarding ownership" (Pierce, Kostova, & Dirks, 2003, p. 86). McConville, Arnold and Smith (2016) argue psychological ownership answers the question 'What do I feel is mine?' Despite these various conceptualizations of psychological ownership, scholars separate and distinguish psychological ownership from other 'psychological state' and 'behaviour' constructs, such as empowerment and knowledge sharing (Dawkins *et al.*, 2017).

Scholars (e.g. Pierce, Jussila and Cummings, 2009; Van Dyne and Pierce, 2004; Dawkins *et al.*, 2017) tend to agree that psychological ownership emerged because it "satisfies certain human motives, some of them genetic and others social in nature" (Pierce *et al.*, 2001, p. 300). Pierce *et al.* (2001, 2003) suggest three routes to psychological ownership. First, controlling the target, which describes the amount of control that an employee can exercise over the target. Second, intimately knowing the target includes the extent to which an

employee has intimate knowledge about the target. Third, investment of the self in the target describes the extent to which individuals invest themselves in the target. Importantly, any single route to PO can result in a sense of ownership (Pierce *et al.*, 2003).

In the psychological ownership literature, the term 'target' is relatively broad. Generally, "psychological ownership does not involve certainty or assurance of ownership and is subject to different interpretations, perceptions, and motivations among organisational members who may be vying for possession over the same work-related object" (Brown, Crossley and Robinson, 2014). According to Avey *et al.* (2009), a 'target' refers to "whatever the object of attachment represents to an individual or group" (p. 174). Although psychological ownership is a cognitive phenomenon reflecting one's beliefs about what is "mine", Pierce and Jussila (2010) note that "mine" can also be "ours" and that an object can be connected to the self while simultaneously being connected to another individual or group. Indeed, ownership is frequently framed in terms of association (Beggan and Brown, 1994). The target of ownership includes tangible and intangible targets, such as the job or a specific aspect of work, such as a new idea, a strategic initiative, or an important project, and its implementation (Dawkins *et al.*, 2017; Avey, Wernsing and Palanski, 2012; Baer and Brown, 2012; Brown, Crossley and Robinson, 2014; Brown and Robinson, 2011). As noted by Pierce *et al.* (2001, 2003), individuals can feel ownership over their actual work.

When leaders talk about ownership, they typically wish to instil psychological rather than financial ownership, which is a sense among employees that they have a responsibility to make decisions that are in the interests of the organisation in the long term (Avey *et al.*, 2009). The literature shows many studies have revealed that employees with a sense of psychological ownership regarding their organisation or job experience more positive work-related attitudes, such as performance (Parker, Wall and Jackson, 1997; Van Dyne and Pierce, 2004; VandeWalle, Van Dyne and Kostova, 1995; Wagner, Parker and Christiansen, 2003). Avey *et al.* (2009) find recent interest focuses on what constitutes employee ownership and the outcomes it may produce. Hence, they argue that, "psychological ownership can be measured, invested in, developed, and managed for performance impact" (p. 174). However, the theoretical foundations of the psychological ownership construct, "its measurement, the factors that influence its development, and when and how it influences

outcomes, are areas of continued debate in the literature” (Dawkins *et al.*, 2017, p. 163-164).

2.3 Innovation context

Literature on public sector innovation has hitherto been scarce, although it appears to have been growing in recent years. While there is growing awareness that much innovation is currently occurring in the public sector, it is also recognised that more systematic efforts to promote innovation are needed to address the economic and societal challenges related to the public sector. There is a lack of common understanding regarding the definition of ‘public sector innovation’ as well as a lack of a measurement framework that can shed light on the innovation processes within public sector organisations. There has been a tendency to consider the public sector as something quite different from the private sector in terms of innovation (Windrum, 2008).

Innovation systems theory stresses that innovation does not occur in isolation, but depends upon the interplay between many different actors that participate in and play various roles in an innovation process (Bloch and Bugge, 2013; Schumpeter, 1959; Weitzman, 1998; Johansson, 2004). Indeed, there are several factors in the institutional surroundings of the innovation system that shape the conditions for innovation within it (North, 1990). The actors include elements such as social rules, laws, regulations, norms, and technical standards (Edquist, 2005). “In management, new theory and research directions on service employees essentially plateaued. Going forward in evolving service contexts, employees will fill roles as ‘Innovators’; ‘Differentiators’; ‘Enablers’ and ‘Coordinators’” (Bowen, 2016, p.4).

Shalley, Zhou and Oldham (2004) distinguish between creativity and innovation. Creativity refers to “the development of novel, potentially useful ideas” (p. 934). Indeed, an idea would be considered innovative only when it has been successfully implemented within the organisation. Therefore, creativity can be conceptualised as a necessary first step or precondition for innovation (Scott and Bruce, 1994; Shalley and Gilson, 2004; Scott, 1995). However, Anderson *et al.* (2014) recently propose an integrative definition of creativity and innovation by regarding these two phenomena as two continuous stages in the process of introducing new, improved ways of doing things at the level of the individual, work team, or organisation. Indeed, they argue creativity and innovation can occur in combination.

Furthermore, they argue creativity and innovation are related constructs and should not be separated. For the public sector specifically, it is important to acknowledge the cross-sectors intrinsic differences that occur when attempting to understand how innovation in the public sector takes place and how it may be supported and measured (Arundel, Casali and Hollanders, 2015). For instance, public sector outputs cannot be valued at pure market prices. In these ways, this study contends that the logic is currently experiencing an explosion of interest in supporting innovation in the public sector as a means of increasing the efficiency and quality of public sector services (Osborne and Brown, 2013; Torugsa, and Arundel, 2016).

2.3.1 What is innovation?

Innovation is fundamental to the public sector and has recently risen to the top of the agenda in public sectors around the world. Today, innovation is the top priority of public organisations and public leaders (Torfing and Triantafillou, 2016). Arguably, innovation is a 'magic concept' in the public sector (Pollitt and Hupe 2011) because of the budget austerity and social challenges with which governments are currently wrestling. Indeed, innovation has been "embraced as a new reform strategy for the public sector" (Voorberg, Bekkers and Tummers, 2015, p. 1334). Recent studies observe the growing interest in supporting innovation in the public sector as a means of increasing the efficiency and quality of public sector services (Osborne and Brown, 2013; Torugsa, and Arundel, 2016). To this end, service employees are increasingly filling the role of innovator (Bowen, 2016).

Previous studies of innovation have suffered as a result of inconsistent definitions (Borins, 2000; Bhatti *et al.*, 2011; Salge, Vera and Ashelford, 2012; Meijer, 2014). In other words, innovation remains weakly conceptualised (Voorberg, Bekkers and Tummers, 2015). More strikingly, most of the research conducted failed to provide a conclusive definition of innovation. Among the first to posit a clear concept of entrepreneurship and innovation theory was Joseph Schumpeter (1942), who defines innovation as a process of creative destruction in which new combinations of existing resources are achieved, and entrepreneurship as the will and ability to achieve new combinations that can compete with established combinations.

A common form of innovation is ingested innovation, which was developed by Simon (1997). In this form, “regardless of whether other industries have already proceeded through the process” (Pierce and Delbecq, 1977, p. 28), innovation occurs when a process, service, or product is adopted and implemented for the first time within a particular organisation. Innovation at the individual level is known as work-role innovation, and is defined as extra-role employee behaviour, including the introduction and implementation of novel ideas to improve existing work processes or routines (Kiazad, Seibert and Kraimer, 2014; Axtell *et al.*, 2000; Welbourne, Johnson and Erez, 1998).

Among the previous studies on innovation investigated in De Vries, Bekkers and Tummers’ (2016) comprehensive review, 76% of these studies failed to provide a definition of this phenomenon. The majority of the remained employed a relatively general definition, based on Rogers (2003), who defines innovation as “an idea, practice, or object that is perceived as new by an individual or other unit of adoption” (p. 12). From a social perspective, Voorberg, Bekkers and Tummers (2015) define innovation in the public sector, “as the creation of long-lasting outcomes that aim to address societal needs by fundamentally changing the relationships, positions and rules between the involved stakeholders, through an open process of participation, exchange and collaboration with relevant stakeholders, including end-users, thereby crossing organisational boundaries and jurisdictions” (p. 1334). This study adopts *innovativeness* concept which includes encouragement to innovate, as an affective state or experience of feeling felt by public employees, in addition to actual innovative behavior (Fernandez and Moldogaziev, 2013).

In practice, the US government, through the Alliance for Innovation and the Innovations in the American Government Awards Program, stress on inventions regarding service delivery and programme management (Fernandez and Pitts, 2011). In Australia, a broad view of innovation includes generating, adopting and replicating ideas to improve public organisations’ processes and outcomes (Australian National Audit Office, 2009). Paradoxically, according to the Australian Government Management Advisory Committee, innovation represents “a considerable change either new or significantly different” (Australian Government Management Advisory Committee, 2010, p. 89). Overwhelmingly, the innovations adopted and implemented in public sector organisations originated from the experiences of the practitioners (Kamensky, 1996).

In 2011, gradual changes in defining innovation have been observed. The European public Sector Innovation Scoreboard (2011) replaced the emphasis on product innovation found in the Oslo Manual with a focus on service innovation, which plays a key role in the public sector. The European Commission, in the European Public Sector Innovation Scoreboard (2013), defines public sector innovation as “a new or significantly improved public service, communication method, process or organisational method for the supply and introduction of such services”. This definition marks a departure from the standard conceptualisations of innovation contained in the Oslo Manual, which focused on the business sector, particularly privately-owned manufacturing companies (Windrum, 2008).

Process and organisational innovation in the public sector share important similarities with the private sector, although they may exhibit greater complexity in the case of certain public services (Windrum, 2008). An increasing number of scholars have become interested in innovation in the public sector. Many studies have adopted the idea that innovation can contribute towards improving the quality of public services as well as enhancing the problem-solving capacity of governmental organisations in dealing with societal challenges (Damanpour and Schneider 2009; Osborne and Brown 2011; Walker 2014). Whereas private sector studies attempt to explain why and how innovation takes place, and to generate new avenues for theory-building and research (Fagerberg *et al.* 2005; Perks and Roberts 2013), Vries *et al.*, (2016) find public sector innovation has recently been frequently linked to the change from government to governance, since “delivering quality services with fewer resources” summarizes the expectations regarding governance in the public sector (Grindle, 2017).

In the public sector, the conditions differ greatly from those in the private sector, and even vary across the public sector itself. The literature highlights a number of characteristics that it is important to take into account when attempting to understand how innovation in the public sector occurs and how it may be supported and measured (Arundel and Hollanders, 2011). Researchers have found that creative ideas may be generated by employees in any job and at any level of the organization (Shalley, Zhou and Oldham, 2004; Madjar, Oldham and Pratt, 2002; Shalley, Gilson and Blum, 2000). Crucially, human capital remains a nonsubstitutable source of innovation and creativity (Bowen, 2016).

Innovation stemming from the organisation's technical core, such as individual employees or their workgroups, is perceived to be the most significant factor for innovation implementation in all areas (Moldogaziev and Resh, 2016). Individuals and workgroups that are closest to the core, mission-oriented tasks of the organisation have the highest impact on the organisational outcomes. In addition, their evidence also suggests that top-down sources of innovations, whether within or outside the organizational boundaries, such as senior leadership or government ministers, are perceived to be either detrimental or ineffectual with regard to outcomes. Conversely, Borins (2001) reported that, for innovation to be successful, it must be supported by the organisation's leaders. Clearly, the leadership is important in the innovation process. Manz *et al.* (1989) state that, "Leaders, and often multiple leaders, helped sensitive and fragile innovations at various stages of development and implementation" (614). In this vein, Moldogaziev and Resh (2016) focus on the importance of the idea that actual top-down supported innovation may signal to employees the potential outcome preferences and resource allocation choices within an organisation, which may improve the odds of successful innovation implementation. Also, Gabris *et al.* (2001) find that studies on public sector innovation have frequently examined the leaders' traits, such as leaders with vision and high credibility.

2.3.2 Innovation types

In general, most studies on public sector innovation (e.g. Hartley 2005; Walker 2006; Moore and Hartley 2008; Osborne and Brown 2013) agree that innovation must be novel and implemented (Torugsa, and Arundel, 2016). However, there is less agreement on both the specific types of innovations that are commonly found in the public sector and the level of novelty required. Walker (2006) supports the idea that it is necessary to distinguish between different types of innovation to understand organisations' innovative behaviour because they have different characteristics. For instance, service, process, administrative, organisational, policy, conceptual, and communication innovation are several distinct types of innovation in the public sector, as identified in the literature (Windrum, 2008; Walker, 2013; Wu, Ma, and Yang, 2013). The literature on the systemic nature of innovation comprises various perspectives and traditions, such as the learning economy, national innovation systems (Lundvall, 1992; Nelson, 1993), regional innovation systems (Cooke, 1992), technological innovation systems (Teece, 1996), sectoral innovation systems (Breschi

and Malerba, 1997), industrial districts (Marshall, 1890), clusters (Porter 1998), triple helix (Etzkowitz and Leydesdorff, 2000), and open innovation (Chesbrough, 2003).

Six typologies of public innovation were proposed by Windrum (2008), which draw on Koch and Hauknes's (2005) work. First, 'Service innovation' is defined as the introduction of new services products or improvements to existing ones. The second type is 'Service delivery innovation' which means new ways of delivering services to and interacting with users. Third, 'Administrative and organisational innovation' includes introducing new organisational principles for the production and delivery of service products. The fourth type is 'Conceptual innovation', which may be defined as a change in the organisation's strategy or societal objectives. Fifth, 'Policy innovation' is new policy concepts, due to policy changes, new programmes or large-scale reforms. The sixth and last type is 'systemic innovation', which involves new or improved ways of interacting with other organisations and knowledge bases.

According to innovation's main goals, Vries, Bekkers and Tummers (2016) classify five different innovation types. First, process innovation entails improving the quality and efficiency of internal and external processes. The second type is administrative process innovation, which focuses on the creation of new organisational forms, the introduction of new management methods and techniques, and new working methods. The third type is technological process innovation, which consists of the creation or usage of new technologies, introduced into an organisation to render services to users and citizens. Product or service innovation is the fourth type, which focuses on the creation of new public services or products. The last type is conceptual innovation, which includes the introduction of new concepts, frames of reference or paradigms that help to reframe the nature of specific problems as well as possible solutions to them.

Torugsa and Arundel (2016) compare simple innovations with complex ones. Complex innovations, involving multiple dimensions and affect multiple stakeholders, are likely to produce a greater variety of positive outcomes rather than more intense benefits from a single outcome. The reason for this is that complex innovations result in a greater variety of different types of beneficial outcome. Other studies review innovation at different levels (industry, organisational and unit), stages (generation and adoption), and types (product-

process, technical-administrative and radical-incremental) (Camisón-Zornoza *et al.*, 2004; Gopalakrishnan and Damanpour, 1997).

Furthermore, by investigating innovation from different angles, Wolfe (1994) identifies three research streams. The first focuses on the diffusion of innovation, the second examines the process of innovation within organisations, while the third addresses the determinants of innovation. Crossan and Apaydin (2010) investigate the dimensions of innovation found in the literature and provide a two-group categorization. The first group studies innovation as a process and the second group as an outcome. Creativity research also distinguished between process and outcome (Shalley *et al.*, 2004, p. 951). Although innovation type might have greater importance than innovation definition (Moore and Hartley, 2008), only 27 of the 181 studies defined a specific type of innovation (e.g. product innovation) (Vries, Bekkers and Tummers, 2016).

2.3.3 Pro-innovation bias

Innovation is a 'magic concept' in the public sector (Pollitt and Hupe 2011) because of the budget austerity and social challenges with which governments are currently wrestling. Indeed, innovation has been "embraced as a new reform strategy for the public sector" (Voorberg, Bekkers and Tummers, 2015, p. 1334). In fact, complex context requires public employees "to fill roles as 'innovators'" (Bowen, 2016, p.5) because, in such circumstances, public employees' inclination to make discretionary effort is related primarily to many outcomes such as performance and efficiency (Hollenbeck and Jamieson, 2015). This situation suggests ways for employees to operate outside of the bureaucratic morass and engage in creative endeavors. However, there is a concern regarding the dark side of creativity and innovation (Vincent and Kouchaki, 2016).

Creativity is generally perceived as a positive force for organisations. Correspondingly, some prescriptions offered in the literature for enhancing innovation in organisations raise ethical concerns. Vincent and Kouchaki (2016) argue that under certain conditions, an innovation identity can cause psychological entitlement, stemming from the fact that innovation is typically viewed as a rare valuable attribute, which can in turn increase unethical behaviour. Gino and Ariely (2012) explain that a creative personality and a creative mindset promote individuals' ability to justify their behaviour, which, in turn, leads them to cheat more than less creative individuals. Baucus *et al.* (2013) identify four categories of behaviour proffered

as a means for fostering innovation that raise serious ethical issue: (1) breaking rules and standard operating procedures; (2) challenging authority and avoiding tradition; (3) creating conflict, competition and stress; and (4) taking risk. Importantly, organisations can attain the benefits of the innovativeness identity without incurring the unanticipated costs by not instilling a creative identity among employees directly (Vincent and Kouchaki, 2016).

In private sector, organisations must find ways to be competitive in the midst of global competition and economic pressures; to remain competitive; they need to differentiate themselves from other companies. There has been a tendency to consider the public sector as something quite different from the private sector in terms of innovation (Windrum, 2008). this study contends that the logic is currently experiencing an explosion of interest in supporting innovation in the public sector as a means of increasing the efficiency and quality of public sector services (Osborne and Brown, 2013; Torugsa, and Arundel, 2016).

2.3.4 Measurement

Marketing innovations are replaced by 'communication innovations' in the public sector because public sector outputs cannot be valued at pure market prices (Scupola and Zanfei, 2016). Communication innovations include new or improved methods of influencing the behaviour of interactions with intermediate (Scupola and Zanfei, 2016). The most frequently mentioned motivation for innovation in the public sector was improving performance, expressed in effectiveness or efficiency terms (De Vries, Bekkers and Tummers, 2016). For instance, the Securing Americans' Value and Efficiency (SAVE) Award, from the Barack Obama administration, continued commitment to seeking out innovative means of improving government performance. The most plausible argument for these findings can be the two logics of action proposed by March and Olsen (1989) when seeking to understand the functioning of the public sector: the logic of consequence and the logic of appropriateness.

The logic of consequence considers the effects of various alternatives. Efficiency and effectiveness are a case in point here (Weber *et al.* 2004). On the other hand, the logic of appropriateness relates actions to situations by means of rules that are organised into identities. An example of the appropriateness logic that affects public sector innovation is the legitimacy of government and the stakeholders' trust that governments are able to deal

with the problems that concern them, implying that stakeholders must become more involved (Carter and Bélanger 2005). Consequently, public sector innovation is not only about efficiency but is also clearly focused on acquiring trust and legitimacy (De Vries, Bekkers and Tummers, 2016). More recent public sector innovations are less hierarchy, more models of public governance, and substantial changes in the technological and institutional contexts (Bannister and Connolly, 2015).

The number of dimensions of an innovation is related to its complexity, or the degree to which an innovation is difficult to understand (Goffin and Mitchell, 2010). The majority of modern economies are based on services (Miles, 2005). Bloch and Bugge (2013) characterise services as 'intangibility', 'simultaneity of consumption and production', and 'customisation to the individual client or user'. They argue that these characteristics may influence both how organisations innovate and also how innovation can be measured. Nevertheless, Miles (2005) asserts that there is a great variety of activities within services. Moreover, Gallouj and Weinstein (1997) argue services may not always be easy to isolate or distinguish from other economic activities. In line with the private sector, the importance of the intangible drivers of the business performance of private sectors firms has been the object of growing interest (Biondi and Reberioux, 2012). Alcaniz, Gomez-Bezarez and Roslender (2011) find investment in intangibles is primarily associated with successful business models.

To increase our understanding, even though various perspectives on the definition of 'intangible' were observed in the literature (e.g. Zéghal and Maaloul, 2011), three components have emerged as common across the majority of definitions. First, intangibles lack clear-cut marketability. Second, intangibles are often not physical or legal objects. Third, intangibles cannot be recognised as financial assets (Biondi and Reberioux, 2012). Nevertheless, intangibles can provide substantial future benefits (Zambon and Marzo, 2007). Indeed, organisations are increasingly dependent on intangible assets for the creation of value (Williamson, 2003). According to Biondi and Reberioux (2012), the development and maintenance of intangibles can be encouraged by various types of expenditure, two of which are spending on the innovation process and spending on improving the organisation's labour force.

A number of factors that are expected to influence the implementation and success of performance measurement initiatives have been identified in prior studies related to information system change, management accounting innovation, and public sector reform. The first factor is technical issues, such as the ability of the existing information systems to provide the required data and the extent to which organisations can define and develop appropriate measures. The second is organisational issues, which involve the decision-making authority, management commitment, training, and legislative mandates (Cavalluzzo and Ittner, 2004).

The public sector outcomes initiatives, based on results-oriented, strategic performance indicators, can improve governmental efficiency and effectiveness by increasing the accountability of public managers (Atkinson and McCrindell, 1997; Fernandez, Cho, and Perry, 2010). In a comprehensive literature review of public sector outcomes, Fernandez, Cho, and Perry (2010) identify the most important initiative, which is the Government Performance and Results Act of 1993 (GPRA), according to which managers are required to clarify their missions and strategic objectives related to each government activity (i.e. project, programme, or operation) and measure the relevant outputs, service levels, and outcomes for each activity in order to evaluate the performance regarding these objectives.

A single outcome measure could fail to capture the full effects of an innovation (Torugsa and Arundel, 2016). In line with this argument, the Australian Public Service Commission's (APSC) 2011 State of the Service (SOS), a nationally representative survey of all Australian Federal Government employees, provides several outcome-based measurements for public sector innovation by asked the respondents in innovative workgroups if their most significant innovation had an effect, using a 5-point ordinal scale, on each of the different eight outcomes: 'the cost of doing your work', 'your administrative procedures', 'the quality of your work', 'your client or service user satisfaction', 'your client or user access to information', 'your job satisfaction', 'your workplace', and 'cross-agency collaboration'. By the same token, followed the same idea, a number of studies provide several outcomes that are measured in their surveys (Arundel and Huber, 2013).

The two most plausible arguments regarding why the outcomes of public sector innovation are difficult to measure were identified by Mulgan and Albury (2003), Eggers and Singh

(2009), and Torugsa and Arundel (2016). First, accounting systems in public sector which can place a financial value on the outcome of an innovation are scarce. Second, the positive or negative benefits of an innovation can occur within the public sector and/or at the same time be experienced by citizens and businesses. Indeed, this study's discussion of innovation in the public sector evokes an influential conceptualization in the innovativeness stream of research found in Fernandez (2013) by capturing both a feeling of encouragement to innovate as well as innovative behaviour. The innovativeness variable is measured using two observable indicators drawn from the Federal Human Capital Survey/Federal Employee Viewpoint Survey (FHCS/FEVS): encouragement to innovate and innovative behaviour. These two indicators capture both a desire to innovate (Locke and Latham 2004) and innovative behaviour on the part of the employee (Fernandez and Moldogaziev, 2013).

In sum, work on public sector innovation is required from related disciplines which can contribute to the formation of a theoretical framework for public sector innovation (Torugsa and Arundel, 2014). The research on service innovation and innovation systems will therefore be used as a backdrop for the discussion on how innovation can be measured in the public sector. So far, there exists limited theoretical literature that focuses specifically on public sector innovation (Torugsa and Arundel, 2014). Furthermore, much of the existing work is not based on empirical investigations. However, despite the scarcity of literature on innovation in the public sector, the insights derived from other strands of theory may be relevant and help to shape the thinking about public sector innovation (Koch and Hauknes, 2005). Three areas are important in forming an understanding of how public sector organisations innovate: the nature of the public services themselves, the context within which the public sector organisations operate, and the interfaces with other actors both within and beyond the public sector.

2.4 Shortcomings in the relevant literature

The literature is viewed from the vantage point of filling the gap regarding the relationship between good governance and innovation in public sector. This study adds to our understanding of this theoretic relationship an important dimension that has been largely unexplored hitherto. It investigates the prominent role of the complementarities between governance and human capital within public sector organisations, translated as public employees' innovativeness. Perhaps more importantly, the governance typology developed

in this article is based on a more holistic approach of governance, whereby multi governance mechanisms are intertwined and several disciplines are considered, giving this study the potential for greater novelty (Rediker and Seth, 1995; Sirmon *et al.*, 2011; Misangyi and Acharya, 2014; Bouckaert, 2017). The conceptual framework and empirical findings in this article will help scholars and practitioners to understand more clearly how to govern public employees for greater organisational performance beyond the HRMP and traditional high-performance models. These important contributions to the literature shed light on the complex puzzle that is governance in the public sector. The contribution is insights from the broad theoretical fields of different social science disciplines that have cross-discipline relevance for studying how governance and innovation are linked in the public sector.

Innovation strategies and activities seem to be growing rapidly in the public sector. There is a growing interest in public innovation amongst students of governance, who are currently working to analyse the barriers to, and drivers of, innovation in the public sector, and also prescribe ways of making the public sector more innovative (Sørensen, 2017; Hartley, Sørensen, and Torfing 2013; Ansell and Torfing 2015). The process and organisational innovation in the public sector share important similarities with the private sector. Notably, the public sector is widely recognised as an area of inherent complexity (Lapsley and Skærbæk, 2012), which may exhibit greater complexity in the case of public services (Scupola and Zanfei, 2016). As a consequence, “more complex service contexts require employees to fill roles as ‘Innovators’; ‘Differentiators’; ‘Enablers’ and ‘Coordinators’” (Bowen, 2016, p.5). Notably, a new public sector approach to innovation focuses on how the public sector itself can become more innovative. Therefore, “the public sector must become more effective, and that calls for innovation” (Sørensen, 2017, p. 3). However, very little such research is being conducted regarding the public sector (De Vries, Bekkers and Tummers, 2016).

The fundamental argument in this thesis is that the way we shape the institutional forms of governance in an organisation affects its capacity for innovation. To this end, if public sector leaders transform public governance appropriately, public innovation may be boosted, to the benefit of users, citizens, employees, stakeholders and society at large (Torfing and Triantafillou, 2016). In such circumstances, the success of the governance may be largely

dependent on whether it is properly administered by the various actors within the organisation. Hence, the impact of governance's practices on the organisational environment and employees is an important consideration in determining governance's relative implementation success. Grindle (2017) states that ways of improving the conditions of public sector governance remain an ongoing issue that needs addressing.

Governance where human capital is a more important resource than financial capital is a neglected topic (Aguilera, Florackis and Kim, 2016). Essentially, the governance approach maintains that higher economic performance can be achieved by investing in complementary and co-specialised assets (Helfat, 1997; Teece, 1986) and governing them in an economising way (Oxley, 1997; Williamson, 1985). Therefore, investment in human capital creates an important pathway for building and enhancing an organisation's core competencies (Torfing and Ansell, 2017). Theoretically and empirically, Golan and Konzelmann *et al.* (2006), and Wilkinson (2007) establish the notion that governance exerts some form of influence on the formulation of human resource management practice. Interestingly, Haxhi and Aguilera (2017) argue governance is easily applicable to human resource standards and sustainability practices.

There is a continuing need to facilitate human capital development through the attenuation of opportunistic behaviour via governance (Williamson, 1999). Additionally, there are increasing requirements for organisations to manage and govern these capabilities effectively, so that realized economic value creation approaches the potential value creation that can be achieved by human capital (Torfing and Ansell, 2017). Heretofore, researchers underestimate the strategic value of the organisation's human capital because they have overlooked the versatility of this notion and its far-reaching impact (Mahoney and Kor, 2015). Importantly, "the intuitive connection between capabilities and governance also holds at the individual level since the development of individual skills is influenced by governance/incentive systems" (Mahoney and Kor, 2015, p.296).

Furthermore, according to leaders in public affairs, the watchword for the next millennium is governance (Bingham, Nabatchi and O'Leary, 2005). Additionally, Afsar *et al.* (2017) note the vital role played by leaders in encouraging and supporting the initiatives of individual employees to explore new opportunities or improve work procedures for the benefit of the

organisation. Hence, in the age of governance (Torfing and Ansell, 2017), leadership may be the missing factor in the efforts to understand governance (Rodriguez-Pose, 2013), since leadership is an institution of governance (Sotarauta and Beer, 2017). Evidence for the relationship between weak leadership and bad governance is abundant (Helms 2012). Elsewhere, Torfing and Ansell (2017) argue that, “governance tends to blur the distinction between leaders and followers” (p.51).

While the evolving strategic human capital research conversation has encompassed how complementarities, with a variety of antecedents in addition to human capital, can enhance value in use, an overwhelming number of those studies investigate the human capital construct by focusing on organisations’ investment in human capital through Human Resource Management Practices (HRMP) as antecedents (Huselid, 1995; Delery and Doty, 1996; Guthrie, 2001; Raineri, 2017). It is important to pause here to understand that not only single practices but also antecedents, as multiple practices, impact on employees (Wright, Dunford and Snell, 2001; Wright and Boswell, 2002). From the above discussion, the researcher has identified four deficiencies. These are: (1) the impact of HRMP tends to be indirect, complicated and highly context-dependent (Su, Wright and Ulrich, 2015), (2) the tendency to measure the investment in human capital as a proxy for the actual human capital itself (Combs, *et al.*, 2006), (3) the tendency to highlight only people as an essential factor for organisations achieving high performance, while neglecting rules and procedures as essential factors (Su, Wright and Ulrich, 2015), (4) the fact that heteroscedastic forms of HRMP simultaneously offer complex models, leaving the optimal approach an unresolved issue (Guest, 2011; Paauwe, Wright and Guest, 2013; Delery and Roumpi, 2017).

As discussed above, since the human capital complementarities bases and HRMP do not perfectly coincide, there is a rich opportunity for other complementarities to exist between human capital and other, idiosyncratic organisational resources (Chadwick, 2017). Previous studies offered a limited view of the antecedents that can create complementarities with human capital, as HRMP’s distortions from many species make it difficult to determine how much value can be tied to human capital. Therefore, nowadays, it is inevitable to “expand the relevant practices to those beyond the control of the HR function” (Wright, Dunford and Snell, 2001, p. 705) where those antecedents should not come from the traditional perspective in order to observe deeper explorations of practices (Wright, Coff and

Moliterno, 2014). A suitable model of human capital complementarities should thus draw upon governance, the structures of which are “most amenable to human capital complementarities” (Chadwick, 2017, p. 515). In doing so, the governance paradigm may offer fresh insights into the nature of human capital investment and produce fresh solutions that will outperform the existing ones (Su, Wright and Ulrich, 2015; Aguilera, Florackis and Kim, 2016; Torfing and Triantafillou, 2016). Hence, this study directly answers these calls to reveal these limitations by testing a typology of governance ran the typical HRMP paradigm (Martin *et al.*, 2016).

Significant shortcomings in terms of the practice of governance in the public sector appear in the literature. Moreover, the empirical evidence on how these factors are affected by the implementation and practice of good governance within public sector agencies is somewhat limited (Subramaniam *et al.*, 2013; Tucker, 2010; Edwards and Clough, 2005; Broadbent and Guthrie, 2008). As a consequence, Torfing and Ansell (2017) argue for the need for empirical (quantitative and qualitative) research that can reveal the consequences of alternative approaches of governance to the issue of under-investment in human capital. To this end, studies are needed of how bottom-up service innovations are initiated and developed by employees (Sørensen, 2017).

More strikingly, the studies on the codes of good governance have focused on the codes issued in each country rather than on the international codes issued by transnational institutions that have a wider applicability and speak to the important debate of global governance (Aguilera and Cuervo-Cazurra, 2009). Heretofore, “it is interesting to note that our review of previous studies shows that there is still a relatively scarce number of studies investigating codes at international level” (Cuomo, Mallin and Zattoni, 2016, p. 231). To this end, they suggest future studies might explore the consequences of the international codes. Such a move to international frameworks could be both quicker and more effective in addressing the shortcomings of the home country governance regimes (Rejchrt and Higgs, 2015). IFAC and CIPFA (2014, p.7) argue that, “where codes and guidance do not exist, the Framework will provide a powerful stimulus for positive action”.

Moreover, countries that do have a code of good governance in the public sector can “refer to the Framework in updating and reviewing their own codes” (p.7). However, in colloquial

terms, international codes cannot fit perfectly because of the heteroscedasticity between countries. In fact, Haxhi and Aguilera (2017) believe that worldwide or international codes of good governance allow countries or organisations to adjust their best practices to suit their own peculiarities. In addition, they argue that different countries can achieve the same governance result through a combination of different practices.

Studies in the public sector are unable to contribute to public administration as an academic discipline. Contributions can only be made through theoretically informed empirical study of the practice of public administration (Peters and Pierre, 2017). Recently, public administration research has become increasingly quantitative in nature because of the growing demand for valid, reliable measures (Van Engen, 2017). Indeed, there is certainly a place for deductive theorising about the behaviour of individuals within it (Peters and Pierre, 2017).

The implications of practice are important in public administration. Notwithstanding, previous studies are not conducive to an understanding of the 'real world'. Consequently, there is an obligation to consider those implications and attempt to engage with the 'real world' (Peters and Pierre, 2017). Additionally, future research needs to engage with stakeholders or managers further and foster the role played by values in shaping an organisational identity. Future studies should consider notions related to loyalty, hierarchy, integrity, public interest, accountability, and transparency (Peters and Pierre, 2017). In particular, public sector institutions are created by infusing a structure with values (Selznick 1957).

Moreover, public administration is somewhat lacking in its ability to provide insights into many issues of governance, and also lacks of use of institutional theory. A new public governance paradigm has evolved around innovation and public value creation rather than procedural and political rationality, and also around interdependency and collaboration rather than government control (Crosby, Hart and Torfing, 2017). Table 2.3 summarises the deficiencies existing in the literature on these three contexts: innovation, governance, and public administration.

Table 2.3 2.4 Shortcomings in the related literature

Context	Source	Deficiencies
Innovation	Bowen (2016)	A new understanding is required about complex service contexts requiring employees to fill roles as ‘Innovators’
	Torring and Triantafillou (2016)	There is need for future research that adopts conceptual logic to build on the argument that, if public sector leaders transform public governance in the correct way, public innovation may be boosted to the benefit of users, citizens, employees, stakeholders and society at large
	Sørensen (2017)	Future research should focus on the functional forms of how the public sector itself can become more innovative
	De Vries, Bekkers and Tummers (2016)	An opportunity for future research lies in studying how applicable public sector innovation studies might be in non-Western countries
	Sørensen (2017)	Studies are needed of how bottom-up service innovations are initiated and developed by employees
	De Vries, Bekkers and Tummers (2016)	Future research might link governance to the extent to which innovativeness is seen in the public sector as well as to the antecedents that shape public sector innovations and their outcomes
Governance	Aguilera, Florackis and Kim (2016)	Governance where human capital is a more important resource than financial capital is a neglected topic
	Mahoney and Kor (2015)	Researchers in the field of governance underestimate the strategic value of the organisation’s human capital because they have overlooked the versatility of this notion and its far reaching impact
	Torring and Triantafillou (2016).	The governance paradigm could yield new solutions that will outperform the existing ones
	Grindle (2017)	The question of how the conditions of public sector governance can be improved warrants ongoing attention
	Subramaniam <i>et al.</i> (2013)	The empirical evidence on the factors affected by the implementation and practice of good governance within public sector agencies is somewhat limited
	Grindle (2017, p.22)	future discussions of governance, “should continue to explore important questions related to pathways to improved performance”

<i>Context</i>	<i>Source</i>	<i>Deficiencies</i>
	Torfining and Ansell (2017)	Empirical research is required that may reveal the consequences of alternative approaches to governance in regard to the issue of under-investment in human capital
	Cuomo, Mallin and Zattoni (2016).	Future studies might explore the consequences of international codes and a worldwide framework of governance
	Crosby, Hart and Torfining (2017)	A new public governance paradigm is a compelling topic for future research, one that evolves around innovation and public value creation rather than procedural and political rationality, and around interdependency and collaboration rather than government control
Human Capital	Chadwick (2017)	The complementarities between governance structure and human capital merit further research attention
	Morris <i>et al.</i> (2017)	The role of human capital at the individual level remains ambiguous. An additional opportunity lies in studying human capital management at a far more micro level while much of the work on human capital has studied these phenomena at an aggregated level (the organisational level)
Public sector	Peters and Pierre (2017)	Public administration is somewhat lacking in its ability to provide insights into many issues of governance, and fails to employ institutional theory There is certainly a place for deductive theorising about the behavior of individuals within public organisations Future studies should consider notions about loyalty, hierarchy, integrity, public interest, accountability, and transparency

Chapter 3: Conceptual framework

3 Conceptual framework

This chapter presents the building blocks of the conceptual framework. It begins by discussing how the prevailing theoretical perspective translates into single dominant governance logic by combining inter-disciplinary theories with the governance literature. The focus of this chapter is on examining the existing literature on conceptual framework development. This chapter also addresses the research questions within the context of Saudi Arabia. This leads to the development of a theoretical framework and associated hypotheses.

3.1 Introduction

This thesis investigates the complementarities' effect between the holistic approach to governance and human capital on public employees' innovativeness in Saudi Arabia. Thus before turning to the study's methodology, it is important to understand the conceptual framework that explains the complementarities between governance structure and human capital in order to maximise innovation. The literature reveals that less research has been conducted on the relationships between good governance and innovativeness in the public sector (De Vries, Bekkers and Tummers, 2016; Sørensen, 2017). Interestingly, scholars extremely rarely address this relationship through intermediating factors (Aguilera, Florackis and Kim, 2016; Mahoney and Kor, 2015). It is important to investigate the effect of intermediary factors in order to identify the motivational factors through which governance provides intellectual stimulation to encourage employees to challenge the status quo and the traditional ways of doing things.

This argument is based on conceptual arguments, where scholars claim that, if employees are empowered, possess sufficient resources and trust in the organisation, and then feel a sense of psychological ownership, this encourages them to engage in creative actions. Given the importance of the intermediating effect, the study conceptualised the connection between good governance and innovation through intermediating factors, such as

employees' trust, empowerment and the availability of resources. The context of this study is employees of public sector organisations in the Kingdom of Saudi Arabia in connection to the good governance practice trends related to organisational innovation. In this study, the researcher considered 14 main constructs, as discussed in the literature review chapter (integrity, fairness, respect for the rule of law, resilience, openness and accountability, governance network, comprehensive measuring of performance, task interventions, developing capacity, trust, job resources, empowerment, and innovativeness) as a basis for the theoretical framework.

As discussed in chapter 2, few empirical studies have addressed the relationship between governance and innovation in the non-western public sector (Scupola and Zanfei, 2016; De Vries, Bekkers and Tummers, 2016) although, nowadays, every area of public administration seems to have been subsumed under the umbrella of governance (Klijn, 2008). Interestingly, most of the studies on public sector innovation have not been linked to existing theories (De Vries, Bekkers and Tummers, 2016). By using a case study of the digitalisation of Roskilde University Library and adopting a qualitative approach, following Hartley's (2005) model, Scupola and Zanfei (2016) attempted to analyse the relationship between governance and innovation in a technological context. The results of this study indicated that a transition towards a Networked Governance mode implies a greater distribution of knowledge and innovation across different organisational levels within public administration and affects the development of new public services.

The public and private sectors differ in important ways. Gospel and Pendleton (2003) assert governance in the private sector incorporates a reductionism that excludes employees and other actors, as "corporate governance is concerned with who controls the firm, in whose interest the firm is governed and the various ways whereby control is exercised" (p.560). Williamson (2003) argues that the incentives and governance mechanisms found in the Anglo-American model force managers to shed employees in hard times and avoid investments with uncertain returns, such as training. In essence, the Anglo-American systems pressurise managers to place the shareholders' interests above those of the employees (Gospel and Pendleton, 2003). In other words, the principal-agent model lies at the heart of the understanding of corporate governance in the private sector.

Nevertheless, in the public sector, “more complex service contexts require employees to play roles such as ‘Innovators’, ‘Differentiators’, and ‘Enablers’ and ‘Coordinators’” (Bowen, 2016, p.5). Indeed, public sector entities stand at the centre of relationships involving various groups of stakeholders (Parkinson, 2003). Notwithstanding these differences and emerging trends in governance raise new questions regarding managerial roles, internal and social processes, contexts, and recent changes in the conceptualisation of governance (Tihanyi, Graffin, and George, 2014).

Accordingly, the conceptual framework in this study is based on three distinct theories. The justification for choosing these three theories is described in section 3.2: The Theoretical perspective. Thereafter, the conceptual framework and proposed hypotheses for conducting this research are presented in section 3.3. Finally, section 3.4 will provide a summary of this chapter.

3.2 Theoretical perspective

3.2.1 Governance theories

The first issue to be addressed is what can be considered theory. While the question of the nature of theory is subject to debate, Llewellyn (2003, p. 667) argues that everyone theorises and that there are different levels of theory according to its formality and structuralism. In effect, what Llewellyn (2003) calls metaphor and differentiation can be seen to be the early stages of theorising, while the later stages of theorising are regarded as ‘stronger’ or more developed theorising. The number of interested scholars developing our collective understanding of how we can bridge theory and empirical research is growing within various management disciplines. One useful tool is the work of Weick (1995), which suggests that theorising needs to be understood as a process rather than a product, where what passes for theory consists of approximations, or interim struggles, as people inch closer towards stronger theories. Theory is not ‘a truth’ but a rhetorical method of explaining a relationship (Llewellyn, 1996).

Multiple definitions of ‘theory’ have been proposed in the literature. Some scholars argue that, “theory allows scientists to understand and predict outcomes of interest, even if only probabilistically” (Colquitt and Zapata-Phelan, 2007, p. 1281). DiMaggio (1995) defines theory as allowing scientists to describe and explain a sequence or process of events. Given

this, he defines theory as, “an account of a social process, with emphasis on empirical tests of the plausibility of the narrative as well as careful attention to the scope conditions of the account” (p. 391). In essence, “true theory goes beyond models and diagrams by delving into the underlying processes that explain relationships, touching on neighboring concepts or broader social phenomena, and describing convincing and logically interconnected arguments” (Colquitt and Zapata-Phelan, 2007, p. 1285).

In quantitative research, theory can be defined as “a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomenon” (Kerlinger, 1986, p. 7). Following this definition, theory helps us to understand, explain, predict and control (Wright, 2017). As a necessary phase in the theoretical process, theoretical refinement consists of modifying the theory based on a desire to develop an even deeper understanding of the phenomenon through the addition of further concepts (Wright, 2017). Notably, a theory might appear as an argument, a discussion, a rationale, or a figure (Creswell, 2014).

Different theories exist in the literature regarding governance. These different theories, such as stakeholder theory, agency theory, stewardship theory, transaction cost theory, and resource dependence theory, have been used to explain and describe the mechanism of governance. Grindle (2017) argues that, “it may be that the concept of good governance became so popular because it captured something universal and aspirational” (p.19). Each theory provides a useful account that reflects a specific view and objectives regarding the governance mechanisms. A reason why the past decade has seen the rapid development of many governance theories is the vast array of researchers, conferences, and journals that are devoted to the study of governance, making this phenomenon one of the most frequently-used social science concepts in the world today (Ansell and Torfing, 2016). Indeed, in recent years, governance has become even more important by including recent recommended qualities of good governance, such as participation and decentralisation (Grindle, 2017). However, Grindle (2017) believes that, in both theory and practice, the timing of governance, trajectories and interdependencies is ignored.

In this heuristic, because “the reach of governance theory is broad and its imperial term of reference are highly varied”, as shown in table 3.1, governance theories may be classified, according to their purpose, into five main categories (Ansell and Torfing, 2016, p. 1).

Table 3. 1 *Classification of governance theories according to their purpose*

<i>Categories</i>	<i>Purpose</i>
One	How different actors, jurisdictions, levels and intuitional arenas interact to exchange knowledge and ideas, coordinate actions and collaborate in making authoritative decisions that produce collective outcomes
Two	To understand the role played by different public, private and civil society actors in governing the processes at various levels
Three	To analyse how governance is designed, organised and orchestrated, or how it evolves over time and across different sectors and domains
Four	To study governance’s impact and effects to understand how different kinds of governance contribute to more effective or innovation methods
Five	To improve governance to ensure eligible outcomes by analysing its failure

Source: Ansell and Torfing (2016)

Notwithstanding these differences, governance is an important concept and central when applied to the public sector. More precisely, Grindle (2017) lists several abilities that might be subsumed under the term ‘governance’ in the public sector. These are: the notions of how administrative decisions are made, how governmental systems work, and why both formal and informal institutions matter with regard to how things get done. Importantly, he assumes that informal institutions are as important, as even more important, than the formal ones in determining how governance occurs.

Some scholars argue budgetary consolidation (reducing costs, delivering better value for money, and increasing effectiveness and efficiency) and instruments (internal audits, quality models, and business process reengineering) enable the public sector to work better at less cost. Hence, the public sector becomes more client-oriented and therefore more business-like (Bouckaert, 2017). Nevertheless, in his seminal work, Kickert disagrees:

“public governance requires more than effectively and efficiently running the ‘government business’. Public governance has a broader meaning than the usual restricted business-like, market-oriented interpretation of the concept of ‘management’. Public governance is also related to legality and legitimacy and more than strict business values” (Kickert, 1997, p.732).

In the past, new public management’s emphasis was laid upon business and market orientation and therefore attention was paid to theories and techniques drawn from private sector management. However, the societal political and legal environment of public administration is distinctive. Therefore, governance in the public sector entails placing a stronger focus on the sector’s peculiarities. Recently, the management concept has been broadened within public governance through the complexity of the administrative relations. Given this, current developments in governance cannot be reduced to a simple convergence model (Gospel and Pendleton, 2003). “A key message from the conclusions is that complexity needs to be taken into account, and that increasing complexity needs increasingly complex theories and solutions” (Bouckaert, 2017, p.48). The arguments in this study suggest interdependency and collaboration, rather than conflict, should be the primary mind-set of public governance. Accordingly, this study will break from traditional, agency conflict between stakeholders and managers and use a combination of theories (social capital theory, stakeholder theory and institutional theory) to describe where and how an organisation’s governance drives human capital value creation towards innovativeness.

As discussed above, the argument is recently extended to cover developments in the public governance paradigm which appear to be enhancing managerial choice. A number of new themes have developed out of this discussion, for example, stakeholder engagement, ethics, and networks. Thus, current developments in governance cannot be reduced to a simple convergence model or theory (Gospel and Pendleton, 2003), a situation in which it makes sense to draw on and integrate theories in order to take the literature forward (Shaw et al., 2018). Theory integration can be an effective way of making a significant, novel, and bold theoretical contribution, generating novel frameworks which provide insights into real problems faced by managers and organisations (Agarwal and Hoetker, 2007).

This study stays mindful of danger zones (compatibility and communication clarity) by combining theories that don't make fundamentally incompatible assumptions on the crucial dimensions (Shaw et al., 2018). In addition, it is important look for true integration of ideas from one theory with those in another, consequently, a complete theoretical picture may therefore emerge (Shaw et al., 2018). The next sections provide assurance that the key assumptions of the Social Capital Theory, Stakeholder Theory and Institutional Theory are not violated and abandoned as the integration occurs. Instead, the three theories explain different aspects of the public governance phenomenon.

Together, the integration of the three theories (social capital, stakeholder, institutional theory) offers a new way of seeing the phenomenon of generate innovativeness by complementarities between governance structure and human capital, and, in doing so, shifts the way we think about the public governance's effects. The broader conceptualized approach of governance in this study gives a complete picture of the components are critical to the success of an organisation. Theorising this influence requires addressing underlying assumptions: that ethical climate, network of relationships, and interventions. Stakeholder theory, when applied to human capital, posits that organisations' human capital values and performance are driven by the norms of ethical climate. Additionally, the arguments in this thesis draw stronger connections with a more comprehensive outlook toward achieving coordination and performance through structural, relational and cognitive networks, which originated in social capital theory. Balancing these assumptions requires managers to recognise specific interventions and choose appropriate behaviours. Institutional theory is converging toward a more balanced view by committing to use interventions consistent with the organisational, individual and societal factors (Cardinale, 2018).

3.2.2 Social Capital Theory

The inspiration for most of the current work on social capital stems from the seminal research conducted in the twentieth century. Recently, social capital has built on what Granovetter (1973) described as the strength of weak ties. Social capital generally refers to social networks and the reciprocities that arise from them and their value within the business environment (Sen and Cowley, 2013). By linking this to outcomes, the concept of social capital refers to the relationships that enable an organisation to work effectively (Dess and Shaw, 2001; Adler and Kwon, 2002; Maak, 2007). Florida, Cushing and Gates (2002,

p.20) explain, “the idea that strong social networks-tight communities bound by shared norms, trust, and reciprocity-enhance cooperation and productivity when people belong to communities with high levels of social capital, the theory goes, they're far more willing to work together and take chances on risky ideas. It followed that high social capital would fuel innovation”. Although this may be true, they argue that the extant theory and mixed empirical evidence leave the effect of social capital on performance unclear.

In the public sector, “effects of social capital are expected to advantage public organisations in achieving goals that lead to better government performance” (Compton and Kenneth, 2016, p. 610). Moreover, social capital can serve as informal governance in weak protection regimes (Cao, ding and zhang, 2016). Where public administration is “dependent upon the cooperation and joint resource mobilization of policy actors outside their hierarchical control” (Börzel, 1998, p. 260), social capital can play an important role and public sector organisations managers should be able to interact with or shape the influences of social capital on the public organisations’ performance (Compton and Kenneth, 2016). In this heuristic, Crona, Gelcich and Bodin (2017) argue social capital may not emerge independently of leadership but is likely to be created and reinforced through active, engaged leadership. Managers apply their human and social capital to monitoring and advisory roles, which allows them to exploit their knowledge more efficiently (Nahapiet and Ghoshal 1998).

Over the last two decades, scholars from various disciplines have actively studied social capital, such as community social problems (Messner, Baumer and Rosenfeld, 2004; Beyerlein and Hipp, 2005), the financial performance of local government (Menahem, Doron and Haim, 2011), and education (Leana and Pil, 2006). Furthermore, social capital researches have undertaken various levels of analysis, such as individual (Belliveau, O’Reilly and Wade, 1996) and group or organisation (Baker, 1990).

Bourdieu (1986) and Putnam (1993) provide two different theoretical models for the social capital concept. Bourdieu (1986, 1988) focusses on the role that different forms of capital play in the reproduction of unequal power relations. Hence, he identifies three forms of capital (economic, cultural, and social). Bourdieu’s theory has been used by a number of researchers, such as Kurunmaki (1999), with regard to professional and financial capital

among traders, Xu and Xu (2008) in the context of accounting classification and terminology in Chinese banks, and Jacobs and Kemp (2002) in exploring the use of accounting in small and medium-sized Bangladeshi firms.

Perhaps the most significant recent work on the development of Bourdieu's (1986) model is that by Coleman (1990) (Sen and Cowley, 2013). Coleman (1990) synthesizes a more relational sociological perspective by focusing on social capital's functions, where it is said to, "facilitate certain action of individuals who are within the structure" (p. 302). Arguably, Coleman (1990) views social capital as the relationships among factors, comprising the elements of trust, norms and sanctions. As a consequence, three types were posited. The first form is the obligations and expectations which depend on the trustworthiness of the social environment. Second is the capacity of information to flow through the social structure in order to provide a basis for action. The third form is the presence of norms. Coleman's model has been used by a number of studies (e.g. Chenhall *et al.*, 2010; Awio *et al.*, 2011). Recently, Worrell *et al.* (2013) draw on the combined work of social capital theorists by using social networking.

The other model is provided by Putnam (1993) from a political science perspective through comparing social capital as the connections among individuals to physical capital as physical objects and human capital as the property of the networks, norms and trust that develop within a group, providing the impetus to pursue the shared objectives of all of the group's members, are the three dimensions of social capital. Therefore, Fukuyama (1995) integrates social capital and trust within an economic framework. Likewise, the World Bank and the Organisation for Economic Cooperation and Development (OECD) (2001) define social capital as "networks together with shared norms, values and understandings that facilitate co-operation within and among groups" (p. 1). However, even though Subramaniam *et al.* (2013) believe there is no unilateral definition of social capital because the concept has been developed and used by sociologists in different ways, they regard Inkpen and Tsang's (2005) definition as commonly accepted: "the aggregate of resources embedded within, available through, and derived from the network of relationships possessed by an individual or organisation" (p. 151).

In this study, the social capital perspective developed by Nahapiet and Ghoshal (1998) is adopted. As shown in figure 3.1, Nahapiet and Ghoshal (1998) divide social capital into three dimensions: structural, relational and cognitive, which is an ideal model for analysis in this study. First, the structural dimension relates to the pattern of connections among the actors within a network. Second, the relational dimension refers to the personal relationships and one-to-one communication ties that actors hold among both themselves and those outside their network. Third, the shared understandings and meanings within a given context is the cognitive dimension (Subramaniam *et al.*, 2013). Their primary argument was that social capital within the organisation facilitates the creation (Inkpen and Tsang, 2016).

This model has been successfully used to explain the benefits of social capital in a variety of network contexts, including large multinational electronics firms (Tasi and Ghoshal, 1998), professional virtual communities (Chiu, Hsu and Wang, 2006), entrepreneurial high-technology ventures (Yli-Renko, Autio and Sapienza, 2001), Chinese high-technology organisations (Jia *et al.*, 2014), and multinational corporations (Gooderham, Minbaeva and Pedersen, 2011). A good example is Bolino, Turnley and Bloodgood (2002), who “highlight the role of social capital as an important determinant of sustainable competitive advantage and organisational performance” (p.508). Another example is Liao and Welsch (2005), who employed Nahapiet and Ghoshal’s model to explore the important role of social capital in entrepreneur success.

In the public sector context, Nahapiet and Ghoshal’s social capital model has been used to explain knowledge acquisition and knowledge sharing in institutions (e.g. Cheung *et al.*, 2016; Leana and Pil, 2006). Also, Subramaniam *et al.* (2013) use the model in the context of governance within the public sector by focusing on four major functional areas of governance: risk management, internal audit, strategic planning and capacity building. They argue for these four major functional areas, as their activities, directly and indirectly, have implications regarding the achievement of organisational goals. In future studies, Subramaniam *et al.* (2013) suggest extending their study to other public sector organisations where the level of task interdependence among employees is high, and structural connections including high frequency interactions. Also, they suggest alternative research methods, such as surveys, might be conducted. Furthermore, future studies

should address the impact of individual managers on governance effectiveness (Brown *et al.*, 2017) through social capital theories (Kor and Sundaramurthy, 2009).

Nahapiet and Ghoshal’s (1998) social capital model is adapted in this study for several reasons. Social capital scholars tend to emphasise social capital at the individual level. Furthermore, Nahapiet and Ghoshal’s model is useful for examining social capital at both the individual and organisational level (Bolino, Turnley and Bloodgood, 2002). Interestingly, Nahapiet and Ghoshal’s model incorporates a cognitive dimension instead of focusing on either the structural or relational aspects of social capital. The three dimensions provided in Nahapiet and Ghoshal’s (1998) model are interrelated and distinguishing between them aids in the analysis of the complex interactions among the managers and employees from different governance functional units (Subramaniam *et al.*, 2013). However, Nahapiet and Ghoshal restricted their arguments to within the organisations so it might be necessary to modify the sub-dimensions in the model (Inkpen and Tsang, 2016). Next, the three dimensions of Nahapiet and Ghoshal’s model (structural, relational and cognitive), are discussed in detail.

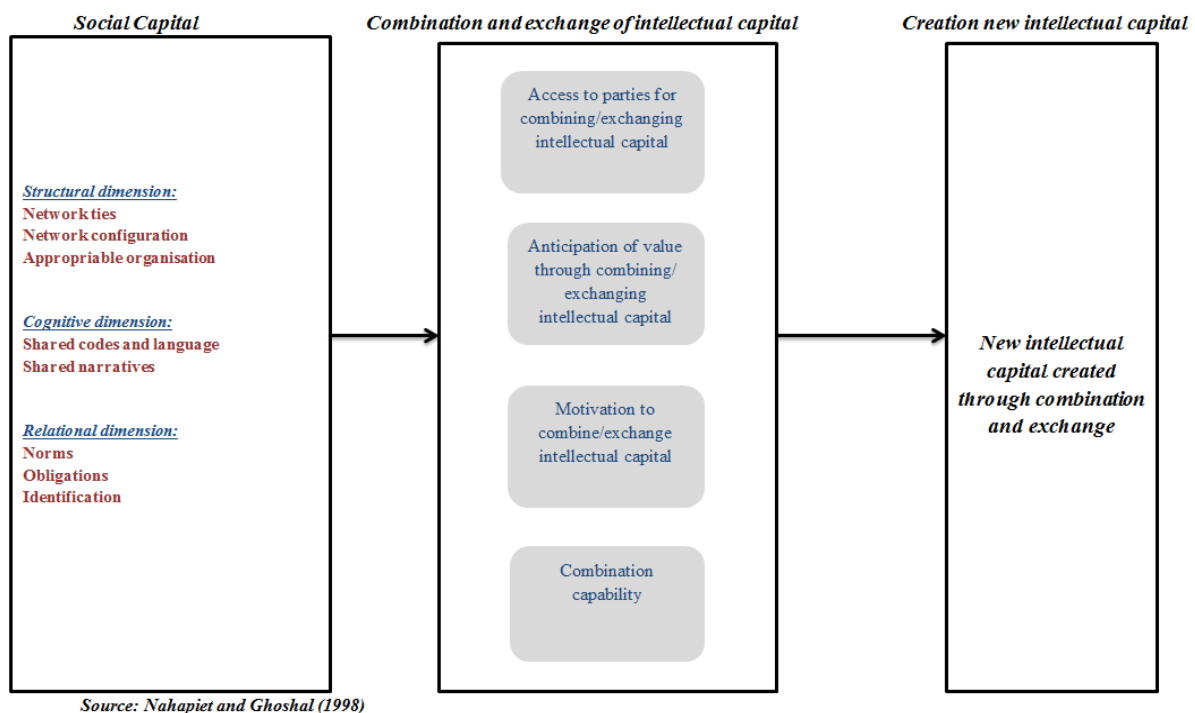


Figure 3. 1 Nahapiet and Ghoshal's social capital model

Structural Dimension

The structural dimension of social capital refers to the patterns of relationships between people. This dimension generally has implications for the accessibility of knowledge as it is characterised by network ties and network configuration. Network ties are the connections between organisational members which facilitate information flows and work as channels for knowledge and resources exchange (Bolino *et al.*, 2002). Nahapiet and Ghoshal (1998) highlight that “network ties influence both access to parties for combining and exchanging knowledge and anticipation of value through such exchange” (p. 252). However, Subramaniam *et al.* (2013) add that the flexibility and ease of information exchange in network configuration are affected by the network density, connectivity and hierarchy. Burt (1992) argues that individuals with a network that is rich in information will benefit from gaining access to that information and facilitating the sharing of it. Consequently, they also become facilitators of knowledge creation and sharing.

Relation dimension

The relational dimension refers to the interpersonal nature of relationships. Subramaniam *et al.* (2013) suggest that this relationship can be developed “over time between people, including friendship, respect, approval, prestige, motive for membership of a network, obligations, trust and a sense of identity with the network” (p. 954). According to Szulanski (1996), the existence of arduous relations between the source and the recipient is one of the most important obstacles to the transfer of best practice within organisations. Building a climate of respect, openness and trust, for instance, is likely to enhance relationships. Regarding the latter, Cheung *et al.* (2016) identified a large body of research evidence for a positive relationship between the level of trust among individuals and their willingness to engage in social exchange and to be cooperative and communicative. Subramaniam *et al.* (2013) assume when individuals identify with the group’s norms, goals and outcomes, a sense of identity with the network is created. Moreover, Kramer and Goldman (1995) find that identification with a collective body enhances the concern for collective processes and outcomes, which in turn increases the chances of information flow and teamwork. Recently, Bandiera, Barankay and Rasul (2008) find friendship ties among workers affect firm productivity.

Cognitive dimension

The cognitive dimension refers to the shared language, meaning and interpretations of the stakeholders, which are all essential for information/knowledge exchange. In particular, Subramaniam *et al.* (2013) argue the cognitive dimension, through sharing codes and language engenders a common understanding of the collective goals and appropriate conduct within an organisation regarding what is relevant and acceptable governance behaviour. Nahapiet and Ghoshal (1998) list the ways in which the cognitive dimension affects the conditions for the combination and exchange of intellectual capital. First, the cognitive dimension makes it easier to gain access to people and their information. Second, the cognitive dimension provides a common frame of reference through which to identify and interpret a situation or problem. Third, the cognitive dimension enhances combination capability where people with different types of overlapping knowledge are able to combine and share information. Moreover, according to Subramaniam *et al.* (2013), the cognitive dimension can also be critical for organisational sense-making. Hence, shared language and shared narratives are potentially critical with regard to coordination and decision-making.

Leonard-Barton (1995) finds the acceptance of diversity; openness to criticism and a tolerance regarding failure are norms that help to create intellectual capital. However, Subramaniam *et al.* (2013) point that how the different governance concepts and dimensions have come to be understood and translated in the practice of governance remains unclear. For instance, the shared understanding of “openness”, “human resource capacity”, and similar governance-related concepts is vital for clear, effective communications for good governance. From a governance viewpoint, the social norms of honesty and teamwork are among the factors that can establish a strong foundation for engendering the appropriate attitudes and behaviour. Further, relational aspects will involve not only having a clear sense of one’s own role but also other staff members’ governance functional roles.

Broadening the focus of governance paradigm shifts our theoretic attention from the formal component of governance structure including structures and processes to also consider the informal component concerning organisational culture and employee behaviour. Together, these two components are critical to the success of an organisation in terms of achieving its goals (Subramaniam *et al.*, 2013). In a way that is analogous to the complementary

components of public governance, the central tenet of social capital theory is described as “the aggregate of resources embedded within, available through, and derived from the network of relationships possessed by an individual or organisation” (Inkpen and Tsang, 2005, p. 151). More subtly, when applied to public governance, social capital theory provides a more comprehensive outlook toward achieving coordination and performance through structural, relational and cognitive dimensions.

3.2.3 Stakeholder Theory

Stakeholder theory has been gaining in importance (e.g. Freeman, *et al*, 2010; Schwartz and Carroll, 2008), and is now central to the business and society field (Lankoski, Smith and Wassenhove, 2016). In the public sector, governments worldwide appear to be experimenting with new approaches and forms of governance, such as interactive decision-making and stakeholder involvement (Klijn 2008; Edelenbos and Klijn 2006). As a consequence, Schafer and Zhang (2017) claim stakeholder management should be a practical matter. Interestingly, they insist that the issue is now no longer whether public administrators should involve the external stakeholders, but in what way. Tihanyi, Graffin, and George (2014) encourage scholars to “rethink their approach to governance research by considering stakeholder engagement” (p. 1535).

Stakeholder theory has been receiving increased attention in the academic dialogue in a wide array of disciplines and perspectives (Harrison and Wicks, 2013; Jones, Harrison and Felps, 2018; Bundy, Vogel and Zachary, 2018). An internal memorandum of the Stanford Research Institute (SRI) in 1963 was the first to employ the term “stakeholder” in the management literature. This term was defined by the Stanford Research Institute as those groups on which the organisation is dependant for its continued survival (Freeman 1984, p. 31). According to this definition, ‘stakeholders’ are limited to those whose needs were perceived to be the sole goals of a business (Sen and Cowley, 2013). Latterly, Freeman (1984) has integrated the stakeholder concepts into a coherent construct and redefined stakeholders as “any group or individual who can affect or is affected by the achievement of the firm’s objectives” (p. 47). Under the new, revised concept, organisations are required to address a set of stakeholder expectations, and management choice is a function of

stakeholder influence (Sen and Cowley, 2013). However, this wider consideration of stakeholders has rarely been explored in the literature.

Organisations that seek to serve the interests of a broad group of stakeholders will create more value over time (Harrison and Wicks, 2009), where stakeholder theory is a vehicle for connecting ethics and strategy (Phillips, 2003). Nevertheless, since the publication of Freeman (1984), the definitions of stakeholder have varied in the literature and there is terminological confusion. In addition, a large body of literature has emerged that is varied in nature (Deegan and Unerman 2006). Crucially, Scherer and Patzer (2011) and Harrison and Wicks (2013) find many different interpretations of basic the stakeholder concept, which makes theory development difficult. In summing up, Lankoski, Smith and Wassenhove (2016) find the stakeholder theory approaches range from those that define stakeholders broadly and address their multilateral interests (e.g. social interests) to those focus strictly on creating value for a delimited set of stakeholders for the effective management of an organisation.

Table 3.2 shows the range of 'stakeholder' definitions proposed by researchers that explains the rapid development over the last three decades and how the stakeholder concept has evolved over time and varies among scholars. Sen and Cowley (2013) analyse the definitions of stakeholder in the literature and conclude that "stakeholder theorists neither reject Friedman's (1962) idea of profit maximisation as the only goal, nor support the view that managers only have moral obligations toward shareholders" (p.415). They find scholars argue for two basic logics. First, in order to perform well, managers need to pay attention to a wide array of stakeholders (e.g. local community and environmental lobbyists) and, second, "managers have obligations to stakeholders which include, but extend beyond shareholders" (p.415).

With some dissent, stakeholders are ranked into two groups according to Dunham *et al.* (2006) using the terms 'cooperation' and 'collaboration'. Cooperation is used for stakeholders who affect or are affected by the business in the community, whereas collaboration is used for stakeholders on whom the business relies for support: employees, consumers and suppliers. In fact, to improve performance and grow the business successfully, Freeman *et al.* (2010) assert organisations need to inspire their employees.

Stakeholder theory help scholars and managers to understand relationships between organisations and their stakeholders, as well as some of the performance outcomes of these relationships. More specific to the arguments in this thesis, when applied to human capital, stakeholder theory posits that organisations’ human capital values and performance are driven by the norms of ethical climate, for instance, fairness, trustworthiness, care, and respect (Jones, Harrison and Felps, 2018).

Table3. 2 *The range and development of the ‘stakeholder’ definition*

<i>Source</i>	<i>Definitions/explanations</i>
Stanford memo (1963)	Those groups without whose support the organisation would cease to exist (cited in Freeman and Reed. 1983)
Rhenman (1964)	“are depending on the firm in order to achieve their personal goals and on whom the firm is depending for its existence” (cited in Nasi, 1995)
Ahlstedt and Jahnukainen (1971)	“driven by their own interests and goals are participants in a firm, and thus depending on it and whom for its sake the firm is depending” (cited in Mitchell, Agle and Wood (1997, p. 858)
Freeman and Reed (1983, p. 91)	“can affect the achievement of an organization's objectives or who is by the achievement of an organization's objectives”
Freeman (1984, p. 46)	“can affect or is affected by the achievement of the organisation’s objectives”
Freeman and Gilbert (1987, p. 397)	“can affect or is affected by a business”
Cornell and Shapiro (1987, 9. 5)	“claimants" who have "contracts”

<i>Source</i>	<i>Definitions/explanations</i>
Bowie (1988, p. 112)	"without whose support the organization would cease to exist"
Evan and Freeman (1988, p. 79)	"benefit from or are harmed by, and whose rights are violated or respected by corporate actions"
Alkhafaji (1989, p. 36)	"groups to whom the corporation is responsible"
Carroll (1989, p. 57)	"asserts to have one or more of these kinds of stakes"-"ranging from an interest to a right (legal or moral) to ownership or legal title to the company's assets or property"
Freeman and Evan (1990)	Contract holders
Thompson <i>et al.</i> (1991, p. 209)	In "relationship with an organization"
Savage <i>et al.</i> (1991, p. 61)	"have an interest in the actions of an organization and...the ability to influence it"
Hill and Jones (1992, p. 133)	"constituents who have a legitimate claim on the firm...established through the existence of an exchange relationship"
Brenner (1993, p. 205)	who supply "the firm with critical resources (contributions) and in exchange each expects its interests to be satisfied (by inducements)" "having some legitimate, non-trivial relationship with an organization [such as] exchange transactions, action impacts, and moral responsibilities"
Carroll (1993, p. 60)	"asserts to have one or more of the kinds of stakes in business-may be affected or affect"
Wicks <i>et al.</i> (1994, p. 483)	"interact with and give meaning and definition to the corporation"

<i>Source</i>	<i>Definitions/explanations</i>
Clarkson (1995, p. 106)	“bear some form of risk as a result of having invested some form of capital, human or financial, something of value, in a firm”
Donaldson and Preston (1995, p. 85)	“Persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activities”
Mitchell <i>et al.</i> (1997)	Possession of attributes: power, legitimacy and urgency
Freeman (2002, p. 39)	“...redistribution of benefits...redistribution of important decision-making power to all stakeholders”

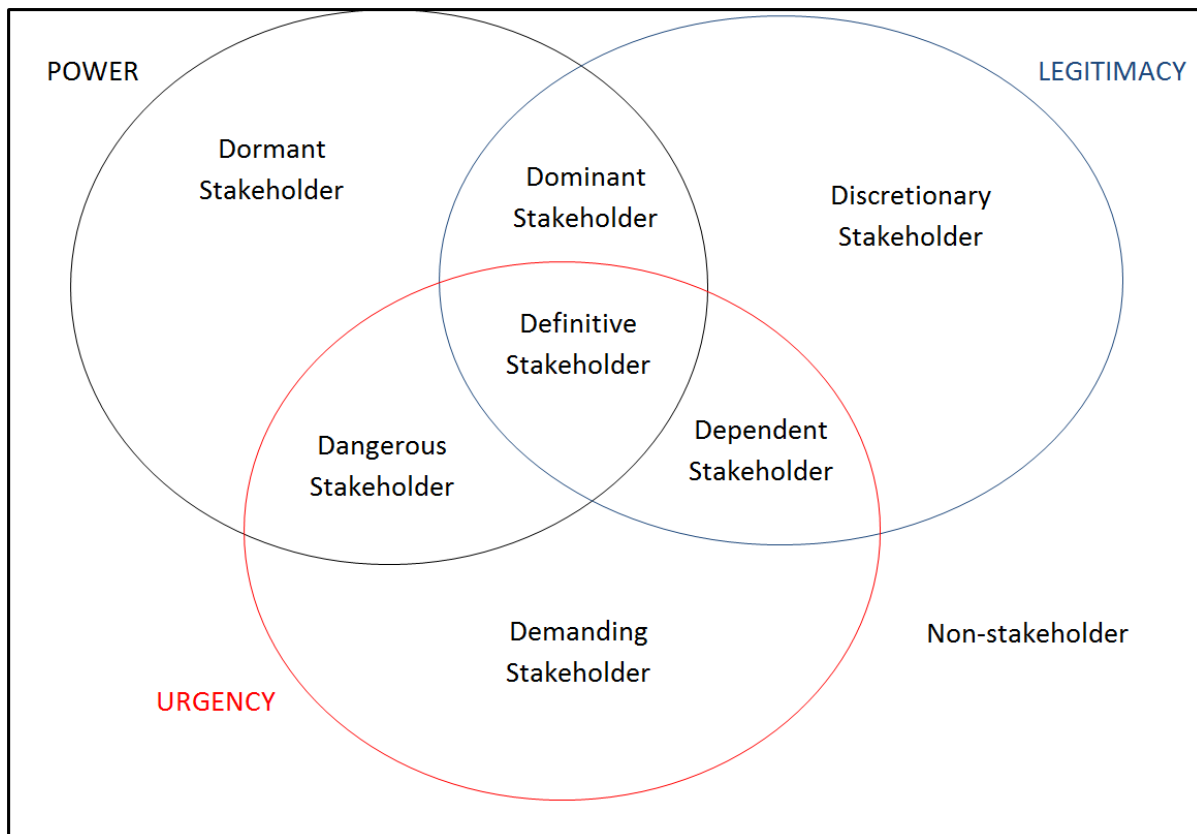
Source: the author

In the literature on stakeholders, the relative importance of individual stakeholders is debated and different models have been proposed to classify this group. Recently, stakeholder theorists argue different kinds of value should be simultaneously considered during decision-making (Linden and freeman, 2017). In other words, organisations’ leaders are “guided by many starts” (Mitchell *et al.* 2016, p.267). To understand the importance of individual stakeholders more clearly, Sen and Cowley (2013) draw our attention to a stakeholder salience model developed by Mitchell, Agle and Wood (1997), which is based on stakeholders’ possession of one or more of the three main attributes: power, legitimacy and urgency.

As figure 3.2 depicts, stakeholder typology consists of three major classifications and seven minor types of stakeholder. First, latent stakeholders are stakeholders who possess only one attribute and have low salience. More specifically, the model names this type using the terms: dormant, discretionary and demanding, respectively, depending on the type of attribute possessed: power, legitimacy or urgency. Second, with moderate salience, expectant stakeholders possess any two of the three attributes. In particular, expectant stakeholders having power and legitimacy attributes are called dominant, expectant stakeholders having legitimacy and urgency attributes are called dependent, and expectant stakeholders with power and urgency attributes are called dangerous stakeholders. Lastly,

when stakeholders possess all three main attributes, their claim is prioritised and they have an immediate mandate by the management. In this heuristic, Sen and Cowley (2013) add that stakeholders can shift between Mitchell, Agle and Wood's model categories by gaining or losing any of the main attributes.

However, Harrison and Wicks (2013) argue "if the only relevant value created by a firm is economic then the legitimacy arguments may actually feed animosity among stakeholders, that they are all vying for a piece of the economic pie, and each wants a larger share" (p. 98). Similarly, Bosse, Phillips and Harrison (2009) agree that, even if economic returns are fundamental to an organisation's stakeholders, most stakeholders desire other things as well. Although differences of opinion still exist, recently, it appears that a general agreement has emerged that paying attention to these other factors may prove critical to understanding why some organisations succeed over time, why stakeholders are drawn to (and remain with) certain organisations, and which organisations do the most for their stakeholders. Indeed, other scholars have called for more investigation in order to understand stakeholders' actions and responses more clearly (Laplume, Sonpar, and Litz, 2008; Rowley and Moldoveanu, 2003). Importantly, Lankoski, Smith and Wassenhove (2016) argue the importance of viewing stakeholders from their standpoint in order to offer a "stakeholder-centered view on stakeholder value" (p.229). In a nutshell, despite more than 40 years of research, stakeholder theory still needs further development (Agle et al., 2008; Freeman et al., 2010; Jones and Felps, 2013).



Source: Mitchell, Agle and Wood (1997)

Figure 3. 2 Stakeholder typology

The stakeholder-based perspective of performance

The concept of stakeholder value is central to all perspectives of stakeholder theory (Lankoski, Smith and Wassenhove, 2016). In order to define value that extends beyond the economic value that stakeholders seek, stakeholder theory, with its four factor perspective, was developed by Harrison and Wicks (2013). Despite the importance of stakeholder theory, Harrison and Wicks (2013) find little attention has been devoted in the existing literature to questions regarding what it means to create value for stakeholders and how this might be measured. Similarly, Lankoski, Smith and Wassenhove (2016, p.227) argue that, “stakeholder value is surprisingly neglected in the literature”. More precisely, organisations must understand what that value is and how stakeholders experience it in order to create, rather than destroy, value for stakeholders. The concept of value should encompass both economic and non-economic (Harrison and Wicks, 2013) and tangible and intangible elements (Harrison *et al.*, 2010). In other words, the concept should be approached holistically (Santos, 2012).

In essence, decision-making in stakeholder theory is often seen as the simultaneous pursuit of the “utility functions” of the organisation and its stakeholders (Tantalo and Priem 2016; Hill and Jones 1992; Harrison, Bosse and Phillips 2010; Harrison and Wicks 2013). Harrison and Wicks (2013, p.101) state that the utility function, “expresses the stakeholder’s preferences for particular types of value”. For instance, the value of an inspiring job for an employee may not stem from some kind of value, such as profit (Linden and Freeman, 2017). Hence, stakeholder value is defined as “the subjective judgment of a stakeholder, occurring at the individual level, of the total monetary and non-monetary utility experienced as a result of some decision or action by an organisation” (Lankoski, Smith and Wassenhove, 2016, p.229). More specific to the arguments outlined in this study, employees, customers and the general public are examples of individual stakeholders in the literature. To this end, McVea and Freeman (2005) argue stakeholders should be seen as real people with names and faces. Interestingly, Harrison and Wicks (2013) considering stakeholders as heterogeneous groups, whereby, “each stakeholder has a different utility function” (p. 113).

Adam Smith (1776) provides at least two important perspectives on ‘value’. First, individuals know what is best for them. In other words, value is something that individuals should define for themselves and not allow governments or others to do so on their behalf. Second, he asserts that healthy markets allow customers to choose. Harrison and Wicks (2013) argue such a market *also* operates for other stakeholder roles, such as employees by asking questions such as, work for whom, under what terms and for what compensation. Moreover, they draw our attention to the value as the measurement of pleasure and pain, which is a key in the evolution of economic thought, by maximising pleasure and minimising pain. However, Mill (1961) believes critical differences exist across the different types of pleasure and pain, and that value is more than simple pain and pleasure. Therefore, the notion of “value” within utility becomes complicated. Indeed, Mill’s view has had a wide influence on scholars. As a consequence, different interpretations of utility have been posited, such as happiness (Sidgwick, 1981) and well-being (Shaw, 1999). In the management discipline, happiness is seen as, “as a potentially useful way to think about measuring how stakeholders feel about the value they receive through their interactions with a firm” (Harrison and Wicks, 2013, p. 100).

Value, as a relationship with utility and the measurement of outcomes, has been tied to a variety of factors: value as determined by price; value as determined by labour; value as determined by exchange; and value as determined by production. The stakeholder-based perspective of performance tends to obscure other critical aspects of utility that extend beyond profitability and economic returns. To this end, Harrison and Wicks (2013) draw upon some of the existing theory on utility and value from a stakeholder perspective. According to the stakeholder-based perspective of performance, value is defined, “broadly as anything that has the potential to be of worth to Stakeholders” (p. 100), whereas the term ‘utility’ is a reflect value that the stakeholder receives which actually has merit in his/her eyes. Arguably, utility “expresses the stakeholder's preferences for particular types of value” (p. 101).

In order for organisations to be able to retain their support and participation and thrive over time, they must tend to make their stakeholders better off. Notably, the stakeholder theory literature argues that, by treating stakeholders well and managing their interests, organisations create value along a number of dimensions and so benefit the organisational performance (Donaldson and Preston, 1995; Freeman, 1984; 1994; Freeman, Harrison and Wicks, 2007; Harrison, Bosse and Phillips, 2010; Jones, 1995; Jones and Wicks, 1999). In more practical terms, Freeman *et al.* (2010) find the existing empirical literature regarding stakeholder theory (Berman *et al.*, 1999; Choi and Wang, 2009; Hillman and Keim, 2001) reflects a positive relationship between stakeholder-oriented management and organisational performance. However, Harrison and Wicks (2013) shed light on two important points regarding those empirical studies: performance is almost always measured in terms of financial returns, and is the independent variable rather than the dependent variable. In other words, the empirical stakeholder literature has adopted the idea that financial returns are the most relevant measure of the value created by an organisation.

Following Freeman's (1984) classical perspective, all stakeholders are customers. In this vein, Harrison and Wicks (2013) demonstrate all stakeholders “have decisions to make in terms of whether the utility a firm provides them is greater than what they give up from other opportunities” (p.101); namely, based on individual preferences, stakeholders themselves determine their own utility functions. Crucially, stakeholders’ preferences are based on their perceptions regarding how relationships, interactions and transactions with

the organisation influence the utility they receive (Smith, 1776; Friedman, 1970). To sum up, organisational performance encompasses the total value created by the organisation through its activities – it is the sum of the utility created for each of an organisation's legitimate stakeholders: customers, employees, suppliers of capital or any groups to whom the organisation owes an obligation based on their participation in the cooperative scheme that constitutes the organisation and makes it a going concern (Phillips, 2003). Therefore, even though financial performance is important to many of an organisation's stakeholders, the stakeholders have various important aspect of value.

According to the stakeholder literature, Harrison and Wicks (2013) demonstrate the need for a more thorough evaluation of the concept of value. Indeed, the stakeholder-based perspective of performance is a way of tackling this issue. Based on the managerial perspective, the stakeholder-based perspective of value helps managers to focus on phenomena that lead to higher performance based on what is actually measured (Kaplan and Norton, 1992; Sachs and Riihli, 2011). Harrison and Wicks (2013) explain that, “rather than focusing primarily on economic measures of performance, a stakeholder-based performance measure challenges managers to examine more broadly the value their organisations are creating from the perspective of the stakeholders who are involved in creating it. Thus, it gives managers the information they need to engage stakeholders where they are and enhance managerial ability to use such insights to create more value. At its core, this perspective is about creating a higher level of well-being for the stakeholders involved in a system of value creation led by the firm” (p. 98). In formulating the stakeholder-based perspective of performance, Harrison and Wicks introduce a new theme, conflict or cooperation, to the stakeholder literature, in addition to physical goods and services, organisational justice, organisational affiliation, and opportunity costs and interconnectedness of factors. In adopting this approach, this study responds to the increasing calls made by researchers for more multi-theoretic approaches that recognise the wider accountabilities of stakeholders' behavioural aspects within an organisation (Desai, 2018).

Conflict or Cooperation

Based on agency theory, the interests of stakeholders are portrayed as heteroscedastic or aimed in different directions in much of the existing literature. At odds with this, one of the

most plausible arguments, that is repeated in the stakeholder literature (Dyer and Singh, 1998; Freeman, 1984; Freeman, Wicks and Parmar, 2004; Harrison and Wicks, 2013), is that organisations tend to perform better when they see stakeholder interests as joint, or at least largely overlapping. Such a view is supported by Freeman, Harrison and Wicks (2007) who find stakeholder theory highlights the underlying overlap of stakeholder interests in generating value. Moreover, stakeholder theory describes the operations of an organisation as a mechanism for making all stakeholders better off over time. Sachs and Rühli (2011) demonstrate the intertwined mechanism whereby each stakeholder provides resources or influence in exchange for some combination of tangible and/or intangible goods because stakeholders' interests are inseparably connected in a system of value creation, which means that the quality of each stakeholder's contributions to the system influences the total value created in the system.

Notwithstanding these differences, Harrison and Wicks (2013) find in the real world, organisations are able to create sufficient overlap in stakeholders' interests. Importantly, shared norms that go beyond strict self-interest lead to stakeholder cooperation and generate utility for the stakeholders. Over the past three decades, studies from a variety of disciplines have provided important information regarding how most people operate within norms of fairness and reciprocation (Becker, 1986; Cialdini, 1984; Cropanzano and Mitchell, 2005; Fehr and Gächter, 2000; Rabin, 1998), through engaging in, "enabling behaviours like trust that lead to increased value creation" (Harrison and Wicks, 2013, p. 103).

The stakeholder-based performance perspective draws on the notions that all of an organisation's legitimate stakeholders have customer-like power, and that the utility created for one stakeholder is dependent, in part, on the behaviour of the organisation's other stakeholders. Furthermore, stakeholders determine their own utility functions. The perspective follows Harrison, Bosse and Phillips (2010) by considering both the tangible value that stakeholders seek, and also the process and distribution of value; in addition to Barney, Ketchen and Wright (2011) by consistent that perception influences utility.

The stakeholder-based performance perspective focuses on four factors that emerge from focusing on both stakeholders and the value they seek from their relationship with an organisation. These four factors are: "1) stakeholder utility associated with actual goods and

services, 2) stakeholder utility associated with organisational justice, 3) stakeholder utility from affiliation, and 4) stakeholder utility associated with perceived opportunity costs” (Harrison and Wicks, 2013, p. 103).

Harrison and Wicks (2013) list two reasons why these four factors have been chosen. First, they have been identified in previous research as important to stakeholders (Ashforth and Mael, 1989; Bosse *et al.*, 2009; Spiller, 2011) and, second, they are sufficiently broad to incorporate much of what stakeholders seek through their interactions with an organisation. Additionally, these four factors are closely associated with the motivation of stakeholders to cooperate in the value-creating activities of the organisation. Simultaneously, each category is important at the individual level, and related to the value that is sought by the group of stakeholders associated with the organisation. Therefore, all of these factors are important in establishing how and why they cooperate successfully over time.

Physical Goods and Services

The most obvious source of utility for stakeholders is found in the physical goods and services (including the various forms of financial remuneration) provided by the organisation (Harrison and Wicks, 2013). The amount of value is a major area of interest within the field of marketing, and several theories have been developed in order to understand how customers determine the amount of value they are willing to part with in exchange for something they desire. The stakeholder-based performance perspective has been influenced by Barney’s (2011) idea that a reasonable goal for the organisation is to create goods and services that are perceived as providing a highly positive ratio between the value surrendered and the utility received and is applicable to all of an organisation’s legitimate stakeholders. For instance, employees give their time, effort, etc., in exchange for wages and other tangible and intangible benefits.

Organisational Justice

Since the work of Blau (1964) and Simon (1966), important insights have been provided into the role of organisational justice, with several types of fairness, to value creation because people reciprocate and value being treated fairly. An instance was provided by Akerlof (1982) of employees who are paying more than their opportunity cost of staying with a

particular employer is likely to reciprocate by providing more than their minimal effort at work. In a variety of disciplines, scholars demonstrate that the majority of people operate better within norms of fairness and reciprocation (Becker, 1986; Cialdini, 1984; Cropanzano and Mitchell, 2005; Fehr and Gächter, 2000; Rabin, 1998).

Perhaps the most important area for value creation is organisational justice (Harrison and Wicks, 2013). Various types of organisational justice appear in literature: Procedural justice, Interactional justice, and Distributional justice. Colquitt *et al.* (2001) explain that procedural justice pertains to the fairness of the procedures and rules used to assist in making decisions that have an impact on another party. Interactional justice describes the ways in which people interchangeably treat each other during regular interactions (Cropanzano, Bowen and Giulliland, 2007). Adams (1965) and Rabin (1993) explain distributional justice as the, “actors believe that material outcomes received as a result of transactions with another party are perceived as fair in comparison with the material outcomes received by other parties” (Harrison and Wicks, 2013, p. 104).

However, from an economic perspective, an organisation that pays more than an employee's opportunity cost is wasting resources. A more recent argument against a purely economic perspective is that the reciprocation argument does not apply to financial remuneration alone (Harrison and Wicks, 2013). Even though distributive justice is most closely associated with economic factors, it is supplemented by perceptions of procedural and interactional justice, as the stakeholders assess how much utility they are receiving from an organisation. Indeed, this argument is in line with those of previous studies. Harrison, Bosse and Phillips (2010) argue providing stakeholders with an amount of utility that they perceive as favourable are the key. Harrison and Wicks (2013) provide an example of this whereby an organisation might provide a wage and benefits that satisfy, but do not exceed, the employees' expectations, based on distributive justice. However, the employees might still receive utility from the organisation that is worthy of positive reciprocity due to the way in which they are treated from the perspective of both procedural and interactional justice. Additionally, Bewley (1998) finds that ‘negative reciprocity’ has a negative impact on human behaviour.

Thus far, the discussion has focused on dyadic relationships between an organisation and each of its individual stakeholders, and the resulting reciprocity. However, stakeholder theory also provides a lens for understanding that how an organisation treats one stakeholder can influence its relationships with other stakeholders (Freeman, Harrison and Wicks, 2007; Rowley, 1997). In other words, the influence of the whole group of stakeholder relationships on the value created is greater than the sum of the influence of each relationship taken separately. This form of interdependence is associated with a phenomenon called 'generalised exchange' (Ekeh, 1974).

Generalized exchange involves multiple actors who are part of an integrated set of transactions in which reciprocations are indirect in the sense that there is no one-to-one correspondence between what the actors take from one actor and give to another (Ekeh, 1974; Bearman, 1997). Generalised exchange explains why stakeholders are sometimes willing to sacrifice some of the value they receive if they believe that this is in the best interests of other stakeholders or the organisation over time. For instance, employees may be willing to take a pay cut or suppliers may be willing to re-write a contract if they believe that this will benefit the organisation's entire network of stakeholders (Harrison *et al.*, 2010). Hence, generalised exchange partly provides an answer to the question of why the combined stakeholder relationships can be greater than the sum of its parts. Consequently, the way in which an organisation treats one stakeholder influences its relationships with other stakeholders.

Mayer, Davis and Schoorman (1995) argue when trust is understood as the willingness of one party to be vulnerable to another with the expectation of non-opportunistic behaviour, this is important to both generalised exchange and reciprocity, and is fostered by the presence of fairness within the relationships among the parties. One stakeholder is probably unlikely to exhibit behaviour such as generosity, incremental effort, and loyalty unless there exists trust to reciprocate by distributing some of the additional value created back to the stakeholder (Cyert and March, 1963). This additional value might take the form of: (1) more or better tangible goods and services including distributional (financial reparation), (2) procedural (greater consideration of the stakeholder's participation in the organisational decision-making processes), or (3) interactional (better treatment) (Harrison and Wicks,

2013). Counterintuitively, trust is also important during the exchange of sensitive valuable information between stakeholders and the organisation (Harrison *et al.*, 2010).

Organisational affiliation and psychological ownership

Utility through affiliation occurs when the actors are able to obtain benefits from their membership of social networks (Lee, Lee and Pennings, 2001; Nahapiet and Ghoshal, 1998; Portes, 1998). Employees with a strong sense of ownership satisfy their basic human need for place and wish to continue their organisational affiliation (Van Dyne and Pierce, 2004). From a stakeholder perspective, group affiliation can motivate the stakeholders to care about one another's interests and so the overall success of the organisation (Putnam, 2000; Hartman, 2011). Hartman (2011) suggests stakeholders' cooperation can support collective action that benefits all stakeholders. When stakeholders desire affiliation, they are encouraged to contribute towards creating more value, while discouraged from engaging in behaviour that destroys it. Utility through affiliation may also provide both esteem, which means that people feel as though they are supporting an organisation, and satisfaction, which refers to an actual feeling of happiness. However, Harrison and Wicks (2013) posit the utility that stakeholders receive from affiliation is only part of the package, and that it needs to be interwoven with the other factors: tangible utility, justice and fairness, and opportunity cost.

Utility from affiliation is received from stakeholders when behaviours within organisations are consistent with things that are valuable to the stakeholders. Indeed, Ashforth and Mael (1989) show that social identity theory explains this phenomenon by the fact that people, to understand who they are, tend to classify themselves into social categories associated with organisations and other types of groups. Therefore, for example, if the organisation embodies characteristics that are considered valuable by its employees, organisational affiliation can be provided through feelings of connectedness, esteem, and empowerment (Harrison and Wicks, 2013; Hogg and Tumer, 1985).

As employees invest energy, effort, time, and attention in the organisation, they develop feelings of 'psychological ownership' which provides a sense of responsibility, shared interest, and motivation to work at high levels (Pierce, Rubenfeld and Morgan, 1991; Vandewalle, Van Dyne and Kostova, 1995). Boatright (2004) argues employees' feelings of

'ownership' and their participation in decision-making lead to 'employee governance'. Psychological ownership, as a state of mind, is defined as a feeling that one has ownership over something, even if this does not constitute legal ownership (Pierce *et al.*, 2001, 2003). Indeed, ownership is frequently framed in terms of association (Beggan and Brown, 1994). When considering relationships, the greater the understanding and depth of the other person, the greater the sense of ownership (Brown, Crossley and Robinson, 2014).

Opportunity costs and the interconnectedness of factors

Heretofore, utility is defined in terms of the tangible benefits (products and services), the intangible benefits (fairness), and the benefits of affiliating with particular organisations. The notion of opportunity costs is embedded within each of three factors (Spiller, 2011; Kerins, Smith and Smith, 2004). As mentioned previously, utility is based on perception (Barney, Ketchen and Wright, 2011), and perception is influenced to a great degree by whether or not the stakeholders believe that they are getting a good deal from the organisation compared with what they might expect to receive through interactions with other organisations that serve similar purposes. For instance, the members of an organisation's community are likely to compare the amount of value they receive in terms of tax revenues or employment opportunities to other in the community of similar size and scope or even organisations in other communities. Suppliers, customers, financiers, and employees make similar comparisons.

What emerges from this discussion is a picture of an organisation at the centre of a network of stakeholders whose behaviour is influenced, in part, by that organisation's treatment of other stakeholders (Susniene & Vanagas, 2006). It is a value creation cycle, consistent with the systems perspective, whereby what happens in one part of a system influences other parts of the system directly, and that eventually the influence returns to the initial part of the system to reinforce the original occurrence. For example, consider a case in which employees believe that they have received a good deal in terms of the total value they receive from an organisation, compared with their opportunity cost. Those employees, according to the principle of reciprocity, are likely to contribute greater effort and loyalty than would otherwise be the case (Vandewalle, Van Dyne & Kostova, 1995). Their behaviour can result in better or cheaper products, which allows the organisation to increase its value proposition to its customers. As the value to the customer increases, so does the demand.

Demand leads to success, which provides more value for managers and employees. An assumption important to this cycle is that the organisation will continue to incorporate distributional justice such that a portion of the incremental value will be distributed back to the employees in order to reinforce their behaviour.

3.2.4 The Institutional Theory

The institutional theory explores what drives and conditions the actions of institutionally-situated actors and how governance arrangements are stabilized (Torfing and Triantafillou, 2016). It “sees institutions as defined by and shaped by structured rules and shared meanings that have a regulative effect” (Beszter, Ackers and Hislop, 2015, p. 366-367). In other words, the core purpose of the theory is to understand the acquisition of meaning in the institutionalisation process (Suddaby, 2010). Essentially, a series of innovative studies that asked why organisations tend to look alike identified the logics of institutional theory (Meyer and Rowan, 1977; Zucker, 1977; DiMaggio and Powell, 1983). The institutional theory’s origins lie in the late 1970s and early 1980s. Philip Selznick, who is the ‘father’ of institutional theory, was concerned about both how organisations became institutions, and how institutional processes affect organisations (Greenwood, Hinings and Whetten, 2014). Recently, institutional theory has become one of the dominant perspectives within management and organisation theory (Beszter, Ackers and Hislop, 2015; Greenwood *et al.*, 2008). However, “the theory remains more of an orientation than a scientific theory. Differences among institutional arguments are considerable, but a few central issues themes do unite the approach” (Frumkin and Galaskiewicz, 2004, p. 284).

The Institutional theory has often been employed in non-profit organisations studies, including colleges and universities (Brint and Karabel 1991; Kraatz 1998), associations (Halliday, Powell, and Granfors 1993), and museums (DiMaggio 1991). Other studies have focused on for-profit organisations, such as large firms (Davis and Greve 1997; Haunschild and Miner 1997; Holm 1995), and high-tech companies (Powell 1998; Suchman 1995). Recently, the role of institutional theory in the public sector has received increased attention across a number of studies (Jacobs, 2012; Meyer *et al.* 1988; Gomes, Carnegie and Rodrigues, 2008; Ezzamel, Robson, Stapleton, and McLean, 2007; Modell, 2007; Nor-Aziah and Scapens, 2007). This is because one effective way to link theoretical development and

empirical analysis in public administration is by using the institutional theory (Peters and Pierre, 2017).

From strategic perspective, the theory claims that organisations have to be legitimate rather than efficiency and financial success in order to survive for a long time. Thus, Frumkin and Galaskiewicz (2004, p. 286) assert “institutional theory has never explicitly theorized that public sector organisations differ that greatly from all other organisation”. Indeed, the institutional theory is an important theory for addressing the structure and performance of the public sector (Peters and Pierre, 2017). Moreover, the impact of institutional forces on public sector organisations should actually be stronger than it is elsewhere. Inextricably, political and legal constraints play a central role in government organisations’ processes (Frumkin and Galaskiewicz, 2004).

Covaleski and Dirsmith (1995) argue that a neo-institutional approach highlights the need to understand the power and self-interest which reside within the various exemplars of formal organisations. However, they criticise the approach for failing to pay sufficient attention to power and interest-based behaviour. Shipton *et al.* (2017, p.249) shed light on the “calls by scholars to focus on the micro rather than the macro implications of institutionalism because institutional logics have a perceptual component that operates cognitively at the level of individuals”. In nutshell, action or intervention within institutions, to actively manage the strategical actor (individual, organisational and societal), has been a central theme of institutional theories of organisations (Cardinale, 2018).

3.3 Development of the conceptual framework

This section will elaborate on the conceptual framework by reviewing the literature and theoretically grounding the hypotheses. This section first presents hypotheses regarding the relationships between governance structure, trust, job resource and empowerment, and then adding the role of psychological ownership leading to innovativeness, and finally supplementing the previous relationship with the role of trust as a moderator.

There is no unified theory about governance (Ansell and Torfing, 2016) because the intertwined mechanisms and accelerated developments in governance cannot be reduced to a simple convergence model (Gospel and Pendleton, 2003). The contributions of this study focus more or less explicitly upon insights from three broad theoretical fields that are rooted in different social science disciplines but have cross-disciplinary relevance for investigating the relationship between governance and innovation. Indeed, “theoretical insights come from demonstrating how the addition of a new variable significantly alters our understanding of the phenomena by reorganizing our causal maps” (Whetton, 1989, p. 493). Bono and McNamara (2011, p. 659) argue “theory alone isn’t enough; it is also important that mediating processes be tested empirically”. They add that, as an area of inquiry becomes more mature, as governance, multiple intermediators may need to be included. To understand the above issues more clearly, this study builds a theoretical framework based on three theories: firstly, social capital theory proposed by Nahapiet and Ghoshal (1998); secondly, the stakeholder theory-based perspective of performance proposed by Harrison and Wicks (2013); and, thirdly, the institutional theory. In response, the present study adds to our understanding of this theoretic relationship an important dimension that has been largely unexplored hitherto. It investigates the prominent role played by the complementarities between governance and human capital within public sector organisations, translating into public sector employees’ innovativeness.

As discussed above, social capital theory addresses an individual’s ability to access information and resources through relationships (Burt 1992). The social capital that the members bring to a group influences the collective actions and effectiveness of that group (Oh *et al.* 2006). Indeed, it is both external and internal in nature (Brown *et al.*, 2017), where internal social capital reflects a member’s access and relationship to others within an organisation and external social capital reflects a member’s connectivity to other individuals

and groups external to the organisation, which provides motivation and opportunities for information exchange.

An intriguing example of social capital theory when applied to governance logics is provided by Subramaniam *et al.* (2013), who use Nahapiet and Ghoshal's social capital model in the context of governance within the public sector by focusing on four major functional areas of governance: risk management, internal audit, strategic planning, and capacity building. They identify ways to enhance interactions and communications among a variety of governance actors from different functional areas. However, one limitation of their study is that Nahapiet and Ghoshal's model was used in isolation, so using it with other conceptualisations, approaches and theories applied to governance might add further insights to the analysis (Subramaniam *et al.*, 2013). Moreover, the perceived utility that arises from justice and fair treatment in social capital is ignored (Harrison and Wicks, 2013). Additionally, Subramaniam *et al.* (2013) argue alternative research methods such as surveys could add further insights. Regarding the latter, it helps different governance concepts and dimensions to be understood and translated in the practice of governance. As argued by Bono and McNamara (2011, p. 659), "theory alone isn't enough". Consequently, this is considered a weakness and a problem in the literature is that most of the variables and intermediators, even when conceptually related to each other, are studied in isolation, whereas other known variables and mediators are not considered.

Social capital is malleable and it is necessary to consider multiple conduits together in a more complex model by including the formal and informal structures of groups and organisations (Oh, Labianca and Chung, 2006). From the social capital perspective, internal and external social capital allows managers and employees to exploit their knowledge more efficiently (Nahapiet and Ghoshal 1998). Thus, the fact that a concentration of managers can have a measureable impact on governance mechanisms is a new area for investigation into the complementary nature of their roles over time under social capital theory (Brown *et al.*, 2017). Additionally, investigating the multilevel effects of the 'team', managers and employees might help to unearth ways to improve the theory (Brown *et al.*, 2017).

To this end, that cooperation, rather than conflict, should be the primary 'team' mind-set. Misangyi and Acharya (2014) examine the combinations of governance mechanisms used by

organisations and find that different governance mechanisms may work together as complements, rather than substitutes, towards higher organisation performance. In other words, governance research has to go beyond the traditional agency conflict between stakeholders and managers (Tihanyi, Graffin and George, 2014). This matched the argument made from the stakeholder theory perspective, suggested by Harrison and Wicks (2013), which an organisation lies at the centre of a network of stakeholders whose behaviour is influenced, in part, by the organisation's treatment of its other stakeholders. Under such a view, different members come together to participate as stakeholders of the organisation, which provides powerful evidence that their interests are overlapping and reinforcing to a substantial degree.

Trust and different types of organisational justice lead to increased value creation. Additionally, when the behaviour within organisations is consistent with things valuable for stakeholders, organisational affiliation emerges (Harrison and Wicks, 2013; Hogg and Tumer, 1985). As employees invest effort, energy, time, and attention in the organisation, they develop feelings of 'ownership', which, in turn, provides a sense of shared interest, responsibility, and motivation to work at high levels (Harrison and Wicks, 2013; Pierce, Rubenfeld and Morgan, 1991; Vandewalle, Van Dyne and Kostova, 1995). Given this, employees with strong feelings of ownership satisfy the basic human need for place and wish to continue their organisational affiliation (Van Dyne and Pierce, 2004). This work highlights the need to understand organisational performance based on the value that an organisation creates for its stakeholders. From a managerial perspective, what was discussed above can be a powerful signal to the stakeholders about their commitment, which can lead to innovation and enhanced efficiency (Harrison and Wicks, 2013).

What emerges from this discussion is a picture of an organisation lies at the centre of a network of stakeholders whose behaviour and ability to access information and resources through relationships is influenced by how the organisation treats them and other stakeholders (Susniene and Vanagas, 2006). Admirably, the institutional theory can play a critical role in understanding this phenomenon because its logics have a perceptual component that operates cognitively at the level of individuals (Shipton *et al.*, 2017). However, Greenwood, Hinings and Whetten (2014) shed light on the possibility that different organisations in the same sector may have different overarching 'logics'. One of

the most frequently-cited studies on public sector innovation is that of Cavalluzzo and Ittnar (2004), who find “the results support institutional theories that claim systems implemented to satisfy external requirements are less likely to influence internal behaviour than are those implemented to satisfy the organization’s own needs” (p.244). Battilana and Dorado (2010) demonstrate how organisations handle multiple logics, and shed light on the importance of the formal structures and human resource practices. More precisely, Shipton *et al.* (2017, p.257) identify, “literature investigating HRM and innovation by bringing institutional theory centre stage”.

Kromidha and Córdoba-Pachón (2017) find the established research approaches investigating the innovation projects in the public sector often rely on the institutional theory (Brown and Thompson, 2011; Luna-Reyes and Gil-Garcia, 2011; Cordella and Iannacci, 2010; Luna-Reyes *et al.*, 2005). Importantly, Goddard *et al.* (2016) argue “institutional theory is a powerful theory when it comes to explaining the adoption of innovations by institutionalised organizations” (p.11). However, very few studies have been based in developing countries. Additionally, to date, very little research has been carried out to compare reform implementation using institutional theory across different public sector settings. Regarding the latter, this is because the ‘sector’ is not a particularly useful distinction to make (Frumkin and Galaskiewicz, 2004). Greenwood, Hinings and Whetten (2014) argue management processes, governance, and stakeholder relations differ profoundly between various categories of organisations in the same sector. As Rainey (1997) mentions, several studies find varying levels of centralization and bureaucratization among government agencies. Shipton *et al.* (2017) suggest that innovation may be “aligned with the institutional parameters that frame and underpin organisational endeavour” (p. 248). Hence, Greenwood, Hinings and Whetten (2014) propose a return to the comparative analysis of organisations in order to recognise and understand organisational differences.

One way this conceptual framework contributes to theory is on the link between ethics and innovation. This research clearly illustrates the importance of including ethics effects in theories explicitly where in literature’s previous, for some reason, “little theory provided for why ethical climate should be associated with various outcomes” (Mayer, 2014, p.436). Organisational ethical climate is an important aspect of the organisational context that has generated a consolidated stream of *stakeholder theory* research. Stakeholder theory is

understood as a vehicle for connecting ethics and strategy (Phillips, 2003). However, surprisingly, Nedkovski *et al.* (2017) find only three articles (i.e. Ruppel and Harrington, 2000; Mulki *et al.*, 2006; DeConinck, 2011), all are conducted in the private sector, that have studied organisational trust as a consequence of ethical climate. The study emphasizes on Vanhala and his colleagues' arguments that trust in the organisation mirrors the employees' positive expectations about its ethical climate (Vanhala, Puumalainen and Blomqvist, 2011; Vanhala and Ritala, 2016).

This conceptual framework also makes theoretical contributions to the understanding of networks in public organisations. This study contributes to *social capital theory* by demonstrating that not only internal but also external social capital networks are helpful theoretical concepts for understanding network effectiveness. Additionally, the study is also unique in that it examines enhancing effects of an intervention. Public organisations have myriad goals in which public managers are likely to practice multiple interventions at once to find the correct mix of activities (Melton and Meier, 2016). However, previous studies on *institutional theory* mainly focused on single intervention, such as training intervention (Kim *et al.*, 2018). Given the growing interest in interventions within the work and organisational contexts, this research demonstrates how the effectiveness of an intervention can be evaluated using multi-resources: comprehensive measuring of performance, task-intervention, and developing capacity.

Based on the theoretical background discussed in this chapter, a conceptual framework is proposed to investigate how the existence of complementarities between key human capital-related constructs and an organisation's governance drives innovativeness. The framework defines good governance dimensions across nine different constructs: integrity, fairness, respecting the rule of law, resilience, openness and accountability, governance network, outcomes measurement quality, task intervention and developing capacity. It hypothesises that governance dimensions will result in employees' trust, empowerment, and job resources, which then leads to innovation. Furthermore, the conceptual model hypothesises that the achievement of empowerment and job resources for employees will result in their sense of psychological ownership, which then leads to innovation. As shown in figure 3.3, the conceptual framework consists of 14 constructs and 12 hypotheses, which are detailed and discussed below:

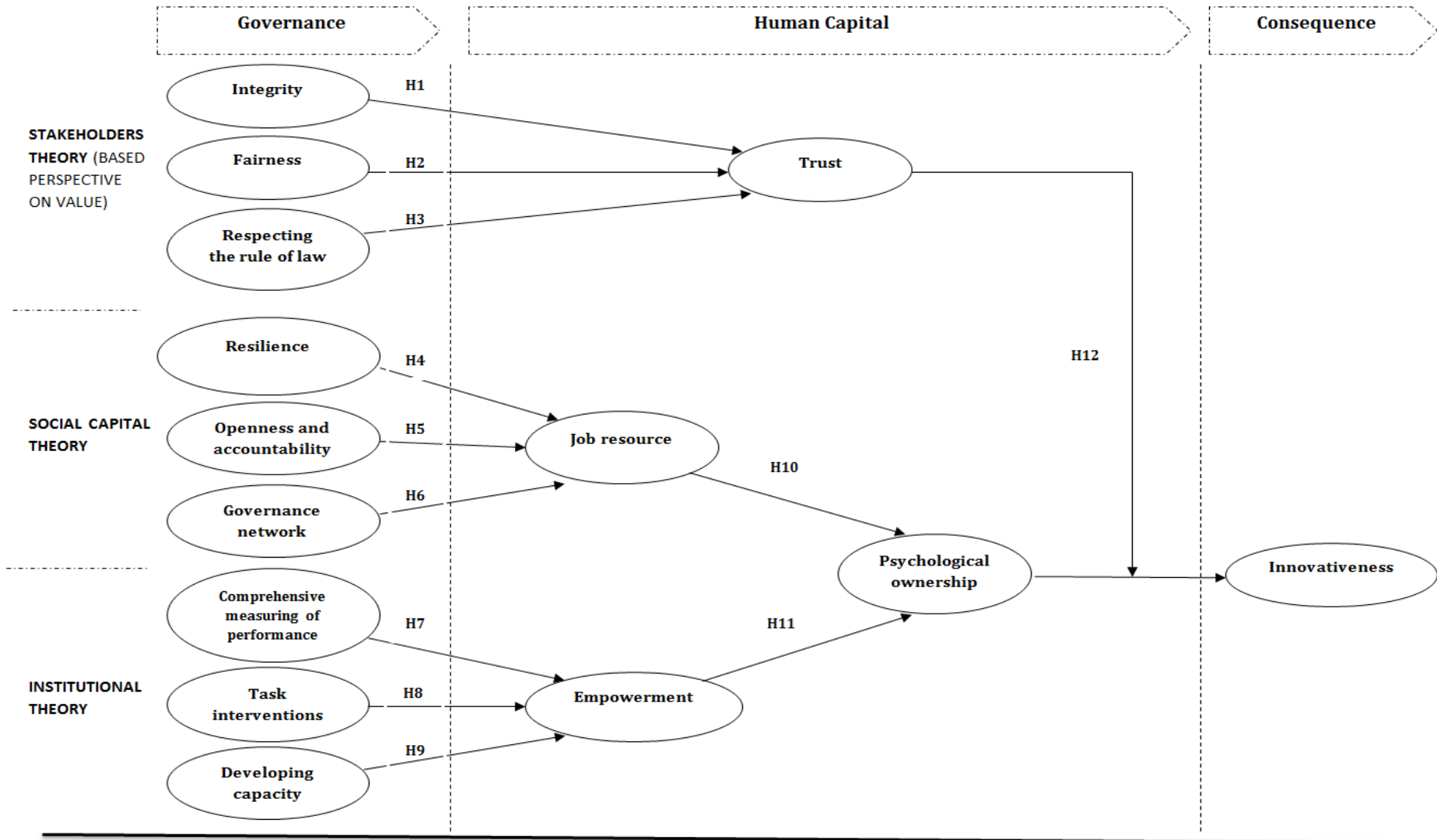


Figure 3.3 Conceptual framework

3.4 Research hypotheses

Ethical climate: Integrity, fairness, respecting the rule of law, and trust in organisation

Hypothesis 1: Public employees' perception of organisation's Integrity will increase their trust in the organisation.

Hypothesis 2: Public employees' perception of organisation's fairness will increase their trust in the organisation.

Hypothesis 3: Public employees' perception of organisation's respecting the rule of law will increase their trust in the organisation.

Networks: Resilience, openness and accountability, governance network, and job resources

Hypothesis 4: Public employees' perception of the organisation's resilience will be positively related with job resources availability for them.

Hypothesis 5: Public employees' perception of the practice of openness and accountability in the organisation will positively related with job resource availability for them.

Hypothesis 6: Public employees' perception of the practice of governance networks in the organisation will be positively related with job resources availability for them.

Interventions: Comprehensive measuring of performance, task-interventions, developing capacity and empowerment

Hypothesis 7: Public employees' perception of the comprehensiveness of performance measuring in the organisation will be positively related with their empowerment.

Hypothesis 8: Public employees' perception of the practice of task interventions in the organisation will be positively related with their empowerment.

Hypothesis 9: Public employees' perception of the practice of developing capacity in the organisation will be positively related with their empowerment.

Job resources, empowerment and psychological ownership

Hypothesis 10: Public employees' perception of the availability of job resources for them will be positively related to a sense of psychological ownership.

Hypothesis 11: Public employees' perception of empowering them will be positively related a sense of psychological ownership.

Trust as a moderator in the relationship between psychological ownership and innovativeness

Hypothesis 12: A positive relationship exists between psychological ownership and public employees' innovativeness, which is moderated by the trust level; the relationship between psychological

ownership and innovativeness which will be stronger in environments characterized by high trust in organisation than in those characterized by low trust.

3.4.1 Ethical climate and trust in the organisation

It is important to acknowledge here that the principal-agent framework is inadequate (Fukuyama, 2013), and governance research must transcend the traditional agency conflict between stakeholders and managers (Tihanyi, Graffin and George, 2014). This point of view matches the argument made from the stakeholder theory perspective suggested by Harrison and Wicks (2013), who argue that an organisation lies at the centre of a network of stakeholders whose behaviour is influenced, in part, by how the organisation treats other stakeholders. Within an organisation, trust is important to both reciprocity and generalized exchange, and fostered by the presence of organisational justice including both procedural justice and interactional justice (Mayer, Davis and Schoorman, 1995; Colquitt, *et al.*, 2001). By weaving different themes together into a more comprehensive view, Ozyilmaz, Erdogan and Karaeminogullari (2018) define trust in an organisation as, “the confident, positive expectations of employees about the intention and behaviour of multiple constituencies of an organisation regarding the organisation’s conduct, motives and intentions in an organisational setting” (p. 184). An organisation’s integrity in being fair, honest, and truthful to its employees is promising routes towards high trust in organisations (Lumineau, 2017). It is plausible to hypothesize that public organisations’ ethical climate values (integrity, fairness and respect for the rule of law) impact on the employees’ attitudes towards it, particularly trust in the organisation, in the following way.

Integrity and Trust

Behavioural integrity has been empirically linked to a wide variety of organisational, group, and individual outcomes (Simons *et al.*, 2015). An organisation’s integrity can help the employees to feel safe and encourage them to offer suggestions for improvements (Liu, Zhu and Yang, 2010). Also, it allows the employees to reveal work-related mistakes by taking interpersonal risks (Edmondson, 1999; Nembhard and Edmondson, 2006). Therefore, robust relationships exist between behavioural integrity and many followers’ outcomes: increased work engagement (Vogelgesang *et al.*, 2013), performance (Fernandez, Cho and Perry, 2010; Palanski *et al.*, 2011; Vogelgesang *et al.*, 2013), organisational commitment (Leroy *et al.*, 2012), a willingness to speak up (Detert and Burris, 2007), and organisational citizenship behaviour (Dineen *et al.*, 2006). More specific to the arguments outlined in this study, the

aspects of an ethical work climate are directly related to trust (Ötken and Cenkci, 2012; DeConinck, 2011). Specifically, Schoorman *et al.* (2007) concluded that integrity can contribute to trust in a group or organisation. In many instances “there is a nearly axiomatic acknowledgement of the importance of integrity for building trust with followers” (Krylova, Jolly and Phillips, 2017, p. 196). However, one of the main difficulties associated with this relationship is the fact that it is virtually impossible to repair trust. In other words, the amount of damage caused to trust is greater (Krylova, Jolly and Phillips, 2017; Kim *et al.*, 2006; Kim *et al.*, 2004).

In recent years, people turn to personal relationships for guidance. Leaders who engage in transparent communication with their employees can establish effective positive relationships that engender a perception of leader integrity among the employees (Hewlin, Dumas and Burnett, 2017; Barry and Crant, 2000; Simmons, 2002; Vogelgesang, Leroy, and Avolio, 2013). Indeed, the relationship between the leader's behaviour and the subordinates' organisational citizenship behaviour is mediated by trust (Detert and Burris, 2007) because the level of trust mainly determines the quality of these relationships (Ötken and Cenkci, 2012). However, although Palanski and Yammarino's (2011) find a positive relation between leaders' behavioural integrity and followers' trust, Hewlin, Dumas and Burnett (2017) argue leaders' ostensibly positive attributes may not always be embraced positively by their followers. In fact, a critical challenge in achieving trust for leaders is that they are only human, so even well-intentioned leaders can experience lapses in ethical or moral judgment (Eubanks and Mumford, 2010). Such arguments suggest that weaving these dimensions together supports the hypothesis that:

H1: Public employees' perception of organisation's Integrity will increase their trust in the organisation.

Fairness and Trust

Leaders who aim to diversity create the potential for enhancing the organisational value through the human capital's knowledge, skills and experience and diverse stakeholders (Barney and Wright, 1998; Fernandez, Cho and Perry, 2010). Fernandez, Cho and Perry (2010) argue leaders in public sector who appreciate and understand diversity are likely to reap two advantages. First, a leadership that is sensitive to diversity can generate performance benefits by increasing the quality of the decisions. The second advantage is

reaping dividends in terms of the ideas generated, the quality of the assessment of options, and decision acceptance, when organisations and groups can tap into diverse workforces. Arguably, this argument assumes that ethnically heterogeneous groups produce ideas that are of higher quality than those produced by homogeneous groups. Similarly, the logic of the value creation dimension of diversity is presented in Richard Florida's (2002) analysis of the competitive advantages of communities.

Accordingly, organisations that foster diversity may fare better in encouraging innovative collaboration (Florida, Cushing and Gates, 2002). The literature on work group diversity should result in more alternatives being considered, more solutions generated, increased communication both within and outside of the team, and ultimately increased creativity. However, the relationship between diversity and performance is complex (Fernandez, Cho and Perry, 2010). Indeed, many studies about the relationship between diversity, related to race, demographics, and performance, have been hard pressed to identify positive relationships (Horwitz and Horwitz, 2007; Kochan *et al.*, 2003; Webber and Donahue, 2001). In this vein, Pitts (2005) studies the relationships related to managers and teachers in Texan public schools, and finds significant but inconsistent relationships between diversity and representation across different performance indicators. In other words, the relationship cannot be conceived artlessly, as diversity equals better performance (Richard *et al.*, 2004).

Such effectiveness requires organisations continuously to engage in fairness practices. Fairness in the workplace has been a critical issue since Adams' (1965) equity theory. In addition, organisational justice is important for value creation because people reciprocate if treated fairly (Simon, 1966; Blau, 1964). Perhaps more important, fair practices within organisations determine the organisational performance (Colquitt *et al.*, 2001). Martin (2016, p. 71) explains that, "the favourable treatment the follower receives from the leader leads to feelings of obligation to 'pay back' the leader by working hard as a means of reciprocation. In addition, the positive exchanges between the leader and follower increase feelings of affect and liking for the leader, and this also motivates followers to want to meet the leader's work demands. This should in turn enhance task and contextual performance". In a nutshell, individuals conform to certain social norms, such as equity, fairness, or honesty, to cooperate, more than in a self-interested manner (Evans *et al.*, 2001; Evans *et al.*, 2005; Birnberg, 2011; Rabin, 1998; Fehr and Gaechter, 2000; Fehr and Schmidt, 1999).

From the stakeholder theory perspective, trust, “is important to both reciprocity and generalized exchange and is fostered by the presence of fairness in relationships among parties” (Harrison and Wicks, 2013).

Research shows that procedural fairness is positively linked to trust (Cohen-Charash and Spector, 2001). Additionally, Den Hartog and De Hoogh (2009) suggest leaders’ perceived fairness behaviour increases a trusting attitude towards both the management and co-workers. By the same token, Cho and Poister (2013, p. 824) argue that, “engaging in fair and just practices is one of the prominent ways that public managers earn trust from their subordinates. Similarly, by establishing consistent and fair practices, top management and middle managers are expected to build trust in their organisation”. However, more strikingly, many studies of creativity have not considered fairness (Shalley and Gilson, 2004). This observation suggests the hypothesis that:

H2: *Public employees' perception of organisation's fairness will increase their trust in the organisation.*

Respecting the rule of law and trust

Employee behaviour is strongly influenced by normative control which is particularly relevant given the increased pressure for ethical compliance. In addition, the enforcement of accepted organisational norms and values, and the sanctioning of deviation from these, are usually driven by informal norm enforcement practices, such as peer pressure (Weibel *et al.*, 2016). Although individuals in organisations tend to abide by the rules, other methods of compliance response may be linked with individuals, which can significantly influence rule effectiveness: violating the letter or spirit of the rules, bending parts of the rules, or completely disregarding the rules (Weibel *et al.*, 2016).

The behaviour of employees who follow the rules is affected by the authoritative behaviour of their leaders (Ötken and Cenkci, 2012). In addition, Grojean *et al.* (2004) assert the leaders have a responsibility for guiding the behaviour of the employees and institutionalizing the moral values and ethical conduct standards. Moreover, Ötken and Cenkci (2012) argue the effect of leaders on their employees is especially strong with regard to the employees’ following of the organisation’s procedures and rules. The main reason of this could be that the leaders have a highly influential role in creating the ethical climate

within organisations. This relationship may be explained by the fact that, because the authoritative behaviour of leaders may create fear among the employees, the employees will tend to follow the rules and procedures in full and consider whether their decisions violate any laws.

In organisations that engage in more managerial monitoring, the employees' trust is higher in both their leaders and co-workers than is the case in organisations that tend to value results over processes (Gittell, 2000). Similarly, Weibel *et al.* (2016) show that control mechanisms enhance trust in the organisation. Conversely, tight or overly strict controls diminish trust and change the attribution process (Malhotra and Lumineau (2011). Concurrently, a lack of controls is perceived to undermine trust (Weibel *et al.*, 2016). Optimal control, neither excessive nor inadequate, is expected to help to convey the organisational preferences for achieving the rule objectives and so increase the stakeholders' trustworthy behaviour (DeHart-Davis, 2009). In addition, individuals who feel trusted behave in trustworthy ways, based on a desire to meet the truster's expectations (Guerra and Rizzo 2002). Hence, it could be hypothesised that:

H3: *Public employees' perception of organisation's respecting the rule of law will increase their trust in the organisation.*

3.4.2 Networks and job resources

Social capital theory, or the strength of weak ties as described by Granovetter (1973), addresses an individual's ability to access information and resources through relationships (Burt 1992) which influences the collective actions and effectiveness of the external and internal group, encourages innovation (Adler and Kwon, 2002; Maak, 2007; Oh, Labianca and Chung, 2006; Brown *et al.*, 2017), allows managers and employees to exploit their knowledge more efficiently (Nahapiet and Ghoshal 1998), and at the same time can serve as informal governance in weak protection regimes (Cao, Ding and zhang, 2016). Knight, Patterson and Dawson (2017) forcefully argue increasing resources in the work environment such as cooperation, support and feedback by facilitating and coordinating member interactions are predicted to lead to build job resources. A variety of networks are facilitated by the partial overlap of sets of resources and knowledge, owned or controlled by the organisations and individuals involved (Phelps *et al.*, 2012; Dagnino, Levanti and Destri, 2016; Mowery *et al.*, 1998). The study predicts that three ties (resilience, openness and

accountability, and governance network) are positively related to the availability of job resources for public employees.

Resilience and job resources

Resilience can enable employees to improve their connectedness, generate more access to resources, use collective resources, process information, and consequently help their organisation to flourish (Branicki, Steyer and Sullivan-Taylor, 2016). Indeed, although sufficient resources is described as “access to appropriate resources”, the availability of information and ‘voluntary’ co-worker cooperation may have a higher importance in public organisations (Amabile *et al.*, 1996; Wright, Coff and Moliterno, 2014). Thus, examining resilience more closely requires a theory on intergroup relations (Kahn *et al.*, 2018). Let us now discuss why and how the primary actors in organisational resilience (the organisation’s hierarchy structure and internal system) enhance the availability of job resources (information and cooperation) for employees.

The literature offers, generally, two divergent perspectives on how and why hierarchy impacts on effectiveness (Greer, Van Bunderen and Yu, 2017; Greer *et al.*, 2018). The first perspective is the functionalist one, proposing a positive pathway from hierarchy to team effectiveness via improved coordination-enabling processes. This perspective argues that employees have an unconscious preference for hierarchy because of the comfort it offers by facilitating and coordinating the members’ interactions within organisations, so a hierarchy may benefit the employees’ effectiveness (Tiedens and Fragale, 2003; De Kwaadsteniet *et al.*, 2007; Halevy *et al.*, 2011). This benefit, for example, includes resource allocation (Anderson & Brown, 2010). In other words, hierarchy, as a fundamental and prevalent form of social organisation, allows groups to achieve high levels of coordination and cooperation (Magee and Galinsky, 2008; Halevy *et al.*, 2011). Moreover, hierarchy may enhance knowledge integration and information exchange, and decrease task ambiguity (Greer *et al.*, 2018).

The second perspective is conflict, proposing a negative pathway via increased conflict-enabling states. This situation naturally appears in the emergent organisation, but is not the case in public organisations, which are characterized by the potential for perceived incompatibilities or differences between employees (De Wit *et al.*, 2012). Therefore, in this case, when employees have opposing interests and perspectives, the hierarchy may

motivate them to climb up the ranks, leading to increased intra-group conflict and harming interpersonal relationships (Magee and Galinsky, 2008; Hays and Bendersky, 2015; Greer *et al.*, 2018). This observation may support the hypothesis that:

H4: *Public employees' perception of the organisation's resilience will be positively related with job resources availability for them.*

Openness and accountability; and job resources

Governance draws upon the interaction of several actors across institutional boundaries (Flanagan, Uyarra and Laranja, 2011). Transparency and openness is a power resource for interactions in the public domain (Meijer, 2013). In fact, ideas gathered as resources are necessary to proceed further in the process (Škerlavaj, Černe and Dysvik, 2014). More precisely, in the public sector, “engaging external stakeholders can provide pivotal resources” (Schafer and Zhang, 2017, p.789). Indeed, managing external relations is a problem associated with innovation. As Dougherty and Hardy put it, power, in the innovation and management literature, focuses on individuals' control of such resources as budgets and information (Dougherty and Hardy, 1996).

Being open to external knowledge sources is an important element for potential innovation (Laosirihongthong, Prajogo and Adebajo, 2013). Moreover, Meijer (2013) finds privileged access to information and feedback from external stakeholders can be used as a power resource for employees. In this vein, Plouffe *et al.* (2016) argue for the successful influence of each of the stakeholder groups: customers and external business partners can indirectly contribute to employees' performance by enhancing the information available to them. Furthermore, they assume ‘strategic’ frontline employees need to interact successfully with all of these types of stakeholder. According to the resource dependence theory, external resources stemming from an organisation's environment exert an important influence on the organisation's ability to survive. Indeed, in the innovation literature, “innovations are locally embedded and the result of co-evolution between different demands and pressures that stem from different but closely related environments” (De Vries, Bekkers and Tummers, 2016, p. 156). Given this, employees are able to collect valuable information, comments and knowledge, and then using and sharing this resource could lead to the creation of new innovations (Woisetschläger, Hanning and Backhaus, 2016). However,

Meijer (2007) argues transparency weakens the position of insiders and strengthens that of outsiders.

A number of studies highlight the importance of frontline employees for the success and effectiveness of organisations. In addition, they play a central role in building and developing the stakeholders' relationships and have a significant influence on the perceived service quality (Woisetschläger, Hanning and Backhaus, 2016; Hartline and Ferrell, 1996; Singh, 2000). In addition, integrating customer information into the innovation processes positively influences the success of new product and service development projects (Evanschitzky *et al.*, 2012; Gruner and Homburg, 2000). These arguments are in line with those of Alam (2002), who found that the generation of ideas is the early stage of the innovation process. Indeed, LeBon and Merunka (2006) explain that employees who interact in formal and informal situations with stakeholders, such as customers, allows them to hear comments, praise, and complaints.

Notably, new ideas are born from observation, direct suggestions or comments through interactions with external stakeholders, and then made available to the organisation through their employees (Woisetschläger, Hanning and Backhaus, 2016). Woisetschläger, Hanning and Backhaus (2016) find idea gathering is positively related to available resources. Interestingly, to date there has been little to no empirical research has explored how influence works across the stakeholder groups to affect employees' performance (Plouffe *et al.*, 2016), and examined how employees adapt their behaviour to influence different stakeholder types effectively (Bradford *et al.* 2010). Hence, it could conceivably be hypothesised that:

H5: Public employees' perception of the practice of openness and accountability in the organisation will positively related with job resource availability for them.

Governance network and job resources

Meanwhile, external resources, such as co-operation with external organisations or individuals, is positively related to innovation performance (Zeng, Xie, and Tam, 2010; Souitaris, 2001). Interestingly, Kramer *et al.* (2011) and Nieto and Santamaria (2007) highlight the importance of studying the ability of the organisation to utilise external resources to enhance its internal capability, which then leads to increased innovation performance. The governance network approach "stresses that outcomes of policy and

public services are a consequence of the interaction of many actors rather than of the action of one single actor” (Klijn and Koppenjan, 2012, p. 591). Hence, inter-organisational relationships allow employees to access more effectively complementary sets of resources, knowledge, etc., which leads to innovation as a network phenomenon. Torfing and Ansell (2017) argue that no public or private actor seems to possess all of the knowledge and resources necessary to steer society and the economy. In this heuristic, Tummers and Knies (2016) point out the potentially promising direction for future research regarding whether higher network governance positively affects performance.

Since the late 1990s, network theory, rather than policy networks and network management, has been attracting considerable interest. Bingham, Nabatchi and O’Leary (2005) argue public affairs leaders identify tools and instruments for the new governance through networks. Recently, governance networks have become of increasing interest in the literature as a way of solving the conceptual ambiguity (Klijn and Koppenjan, 2012). In their systematic review of public sector innovation, De Vries, Bekkers and Tummers (2016) find the second most important antecedent of innovation is participation in networks and inter-organisational relationships. Furthermore, Schafer and Zhang (2017) argue that, by strategically engaging with and consulting stakeholders, information is provided that not only reduces the risks and transactions costs for the government and its entities but also minimises the effect of conflictual politics.

Public sector leaders nowadays work in contexts where they have to operate in networks. High performing collaborative innovation involves not only possessing the appropriate structural antecedents, such as research and development capability, but also the dynamic organisational processes associated with the roles of the collaboration partners’ leadership (Davis, Kathleen and Eisenhardt, 2011). Tummer and Knies (2016) examine the extent to which leaders motivate their employees actively to engage in existing networks and develop new ones, by spending time connecting to other stakeholders. Interestingly, their findings support the importance of working in networks. Moreover, the results show that the governance network plays a valid, reliable role as a public sector leader.

Managers play a complex role in providing access to the necessary resources so that employees can perform their jobs admirably (Shalley and Gilson, 2004). Likewise, Booms,

Curşeu and Oerlemans (2017) argue leadership behaviour aims to provide the resources necessary for task accomplishment. Crucially, the public sector should mitigate the effects of a conflicted political environment (Yang and Callahan, 2007). Under such a view, it is important to increase the legitimacy and sustainability of programmes and plans (Schafer and Freeman, 2017). In addition, the external activities - boundary spanning behaviour - involve the management of external relationships, such as initiating politically focused communication to increase the resources available to the team (Hirst *et al*, 2004). Recently, studies building on political theory show that various interests play a relevant role in the development of good governance codes (Haxhi and Aguilera, 2017). Nowadays, “the role of leaders has changed so as to become less concerned with the day-to-day work activities and more focused on the procurement of needed resources and developing and supporting a work environment that facilitates team success” (Shalley and Gilson, 2004, p. 48). Moreover, interestingly, Tummers and Knies (2016) regard the leaders in the public sector as the motivator, explicitly or implicitly, for their employees to align their actions with the interests of politicians, even if this is costly for them. In other words, leaders should encourage their employees in order to align their actions with the interests of politicians.

In 1996, networks were portrayed as a locus of innovation by Powell *et al.* (1996). Dagnino, Levanti and Destri (2016) assume the actors embedded in networks of informal ties benefit from exposure to different ideas, information, capabilities and knowledge. Hence, they argued that the role of networks is to enhance organisations’ innovation performance. However, the recurring interactions between organisations embedded in formal ties tend to lead to network redundancy, which in turn frequently leads to a reduced innovation capability among the participating actors (Gargiulo and Benassi, 2000; Uzzi, 1997; Uzzi and Gillespie, 2002). Tummer and Knies (2016, p.437) argue “developments such as budget austerity, the economic and fiscal crisis and the reduced legitimacy of governments have encouraged civil servants to work together with other stakeholders to tackle the problems of contemporary society”. In a nutshell, the highest-performing organisations mobilise different individuals to form ties with new partners as new strategic imperatives emerge (Maurer and Ebers, 2006). To this end, different behaviour from the public employees, leaders, and staff, is required. In general, therefore, it seems that:

H6: *Public employees' perception of the practice of governance networks in the organisation will be positively related with job resources availability for them.*

3.4.3 Interventions and empowerment

Interventions denote deliberate attempts to produce empowerment (Thomas and Velthouse, 1990). In fact, it may be more fruitful for an organisation to invest in capabilities that create human capital complementarities rather than inherently scarce human capital (Sirmon *et al.*, 2011; Chadwick, 2017). In such ways, many of the arguments and investigations that have been outlined in the innovation literature to date have brought the institutional theory to centre stage (Shipton *et al.*, 2017; Kromidha and Córdoba-Pachón, 2017; Cordella and Iannacci, 2010) because it “is a powerful theory when it comes to explaining the adoption of innovations by institutionalized organisations” (Goddard *et al.*, 2016, p.11). The findings of these studies “support institutional theories that claim systems implemented to satisfy external requirements are less likely to influence internal behaviour than are those implemented to satisfy the organisation’s own needs” (Cavalluzzo and Ittnar, 2004, p.244). Previous research has shown the empowering effects of a number of interventions (Van Erp *et al.*, 2018). More specific to the arguments of this study, it is important to pause here to consider the empowering effects of three interventions: the comprehensive measuring of performance, task-interventions and developing capacity.

Comprehensive measuring of performance and empowerment

The ultimate goal of performance appraisal should be to motivate employees to improve their performance (Selvarajan, Singh and Solansky, 2018; DeNisi and Pritchard, 2006). Therefore, a key outcome of performance appraisal is employee motivation to improve future performance (Pichler, 2012). Additionally, measuring performance may stimulate employee initiatives to improve operational performance (Groen, Wouters and Wilderom, 2012). Namely, better perceived measurement quality can increase job performance (Groen, Wilderom and Wouters, 2017).

Measuring performance through tangible and intangible factors is important for the core internal stakeholders because it helps organisations to understand the needs of this group more clearly (Harrison and Wicks, 2013). Ittner, Larcker and Randall (2003) argue measurement diversity is an important feature of more comprehensive performance measurement systems. In this vein, Henri (2006), and Ullrich and Tuttle (2004) argue that

comprehensive systems should be designed to measure performance in every important area of the organisation. Indeed, comprehensive performance measurement systems should provide a rich, relatively complete picture of the performance of the business unit (Chenhall, 2005; Ittner, Larcker, and Randall, 2003; Kaplan and Norton, 2001).

Kaplan and Norton (1992, p. 172) argue “organisation's measurement system strongly affects the behaviour of managers and employees”. Interestingly, prior studies in different disciplines have noted the positive effects of employee participation in the development of performance measures on the performance of both employees and work units (Groen, Wouters and Wilderom, 2012; Kleingeld, Van Tuijl and Algera, 2004; Hunton and Gibson, 1999). However, especially for public employees, “traditional financial accounting measures like return on investment and earnings per share can give misleading signals for continuous improvement and innovation” (Kaplan and Norton, 1992, p. 172). In such cases, performance appraisal may have a ‘crowding out’ effect on employee motivation, resulting in perceived stress or even burnout. Therefore, public employees’ confidence has recently decreased in the efficacy and fairness of public performance appraisal (Kim and Holzer, 2016).

The empowerment literature supports the relationship between performance information and intrinsic motivation. Providing information about performance is essential for the development of empowerment. More precisely, access to quality performance information is positively related to empowerment (Spreitzer, 1995, 1996). Groen, Wilderom and Wouters (2017, p. 115) argue “when the performance measures are of better quality, employees can engage in clearer discussions with their managers about their performance, which may increase their autonomous work motivation”. Counterintuitively, a lack of information about performance affects the sense of empowerment (Hall, 2008). Hall (2008) finds an indirect relationship between comprehensive performance measurement systems and performance through the intervening variable of ‘psychological’ empowerment. However, previous studies were limited by the absence of the other types of empowerment (Hall, 2008; Spreitzer, 1995, 1996). These results provide further support for the hypothesis that:

H7: *Public employees' perception of the comprehensiveness of performance measuring in the organisation will be positively related with their empowerment.*

Task interventions and empowerment

Another potential way to satisfy employees' needs is through task-interventions (IFAC and CIPFA, 2014). Managing performance through monitoring and review as a mechanism is defined as "setting and communicating goals and performance standards; planning, directing and coordinating the activities of subordinates; maintaining clear channels of communication; monitoring compliance with procedures and goal achievement; and providing feedback" (Fernandez, Cho and Perry, 2010, p. 311). The essential argument in feedback theories is that performance information can improve empowerment by providing information about task behaviour and performance (Ilgen *et al.*, 1979; Locke, *et al.*, 1981; Collins, 1982; Lockett and Eggleton, 1991). However, providing employees with performance feedback is a key function with which many managers struggle (Fernandez, Cho and Perry, 2010). Crucially, giving feedback can prove particularly important in improving performance (Cho and Poister, 2013; Shalley and Gilson, 2004).

The enhanced attention to strategic management increases the importance of goal clarity. Arguably, it is an antecedent for successful organisational change (Fernandez and Rainey, 2006). Interestingly, employee attitudes are affected by goal clarity (Cho and Poister, 2013). The theory of goal-setting provides a useful account of how setting clear, challenging goals increases employee motivation (Locke and Latham, 1990). Increased communication and feedback regarding the organisation's goals helps employees "to understand why their goals should be set as such and what are the specific expectations and strategies for goal accomplishment" (Lee and Wei, 2016, p. 282). Accordingly, the employees will be more motivated to achieve the goal and improve their performance.

Employees are expected to offer constructive information on how to improve their performance (Shalley and Perry-Smith, 2001). Arguably, open communication between leaders and followers is positively related to feelings of empowerment. In other words, employees will be more likely to feel empowered in their work when their leader establishes open communication with them and acts in accordance with the goal. Notably, performance is improved not through communication, feedback and discussion per se but because these provide the employees with an increased understanding of the expectations and strategies

regarding goal accomplishment (London *et al.*, 2004). Thus, the concern from an evaluation standpoint is whether the employees possess adequate information to understand the specific expectations and strategies for goal accomplishment, which is an important dimension of empowerment. Moreover, employees expect to receive constructive, developmental feedback on their task. If leaders are supportive, creative activity is more likely to occur.

Therefore, leaders must communicate in a way that empowers employees (Maynard, Gilson and Mathieu, 2012). Offering feedback and information is a vital supportive behaviour for leaders who wish to foster their subordinates' creativity (Madjar *et al.*, 2002). In many studies, a debate is taking place between task performance and performance information concerning psychological empowerment. This relationship may be explained by the fact that providing adequate performance information enhances the development of psychological empowerment (Hall, 2008). The research into task behaviour and performance has a long history. According to feedback theories, performance information can improve empowerment by providing information about task behaviour and performance (Ilgen *et al.*, 1979; Locke, Shaw, Saari and Latham, 1981; Collins, 1982; Lockett and Eggleton, 1991). Goal-setting theory (Locke 1968) is one of the most valid and practical theories of employee motivation in the field of organisational psychology (Miner 1984; Lee and Wei, 2016). However, less research has been conducted to test the effects of goal-setting at the individual level (Gibson 2001). Thus I propose the following:

H8: Public employees' perception of the practice of task interventions in the organisation will be positively related with their empowerment.

Developing capacity and empowerment

As discussed previously, in the public sector, it is better to focus on employees than the direct service because the latter actually perform the task and provide its quality (Van Wart, 2003). Perhaps the most important thing for employees is to feel a 'fit' between their own ability and the demands of their job (Han *et al.*, 2015). Hence, a critical challenge for public sector organisations is not only finding "people with the right skills, appropriate qualifications and mind-set" (IFAC and CIPFA, 2014, p. 23), but also the fact that, "subsequent training and development need to be driven by matching organisational and individual development requirements" (p. 26). Given this, Van Wart (2003) famously defined

public sector leadership as the process of developing/supporting followers (Orazi, Turrini and Valotti, 2013), including providing subordinates with opportunities for personal growth (Fernandez, Cho and Perry, 2010) and initiating a highly supportive climate (Bliese and Halverson, 2002). The new role of leaders has become more focused on developing and supporting a work environment that facilitates employees' success and transfers the traditional leadership responsibilities to the team members (Rapp *et al.*, 2016; IFAC and CIPFA, 2014). In short, when managers "exhibit encouraging leader behaviours" (Kirkman and Rosen, 1999, p. 60), create personal development opportunities and potential career progression (IFAC and CIPFA, 2014), and invest in resources through training employees (Van Erp *et al.*, 2018), they should experience team empowerment to a greater extent (Rapp *et al.*, 2016). In not doing so, the risk or failure associated with creativity is high (Hon and Lui, 2016).

Leader-member exchange (LMX) theory and other dyadic theories of leadership note the vertical relationship that develops between a leader and the employees (Dansereau, Graen and Haga, 1975; Graen and Scandura, 1987; Gerstner and Day, 1997; Schriesheim, Castro and Cogliser, 1999). Relations-oriented leadership provides employees with opportunities for personal growth and increases the personal responsibility among employees, leading to a commitment to both the leader and the organisation (Fernandes, Cho and Perry, 2010). Oldham and Cummings (1996) find non-controlling, supportive supervisors create a work environment that fosters innovation. Likewise, Tierney, Farmer, and Graen (1999) show that encouragement and support by supervisors leads to enhanced employee creativity. Nowadays, the role of leaders has become more focused on developing and supporting a work environment that facilitates employees' success, as well as transferring the traditional leadership responsibilities to the team members (Rapp *et al.*, 2016).

Gilson and Shalley (2004) suggest supervisory supportive behaviour facilitates individual creativity. Relations-oriented behaviour overlaps with participative leadership through being aimed at employee empowerment (Fernandes, Cho and Perry, 2010). It is difficult to start such a relationship and there is a lack of clarity about its impact in different situations (Fernandes, Cho and Perry, 2010; Bryman, 1993; Yukl, 1999). For example, in certain circumstances, this relationship may not be supported (Mathieu, Gilson and Ruddy, 2006).

Indeed, Shalley and Gilson (2004) argue the results for supportive supervision can vary for those with different personality characteristics or cognitive styles.

“Leaders exhibit team-oriented behaviours aimed at supporting (e.g., motivating and building teamwork), encouraging (e.g., providing needed information and resources), and promoting empowerment (e.g., allowing teams to carry out decisions), higher levels of team empowerment should ensue” (Rapp *et al.*, 2016, p. 112). Supportive leaders are valuable to empowered employees because they serve as liaison and a hands-off consultative form of influence by providing information and advice (Zaccaro and Marks, 1999; Courtright, Fairhurst and Rogers, 1989). Moreover, when managers “exhibit encouraging leader behaviours” (Kirkman and Rosen, 1999, p. 60), Rapp *et al.* (2016) assert employees should experience team empowerment to a greater extent. In addition, Rapp *et al.* (2016) assume this support should increase the employees' sense of responsibility and authority regarding their tasks. It is important to bear in mind that team leadership should focus on supporting the, “team members' collective belief that they have the authority to control their proximal work environment and are responsible for their team's functioning” (Mathieu, Gilson and Ruddy, 2006, p. 98). Regarding the latter, this kind of supportive leadership may positively influence empowerment (Maynard, Gilson and Mathieu, 2012). Hence, it could be hypothesised that:

H9: Public employees' perception of the practice of developing capacity in the organisation will be positively related with their empowerment.

3.4.4 Job resources, empowerment and psychological ownership

Availability of job resources and psychological ownership

Employees' needs, or demands, may be met by positive working conditions (Cable and DeRue, 2002). Employees feel a sense of belonging and experience the organisation as a place that makes them feel comfortable, favourable, and safe (Van Dyne and Pierce, 2004). Also, Pierce *et al.* (2001) state psychological ownership can be caused by a feeling of efficacy and efficiency, for instance, when employees experience effective interactions and cooperation in their work environment (Bandura, 1977; White, 1959). When employees feel that they share similar values with their employing organisation (e.g., helping behaviour,

knowledge sharing, etc.), this can lead to positive changes in employees' involvement (Han *et al.*, 2015).

Reciprocal and exchangeable relationships develop between the organisation and its employees through psychological contracts. In addition, job resources are very important because, in a psychological contract, the employees within the organisation in relation to various aspects of organisational life (Han *et al.*, 2015). As a consequence, employees who are satisfied with their 'psychological contract' may feel like 'insiders' (Masterson and Stamper, 2003). Knight, Patterson and Dawson (2017) argue that building job resources by facilitating and coordinating member interactions are predicted to lead to work engagement, affiliation and performance.

It is important for employee to feel that there exists a 'fit' between their own ability and the demands of their job (Han *et al.*, 2015). The accessibility and right to information is one of three fundamental, basic rights, suggested by Pierce *et al.* (1991) that define ownership. Moreover, in order to achieve psychological ownership, the organisational members should share information of their 'own' with members of the organisation, as an aspect of cooperation, because they perceive that this sharing may be benefit the organisation (Dawkins *et al.*, 2017). In a nutshell, cooperation, sharing knowledge and experience between stakeholders, and ample discretionary financial resources are important routes to psychological ownership. This observation may support the hypothesis that:

H10: Public employees' perception of the availability of job resources for them will be positively related to a sense of psychological ownership.

Empowerment and psychological ownership

Pierce *et al.* (2001, 2003) argue that, as a route to psychological ownership, participation in decision-making is likely to enhance the employees' experienced control over the target of ownership. Empirical studies find a strong association between employee participation in decision-making and a sense of psychological ownership (Chi and Han, 2008; Han *et al.*, 2010; Liu *et al.*, 2012). Pierce *et al.* (1991) suggest ownership is often experienced and defined in terms of a 'bundle' of rights. Inextricably, ownership is associated with the right to information about the target of the ownership as well as the right to have a voice in the decisions that impact the target (Pierce *et al.*, 1991; Kubzansky and Druskat, 1993). Hence,

Pierce *et al.* (2001) argue when the employees are given information about the mission of the organisation, its goals, and its performance, they feel that they know the organisation better and, as a result, may develop a sense of psychological ownership toward it.

Promotion, training, and development, as various aspects of organisational life, are considered in the psychological contract between the employees and their organisation (Han *et al.*, 2015; Rousseau, 1990). As discussed in Section 2.2.2, Bowen and Lawler's model of empowerment, chosen in this study, consists of four different elements, which can provide routes to psychological ownership. In this vein, Dawkins *et al.* (2017) suggest future research might investigate the relationship between empowerment and psychological ownership. This observation may support the hypothesis that:

H11: Public employees' perception of empowering them will be positively related a sense of psychological ownership.

3.4.5 Trust as a moderator in the relationship between psychological ownership and innovation

In order to focus on the factors that promote employee performance and innovation, it is necessary to understand a key emerging construct which is psychological ownership (Dawkins *et al.*, 2017). As argued by Pierce *et al.* (2001), employees who feel ownership over their job or organisations will seek to protect, care, and make sacrifices for it. Similarly, Avey *et al.* (2009) argue conventional wisdom suggests that people will take better care of, and strive to maintain and nurture, their possessions. In the case of the organisation, when employees feel a sense of ownership towards it, they may begin voluntarily to defend it and feel more responsible for the achievement of the organisational goals. In a nutshell, psychological ownership leads to changes in behaviour and attitudes (McConville, Arnold and Smith, 2016).

Han *et al.* (2015) argue that employee performance is enhanced when employees feel a sense of psychological ownership towards the organisation, in which case they will feel that their jobs are important and meaningful, participate in organisational activities actively (Hen *et al.*, 2015; Van Dyne and Pierce, 2004; Rochberg-Halton, 1980) and then experience a greater sense of commitment at work (Hen *et al.*, 2015). Simultaneously, innovation entails more than employees' acquisition of social and material resources, it requires other

substantial resource investment, such as time and energy (Kiazad, Seibert and Kraimer, 2014; Scott and Bruce, 1994). Originally, Bernstein (1979) argues an organisation's members feel a sense of psychological ownership at work, experience greater levels of confidence, and feel a greater responsibility to defend and work for the organisation. Hence, psychological ownership plays an important role in enhancing organisational competitiveness (Brown, 1989). As a consequence, Brown *et al.* (2014) report a strong relationship between psychological ownership and sales performance.

However, Pierce *et al.* (2001, p. 303) alluded to the fact that "psychological ownership may lead to other organisationally dysfunctional behaviours as well". For instance, an employee may wish to retain exclusive control over the target of ownership and resist sharing, such as tools, computers or work-space with co-workers. Another example is when managers feel a high degree of ownership towards the management, in which case they may resist interventions that support their employees. In this case, psychological ownership is likely to impede cooperation and teamwork. In other words, when employees feel a sense of ownership, they "may engage in territorial behaviours to communicate and defend their ownership claims" (Brown, Crossley and Robinson, 2014, p. 464). Therefore, territorial behaviours may lead to organisationally dysfunctional at the individual, workgroups, and organisational levels (Dawkins *et al.*, 2017), thus ultimately negatively affecting public innovativeness's stem: top-down support and the strength of employees' relationship within workgroups. Indeed, only objects to which individuals feel a proprietary attachment lead to territorial behaviour (Brown, Lawrence and Robinson, 2005).

Territoriality is centrally concerned with establishing, maintaining and communicating that individual's relationship with that object relative to others in the same social environment (Brown, Lawrence and Robinson, 2005). Hence, territoriality is not about expressing some form of attachment to an object; rather, it refers to social behaviour used to mark and defend objects over which the individual feels a sense of psychological ownership to help to establish not only what is 'mine' but also what is 'not yours' (Brown, Lawrence and Robinson, 2005). Notably, the level of trust present in the environment is a key aspect of the social work environment that is pertinent to the expression of territorial behaviour (Brown, Crossley and Robinson, 2014, p. 464). Even though there is no universally accepted scholarly definition of trust, Rousseau *et al.* (1998) propose a general definition of trust as, "the

willingness to be vulnerable to another based on one's expectations of the other's favourable character, intentions, and behaviours" (p. 469).

Trust, as a key social context variable, enables cooperative behaviour, reduces harmful conflict, promotes network relations and facilitates the formulation of work groups (Miles and Snow, 1992; Meyerson, Weick and Kramer, 1996). Additionally, a trust environment can have a significant impact on individual relationships (Johns, 2006). In order to invest in social capital and simultaneously seek innovation, employee development, individual and organisational learning, and talent retention, an organisation needs to recognise that it "runs better when people within an organisation know and trust one another" (Prusak and Cohen, 2001: 86). To this end, organisations can form an overarching environment of trust to permeate the work environment (Pearce *et al.*, 2000). Arguably, by creating a high trust environment, the management will benefit most from diminishing the occurrence of territorial behaviour (Brown, Crossley and Robinson, 2014). More precisely, they argue that "depending upon the level of trust in the environment, it may also lead employees to engage in territorial behavior" (p. 465). This observation may support the hypothesis that:

H12: A positive relationship exists between psychological ownership and public employees' innovativeness, which is moderated by the trust level; the relationship between psychological ownership and innovativeness which will be stronger in environments characterized by high trust in organisation than in those characterized by low trust.

3.5 Conclusion

This chapter develops a theoretical framework with related hypotheses. It began by providing the theoretical background of the present study, where the theories underpinning the proposed framework are discussed. The theoretical background is categorised into three theories: the social capital theory, the stakeholder theory and the institutional theory. Additionally, the importance of the use of such theories has been provided and justified in this part of the thesis. The theoretical background is used to build the research framework and explain how the proposed framework is constructed. The conceptual framework uncovers overlooked circumstances, such as underestimating the strategic value of the public organisations' human capital, and offers a new approach to the conceptualisation of governance by developing a cooperation (rather than conflict) model, whereby multi-governance mechanisms are intertwined.

Chapter 3: Conceptual framework

On the basis of the theoretical background provided in this chapter and previous related research, 12 research hypotheses are then developed, explaining the effect of the complementarities between governance structure and human capital on public employees' innovativeness. In this chapter, a hypothesis is also developed to explain the moderating impact of trust on the relationship between the sense of psychological ownership and innovativeness of public employees. The next chapter will describe and justify the methodological approach and procedures adopted in this study.

Chapter 4: Methodology

4. Methodology

4.1 Introduction

The previous chapter has developed a conceptual framework for analysing the effects of the complementarities between governance structure and human capital on public employees' innovativeness. This chapter sets out to describe and justify the methodology chosen for the study and also describe and discuss the procedures and methods used to examine and validate the proposed framework. It establishes the appropriateness and credibility of the methodology used to address the research questions. The research strategy involves a questionnaire survey of public employees. The chapter discusses the methods for selecting a sample, and collecting and analysing the research data in detail for each stage.

It begins by discussing the main research paradigms with the purpose of choosing the paradigm that is the best fit for the proposed framework. It then provides clear reasons for employing the quantitative method in this study. Thereafter, the questionnaire survey with the quantitative approach is discussed in greater detail. After this, the study population and sample are described, followed by an explanation of the pre-test and pilot test. Then, this chapter discusses the statistical procedures and data analysis, together with the ethical considerations and the questionnaire translations. The final section provides the conclusions.

4.2 Research philosophy

Prior to selecting the research method and commencing on the research design, it is important to select an appropriate research philosophy, as this establishes the foundation for what follows (Creswell, 2009). Indeed, the key primary research design step is to decide upon the most suitable research paradigm (Saunders *et al.*, 2016). A research paradigm can be defined as a philosophical outline that characterises how to perform research in light of people's views of the world and the type of information concerned (Collis and Hussey, 2009). Positivist, interpretive, and critical research are the three key research philosophy approaches (Collis and Hussey, 2014).

Positivism can be defined as an epistemological assumption that "reality is given and exists independent from humans" (Rodela, Cundill and Wals, 2016, p. 17). In fact, the observer and

the observed are separated by using the scientific method that includes measurement, observation, and experimentation (Guba, 1990). Under the Interpretative paradigm, “reality is socially constructed and cannot be captured by single interpretations that all observers, or rather, participants in reality, share” (Rodela, Cundill and Wals, 2016, p. 17). Therefore, it focuses on understanding the behaviour of humans from the participant’s own reference frame (Hussey and Hussey, 1997). Similarly, critical research “seeks to unveil the interpretations of reality, but often does so through the lens of power relations” (Rodela, Cundill and Wals, 2016, p. 18). Table 4.1 presents a comparison between the positivism, interpretivism, and critical philosophy approaches.

Table 4.1 Comparison between the research philosophy approaches

Dimension	Positivist	Interpretative	Critical
Basic goal	In search of truth	In search of actors' interpretations of the world	In search of a transformations
Logic	Build upon current knowledge base and fill gaps in our understanding	Provide a rich picture of the interpretations of a given issue by different groups	Provide input for empowering processes undertook by practitioners
Reasons for undertaking the investigation	Finding evidence	Understanding	Empowering
Type of evidence discussed	Mainly quantitative	Mainly qualitative	Mainly qualitative
Typical methods	Deductive Highly structured Large samples	Inductive Small samples In-depth investigations	Reproductive in-depth historically situated analysis of pre-existing structures and emerging agency
Researcher's role	Neutral outsider	Participant	Learning agent, participant

Source: Rodela, Cundill and Wals (2016); Saunders et al. (2016)

4.2.1 Rationale for adopting positivist paradigm

Research has been described as a systematic investigation or inquiry whereby data are collected, analysed, and interpreted in some way in an effort to understand, describe, predict or control a phenomenon in such contexts (Burns, 1997; Mertens, 2005). Therefore, without nominating a paradigm as the first step, there is no basis for the subsequent choices regarding the methodology, methods, literature or research design. Indeed, the nature and conditions of every research question and problem determine which research approach provides the best fit.

The positivist paradigm is premised on the desire to draw a distinction between discovery and validation (Fay, 1975). Positivism can be defined as “research approaches that employ empirical methods, make extensive use of quantitative analysis, or develop logical calculi to build formal explanatory theory” (Fox and Miller, 1998, p. 1718). Under this paradigm, “theories provide the basis of explanation, permit the anticipation of phenomena, predict their occurrence and therefore allow them to be controlled” (Collis and Hussey, 2014, p. 44). A study should provide quantifiable variables’ measures, formal propositions, hypotheses assessment and a dedicated focusing of the phenomena of the sample on a specified population in order to be considered a positivist study (Orlikowski and Baroudi, 1991). Thus, some scholars have forcefully questioned the rigour of research on public administration with regard to knowledge production, because it lacks the use of the positivist approach (McCurdy and Cleary, 1984).

This study is designed under a broadly positivist paradigm. The purpose of this study is to investigate the effects of the complementarities between governance structure and human capital on public employees’ innovativeness in Saudi Arabia. In view of the different theories and models on the subject of governance, the study developed a hypothesis-based framework. Keeping in mind the end-goal of testing and validating the research hypothesis through the proposed framework, the positivist (quantitative) approach was utilised because it was compatible with the topic. Moreover, Collis and Hussey (2014) proposed that the normal procedure under a positivistic approach was to examine the literature in order to establish an appropriate theory and develop hypotheses.

This study is in accordance with the positivist approach rather than the interpretivist approach for the following reasons. First, following an exhaustive examination of the studies in the field, this research planned the research hypotheses, which would be checked by gathering data through self-managed surveys. Namely, the researcher remains detached from the realm of the problem (Collis and Hussey, 2014). Second, positivist methodologies frequently emphasise that the existing theories are the most important source of knowledge (Schrag, 1992; Saunders *et al.*, 2016). Indeed, positivist research is generally established based on previously-examined relationships (Meredith *et al.*, 1989). Moreover, the study remains neutral throughout the entire research process. Finally, this approach is

fitting because it permits a clear theoretical focus of the study, facilitates economic data gathering, and yields data that are easy to compare (Hussey and Hussey, 1997).

This study adopts a deductive approach, in which a theoretical framework is developed and tested using empirical data. A survey methodology is used to collect primary data from a sample. Thereafter, the collected data are analysed statistically with a view to “generalizing the results to a population” (Collis and Hussey, 2014, p. 62). In a nutshell, this study followed Bono and McNamara’s (2011, p. 657) advice that, “design should be driven by the questions being asked”.

4.3 Research design

A research design refers to a plan that describes how, when and where data has to be gathered and analysed (Collis and Hussey, 2014). The research design helps to set the limits for the research, and reduce the chance of drawing inaccurate causal effects from the collected data (Hair *et al.*, 2003; Creswell, 2009). In other words, a research design is the research objectives’ function. Thus, it is critical to agree on the appropriate research design to follow throughout the different phases of the research. ‘Research design’, here, refers to a framework or systematic approach to be adopted to fulfil the aim and objectives of this research (Bryman and Bell, 2007). The key elements of the research design are explained in the following subsections. Figure 4.1 presents the research design of this study.

The design process in this study started with the selection of the area or topic of interest. Then, a comprehensive and critical review of the literature was carried out to identify the gaps in the existing literature, the reasons for conducting this research, and extended the knowledge of the role of complementarities between governance structure and human capital in shaping public employees’ innovativeness. The research questions, aims and objectives were identified accordingly. Thereafter, a research framework was developed in which 12 hypotheses were drawn and justified based on the existing literature. Ethical issues were taken into consideration before piloting the measurement scales. Accordingly, 713 questionnaires were deemed usable and then analysed by a set of analytical tools. Subsequently, with respect to the obtained results, a deep discussion was provided. Finally, the conclusion provides a summary, theoretical and managerial implications of the whole study in addition to some areas for future investigations.

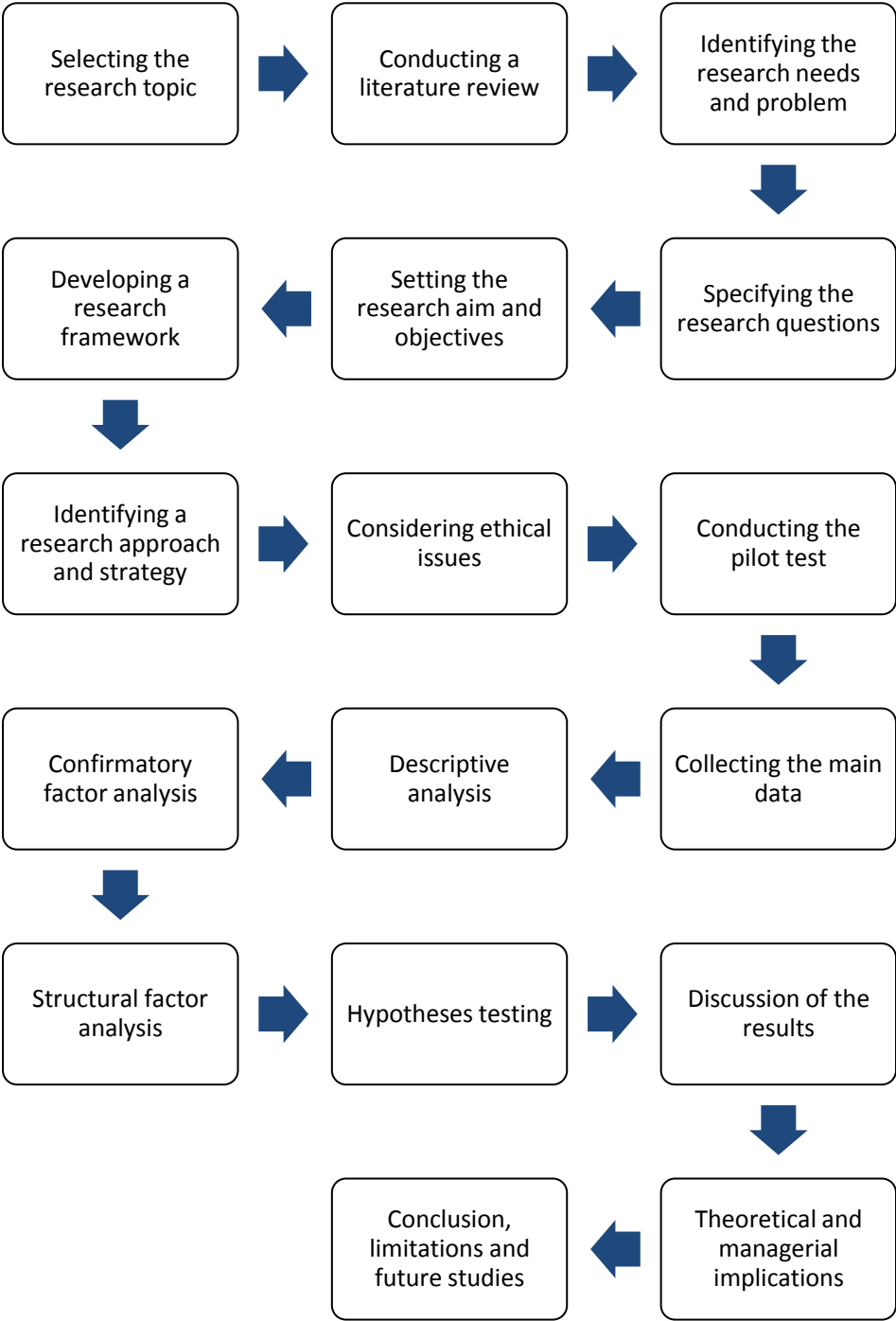


Figure 4. 1 Research Design

4.4 Research approaches

There are three main research approaches, namely: quantitative, qualitative and mixed method (both quantitative and qualitative) (Bryman and Teevan, 2005; Bryman and Bell, 2007). In most cases, quantitative research attempts to examine theories by testing and confirming the relationships between factors (Creswell, 2009). Hence, the major objective of quantitative studies is the quantification of data, which enables generalisations of the obtained results from a sample to a whole population of interest. Quantitative studies are often associated with positivism (Goldkuhl, 2012), use the deductive logic of the natural sciences (Amaratunga *et al.*, 2002; Saunders *et al.*, 2016), and often employ questionnaire surveys to collect data and examine phenomena (Collis and Hussy, 2014). Figure 4.2 depicts the process through which quantitative research can be conducted (Bryman and Teevan, 2005). The process starts by selecting the theories that help to address the phenomenon under examination and consequently draw hypotheses. Then, researchers can plan how, when and where the data can be collected and analysed, after which the obtained results are reported and the conclusion drawn.

Another research approach is the qualitative approach, which is designed to advance an understanding of the primary reasons for the problem (Creswell, 2009). In other words, qualitative research is not confirmatory but mainly exploratory in nature. Hence, qualitative approach outcomes are, “not arrived at by means of statistical procedures or other means of quantification” (Strauss and Corbin, 1990, p. 17) but, instead, rely heavily on words gathered from a small sample of participants (Bryman and Teevan, 2005). Qualitative methods are well-known for their relevance to Interpretivism rather than positivism (Goldkuhl, 2012; Miles and Huberman, 1994), and adopt an inductive approach, where the theory is the result of the study (Collis and Hussy, 2014; Saunders *et al.*, 2016). There are three techniques of data collection related to qualitative methods: (1) in-depth, open-ended interviews, (2) direct observation, and (3) analysis of written documents (Patton, 1990).

The third approach is the mixed-method approach; in which researchers often incorporate the use of both quantitative and qualitative techniques in different designs; namely a concurrent mixed-methods design, sequential mixed-methods research, and a sequential multi-phase design (Creswell, 2009; Saunders *et al.*, 2016). As a result, a mixed-method research design may include both deductive and inductive approaches in order to develop

theories, and the nature of this approach may be exploratory and confirmatory (Amaratunga *et al.*, 2002).

4.4.1 Rationale for using the quantitative approach

After summarising the different research approaches, it is now necessary to adopt one of them for the current investigation. The process of selecting an appropriate research method is based on a number of factors, such as the nature of the research, the problem to be solved, the type of data required, and accessibility to those data (Punch, 2005). The aim of this study is to explore the nature of 'public employees' behaviour' as 'individual behaviour', which requires a more contextually-oriented research perspective. In the present study, a quantitative method in the form of a questionnaire survey is used for the following reasons:

- The quantitative approach is usually linked to positivism, which has been chosen as the most suitable research paradigm for this research (Goldkuhl, 2012; Collis and Hussy, 2014; Saunders *et al.*, 2016). Additionally, quantitative approaches are often related to deductive methods, where the researcher is fully aware of the study's variables and the theory prior to conducting the research (Creswell, 2009).
- This research proposes a theoretical model with testable hypotheses to illustrate the effects of the complementarities between governance and human capital on public employees' innovativeness. In addition, the suggested framework was based on prior theories (social capital theory, stakeholder theory and institutional theory), with the goal of providing empirical confirmation of its validity.
- Quantitative procedures are also deemed to play a vital role in measuring physiological and behavioural elements, such as attitudes, opinions, and emotions, which are the main consequence of the current examination (Amaratunga *et al.*, 2002).
- According to the characteristics of this examination, the sample size for this research should be relatively large and representative to allow generalisation from the collected results (Kothari, 2004). Therefore, a quantitative approach, using a survey questionnaire, is the most suitable method for the current research (Teddlie and Tashakkori, 2010; Saunders *et al.*, 2016).

4.5 Research Strategy

Scholars have shown a propensity to define a research strategy as a general plan that enables a researcher to answer the research questions and meet its objectives in a logical and academic way (Saunders *et al.*, 2016). Specifically, a research strategy is typically viewed as a linkage between the research paradigm or philosophy and the experiment strategy (the methods adopted to collect and analyse the data) (Saunders *et al.*, 2016). A good research strategy helps the researcher to define why they are employing a particular research method to conduct the research in an effective manner to support the arguments. According to the research aim and questions, a good research strategy has a number of defining characteristics (Collis and Hussey, 2014; Saunders *et al.*, 2016), including (1) consistent with the research paradigm and approach chosen for conducting a study, (2) specifying the resources required for data collection, (3) considering constraints that may influence the process of data collection, such as access, location, time, ethical issues etc.

4.5.1 Justification for the use of a survey

The primary purpose of a survey is to gather information about a population. A survey methodology tends to produce results that may be high in reliability but low in validity (Collis and Hussey, 2014). In a positivist study, “reliability refers to the accuracy and the precision of the measurement and absence of differences in the results if the research were repeated; validity refers to the extent to which a test measures what the researcher wants it to measure and the results reflect the phenomena under study” (Collis and Hussey, 2014, p. 53). As a consequence, There is “a need for short measures that do not compromise on validity and reliability” (Van Engen, 2017, p. 512).

A questionnaire survey of public servants is conducted in this study. By using a questionnaire, the primary data are collected by asking the respondents a number of carefully structured questions. Where research should cover multiple factors to find useful answers to real-life problems, survey research ideally incorporates many measures (Van Engen, 2017). As recommended by Collis and Hussey (2014), the questions are chosen after testing to obtain reliable responses from the respondents.

The quantitative approach, in the form of a survey, was considered to be the most acceptable approach for this study, for many reasons. First, the sensitivity of this subject in the work context means that interview-based data collection would be unacceptable.

Second, it was hoped that the response rate would be boosted as the participants (public employees) could participate without being identified. Third, the recent systemic review conducted by De Vries, Bekkers and Tummers (2016) proposes a number of suggestions for future research related to innovation in the public sector. One suggestion was the need for greater variety in terms of research methods by moving from qualitative dominance to other methods, such as surveys. As a consequence, public administration research is recently becoming increasingly quantitative because of the growing demand for valid, reliable measures (Van Engen, 2017). Fourth, crucially, the majority of the previous studies on governance have focused on archival data for their empirical analyses, but Aguilera, Florackis and Kim (2016) argue data that exist in the public domain are poorly-suited for analysing governance attributes, such as dynamics and culture. Lastly, using a questionnaire is cheaper and quicker than conducting face-to-face or telephone interviews.

4.6 Questionnaire survey of public employees

In fact, it may be impossible to identify all of the members of the population, and frequently it is impractical or impossible to survey an entire population (Saunders *et al.*, 2016). Thus, a sample may be drawn from the population, data collected from whom may be used to infer information about the entire population (Fielding, Lee and Blank, 2017). It is important to acknowledge here that, “quality issues should be prevented through high-quality research design and data collection at the early stages” (Dolnicar, Grun and Leisch, 2016, p. 998). A good survey design seeks to reduce all types of error: coverage, sampling, nonresponse and measurement (Groves, 2004). This study has worked to map these errors fully, as shown in the procedures that follow.

4.6.1 Sample selection and population

One of the essential characteristics of quantitative research is the sample employed, that reflects the target population’s attributes (Sarandakos, 1998). The sample is drawn from the population to which the results are to be generalised (Anderson and Gerbing, 1988). When selecting a sample when the generalisation of the results is important, it is essential to select an unbiased subset of the population (Collis and Hussey, 2014; Fielding, Lee and Blank, 2017). This allows the results from the sample to address the research question and also be generalised to the entire population (Collis and Hussey, 2014). According to Churchill and Iacobucci (2005), the purpose and scope of the study play a vital role when selecting an

appropriate sample. The unit of analysis is public employees of Saudi public organisations. This study selects a very highly focused sample.

A population can be loosely described as the total number of units from which research data can be gathered. In particular, a research population is described as all of the individuals who meet the criteria for participation in a study (Cooper and Schindler, 2014). At the time of the study, the entire population is the group of public sector employees drawn from the Civil Services Ministry database. The given population equals 1,244,811 registered public employees who are working and practising in the public sector in Saudi Arabia.

4.6.2 Sample size

Imperfect sampling is a common problem that affects the quality of survey research (Dolnicar, Grun and Leisch, 2016), so it is important to determine the minimum sample size needed to allow results from a random sample to be generalisable to the population (Krejcie and Morgan, 1970). Following Krejcie and Morgan guidelines, the minimum sample size from a given population equal to 1,000,000 is determined as 384 cases. Thereafter, “as the population increases the sample size increases at a diminishing rate and remains relatively constant at slightly more than 380 cases” (Krejcie and Morgan, 1970, p. 610). If the sample size of the study increases, the likelihood of attaining statistical significance increases (Hinkin, 1998). However, in certain circumstances, increasing the sample size can compensate for some degree of bias (Dolnicar, Grun and Leisch, 2016). Perhaps the most significant recent work that points out this mismatch is that by Clegg, Cai and Sen (1999), who suggest that the statistical analysis planned is one of the main considerations when determining the sample size. Therefore, it is essential to determine the minimum sample size for this study before applying the multivariate statistical analysis, which is sensitive to sample size.

Bollen (1998) suggests that a minimum sample size is 100 cases for the multivariate analysis, whereas Guadagnoli and Velicer (1988) suggest that 150 cases are sufficient to obtain an accurate result in exploratory factor analysis (Guadagnoli and Velicer, 1988). Hoelter (1983) determines that a minimum of 200 cases is required to conduct confirmatory factor analysis. Notably, a small sample size may hinder some important statistical testing of the proposed hypothesis and relationships (Collis and Hussey, 2014). More specifically, to analyse the proposed conceptual model, this study uses Structural Equation Modelling (SEM), which

offers great potential for theory development and construct validation (Anderson and Gerbing, 1988), which would require a sufficient sample. Sampling in SEM can be categorised as 100 being poor, 200 being fair, 300 being good, 500 being very good and 1000 or greater being excellent (Tabachnick and Fidell, 2001). Based on this argument, the sample size selected for this study is very good, as more than 500 surveys were collected.

4.6.3 Sampling techniques

Sampling techniques refer to the methods that researchers use to single out the participants who will inform the study (Oates, 2006). As shown in Figure 4.2, there are two main types of sampling technique: (1) probability sampling; and (2) non-probability sampling (Saunders, 2009; Bryman, 2016). In probability-based sampling techniques, all of the population members have an equal chance of being selected for the sample, which produces less biased results and a higher representation of the target population (Churchill, 1995; Black, 1999; Cooper and Schindler, 2014; Bryman, 2016). However, probability sampling is considered time-consuming and highly expensive, as a complete list of the study population is needed in the process of selecting a probable sample, where the surveyor should select the sample using a probabilistic mechanism (Deming, 1960; Black, 1999; Fielding, Lee and Blank, 2017). Probability sampling techniques include simple random, systematic, stratified random, and cluster (Deming, 1960; Black, 1999; Bryman, 2016).

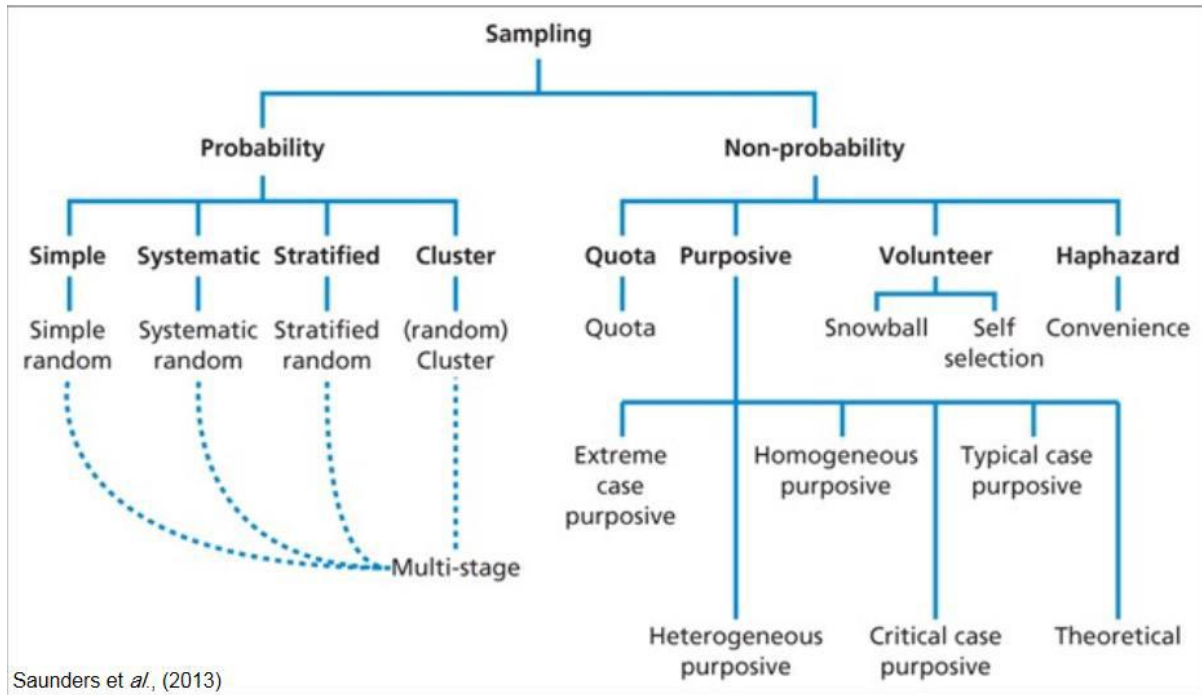


Figure 4. 2 Sampling Techniques

Non-probability sampling refers to a sampling technique whereby the members of the research sample are selected in a manner that does not give all of the members in the target population an equal chance of being chosen (Bryman, 2016). In this technique, the units of the research sample are often chosen in accordance with their availability or the researcher's judgement (Saunders *et al.*, 2016). Quotas, purposive, snowball, and convenience sampling are the methods used in non-probability sampling (Black, 1999; Bryman, 2016). In contrast with the probability sampling technique, non-probability sampling is time and cost effective. Perhaps more importantly, non-probability sampling techniques are practical when a study's population is unlimited or extremely large, or the probability that every unit or respondent is included in the sample cannot be determined (Cooper and Schindler, 2014; Bryman, 2016; Saunders *et al.*, 2016; Fielding, Lee and Blank, 2017).

Because the population size of this study is so large and distributed across different geographic areas, the technique employed in this study was non-probable sampling. In this regard, Cooper and Schindler (2014) and Saunders *et al.* (2016) argue that probability-based sampling is not valid when conducting quantitative research in the following situations: (1) when the number of population units is unlimited or large, as a complete source list of

population members is difficult to obtain; and (2) when researchers have a limited time and budget to conduct their research studies. Accordingly, it was considered that non-probability sampling would draw a sample that empirically helps to conduct the present study.

4.6.4 Reasons for adopting convenience sampling

Convenience sampling (also known as Haphazard Sampling or Accidental Sampling) is a type of non-probability sampling. Under this technique, members of the target population who meet certain practical criteria, such as easy accessibility, availability at a given time, geographical proximity, or a willingness to participate, are included for the purpose of the study (Dörnyei, 2007). Convenience sampling techniques were adopted in order to select an appropriate sample for this study for three reasons. First, convenience sampling is a suitable approach for selecting a sample when the population units are large and geographically distributed (Malhotra *et al.*, 1996; Black, 1999; Reynolds *et al.*, 2003; Saunders *et al.*, 2012; Bryman, 2016). Second, compared with other sampling techniques, convenience sampling provides easy access to population units, such as individuals and institutions, plus an ability to create higher response rates (Black, 1999; Cooper and Schindler, 2014; Saunders *et al.*, 2016). Third, convenience sampling is one of the most commonly employed non-probability sampling methods (Hair *et al.*, 2014). In these circumstances, convenience sampling was the ideal choice for this study. The use of convenience sampling is prevalent in various disciplines, including public sector (Johnsen, 2015), human capital (Schlechter, Thompson and Bussin, 2015), innovation (Paillé and Rainer, 2015), and governance (Singh *et al.*, 2010). As scholars have forcefully argued, the obvious disadvantage of convenience sampling is that it is likely to be biased (Mackey and Gass, 2005), so it is compulsory for this study to assess the data bias, as shown in Chapter Five.

4.6.5 Operationalisation of the constructs

This study follows the guidelines proposed by Hinkin (1998), Sekaran (2003), Fernandez *et al.* (2015), and Wright *et al.* (2017) to develop the questionnaire for public employees. In particular, Fernandez *et al.* (2015, p. 382) provide “a set of recommendations for refining the survey and its implementation with the aim of improving the quality and value of the data” for public management researchers, where “sloppy and imprecise definition and

operationalisation of key variables threaten the inferences that can be drawn from the research” (Bono and McNamara, 2011, p. 659).

‘Deductive’ scale development utilises a classification framework prior to the actual data collection (Wright *et al.*, 2017). In this study, the measures for the constructs require their indicators to be identified, which can be measured empirically. The burden of indicator selection and construction can be vastly reduced by a thorough accounting of both the indicator selection and construction in the literature, plus the evidence of their validity and reliability. In addition, “the use of existing validated measures not only eases the burden of indicator selection but also prevents ambiguities over interpretation” (Fernandez *et al.*, 2015, p. 390).

The generation of appropriate indicators to represent such constructs is the most important aspect in the development of sound survey questionnaire scales (Stone, 1978). It requires a priori understanding of the phenomenon in question based on a comprehensive review of the literature and extant questionnaires purporting to measure the same or similar constructs (Wright *et al.*, 2017). This study adopts the operational definitions of the constructs as far as possible from previous studies on governance, public administration, and human capital. The study makes minor changes to the original measures to fit public sector organisations in KSA, and retains only those items that provide the best representation of each of the constructs.

This study adopts multi-item constructs. A construct is multiple-item when it is “measured by more than one item” (Hair *et al.*, 2014, p. 30) or “defined by at least two measures, and each measure is intended as an estimate of only one construct” (Anderson and Gerbing, 1988, p. 415). Perhaps a fuller definition is that a multi-item construct “comprises multiple items measuring the same focal variable in a reliable and valid manner” (Robinson, 2018). A multiple-item measurement model is preferred because it allows the most unambiguous assignment of meaning to the estimated constructs (Anderson and Gerbing, 1982; Anderson and Gerbing, 1988). Otherwise, the scales may lack content, construct validity, internal consistency and/or reliability (Wright *et al.*, 2017; Hinkin, 1995; Nunnally, 1976). Consequently, a large number of academics have been able to use multiple item constructs to improve measurement reliability (Fernandez *et al.*, 2015).

In this study, all of the items were carefully drafted in the same direction. The use of negatively worded or reverse-scored items may introduce systematic errors to a questionnaire (Wright, 2017; Jackson *et al.*, 1993; Robinson, 2018). Moreover, a questionnaire should generate sufficient response variance with, for instance, five- and seven-point Likert-type scales being especially popular (Wright, 2017). Multi-item constructs always use fixed-format rating scales, and the most widely used of these are the Likert rating scales (Robinson, 2018). As recommended by Fernandez *et al.* (2015), using a 7-point Likert scale could mitigate response set bias; all constructs in this study are measured using a seven-point Likert scale. The indicators of all constructs are elaborated as follows.

Table 4.2 shows the nine constructs, capturing the extent of implementation of good governance from the IFGGPS perspective. These are modelled as multiple-items as they are measured by more than one indicator. Integrity, Fairness, Respecting the rule of law, Resilience, Openness and accountability, Governance network, Comprehensive measuring of performance, Task interventions, and Developing capacity are measured using a seven-point Likert scale, where 7 = Extremely agree, and 1 = Extremely disagree.

Table 4. 2 *Good governance constructs*

<i>Construct</i>	<i>Code</i>	<i>Number of indicators</i>	<i>Table #</i>
Integrity	<i>IT</i>	5	4.3
Fairness	<i>FR</i>	4	4.4
Respecting the rule of law	<i>RL</i>	4	4.5
Resilience	<i>RM</i>	4	4.6
Openness and accountability	<i>OA</i>	4	4.7
Governance network	<i>GN</i>	5	4.8
Comprehensive measuring of performance	<i>OM</i>	4	4.9
Task interventions	<i>TI</i>	4	4.10
Developing capacity	<i>DC</i>	4	4.11

Table 4.3 shows the integrity indicators adopting from Fernandez, Cho and Perry (2010), Hassan, Wright and Yukl (2014), and Moldogaziev and Silvia (2015).

Table4. 3 Integrity construct indicators

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Integrity	<i>IT1</i>	My organization's leaders maintain high standards of honesty and integrity
	<i>IT2</i>	Prohibited Personnel Practices are not tolerated
	<i>IT3</i>	I can disclose a suspected violation of any law, rule or regulation without fear of reprisal
	<i>IT4</i>	My organization's leaders keep actions consistent with stated values ('walks the talk')
	<i>IT5</i>	My organization's leaders can be trusted to carry out commitments that he or she makes

Source: Fernandez, Cho and Perry (2010), Hassan, Wright and Yukl (2014), and Moldogaziev and Silvia (2015).

Table 4.4 shows the indicators of fairness adopting from Colquitt (2001), Choi (2009), and Moldogaziev and Silvia (2015).

Table4. 4 Fairness construct indicators

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Fairness	<i>FR1</i>	Policies and programs promote diversity in the workplace (for example, recruiting minorities, training in awareness of diversity issues, mentoring)
	<i>FR2</i>	Managers/supervisors/team leaders work well with employees of different backgrounds
	<i>FR3</i>	Managers/supervisors/team leaders are committed to a workforce representative of all segments of society
	<i>FR4</i>	Managers/supervisors/team leaders refrain from improper remarks or comments

Source: Colquitt (2001), Choi (2009), and Moldogaziev and Silvia (2015).

Table 4.5 shows the indicators of respecting the rule of law adopting from Victor and Cullen (1988), Tummers and Knies (2016), and Borry (2017).

Table 4. 5 *Respecting the rule of law construct indicators*

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Respecting the rule of law	<i>RL1</i>	It is very important to follow strictly the organization's rules and procedures here
	<i>RL2</i>	Everyone is expected to stick by organization rules and procedures
	<i>RL3</i>	My supervisor emphasizes to me and my colleagues that it is important to follow the law
	<i>RL4</i>	My supervisor gives me and my colleagues the means to properly follow governmental rules and regulations

Source: Victor and Cullen (1988), Tummers and Knies (2016), and Borry (2017).

Tables 4.6, 4.7 and 4.8 show the organisational resilience, openness and accountability, and governance network indicators adopting from Tummers and Knies (2016), and Benito and Bastida (2009). The RM1 indicators are adopted by Bernardino, Benito and Bastida (2009) from the survey of the World Bank Budgeting Database. The RM2 and RM3 indicators are adopted from the Standards for Internal Control in the Federal Government 2014 (Green Book) issued by the United States Government Accountability Office (GAO). The previous issues of GAO standards serve as examples of the practice of controlling controls (Candrea, 2006).

Table 4. 6 *Resilience construct indicators*

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Resilience	<i>RM1</i>	A dynamic system of internal controls is in place to ensure the Strengthening of procedures and the integrity of information provided in the reports
	<i>RM2</i>	Management establishes an organizational structure, assign responsibility, and delegate authority to achieve the entity's objectives.
	<i>RM3</i>	Management identifies, analyses, and responds to risks related to achieving the defined objectives.
	<i>RM4</i>	My supervisor encourages me and my colleagues not to jeopardize the relationship with political heads, even if that entails risks

Source: the Standards for Internal Control in the Federal Government 2014, Tummers and Knies (2016), and Benito and Bastida (2009).

Table4. 7 *Openness and accountability construct indicators*

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Openness and accountability	OA1	A dynamic system of internal audit is in place
	OA2	Employees inform stakeholders of our way of working
	OA3	it is important to answer questions from clients
	OA4	Employees openly and honestly share the actions of our organizational unit with others

Source: Tummers and Knies (2016), and Benito and Bastida (2009)

Table4. 8 *Governance network construct indicators*

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Governance network	GN1	Employees maintain many contacts with other organizations
	GN2	My supervisor encourages me and my colleagues to invest substantial energy in the development of new contacts
	GN3	We introduce other employees to contacts of our own networks
	GN4	My supervisor motivates me and my colleagues to regularly work together with people from our networks
	GN5	My supervisor motivates me and my colleagues to develop many contacts with people outside our own department

Source: Tummers and Knies (2016), and Benito and Bastida (2009)

Table 4.9 shows the indicators of the comprehensive measuring of performance adopted from Leventhal (1976), Colquitt (2001), Moers (2006), Fry, Vitucci and Cedillo (2005); Cojuharenco and Patient (2013), Haynie, Mossholder and Harris (2016), and Groen, Wilderom and Wouters (2017).

Table4. 9 *Comprehensive measuring of performance construct indicators*

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Outcomes measurement quality	OM1	I have a clear sense of my organisation’s vision and goals
	OM2	Your outcome reflects what you have contributed to the organization
	OM3	Your outcome reflects the effort you have put into your work
	OM4	Your outcome is appropriate for the work you have completed

Tables 4.10 and 4.11 respectively show the task-interventions and relations-orientation indicators adopted from Fernandez, Cho and Perry (2010), and Moldogaziev and Silvia (2015).

Table4. 10 *Task-interventions construct indicators*

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Task-interventions	<i>TI1</i>	Managers communicate the goals and priorities of the organization
	<i>TI2</i>	Managers promote communication among different work units
	<i>TI3</i>	Managers review and evaluate the organization's progress toward meeting its goals and objectives
	<i>TI4</i>	Supervisors/team leaders provide employees with constructive suggestions to improve their job performance

Source: Fernandez, Cho and Perry (2010), and Moldogaziev and Silvia (2015).

Table4. 11 *Developing capacity construct indicators*

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Developing capacity	<i>DC1</i>	I am given a real opportunity to improve my skills in my organization
	<i>DC2</i>	Supervisors/team leaders in my work unit provide employees with the opportunities to demonstrate their leadership skills
	<i>DC3</i>	Employees have a feeling of personal empowerment with respect to work processes
	<i>DC4</i>	Supervisors/team leaders in my work unit support employee development

Source: Fernandez, Cho and Perry (2010), and Moldogaziev and Silvia (2015).

Four constructs measure the human capital factors, as shown in Table 4.12 These are modelled as multiple-items, as they are measured by more than one indicator. Trust, job Resource, Empowerment and Psychological Ownership are measured using a seven-point Likert scale, where 7 = To a great extent, and 1 = Minimally.

Table4. 12 Human Capital context constructs

<i>Construct</i>	<i>Code</i>	<i>Number of indicators</i>	<i>Table #</i>
Trust	<i>TR</i>	4	4.13
Job resource	<i>SR</i>	4	4.14
Empowerment	<i>EM</i>	4	4.15
Psychological ownership	<i>PO</i>	4	4.16

Table 4.13 shows the Trust indicators adopted from Cook and Wall (1980), Asencio and Mujkic (2016), and Pearce *et al.* (2000).

Table4. 13 Trust construct indicators

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Trust	<i>TR1</i>	Management at my organisation is sincere in its attempts to meet the workers' point of view
	<i>TR2</i>	Management at work seems to do an efficient job
	<i>TR3</i>	I feel quite confident that the organisation will always try to treat me fairly
	<i>TR4</i>	we have confidence in one another in this workgroup

Source: Cook and Wall (1980), Asencio and Mujkic (2016), and Pearce et al. (2000).

Table 4.14 shows the Job Resource indicators adopted from Atuahene-Gima (2005), Troilo, De Luca, and Atuahene-Gima (2014), and Danneel (2008).

Table4. 14 Job resources indicators

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Job resources	<i>SR1</i>	We have ample discretionary financial resources
	<i>SR2</i>	Physical conditions (e.g., noise level, temperature, lighting, cleanliness in the workplace) allow employees to perform their jobs well
	<i>SR3</i>	The people I work with cooperate to get the job done
	<i>SR4</i>	Stakeholders share their knowledge and experience

Source: Atuahene-Gima (2005), Troilo, De Luca, and Atuahene-Gima (2014), and Danneel (2008).

Table 4.15 shows the empowerment indicators adopted from Fernandez and Moldogaziev (2013), and Barrick *et al.* (2015). The EM1, EM2, and EM3 indicators are originally adopted by Fernandez and Moldogaziev (2013) from the Federal Employee Viewpoint Survey (FEVS).

Table 4.15 Empowerment indicators

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Empowerment	<i>EM1</i>	I'm satisfied with the information I receive from management on what's going on in your organization
	<i>EM2</i>	Promotions are primarily based upon merit or performance as opposed to seniority
	<i>EM3</i>	The workforce has the job-relevant knowledge and skills necessary to accomplish organizational goals
	<i>EM4</i>	Employees are involved in decisions that affect our work

Source: the Federal Employee Viewpoint Survey (FEVS), Fernandez and Moldogaziev (2013), and Barrick et al. (2015)

Table 4.16 shows the psychological ownership indicators adopted from Avey *et al.* (2009).

Table 4.16 Psychological ownership indicators

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
psychological ownership	<i>PO1</i>	I'm confident in my ability to contribute to my organisation's success
	<i>PO2</i>	I feel I belong in this organisation
	<i>PO3</i>	I'm totally comfortable being in this organisation
	<i>PO4</i>	I feel this organisation's success is my success

Source: Fernandez and Moldogaziev (2013), and Barrick et al. (2015)

Table 4.17 shows the Innovation indicators are operationalised using two dimensions: encouragement to innovate and innovative behaviour. The dimensions and indicators for innovation are derived from previous studies (Nicholson-Crotty, Nicholson-Crotty and Fernandez, 2017; Fernandez, 2013; Fernandez and Moldogaziev, 2013), and the IN1 and IN2 indicators are originally adopted from the Federal Human Capital Survey/Federal Employee Viewpoint Survey (FHCS/FEVS) where IN3 is adopted from Scott and Bruce (1994). Innovation is measured using a seven-point Likert scale, where 7 = Always, and 1 = Never.

Table 4. 17 *Innovativeness indicators*

<i>Construct</i>	<i>Code</i>	<i>Indicator</i>
Innovativeness	<i>IN1</i>	I feel encouraged to come up with new and better ways of doing things
	<i>IN2</i>	I am constantly looking for ways to do my job better
	<i>IN3</i>	Employees are allowed to try to solve the same problems in different ways.

Source: the Federal Human Capital Survey/Federal Employee Viewpoint Survey (FHCS/FEVS), and Scott and Bruce (1994)

4.6.6 Designing the questionnaire

As discussed above, the constructs are operationalised, and then used to design a list of carefully structured questions. The questionnaire survey is conducted using the mixed-mode data collection approach. Mixed-mode refers to combining the Internet and paper-and-pencil (PP) method, which enables a meaningful substantive interpretation of the overall results (Fenlason and Suckow-Zimberg, 2006). Beuckelaer and Lievens (2009) argue “the establishment of measurement equivalence implies the absence of measurement effects (i.e. biases) of collecting survey data through the Internet as compared to using the PP method” (p. 337).

On the one hand, the most important advantages associated with using Internet surveys appear to be: (1) a more efficient data collection process, (2) the elimination of human coding errors, and (3) cost-reduction (Beuckelaer and Lievens, 2009). Additionally, this method enables the researcher to export the responses into Excel and then begin to analyse the data immediately or to convert the data set into other sheets or formats in order to conduct further statistical analysis (Wright, 2005). On the other hand, Internet surveys may include disadvantages, such as a higher probability of obtaining dishonest answers (Booth-Kewley, Edwards and Rosenfeld, 1992; Lautenschlager and Flaherty, 1990), higher non-response rates (Schaeffer and Dillman, 1998; Sproull, 1986), potential technological problems (Kraut and Saari, 1999), the possibility of multiple submissions (Reips, 2000), and decreased item reliability, due to somewhat higher measurement errors (Stanton, 1998). Additionally, because public employees belong to different occupational groups, they may have varying access to computers, e-mail, and the Internet during working hours (Stanton and Rogelberg, 2001). They may also differ from one another in terms of their level of computer literacy.

Due to these limitations, “it is often necessary to combine Internet surveys with more conventional modes of data collection such as the PP method” (Beuckelaer and Lievens, 2009, p. 339). As a consequence, for instance, the response rate of the total sample might improve (Yun and Trumbo, 2000). Recently, mixed-mode surveys have been growing in popularity (Stanton, 1998; Buchanan and Smith, 1999; Cole, Bedeian and Field, 2006, Beuckelaer and Lievens, 2009; Moser and Kalton, 2017).

The study adds a first screen question at the beginning of the survey to ensure that the respondent is the best-informed participant to answer the questionnaire. The study employs the critical incident technique in the first question, as the respondents are public employees. In addition, they are asked to answer the remainder of the survey in the context of their organisation. As suggested by Collis and Hussey (2014), this technique helps to add focus and considerable insights can be gained. A number of filter questions are used at the beginning of the survey to direct certain groups of respondents. These questions are presented in a logical order and kept as simple, clear and short as possible. In addition, precise instructions are provided for all questions.

Based on a positivist approach, closed questions are used to allow the respondents to choose from predetermined answers (Collis and Hussey, 2014). Closed questions are very convenient and usually easy to analyse, since the range of answers is limited and can be coded in advance (Collis and Hussey, 2014, p. 213). Although open questions allow the respondents to give their opinions specifically, using their own words, open questions may prevent busy respondents from answering the survey (Collis and Hussey, 2014). Thus, using closed questions overcomes this disadvantage associated with open questions. The study uses two approaches in designing the closed questions: multiple choice questions and ranking questions. Multiple choice questions are used, where the respondents can select one or more answer from a list of predetermined choices (answers). Rating questions seek opinions and are designed using a seven-point Likert scale to ask the respondent to rank a list of items (Collis and Hussey, 2014, p. 215). All questions are pre-coded to make the subsequent data entry easier and less prone to error. The codes are hidden and used only for statistical purposes. This study considers all of the ethical principles prior to the data collection, following the procedures and guidelines proposed by Bell and Bryman (2007) and Collis and Hussey (2014). The guidelines provided by Brunel University’s Code of Research

Ethics were taken into consideration when designing the study. Approval by the Ethics Committee was received on 22 September 2017.

4.7 Pilot testing

It was important to pilot test the questionnaire before using it for the data collection. A pilot study is a very common exercise in business research, especially within the positivist paradigm. In addition, the use of a pilot study format has proven highly useful in the further development of psychometrically rigorous scales (Wright *et al.*, 2017). In particular, pilot study is a common procedure in business studies for advancing the instrument.

Table 4.18 shows that a pilot study is imperative for many reasons, which are applicable to this study. The main aim of a pilot test is to refine the questionnaire and enable the researcher to assess the validity and reliability of the questions (Saunders *et al.*, 2012). Validity involves the process of asking one or more expert to comment on the representativeness and suitability of the questionnaire. Reliability is concerned with the consistency of the responses to the questions (Saunders *et al.*, 2012). Its measurement assists the researcher to obtain a clear picture of the true relationships because random errors tend to obscure relationships (Hughes, Price and Mars, 1986).

Table 4.18 Purpose of the Pilot Survey

<i>ID</i>	<i>Purpose</i>
1	Testing questionnaire wording
2	Testing questionnaire sequencing
3	Testing questionnaire layout
4	Estimating response rate
5	Estimating questionnaire completion time
6	Testing analysis procedure

Source: Ticehurst and Veal (2000)

Once the questions have been designed, the content face validity of the questionnaire is assessed. Each of the questionnaire questions is reviewed by experts in regard to its content, scope, and purpose. First, this study tests the validity of the questionnaire with experts, who are three academics (two senior lecturers and one professor) with research interests in the fields of governance and public administration. Additionally, each expert was

asked about the clarity of the instructions, their opinions, and whether the layout was clear and attractive (Saunders *et al.*, 2012).

After contemporaneous notes were taken, the draft questionnaire was revised. Thereafter, this study tests the validity of the questionnaire through pre-tests with multiple participants to ensure that there are no empirical issues associated with the selection of the scale items (Churchill, 1979; Robinson *et al.*, 1991; Hair *et al.*, 2010). Pre-testing allows the testing of most aspects of the questionnaire with respect to the time taken, ease of completion, and ease of data collection (Kriel, 2006). The questionnaire is then piloted based on the revised questionnaire. A total of 31 surveys were collected to check the clarity of the questionnaire. In this study, the reliability of the survey was assessed through the Cronbach's alpha. As a rule of thumb for Cronbach's α , a figure of ≤ 0.90 indicates excellent reliability, 0.70-0.90 high reliability, 0.50-0.70 moderate reliability, and ≤ 0.50 low reliability (Hinton *et al.*, 2004). This study used Cronbach's α to test the pilot study and achieved an excellent level of reliability of 0.985 (Hair *et al.*, 2010).

4.7.1 Demographic profile of the respondents involved in the pilot study

This section presents the demographic information of the respondents involved in the pilot study. Table 4.20 presents the participants' gender, age, education, experience, frequency of meeting with manager, and government organisation type.

The results of the pilot study show that, of the 31 respondents, the majority was male (n=27, 78.1%) while the remainder was female (n= 4, 12.9%). The majority of the respondent were adults aged 31-40 years (n=15, 48.4%) while those aged 41-50 years were the second highest group in terms of numbers (n=9, 29.0%).

Table 4. 19 Demographic details of the pilot study respondents (N=31)

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
Age		
Up to 30	3	9.7
31-40	15	48.4
41-50	9	29.0
51-60	3	9.7
Above 60	1	3.2
Gender		
Male	27	87.1
Female	4	12.9
Education		
Up to high school	5	16.1
Bachelor Degree	10	32.3
Master Degree	8	25.8
PhD Degree	8	25.8
Frequency of meeting with manager		
Rarely	2	6.5
Occasionally	3	9.7
Very Often	15	48.4
Every day	11	35.5
Government organisation type		
Ministry	7	22.6
Commission	6	19.4
University	18	58.1
General organisation	0	0

The findings of the pilot study showed that most of the participants had a Bachelor degree (n=10, 32.3%), followed by those with a postgraduate qualifications. It was striking that the percentage of participants with a master and PhD degree was the same (n=8, 25.8%) in the pilot study. These findings indicate that government employees are generally more highly

educated than average Saudi citizens (Demographic census, 2016), probably because educated citizens have a better opportunity to be recruited. It was also interesting to find that 16.1% of the respondents had a lower level of educational qualifications.

It was also shown that most of the participants meet very often with their manager (n = 15, 48.4%). In addition, the pilot study revealed that most of the respondents (n = 18, 58.1%) were employed in universities.

4.3.5.1 Reliability of the instrument

In this pilot study, the reliability of the measurement items used on the questionnaire was assessed using the internal consistency test, Cronbach's alpha, to test the consistency of the respondents' answers to all of the items on the measure. A Cronbach's alpha estimate value of ≤ 0.90 reflects excellent reliability, 0.70-0.90 high reliability, 0.50-.70 moderate reliability, and ≤ 0.50 low reliability (Hinton *et al.*, 2004). Table 4.21 presents the Cronbach's alpha coefficients for all of the constructs obtained in the pilot study.

All of the measures used in the pilot study showed adequate reliability, with Cronbach's alpha values ranging from 0.751 to 0.960, which are considered to reflect high to excellent reliability, except for one construct, which is considered to have high reliability, which consists of only three items. The Cronbach's alpha coefficient "is sensitive to the number of items in the scale and generally tends to underestimate the internal consistency reliability as it assumes that all indicators are equally reliable" (Hair, *et al.*, 2010, p. 709). Indeed, the reliability of this construct should be improved in the final result since the main sample size will definitely be greater than 31 participants, which was the sample size for the pilot study.

Table 4. 20 Cronbach's alpha coefficients for all of the constructs in the pilot study

<i>Construct</i>	<i>Items</i>	<i>Cronbach's Alpha</i>
Integrity	5	.860
Fairness	4	.785
Respecting the rule of law	5	.893
Resilience	4	.909
Openness and accountability	5	.942
Governance Network	6	.960
Comprehensive measuring of performance	4	.751
Task interventions	5	.910
Developing capacity	4	.957
Trust	4	.940
Job resources	5	.767
Empowerment	5	.868
Psychological ownership	5	.932
Innovativeness	3	.679

4.8 Response rate

This study selects a highly focused sample. However, the actual response rate of this study is unknown, as it is unknown how many public employees actually see the survey. This may suggest that the study responses are more likely to have the chance to represent the population, as the sample size is 713, which is larger than the minimum sample size of 200 responses required to conduct a multivariate analysis using SEM (Tabachnick and Fidell, 2001).

4.9 Data analysis

According to Coorley (1978), the main goal of “the statistical techniques are to assist in establishing the plausibility of the theoretical model and to estimate the extent to which the various explanatory factors seem to be influencing the dependent variable” (p.13). The primary purpose of this research study was to identify and investigate the relationship between good governance and human capital complementary; and innovation. In order to achieve the study’s objectives, two different statistical software tools were used.

In order to analyse the data collected for this study and test the hypothesised relationships, several analytical techniques were applied. These included the preliminary examinations of the collected data, the reliability and validity assessments, and structural equation modeling (SEM), as well as moderating tests. Each of these examinations is discussed in the following subsections.

4.9.1 Preliminary data analysis statistics

The selection of the statistical technique that best fits the analysis is the first and most important step. It requires a consideration of the research components, including the questions, aims and objectives, attributes of the data, and the suitability and characteristics of the statistical tool under review (Malhotra, 1999). All of these considerations are critical before actually implementing the techniques for analysis to ensure that the research efforts and resources are utilised according to a precise plan that consequently produces an accurate conclusion (Cooper and Schindler, 2001).

The Statistical Package for Social Sciences (SPSS), IBM® SPSS® Statistics V.23 software was used to analyse the quantitative data obtained from the survey questionnaire. This software package is widely accepted and used by researchers in different management disciplines because it is user friendly and requires limited time to learn the mandatory features (Zikmund, 2003). Perhaps more importantly, the selection was based on the rationale that this statistical package provides most of the required and fundamental calculations, such as descriptive and reliability analysis, correlation techniques, outlier identification, normality test, confirmatory factor analysis (CFA) and structural equation modelling (SEM), which are important and required to arrive at the data findings.

Therefore, this tool has been used to test and establish the data normality (i.e. using kurtosis and skewness statistics), to perform descriptive statistics such as frequencies, percentages, mean values, standard deviations, correlation analysis, reliability, and validity. These analyses were performed for each variable separately and to summarise the demographic profile of the respondents in order to obtain preliminary information and the feel of the data (Sekaran, 2000). Furthermore, before applying SEM, SPSS was used to conduct Confirmatory factor analysis (CFA) in order to review the level to which the different variables succeed in measuring the construct (Byrne, 2006). The data collection for this quantitative survey mainly used nominal and ordinal scales, which would return data in a form appropriate for this technique (Kline, 2005).

Thereafter, the Analysis Moment of Structures Software (AMOS) for Structural Equation Modelling (SEM) was used for measurement model analysis and structural model to test the proposed conceptual framework explained in Chapter Three. Following sub-sections

describe and provide justifications for using the statistical software and techniques mentioned above.

Missing data

Missing data are a very common problem in all type of survey research because it usually involves a large number of samples (Bryman and Cramer, 2005). Hair *et al.* (2006) note that missing data cause two main problems: (a) they minimise the ability of statistical tests to imply a relationship in the data set, and (b) they create biased parameter estimates. The potential effects of missing data depend on the frequency of occurrence, the pattern of missing observations, and the reasons for the missing value (Tabachnick and Fidell, 2001).

Although there are no clear set guidelines regarding what constitutes a large amount of missing data, Kline (1998, p. 75) suggested that missing values should probably constitute less than 10% of the total data. According to Cohen and Cohen (1983), 5% or even 10% of missing data on a particular variable is not large. Olinsky *et al.* (2003) point out that, if the percentage of cases with missing observations is less than approximately 5%, and the pattern is ignorable, most simple analyses should still yield reliable results. This study follows the steps suggested by Byrne (2001) for dealing with incomplete (missing) data, which are: (1) to investigate the total amount of missing data, (2) if it is found that some data are missing, to investigate the pattern of these missing data, and (3) to find appropriate techniques for dealing with the missing data. This study did not find any missing values and hence proceeded to the next phase.

Outliers

As recommended by Hair *et al.* (2014), this study first checked the collected data for outliers, normality, and multicollinearity. Kline (2005) and Hair *et al.* (2006) described outliers as cases with scores that are distinctively different from the other observations in a dataset. Researchers have warned that problematic outliers can have a dramatic effect on the statistical analysis, such as the model fit estimates and parameter estimates (West *et al.*, 1995), and can create a negative variance (Dillon *et al.*, 1987). There are two main types of outlier i.e. univariate and multivariate outliers. A univariate outlier has an extreme value for one variable whereas a multivariate outlier has an unusual combination of values on two or more variables (Tabachnick and Fidell, 2001; Kline 2005). Although, there is no absolute

judgement of an extreme value, a commonly accepted rule of thumb is that scores more than three standard deviations away from the mean may be considered as outliers (Kline, 2005). The univariate outlier can be detected easily by diagnosing the frequency distributions of Z-scores (Kline, 2005).

Indeed, there might be outliers resulting from unengaged respondents who enter the same answer for the majority of the survey questions. In this case, the study removes the outliers from the dataset as they can distort the results of the statistical analysis (Collis and Hussey, 2014). As discussed above, the study utilised a Likert scale with 7 categories and no univariate outliers were identified.

Normality

Normality is defined as the "shape of the data distribution or an individual metric variable and its correspondence to the normal distribution, which is the benchmark for statistical methods" (Hair *et al.*, 2006; p. 79). Violation of normality might affect the estimation process or the interpretation of results, especially in SEM analysis. For instance, it may increase the chi-square value and possibly cause an underestimation of the fit indices and standard errors of the parameter estimates (Hair *et al.*, 2006). One approach to diagnosing normality is through visual checks or graphical analyses, such as a histogram and normal probability plot that compare the observed data values with a distribution approximating the normal distribution. If the observed data distribution largely follows the diagonal lines, then the distribution is considered normal (Hair *et al.*, 2006). A normality test is essential to decide whether parametric or non-parametric tests are appropriate for the dataset. Parametric tests can be used when the data meet the assumptions recommended by Field (2000). One of these assumptions is that data are drawn from a population with a normal distribution (Field, 2000). The study conducts the normality test and follows the general guidelines for skewness and kurtosis values.

Besides the shape of the distribution, normality can also be inspected by two multivariate indices i.e. skewness and kurtosis. Skewness portrays the symmetry of distribution whereas kurtosis refers to the measure of the heaviness of the tails in a distribution (also known as the peakedness or flatness of the distribution) compared with normal distribution. In normal distribution, the scores for both skewness and kurtosis are zero. When the value of

skewness is greater than +1 or lower than -1, the Kurtosis scores outside +/-2 times its standard error, and the skewness rating outside +/-1 times its standard error, this indicates that the data are non-normal (Kline, 2005). Hair *et al.* (2006) point out that skewness scores outside the -1 to +1 range demonstrate substantially skewed distribution. However, West *et al.* (1995) and Kline (2005) suggest that values of the skew index greater than three (3.0) are indicated as extremely skewed while a score on the kurtosis index from about 8.0 to over 20.0 describes extreme kurtosis. In this study, the researcher set the maximum acceptable limit of observation values as up to ± 1 for skewness and up to ± 3 for kurtosis. Thereafter, the researcher used factor analyses and structural equation modelling for the inferential statistical analyses.

4.9.2 Descriptive statistics

Descriptive statistics are used to describe the key characteristics of the study sample using SPSS V. 23.0 software. Following the guidelines suggested by Gefen, Straub and Rigdon (2011) on the minimal necessary reporting required for multivariate analysis, the study examines the frequencies of the cases for the categorical variables. The simple descriptive statistics, including the mean, median, and standard deviation, are examined for the ordinal variables that are measured using a seven-point Likert scale.

4.9.3 Multicollinearity analysis

The Pearson's correlation test is conducted in this study to solve any multicollinearity issues (Hair *et al.*, 2014). Indeed, the Pearson correlation coefficient is deployed to determine the level of association between the variables with the objective of determining the level of association between the variables and ascertaining the association between those variables with a dependency connection. The correlation between variables results in the production of a matrix table of correlation that yields correlation coefficients among the studied variables (Robson, 2002). The levels of correlation of the coefficients are analysed. Below than 0.20 is the least; 0.20–0.40 is low; 0.40–0.71 is moderate; and 0.71–0.91 is high (Pfeifer, 2005).

4.9.4 Reliability

Reliability is the most important determinant when measuring an instrument's quality, such that it helps to identify the inconsistencies and their effect on the measurement results. Reliability is concerned with the consistency, stability and reproducibility of measurement

results (Sekaran, 2000). More specific to the constructs of this study, internal reliability is particularly important when multiple measurement items exist for each construct (Bryman and Cramer, 2005). The term 'reliability' is understood to mean the quality or state of being reliable. In statistics, this term tends to be used to refer to "the degree to which a measurement yields the same results when taken on at least two different occasions or by a minimum of two different examiners" (Gogia *et al.*, 1987, p. 192).

The reliability of the measurement items was evaluated by examining the consistency of the respondents' answers to all of the question items in the measure (Nunnally, 1978). The current study uses the Cronbach's alpha to estimate the reliability and measure the internal consistency of the measurement scales adopted in the study. Reliability coefficients less than 0.6 were considered poor, 0.7 acceptable, and those greater than 0.8 good, as suggested by Sekaran (2000). Nunnally (1978) suggested that Cronbach's alpha reliability coefficients equal to 0.7 or greater show adequate reliability, while Hair *et al.* (2006) suggested the Cronbach's alpha reliability coefficients of 0.7 or higher indicate adequate internal consistency. Therefore, a minimum cut-off value of 0.7 for Cronbach's alpha reliability coefficients was employed in the present research to determine the reliability of each measure in order to establish the overall reliability of each of the latent constructs used in the model.

4.9.5 Factor Analysis

Factor analysis (FA) techniques are used to address the problem of analysing the structure of the correlations among a large number of measurement items (also known as variables) by defining a large set of common underlying dimensions, known as factors. FA takes a large set of variables and summarises or reduces them using a smaller set of variables or components (factors) (Hair *et al.*, 2006). The main purposes of the FA therefore include: (a) understanding the structure of a set of variables, (b) constructing a questionnaire to measure any underlying variables, and (c) reducing a dataset to a more manageable level (Field, 2006, p.619). Therefore, first, the researcher identifies the latent dimensions of the structure of the data and then determines the degree to which a test item (variable) is explained by each factor. This is then followed by the primary uses of FA: summarisation and data reduction (Hair *et al.*, 1995).

This purpose can be achieved by either exploratory factor analysis (EFA) or confirmatory factor analysis (CFA) techniques. Even though EFA is designed for situation where links between the observed and latent variables are unknown or uncertain, CFA is appropriately used when the researcher has some knowledge of the underlying latent variable structure (Byrne, 2013). Indeed, the EFA technique is used for “take what the data give you”, whereas the CFA technique involves combining variables together on a factor or the precise set of factors for testing the hypotheses (Hair *et al.*, 2006, p.105).

CFA is a multivariate statistical technique that is used to review the level to which the different variables are successful in measuring the construct. It is used to assess the measurement model’s validity through comparing the measurement theories against the reality. In this research study, confirmatory factor analysis (CFA) was performed to test and confirm the relationships between the observed variables under each hypothesised construct (Zikmund, 2003; Hair *et al.*, 2006).

4.9.6 Validity

Validity is related to the accuracy of the measures (Sekaran, 2000). Zikmund (2003) defined validity as “the ability of a scale to measure what it intended to be measured” (p.331). In other words, validity determines the extent to which a construct and its corresponding measurement indicators are related, and the extent to which this set of items actually reflects the construct that they were designed to measure (Hair *et al.*, 2006). According to Neuman (2003), the better the fit between the theoretical latent construct and the measured items, the greater the validity. A construct’s validity can be examined by assessing the convergent validity and discriminant validity (Hair *et al.*, 2014; Hair, Babin and Krey, 2017), which are explained as follows.

Convergent Validity

Convergent validity is the extent to which the observed variables of a particular construct share a high portion of the variance in common (Hair *et al.*, 2006; Hair *et al.*, 2014), “meaning the items representing a construct correspond with one another to represent a unidimensional factor” (Hair, Babin and Krey, 2017, p. 169). The factor loadings, average variance extracted (AVE), and construct reliability (CR) estimation are used to assess the convergent validity of each of the constructs (Hair *et al.*, 2006). In addition, Hair *et al.* (2006) suggested that ideal standardised loading estimates should be 0.7 or higher, the AVE

estimation should be greater than 0.5, and the reliability estimates should be above 0.7 to show adequate convergent validity. Therefore, in this study, the minimum cut-off criteria for the loadings of >0.7 , for the AVE of >0.5 , and for the reliability of >0.7 were used to assess the convergent validity. To evaluate the convergent validity, this study performed a confirmatory factor analysis (CFA), which aimed to examine the factor loading of each item, the average variance extracted (AVE), and the composite reliability (CR) (Hair *et al.*, 2014; Nunnally and Bernstein, 1994).

Discriminant validity

Discriminant validity refers to the extent to which a latent construct is truly distinct from other latent constructs (Hair *et al.*, 2006; Hair *et al.*, 2014), “so that each measured variable corresponds to only a single construct and the constructs that make up a model each represent a unique entity” (Hair, Babin and Krey, 2017, p. 169). Discriminant validity was assessed by a method, suggested by Hair *et al.* (2006) and Hair *et al.* (2014), whereby the average variance extracted for each construct is compared with the corresponding squared inter-construct correlations (SIC), and an AVE estimate that is consistently larger than the SIC estimates indicates support for the discriminant validity of the construct. This procedure was used in this research to assess the discriminant validity of each of the constructs.

4.9.7 Response bias test

Gefen, Straub and Rigdon (2011) recommend that it is vital to conduct a formal test to examine whether the responses provided by one respondent group differ significantly from those provided by another group. Thus, one may suspect that government employees in different government organisations may tend to have different perceptions about good governance practices and the benefits to employees and their organisations. The full sample of 713 government employees is split into two subsamples. The study examines two non-parametric tests. The Mann-Whitney U-test is used to compare the means of the factor scores for all of the constructs between the two groups.

Common method bias test

Common method bias is examined to assess whether common method variance is a serious issue for this study (Podsakoff *et al.*, 2003). Common method bias can exist when using self-reported data, which can potentially occur in the case of survey data (Podsakoff *et al.*, 2003). The study uses the Harmon one-factor using SPSS V. 23.0 software to assess the

common method bias (Podsakoff and Organ, 1986). Previous studies also use this method (Zhu and Kraemer, 2005; Zhu, Kraemer and Xu, 2006), which entails, “including all items from all of the latent constructs in the study into a factor analysis to determine whether the majority of the variance can be accounted for by one general factor” (Podsakoff *et al.*, 2003, p. 890).

4.9.8 Structure Equation Modelling

Structural equation modelling (SEM) is collection of statistical models that seeks to clarify and explain the relationships among multiple latent variables (constructs). More precisely, SEM is “a multivariate technique that combines the aspects of factor analysis and regression to examine the interrelationships among constructs” (Hair *et al.*, 2010, p.5). Multivariate analysis is “the analysis of data relating to more than two variables” (Collis and Hussey, 2014, p. 227). In SEM, researchers can examine the interrelationships among multiple dependent and independent constructs simultaneously (Hair *et al.*, 2006). Consequently, SEM analytical techniques have been used in many disciplines and have become an important method for analysis in academic research (Byrne, 2001; Kline, 2005; Hair *et al.*, 2006). In addition, SEM is a multivariate statistical approach that allows researchers to examine both the measurement and structural components of a model by testing the relationships among multiple independent and dependent constructs simultaneously (Gefen *et al.*, 2000; Tabachnick and Fidell, 2001). Multivariate techniques are “all statistical techniques that simultaneously analyse multiple measurements on individuals or object under investigation” (Hair *et al.*, 2010, p. 4). Thus, structural equation modelling techniques were most suitable for this research study involving multiple independent-dependent relationships that were hypothesised in the proposed research model, which was described in Chapter Three.

An SEM software package called Analysis of Moment Structures (AMOS), version 23, was used in this research study to explore the statistical relationships between the test items of each factor and among the factors of the independent variables (i.e. INTEGRITY, FAIRNESS, and others) and the dependent variable (i.e., INNOVATION). The reasons for selecting the SEM for data analysis were: it corrects for measurement errors when estimating structural parameters (Cheung and Lau, 2017), and also offers a systematic mechanism for validating the relationships among the constructs and indicators and also testing the relationships

between the constructs in a single model (Hoyle, 1995, Hair *et al.*, 2006). In addition, it gives the researcher full control and facilitates further understanding of the analyses (Byrne, 2013).

Secondly, it offered powerful, rigorous statistical techniques for dealing with complex models (Byrne, 2001; Tabachnick and Fidell, 2001; Hair *et al.*, 2006). In SEM, the relationships among the constructs and indicators are validated by using confirmatory factor analysis (CFA), also known as the measurement model, and the relationships between the constructs are tested using the structural model (Bentler, 1995; Hoyle, 1995, Hair *et al.*, 2006), which is described below.

Measurement model

Confirmatory factor analysis (CFA) is a very important technique in SEM (Kline, 2005) and is generally applied when some background knowledge exists regarding the underlying constructs and measurement items (Byrne 2001). The CFA technique identifies the relations between the observed (indicators) and unobserved variables (or latent constructs) by providing links between the scores to measure the constructs (Hair *et al.*, 2010). It is also used to assess the measurement model's validity through conducting a comparison between the measurement theory and the reality. However, it is highly recommended that CFA should be performed after exploratory factor analysis (EFA) in order to verify and confirm the scales derived from EFA (Hair *et al.*, 1998; Byrne, 2001). In practice, unlike EFA, CFA is technique used to confirm an a priori hypothesis about the relationship between a set of indicator variables (measurement items) and their respective latent variables (Byrne, 2001). There are two broad approaches used in CFA to evaluate the measurement model: (1) deciding the goodness of fit (GOF) of the criteria indices, (2) and evaluating the validity and reliability of the measurement model (Hair *et al.*, 2006). Therefore, the researcher used the measurement model in this research to assess the unidimensionality, validity, and reliability of the measures, which are explained in the following sections.

Goodness of fit indices

SEM has three main types of fit measure index: absolute fit indices, incremental fit indices, and parsimonious fit indices (Hair *et al.*, 1998). The absolute fit indices are used to assess the ability of the overall model fit and these indices include the likelihood ratio statistic chi-

square (χ^2), in association with the root mean square error of approximation (RMSEA), and the goodness of fit index (GFI) (Hair *et al.*, 1998). The incremental fit indices are used to compare the proposed model to some baseline model and the incremental fit indices consist of the normed fit index (NFI) and the comparative fit index (CFI) (Hair *et al.*, 1998; Hair *et al.*, 2006). The parsimonious fit indices are used to investigate whether the estimated model is simpler or can be improved by specifying fewer estimated parameter paths (Hair *et al.*, 1998). The parsimonious fit index includes the adjusted goodness-of-fit index (AGFI). Details of these fit measures and their recommended level are presented in Table 4.21.

Table 4. 21 Goodness of fit statistics in SEM

<i>Index</i>	<i>Abbreviation</i>	<i>Type of fit measure</i>	<i>Recommended criteria</i>
Chi square	χ^2	Model fit	χ^2 , df, p >0.05
Normed chi square	χ^2/df	Absolute fit and parsimony of model	1.0 < χ^2/df < 3.0
Goodness-of-fit index	GFI	Absolute fit	>0.90
Root mean square error of approximation	RMSEA	Absolute fit	<0.05 good fit <0.08 acceptable fit
Normed fit index	NFI	Incremental fit	>0.90
Comparative fit index	CFI	Incremental fit	>0.90
Adjusted goodness-of-fit index	AGFI	Parsimonious fit	>0.90

Source: (Bentler and Bonett, 1980; Carmines and McIver, 1981; Browne and Cudeck, 1992; Vandenberg and Lance, 2000; Hair et al, 2006; Hair, Babin and Krey, 2017)

Model estimates

In addition to the goodness of fit criteria, other standardised estimates are also used to evaluate the measurement model, such as the standardised regression weight (factor loadings), and critical ratio (CR) estimates criteria. This research study used the cut-off point suggested by researchers for these estimates as follows. According to Churchill (1979), a factor loading value greater than 0.5 is acceptable. As an alternative interpretation, a value should be greater than 0.7 (Holmes-Smith, 2002). The critical ratio values should be above 1.96 (Hair *et. al.*, 1998; Byrne, 2001), while the standard residuals to be ± 2.8 (Byrne, 2001; Hair *et. al.*, 2006). The following Table 4.23 summarises these criteria.

Table 4. 22 Measurement Model Estimates

<i>Estimates</i>	<i>Recommended values</i>	<i>References</i>
Factor loading	>0.5 acceptable >0.7 good	Churchill, (1979) Holmes-Smith (2002)
Critical ratio (t-value)	>1.96	Hair <i>et al.</i> (2006); Byrne (2001)
Standard residuals	±2.8	Byrne (2001); Hair <i>et al.</i> (2006)

As described in the previous section, the measurement model explains the interrelationships between the observed (indicator) variables and unobserved (latent) variables. In other words, it specifies and aims to confirm which measurement items (indicator variables) relate to each of the corresponding underlying constructs (latent variables). Therefore, CFA (the measurement model) was performed in order to identify and confirm the pattern whereby the measurement items were loaded onto a particular construct (Kline, 2005; Hair *et al.*, 1998). The measurement model was evaluated using the maximum likelihood (ML) estimation technique provided in the AMOS software (Hair *et al.*, 1998; Tabachnick and Fidell, 2001). The reasons for choosing this estimation procedure were: firstly, this technique is reasonably suitable for medium-sized samples and when the model does not meet the criteria of having at least five measurement items per construct (Anderson and Gerbing, 1984; Hair *et al.*, 1998) because some of the constructs employed in this study used fewer than five items; and, secondly, the ML estimation technique is fairly unbiased compared to other estimation methods under moderate violations of normality in the case of a medium-sized sample, normal data, and when there are four or more categories on the Likert scale (Bollen, 1989, Kline, 2005; Bryne, 2001). As noted above, this study used a seven-point Likert scale. Finally, the ML method is also the most widely-used estimator in SEM analysis (Kline, 1998; Tabachnick and Fidell, 2001) because this method minimises the difference between covariance and observed matrices; as a result, it improves the parameter estimates (Hair *et al.*, 2006). Therefore, in this study, the measurement model was run using the maximum likelihood estimation method, as recommended by several researchers (Anderson and Gerbing, 1988; Hair *et al.*, 1998; Kline, 2005).

Structural model evaluation and hypothesis testing

As discussed earlier in this chapter, this research applied a two-step approach in the structural equation modelling analysis. In the first step, measurement model evaluation was achieved by examining the unidimensionality, reliability, and validity of the latent constructs, using CFA. Hence, the structural model can be tested as a next main stage to examine the hypothesised relationships between the latent constructs in the proposed model (Kline, 2005; Hair *et al.*, 2006). The structural model (hypothesised model) depicts the relationship among the latent constructs, as presented in Chapter Three. In other words, it aims to specify which constructs directly or indirectly influence the values of the other constructs in the model (Byrne, 2001). The results of structural model testing are presented in Chapter Five.

4.9.9 Moderation model

Thus far, this chapter has focused on the mechanism through which the proposed model is validated overall, using a set of analytical approaches based on the Statistical Package for Social Sciences (SPSS) and Structural Equation Modelling (SEM). As mentioned earlier, the study aims to investigate whether and how the effects of psychological ownership on innovativeness are moderated by trust.

The moderators will now be described and how the moderating effects can be investigated. A moderator is defined as a “qualitative (e.g., sex, race, class) or quantitative (e.g., level of reward) variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable” (Baron and Kenny, 1986, p. 1174). As shown in Figure 4.2, moderation occurs when an independent variable (X) is more strongly associated with a dependent variable (Y) for one group (e.g. high trust) than others (e.g. low trust) (Frazier *et al.*, 2004). In the figure, Z represents the moderator, whereas X and Y represent the predictor and outcome, respectively.

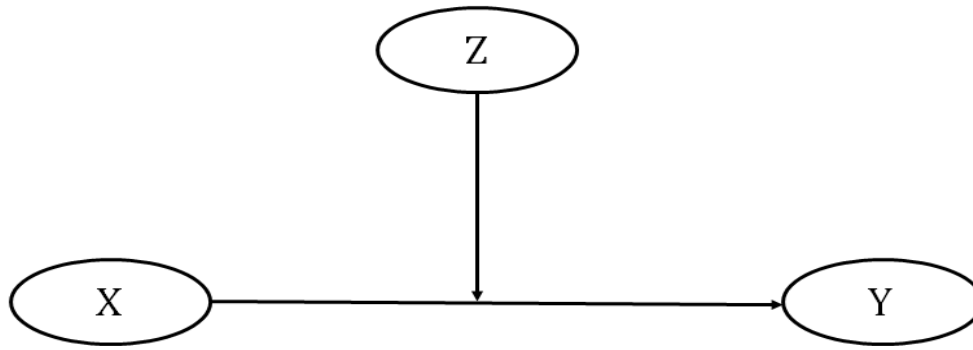


Figure 4. 3 A moderation model

To address such hypotheses, as suggested by Cheung and Lau (2017), SEM is also adopted by creating a multi-group structural model; one for high trust and the other for low trust. According to Bowen and Guo (2011), SEM provides “a useful framework for testing moderation (interaction) models, or models in which the effects of one variable on another vary by the values or levels of a third variable. It provides more detailed output about moderation effects than typical regression procedures” (p. 12).

Following Innocenti, Pilati and Peluso (2011), the moderating impact of trust was assessed by comparing the standardised regression coefficients (β -value), P-values and T-values of the same relationship for both the high trust and low trust groups based on the multi-group analysis.

4.10 Ethical considerations

The study considered all of the ethical principles before collecting the data. The guidelines provided by the University’s Code of Research Ethics were taken into consideration when designing the study. Approval by the Ethics Committee was received on 22 September 2017. It is vital to address ethical issues in any kind of research despite the fact that this may prove a very difficult and strenuous process (Busher and Clarke, 1990). “The application of moral knowledge and wisdom then turns out to be governed as much by reflective judgment as by rule-following and the practicing of skills” (Lovlie, 1993, p. 76). Since researchers are human, they are prone to make mistakes, and sometimes fail to addressing all ethical issues successfully (Cohen *et al.*, 2000). In order to avoid making mistakes in addressing ethical issues, it has been suggested that researchers “need two attributes: the sensitivity to

identify an ethical issue and the responsibility to feel committed to acting appropriately in regard to such issues” (Eisner and Peshkin, 1990, p. 244).

In addition, Busher (2002) believes that ethical codes vary from person to person, culture to culture, and context to context. Something acceptable in one setting may be considered unethical or even unacceptable in another. “The application of ethics to research is situated in and depends on how each situation is deconstructed to understand the needs of all the participants in it, including the researchers and research sponsors” (p. 87). Moreover, ethical decisions involve trade-offs, whereby a researcher should adopt an attitude of compromise. Cohen *et al.* (2000) argue that researchers need “to strike a balance between the demands placed on them as professional scientists in the pursuit of truth, and their subjects’ rights and values potentially threatened by the research” (p. 49). Therefore, a ‘give and take’ attitude should be adopted, in which the researchers’ interests and the people’s (audience’s) right to know should be evaluated against the informants’ (participants’) right to privacy and confidentiality (Frankfort-Nachmias and Nachmias, 1992). In other words, “the value of the best research is not likely to outweigh injury to a person exposed. Qualitative researchers are guests in the private spaces of the world. Their manners should be good and their code of ethics strict” (Stake 2005, p. 459).

In the research, privacy involves the usage of the information received from the participants (Denier and Crandall, 1978) while confidentiality involves safeguarding the identity of the participants (Cohen *et al.*, 2000). To address the issue of confidentiality, Kvale (1996) suggested that data that identify the participants should be excluded. Cohen *et al.* (*ibid*) also remarked that participants should have the right to participate, withdraw, or even refrain from taking part in the study.

In this research study, ethical issues were seriously considered during the research process to ensure the integrity of the research. In accordance with this, Brunel University requires all projects involving human subjects must obtain approval from the University’s Research Ethics Committee before the fieldwork is conducted. According to the University’s Ethics Policy Guidelines, the researcher is required to complete an Ethics Form, which must be signed by the researcher and approved by his/her supervisor(s). Accordingly, a Brunel University Research Ethics application form was completed and signed by the researcher

and his supervisors before being submitted to the academic programme office for ethical approval to conduct this research study.

In conformity with the ethics requirements, a covering letter was also attached to the questionnaire, stating the purpose of the study. The name and address of the researcher, and his university, were included in the covering letter to increase the respondents' confidence and ensure that the respondents knew with whom they were dealing (Cooper and Schindler, 2001). The respondents' information was kept confidential and they were not described in any way that would allow them to be identified. To maintain the confidentiality and privacy of the respondents, only aggregate results were used in reporting the results of this study. The participants' personal information was not identified in any of the study findings. In addition, the data collected were not used for any purpose other than as stated in the study objectives, which were only aimed at academic research for the fulfilment of the requirements of a PhD thesis.

4.11 Translation

Survey methodologists generally agree that standardising the questions' meaning is essential for sound survey questionnaire measurement. The questionnaires were conducted in the local language (Arabic) to prevent the bias associated with using a questionnaire in English alone (Harzing, 2005). The questionnaire was translated then back-translated by professionals fluent in both English and Arabic language to ensure accuracy.

Following Brislin (1970), the translation practices employed in this study generally build on the multistep translation and evaluation approach. Brislin's (1970) approach includes using back-translation to evaluate the survey translations, bilingual respondents to test the source and translated target-language questionnaire, and then respondents to pre-test the target-language translation.

The flexible five-stage framework (TRAPD) described by Harkness, Van de Vijver, and Mohler (2003) was followed in this study, which identifies five general stages for developing and evaluating a questionnaire translation: Translation, Review, Adjudication, Pretesting, and Documentation. Indeed, each of these five stages can be implemented in a variety of ways.

The first stage is translation, which aims to develop translations that 'ask the same questions' (Harkness, Van de Vijver, and Mohler 2003). In this study, the translation team

consists of three independent professional translators. Compared with direct translation by one individual, team approaches provide sounder, less idiosyncratic translation review and evaluation by generating more translation options (Harkness and Schoua-Glusberg 1998; Harkness, Van de Vijver, and Mohler 2003). The three translators were bilingual speaking, English and Arabic. Additionally, they had at least ten years' professional translation experience in the English Language Centre (ELC) at the Institute of Public Administration in Saudi Arabia. Their experience of translating survey questionnaires varied. Based on these instructions, the three translators worked independently to produce target language translations. The translation coordinator, who is the ELC Manager, supervised their work and was available if required to answer questions and provide guidance.

The second stage is Review. After the translation stage was accomplished, the researcher sought opportunities for collaboration and feedback across the subsequent review, adjudication, and pretesting steps. PhD students reviewed the initial target-language survey questionnaire translations to identify the different translation options. In stage three, the role of the adjudicator is to make decisions regarding the recommendations for improving the translations. Regarding the latter, for this adjudication to be effective, knowledgeable, versatile adjudicators are required (Harkness, Van de Vijver, and Mohler 2003). The adjudicators' task was to make a decision about whether to retain the original translation, make the revisions suggested by the PhD students, or make an alternative revision. The three researchers who formed the adjudication team were bilingual academic staff from the management discipline.

The pre-test is the fourth stage. The goal in this stage is to identify and remove potential causes of response error. This includes inappropriate or unfamiliar terminology, indicators that respondents interpret in unexpected ways, or indicators that request information that the respondents have difficulty recalling. The respondents were undergraduate and graduate students. The last stage is the final review and adjudication, for which the researcher convened a meeting, at which the adjudication team determined which recommendations to accept and which revisions to make to the target-language questionnaire.

Table 4. 23 *The five-stage translation framework*

<i>Step</i>	<i>Activities</i>	<i>Personnel</i>
Translation	Create draft target-language questionnaire by translating source questionnaire into the target language.	Three independent professional translators.
Review	Review translation materials, including source questionnaire, draft versions of target language questionnaires, and translator documentation.	PhD students
Initial adjudication	Review and decide on suggested revisions	The adjudication team consists of three bilingual academic staff from management discipline
Pre-test	Analyze results and develop recommendations	Undergraduate and graduate students
Final review and adjudication	Review recommendations with the adjudication team and select final revision.	The adjudication team and the researcher

4.12 Conclusions

The aim of this chapter was to discuss and choose the most appropriate methodology and discuss the statistical techniques used in this study. It was identified that, in the domain of methodology, two main research approaches are widely used and respected; namely, positivist and interpretivist. The positivist approach is widely known as a scientific approach and also quantitative in nature while the interpretivist approach is commonly known as a qualitative approach. However, while both philosophical approaches have positive and negative impacts on different research contexts in varying ways, the main concern is the same. Both of these approaches were discussed in detail with appropriate justifications for the selection of a particular research methodology.

This study adopted the quantitative (positivist) approach, as this was consistent with the topic. In fact, prior research suggests that the usual process under a positivistic approach is to study the literature to establish an appropriate theory and construct hypotheses. Therefore, this study fell within the domain of the positivist rather than the interpretivist approach, as the model was developed following a thorough investigation of the literature, after which the hypothesised model was proposed (see Chapter Three), in order to determine the impact of the complementarities between governance structure and human capital on public employees' innovativeness in Saudi Arabia. In addition, a cross-sectional quantitative approach using a survey tool was employed to collect the data. The survey

method was used because it was designed to deal more directly with the respondents' thoughts, feeling and opinions, especially when collecting information regarding attitudes and beliefs. Moreover, the survey approach offers a more accurate means of evaluating information about the sample and enables the researcher to draw conclusions about generalising the findings from a sample to the whole population. Additionally, the survey method is quick, economical, efficient, and can easily be administered to a large sample.

In order to collect the data for this study, a questionnaire was developed. The question items were adopted from prior relevant research. The adopted items were validated, and wording changes were made to tailor the instrument to the purposes of this study. The question items and response categories were then developed to motivate the respondents to participate in the research study. The researcher made a huge effort to keep the questions simple, and easy to read and comprehend, to avoid the respondents misunderstanding them or losing interest in participating in the study. The questionnaire was then administered to the users personally, as well as via email.

Previous research suggests that a pre-test and pilot study are both essential parts of questionnaire survey design and must be conducted prior to the initial data collection phase or main survey in order to validate the instrument and ensure that the survey questionnaire is free from errors and ambiguities. Thus, one pre-test and a pilot study were conducted prior to using the final survey questionnaire in the main study. The main purpose of the pre-testing and pilot study was to avoid the participants' confusion and misinterpretation as well as to identify and detect any errors and ambiguities. In addition, a pilot study was also used to test the reliability of the measurement items used on the questionnaire, and most of the items displayed adequate reliability.

SPSS 23.0 was used to analyse the quantitative data collected from the questionnaires. This software package is widely accepted and used by researchers in different disciplines, thus this tool was used to test and establish the data's normality (i.e. using kurtosis and skewness statistics). In addition, SPSS was also applied to perform descriptive statistics such as frequencies, percentages, mean values, and standard deviations. The structural equation modelling (SEM) software package AMOS 23.0 was used in this research study to explore the statistical relationships between the test items for each factor and also among the

independent variables and the dependent variable. This research study applied a two-step approach in the SEM analysis as suggested by prior research. In the first step, measurement model evaluation was achieved by examining the uni-dimensionality, validity, and reliability of the latent constructs, using CFA. In the next step, the structural model was tested to examine the hypothesised relationships between the latent constructs in the proposed research model. Finally, the ethical issues were also addressed. The results of the main study will now be presented.

Chapter 5: Results

5 Results

5.1 Introduction

This chapter presents the results of the questionnaire survey designed in Chapter Four of public servants in practice who work in public sector entities. Analysis of Moment Structures (AMOS) version 23 is chosen to carry out Structural Equation Modelling (SEM) on the survey results collected. The SEM technique was used in this study to validate the hypotheses and the performance of the proposed conceptual model. The analysis starts with an examination of the descriptive statistics related to the characteristics of the respondents and the survey constructs. This is followed by a summary of the reliability test and KMO AND Bartlett's Test results. The results of the Confirmatory Factor analysis (CFA) are then presented. The penultimate section presents the results of the structural model after assessing the theoretical model and hypotheses. The final section provides the conclusions.

5.2 Descriptive statistics

5.2.1 Key characteristics of the sample

This study collected data from Saudi civil servants in the period from October 2017 to January 2018. As clarified in the previous chapter, by using the mixed-mode data collection approach, this research collected a total of 719 responses. After the data cleaning stage, a total of 6 responses were deleted due to being incomplete. As a result, this study considers a total of 713 survey questionnaires for further analysis. As this study uses SEM to analyse the proposed theoretical model, the sample size of this study is very good (Comrey and Lee 1992; Tabachnick and Fidell, 2001; Hair *et al.*, 2010). The demographic profiles of these 713 participants are detailed below.

Table 5.1 reveals that gender of respondents is nearly equally split at 50.1% female and 49.9% male.

Table 5.1 Gender breakdown of the respondents

<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
Female	357	50.1
Male	356	49.9
Total	713	100

The respondents in the current study were also asked to indicate their age. The age of the participants is presented in table 5.2. The figures show that 55.1% of the participants were aged 31-40 years; followed by 27.4% aged 41-50 years and 13.2% were aged up to 30 years. The remainder of the participants were over 50 years.

Table5. 2 Respondents age

<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
Up to 30	94	13.2
31 – 40	393	55.1
41 – 50	193	27.1
50 – 60	32	4.5
Over 60	<u>1</u>	<u>.1</u>
Total	713	100

As explained earlier, the data collection for this study was carried out in Saudi Arabia, with the total number of the participants equating 713 public servants. As shown in Table 5.3, the sample analysis shows that 83.03% of the respondents were university graduates and about 16.97% had at least a school education. The results show that the majority of those who completed the survey were well-educated and, thus, sufficiently knowledgeable to provide sufficient information for the researcher to evaluate the governance structure within their organisation’s environment.

Table5. 3 Education level of the respondents

<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
Up to high school	121	16.97
Bachelor degree	518	72.65
Master degree	65	9.12
PhD degree	<u>9</u>	<u>1.26</u>
Total	713	100

In the present study, the participants were also asked to indicate their organisation’s type. Table 5.4 shows that a large portion of the sample (74.2%) of the respondents works in the ministries, followed by 20.5% who work in commission. The remainder (5.3%) of the

respondents work in organisations. These figures are compatible with the Statistical Yearbook of 2016 for Civil service employees in Saudi Arabia.

Table5. 4 Respondents organisation type

<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
Employee in ministry	529	74.2
Employee in commission	146	20.5
Employee in organisation	<u>83</u>	<u>5.3</u>
Total	713	100

In response to the question: “How long have you been working for your present employer?”, table 5.5 shows that the majority of the participants (83.9%) had more than five years’ experience. These results show that the majority of respondents had sufficient experience to gain enough information to evaluate the governance practices within their organisations.

Table5. 5 Respondents’ work experience

<i>Experience Category</i>	<i>Frequency</i>	<i>Percent</i>
Employees with less than five years	115	16.1
Employees with 5 – 10 years	297	41.7
Employees with 11 – 15 years	122	17.1
Employees with 16 – 20 years	73	10.2
Employees with more than 20 years	<u>106</u>	<u>14.9</u>
Total	713	100

When the participants in this study were asked about the frequency with which they met their managers, the overall response to this question was very positive. Table 5.6 provides a breakdown of the respondents’ behaviour in terms of the frequency of meeting their managers. It shows that a large portion of the sample (74.6%) met their manager on a frequent and continuous basis. This indicates that the majority of the respondents had the knowledge to answer the majority of the survey questions related to management behaviour.

Table 5. 6 Frequency at which the respondents' meet with their managers

<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
Very rare	12	1.7
Rarely	29	4.1
Occasionally	140	19.6
Very often	112	15.7
Every day	<u>420</u>	<u>58.9</u>
Total	713	100

5.3 Normality

The study conducts a normality test to confirm that the research data are drawn from a population with a normal distribution (Field, 2000) and that a normality assumption has not been disregarded. In many multivariate analyses, this assumption is considered the most fundamental (Field, 2005; Hair *et al.*, 2006). Even though there is “no single test has been shown to be most powerful for all situations” (Kim, 2016, p. 48), some supplementary procedures, such as Mardia’s skewness and kurtosis measures, need to be followed in order to diagnose possible deviations from normality (Kim, 2016). In addition, tests based on kurtosis and skewness are frequently used for univariate normality (Pearson *et al.*, 1977) because they demonstrate slightly better power (Kim, 2016). Skewness is the distribution of symmetry, to check whether the distribution has shifted to one side or unbalanced (Tabachnick and Fidell, 2006). Indeed, there are two main types of skewness: the first shows positive skewness if the distribution moves to the left, while the second shows negative skewness if it moves to the right. Kurtosis is defined as the peaked distribution known as leptokurtic, when distributions are peaked or tall, and platykurtic, when distributions are flatter (Tabachnick and Fidell, 2006). A combination of skewness and kurtosis is described as omnibus statistics (Kim, 2016).

The variables’ zero values of skewness and kurtosis mean normal distributions. Therefore, a deviation from normality is suggested if these values are negative or positive. Indeed, the acceptable deviation value range is influenced by the sample size; in small samples (less than 30), the deviation can be dangerous while, in large sample sizes (200 or more), it may be ignored (Hair *et al.*, 2010). If the variables’ skewness and kurtosis deviate by three points, either positively or negatively, then they have normal distribution (Kline, 2005).

The study concentrated on the Jarque-Bera (Skewness-Kurtosis) evaluation to guarantee that each of the constructs lay within the appropriate range. Table 5.7 shows the constructs' skewness and kurtosis, which lie with the acceptable range.

Table5. 7 *Skewness and Kurtosis at the Item Level*

<i>Item</i>	<i>Mean</i>	<i>Skewness</i>		<i>Kurtosis</i>	
		<i>Statistic</i>	<i>Std. Error</i>	<i>Statistic</i>	<i>Std. Error</i>
Integrity	5.1254	-.764	.092	.593	.183
Fairness	4.9341	-.570	.092	-.044	.183
Rule of Law	5.4702	-1.111	.092	1.503	.183
Openness and Accountability	5.5614	-1.067	.092	1.716	.183
Resilience	5.4586	-.911	.092	1.090	.183
Governance Network	5.4777	-.850	.092	1.058	.183
Task Interventions	5.3219	-.925	.092	1.200	.183
Developing Capacity	5.1182	-.937	.092	.876	.183
Outcome Measurement	5.6434	-1.167	.092	1.815	.183
Trust	5.0940	-.765	.092	.185	.183
Job Resource	5.1546	-.873	.092	1.522	.183
Empowerment	5.0277	-.919	.092	.738	.183
Psychological Ownership	5.7174	-1.124	.092	.890	.183
Innovativeness	5.5708	-.991	.092	.890	.183

5.4 Correlation

The multicollinearity issues were analysed in this study by applying the Pearson's correlation test (Hair *et al.*, 2014). The correlation coefficient refers to the strength measure or linear association degree between the variables. Table 5.8 reported the correlation matrix, offering the Pearson's correlation coefficient as well as the associated test results of its significance. The result provides evidence of a linear association among the research constructs and the gathered data, so conducting this study does not generate any multicollinearity issues or lack of identification. Unreliable estimates due to a lack of identification occur when the observed correlation for the measured variables is 0.99 (Hair, Babin and Krey, 2017).

Table 5. 8 Correlation matrix of the research constructs (The Pearson's correlation test)

Construct	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Integrity													
(2) Fairness	.760**												
(3) Rule of Law	.736**	.685**											
(4) Openness and Accountability	.626**	.585**	.682**										
(5) Resilience	.683**	.672**	.718**	.786**									
(6) Governance Network	.595**	.572**	.649**	.746**	.713**								
(7) Task Interventions	.640**	.641**	.632**	.704**	.714**	.756**							
(8) Developing Capacity	.586**	.611**	.506**	.560**	.578**	.593**	.688**						
(9) Comprehensive measuring of performance	.532**	.490**	.552**	.563**	.555**	.547**	.624**	.619**					
(10)Trust	.755**	.779**	.716**	.636**	.658**	.633**	.681**	.692**	.540**				
(11)Job Resources	.565**	.575**	.535**	.656**	.643**	.632**	.611**	.614**	.482**	.680**			
(12)Empowerment	.616**	.650**	.537**	.576**	.620**	.605**	.711**	.732**	.592**	.741**	.708**		
(13)Psychological Ownership	.641**	.616**	.611**	.669**	.670**	.677**	.699**	.687**	.667**	.696**	.665**	.731**	
(14)Innovativeness	.681**	.660**	.668**	.632**	.639**	.665**	.701**	.659**	.599**	.770**	.610**	.689**	.804**

** Correlation is significant at the 0.01 level

5.5 Reliability of scales using Cronbach's alfa

The reliability of a measure refers to its consistency. The Cronbach's alpha coefficient (Cronbach, 1951) is "one of the most widely used measures of reliability in the social and organisational sciences" (Bonett and Wright, 2015, p. 3) and "for checking the internal reliability of multiple-item scales" (Hair, *et al.*, 2010, p. 709). Cronbach's alpha is conceived as a calculation of the "internal consistency" coefficient scale (Cho and Kim, 2015). Although there is no universal minimally acceptable reliability value (Bonett and Wright, 2015), the second most cited document states that a reliability of 0.5 or 0.6 is sufficient (Nunnally, 1967), which was subsequently increased to from 0.6 to 0.7 (Nunnally, 1978), and latterly increased to => 0.7 (Hair, Babin and Krey, 2017). Table 5.9 shows the Cronbach's Alpha of all of the constructs employed in this study is considered good, as they all exceed the agreed baseline of 0.7. Therefore, all of the variable scales were demonstrated to be reliable instruments.

Table5. 9 Cronbach's alpha for each construct

<i>Scale</i>	<i>Number of items</i>	<i>Cronbach's Alpha</i>
Integrity	5	0.842
Fairness	4	0.868
Rule of Law	4	0.844
Openness and Accountability	4	0.817
Resilience	4	0.838
Governance Network	5	0.874
Task Interventions	4	0.883
Developing Capacity	4	0.896
Outcome Measurement Quality	4	0.831
Trust	4	0.893
Job Resources	4	0.892
Empowerment	4	0.856
Psychological Ownership	4	0.894
Innovativeness	3	0.876

5.6 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test

In order to meet the statistical requirements to proceed to the confirmatory analysis (CFA), two tests were conducted to measure the sample's adequacy. These tests are the Kaiser-

Meyer-Olkin (KMO) and Bartlett's test of Sphericity (Hinton *et al.*, 2004). The Kaiser-Meyer-Olkin (KMO) examines whether the factors within a provided sample are accurate and suitable for correlate purposes. The Bartlett's test of Sphericity is carried out to check whether or not the correlation matrix is an identity matrix and then confirm the relationship between the variables (Hair *et al.*, 2010). According to Hair *et al.* (2010), as a rule of thumb, the KMO value should exceed the minimum value of 0.6, while Bartlett's test should have a value ($p < 0.05$). Table 5.10 shows that the significance value for Bartlett's test is less than an alpha level of $0.000 < 0.05$ and has an excellent KMO value of 0.978. Thus, the results were greater than the required minimum values and indicated the appropriateness of the data for performing CFA.

Table 5. 10 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.978
	Approx. Chi-Square	31407.054
Bartlett's test of Sphericity	df	1711
	Sig.	.000

5.7 Confirmatory Factor analysis (CFA) for Measurement Model and Assessment of Construct Validity of the Model

The confirmatory factor analysis (CFA) technique identifies the relationship between the observed (indicators) and unobserved variables (or latent constructs) by providing links between the scores to measure the constructs (Hair *et al.*, 2010). This, together with the general popularity of structural equation modelling (SEM), has resulted in a tendency to use confirmatory factor analysis (CFA) rather than alternative techniques and approaches (Credé and Harms, 2015). Using SPSS AMOS version 23.0, this research performed the CFA to check the validity and measurement model. This study follows the two stages proposed by Hair *et al.* (2006) for assessing the validity of the CFA. The two stages are: (1) Construct Validity, including convergent and discriminant validity, and (2) the Goodness of Fit indices.

5.7.1 Convergent Validity

Convergent validity refers to "the extent to which different measures that are designed to tap the same construct correlate with each other" (Cunningham, Preacher and Banaji, 2001, p. 163). It is also defined by Hair, Babin and Krey (2017) as "the extent to which multiple measures converge on a consistent meaning" (p. 176). In other words, the indicator should

correlate positively with alternative indicators of the same reflective construct (Hair *et al.*, 2010). To this end, the study first computed factor loading (standardized regression weight) in the second column of Table 5.11, where the loadings should be greater than 0.5 for each construct (Hair *et al.*, 2010; Hair, Babin and Krey, 2017). Then, composite reliability was conducted to measure the reliability and validity of the measurement model (Bagozzi and Yi, 1988). The composite reliability should be greater than 0.70, but values of 0.60 to 0.70 are considered acceptable in exploratory research (Hair *et al.*, 2014; Hair, Babin and Krey, 2017), where rogue items should be deleted (Robinson, 2018). Thus, several problematic items were identified and therefore deleted. Column three of table 6.11 shows the results of the tests. Lastly, the Average Variance Extracted (AVE), which calculates the total variance in the indicators divided by the latent number of constructs, was examined. As recommend in the literature, the AVE loadings should be greater than 0.5 (Henseler, Ringle and Sinkovics, 2009). Table 5.11 shows, in the fourth column, the results of the test. Items that were below the recommended value were excluded from further analysis, including the full measurement model testing, as well as the subsequent structural model, in order to test the hypotheses of this research.

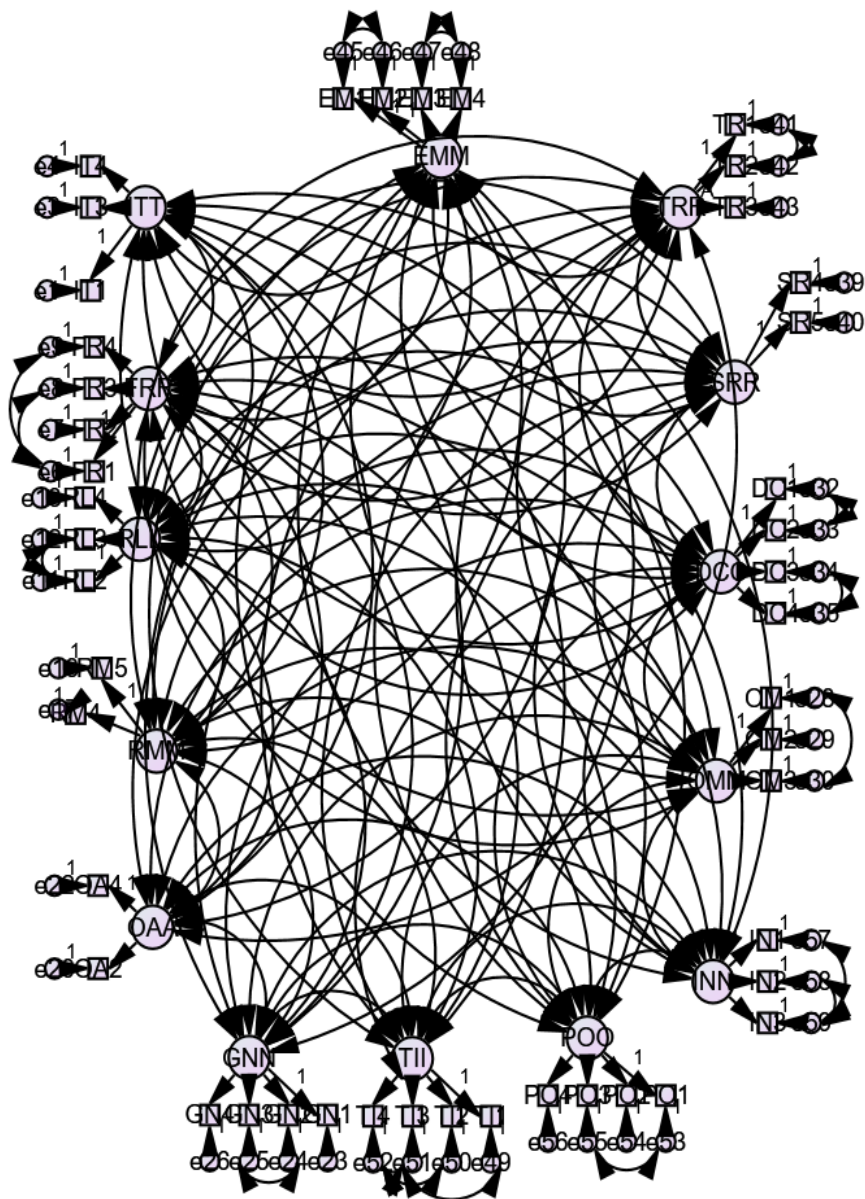


Figure 5.1 Confirmatory factor analyses (CFA)

Table 5. 11 Convergent validity

<i>construct</i>	<i>Item</i>	<i>Factor loading</i>	<i>Composite reliability</i>	<i>AVE</i>
Integrity	IT1	0.752	0.776	0.538
	IT2	0.653		
	IT3	0.789		
Fairness	FR1	0.853	0.883	0.654
	FR2	0.807		
	FR3	0.844		
	FR4	0.725		
Rule of Law	RL2	0.691	0.829	0.620
	RL3	0.824		
	RL4	0.839		
Openness and Accountability	OA2	0.760	0.719	0.562
	OA4	0.739		
Resilience	RM4	0.756	0.738	0.585
	RM5	0.774		
Governance Network	GN1	0.661	0.851	0.590
	GN2	0.802		
	GN3	0.777		
	GN4	0.823		
Task Interventions	TI1	0.797	0.887	0.664
	TI2	0.852		
	TI3	0.845		
	TI4	0.762		
Developing Capacity	DC1	0.755	0.893	0.676
	DC2	0.831		
	DC3	0.821		
	DC4	0.876		
Outcome Measurement Quality	OM1	0.821	0.845	0.646
	OM2	0.767		
	OM3	0.822		
Trust	TR1	0.848	0.891	0.732
	TR2	0.850		
	TR3	0.868		
Job Resources	SR4	0.748	0.734	0.580
	SR5	0.775		
Empowerment	EM1	0.786	0.845	0.577

	EM2	0.680		
	EM3	0.780		
	EM4	0.788		
	PO1	0.809		
Psychological Ownership	PO2	0.850	0.900	0.692
	PO3	0.828		
	PO4	0.839		
	IN1	0.851		
Innovation	IN2	0.838	0.882	0.714
	IN3	0.846		

5.7.2 Discriminant Validity

Discriminant validity refers to the extent to which different constructs diverge from one another (Hair *et al.*, 2014) or “the extent to which a measure is unique and not confounded by another” (Hair, Babin and Krey, 2017, p. 176); in other words, “The degree to which two conceptually similar concepts are distinct” (Hair *et al.*, 2010, p.125). Based on Hair *et al.* (2014), two criteria are used to assess the discriminant validity. The first criterion is the cross loadings of the indicators (Hair, Ringle and Sarstedt, 2011). The second criterion is the Fornell-Larcker (Fornell and Larcker, 1981) which is a more conservative approach than cross loadings for assessing discriminant validity. Discriminant validity can be measured through comparing any two constructs’ average values of variance extracted in relation to the square estimate correlation of these two constructs. The construct has significant, good discriminant validity when the square root of the AVE of multi-items’ reflective constructs are greater than the absolute value of the alternative construct correlations (Hair *et al.*, 2014). As shown in Table 5.12, all of the reflective constructs meet this criterion. The diagonal values shown in bold show that the square root of the AVE is higher than the squared correlation estimate for all of the other constructs. Therefore, the results suggest that the indicators share greater common variance with their respective constructs than with the other constructs. As a result, the constructs are considered to be at a significant level and to have good discriminant validity, based on this criterion.

Table 5. 12 Factor correlation matrix with the square root of the AVE

Construct	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Integrity	0.874													
(2) Fairness	0.868	0.883												
(3) Rule of Law	0.808	0.749	0.837											
(4) Openness and Accountability	0.758	0.688	0.783	0.895										
(5) Resilience	0.667	0.588	0.770	0.796	0.830									
(6) Governance Network	0.676	0.636	0.730	0.887	0.667	0.890								
(7) Task Interventions	0.743	0.697	0.709	0.812	0.649	0.838	0.863							
(8) Developing Capacity	0.679	0.696	0.573	0.656	0.506	0.654	0.770	0.863						
(9) Outcome measurement	0.594	0.547	0.642	0.629	0.569	0.570	0.667	0.644	0.804					
(10) Trust	0.851	0.855	0.788	0.737	0.572	0.699	0.762	0.780	0.585	0.863				
(11) Job Resources	0.624	0.605	0.623	0.811	0.561	0.714	0.670	0.683	0.547	0.747	0.830			
(12) Empowerment	0.745	0.750	0.643	0.719	0.529	0.708	0.831	0.854	0.662	0.847	0.816	0.863		
(13) Psychological Ownership	0.711	0.669	0.676	0.758	0.658	0.736	0.768	0.759	0.727	0.755	0.748	0.846	0.895	
(14) Innovativeness	0.765	0.732	0.736	0.734	0.643	0.731	0.781	0.743	0.655	0.861	0.719	0.810	0.890	0.895

The CFA indicated strong evidence of convergent and discriminant validity and high reliability. In summary, the CFA was applied to the entire research model’s constructs once the researcher had made appropriate adjustments by dropping items with low or insignificant factor loadings. Accordingly, the CFA showed significant evidence that the model had adequate convergence and discriminant validity, and thus confirmed the model’s construct validity. Table 5.13 below presents the model fit measures for the CFA. All of the measures were considered to meet the minimum cut-off value required for the model’s acceptance.

Table 5. 13 Goodness of fit indices for the final CFA

<i>Model Fit Indices</i>	<i>Default Framework</i>	<i>Recommended Criteria</i>
Root mean squared error of approximation (RMSEA)	0.041	<0.08 (Browne and Cudeck, 1992; Vandenberg and Lance, 2000)
90% confidence interval for RMSEA	0.039, 0.044	Upper limit < 0.08 (Browne and Cudeck, 1992)
Parsimony Comparative Fit Index (PCFI)	.810	>0.8 (Hair <i>et al</i> , 2006)
CMIN/df	2.218	<5.0 (Carmines and Mclver, 1981)
Comparative Fit Index (CFI)	.956	>0.09 (Bentler and Bonett, 1980; Browne and Cudeck, 1992)
Goodness of Fit Index (GFI)	0.910	>0.90 (Browne and Cudeck, 1992)
Adjusted Goodness of Fit Index (AGFI)	0.875	>0.80 (Bentler and Bonett, 1980; Browne and Cudeck, 1992)
Tucker Lewis Index (TLI)	0.950	>0.90 (Browne and Cudeck, 1992; Vandenberg and Lance, 2000)

5.8 Common Method Bias Analysis

Using the same survey respondents to measure both the independent and dependent variables of an analysis, the estimated effect of one variable on another is at risk of being biased because of common method variance (Jakobsen and Jensen, 2015). In other words, the estimated effect may suffer from common method bias (CBM). Common method variance “occurs when the measurement technique introduces systematic variance into the measures” (Doty and Glick, 1998, p. 374), and is defined as the “systematic error variance shared among variables measured with and introduced as a function of the same method and/or source” (Richardson, Simmering, and Sturman, 2009, p. 763). This systematic error

variance can bias the estimated relationships between the measures, which may lead to CBM (Campbell and Fiske 1959; Jakobsen and Jensen, 2015). In a nutshell, CMB is the variance analysis of the attribute associated with the measurement method instead of the research model or theoretical constructs (Bagozzi and Yi, 1991; Podsakoff *et al.* 2003; Richardson, Simmering, and Sturman 2009; Podsakoff, MacKenzie, and Podsakoff 2012). This study adopted two primary methods to control CBM through: the design of the study's procedures (e.g., obtaining measures of the variables from different resources) and statistical controls. In order to test the CMB, this study adopted two techniques: Harman's single factor analysis and the common latent factor.

5.8.1 Harman's Single Factor Analysis

The first technique used in this study to test CBM is Harman's Single Factor Analysis (Harman, 1976). Arguably, in a single-method research design, Harman's Single Factor Analysis is the most widely known approach for assessing CMB (Podsakoff and Organ 1986; Podsakoff *et al.* 2003; Malhotra, Kim and Patil, 2006). All of the items in a study are subject to exploratory factor analysis (EFA), or (CFA) as an alternative, where all of the manifested items, presented in the model, are modeled as the indicators of a single factor so that there is no rotation (Malhotra, Kim and Patil, 2006). This new factor was proposed in the model only for the CMB analysis after that factor was discarded. If the value of the variance was above 50%, then CMB might be present (Harman, 1976; Podsakoff *et al.*, 2003). The total variance, explained by one factor, was only 46.45%, which is less than 50% (Podsakoff *et al.*, 2003). Thus, CMB did not seriously affect the outcome of the research model.

5.8.2 Common Latent Factor

The common latent factor is the second technique that presents a new latent variable in such a way that all of the research variables are linked to it. Those paths are forced to be equal, while the variance of the common factor is forced to be 1. This is similar to Harman's Single Factor Analysis method, as all of the patent variables are linked to a single factor. However, the latent factors of the research model and their relations were kept in this analysis. The value of the common variance was the square of each path's common factor prior to standardisation. The common heuristic should be less than 50%. This allowed measurement error did not require the researcher either to measure or recognise the specific factor's common method effects responsible.

Figure 5.2 illustrates the fitted model in AMOS, based on the Common Latent Factor method. This represents the CLF drawn from the regression weight, constrained to be equal to all of the regression paths for the set of exogenous variables. The unstandardized estimate of the regression weight was 0.25. This meant that the variance, as explained by the CLF, was 0.0625 (6.25%). This was comfortably less than 0.50 (50%). Therefore, no severe CMB affected the framework's results.

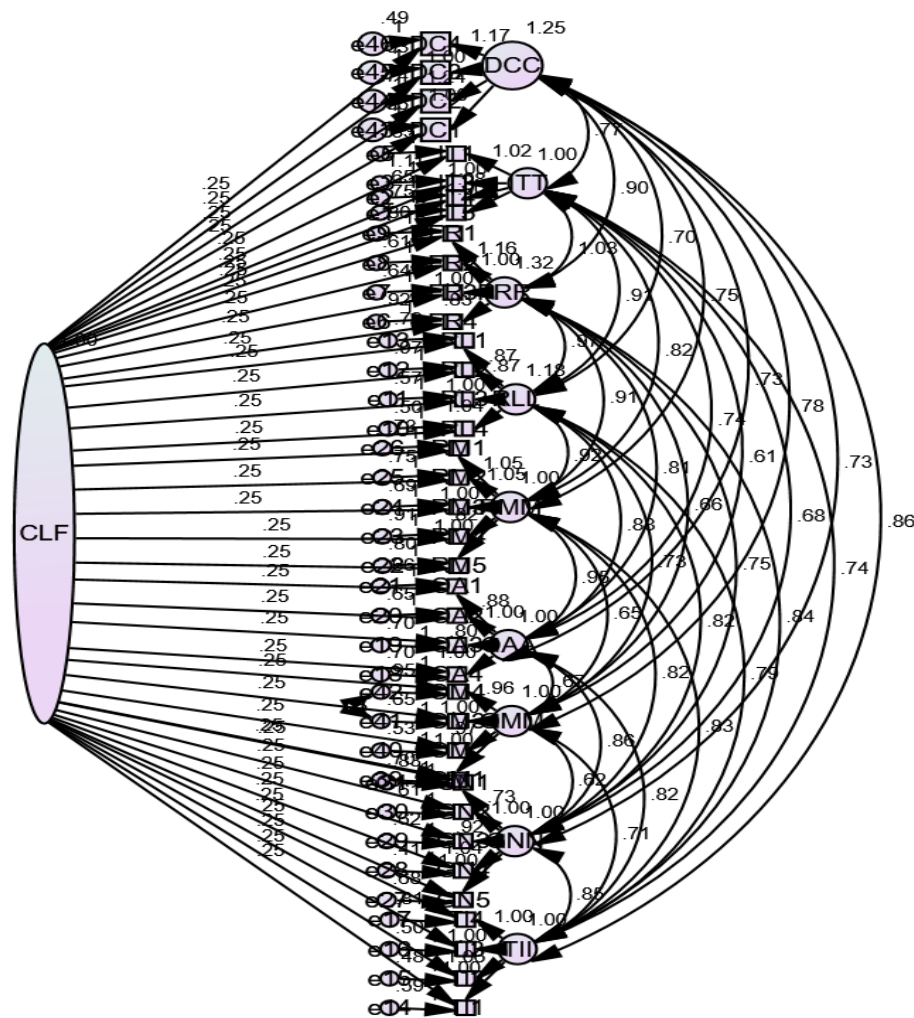


Figure 5. 2 Common latent factor

Figure 5.3 illustrates the fitted model in AMOS on the bases of the CLF method. This represents the CLF drawn from the regression weight, which is forced to be equivalent to all of the regression paths for the set of endogenous variables. The unstandardized estimate of

the regression weight was 0.49, which meant that the variance, explained by the CLF, was 0.2401 (24.01%). This was comfortably less than 0.50 (50%), so CMB did not seriously affect the framework's results.

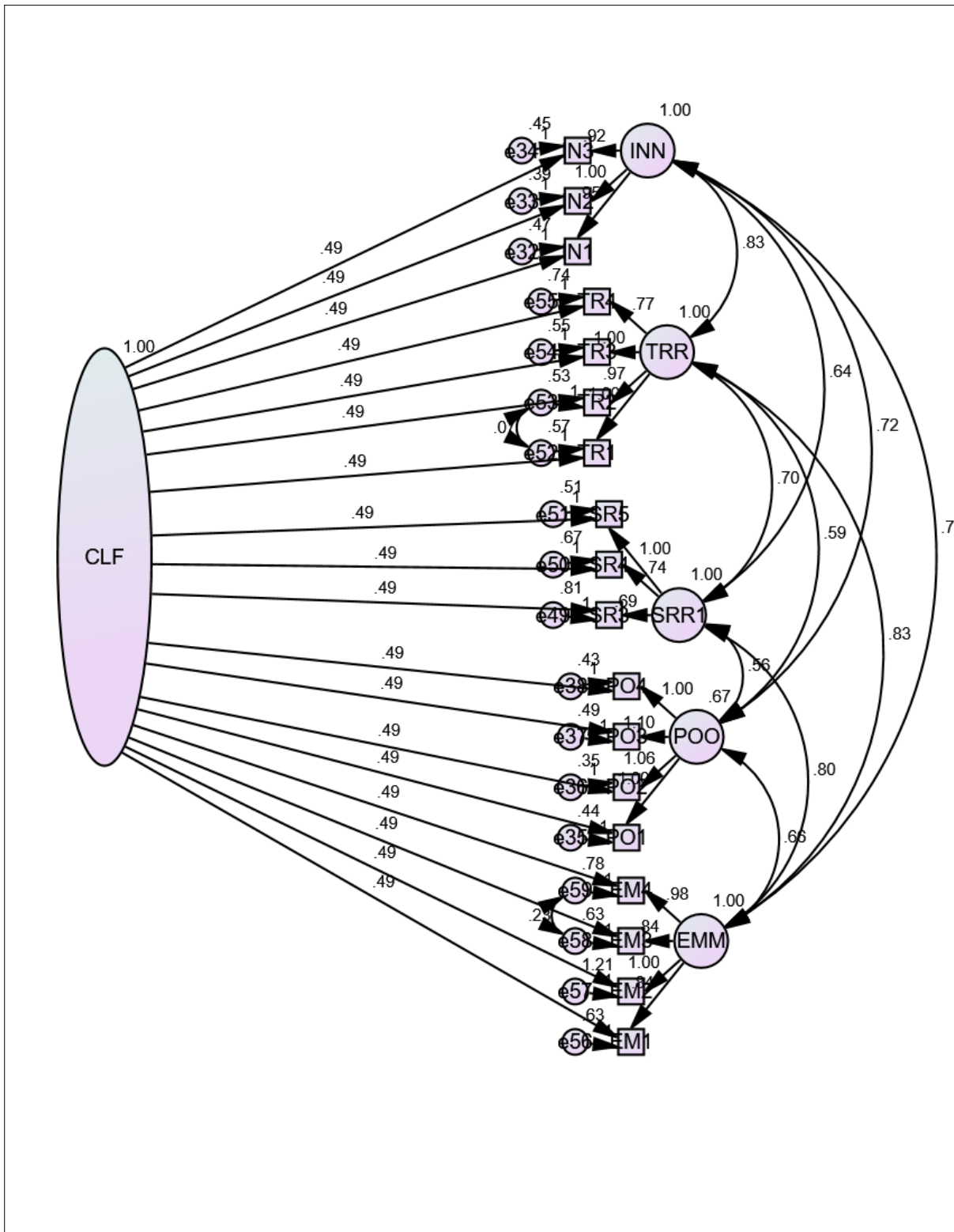


Figure 5.3 Common Latent Factor Method

5.9 Hypothesis Testing

This research developed the measurement model confirmed by the CFA results. The CFA was carried out on the structural model via adding arrows between the independent and dependent variables on the diagram, in order to indicate the relationships among the research hypotheses. This research examined the structural model by using the maximum likelihood estimation method. The SEM was built by using the final measurement model of the CFA to connect the research constructs based on the conceptual framework, in order to reflect the entire hypotheses of the research. All of the model fit statistics met the desirable cut-off value, indicating a good fit: a CMIN/DF of 3.289 (cut-off value <0.5 (Carmines and McIver, 1981)), RMSEA of 0.057 (cut-off value <0.08 (Browne and Cudeck, 1992)), CFI of 0.947 (cut-off value >0.90 (Browne and Cudeck, 1992)), Adjusted Goodness of Fit Index (AGFI) of 0.845 (cut off value >0.80 (Bentler and Bonett, 1980; Browne and Cudeck, 1992)), Parsimony Comparative Fit Index (PCFI) of 0.826 (cut-of value >0.8 (Hair *et al.*, 2006)). Table 5.14 reported the estimated path coefficients for each hypothesised path in the proposed structural model and the associated test results regarding their significance. Figure 5.4 below provides an outline of the structural model designed in the AMOS graphics window.

Table 5. 14 Path analyses results

H#	Hypothesis		Estimate (β)	S.E.	C.R.	P	Label	
H1	Integrity	➡	Trust	.338	.161	2.099	*	Supported
H2	Fairness	➡	Trust	.428	.102	4.192	***	Supported
H3	Rule of Law	➡	Trust	.306	.101	3.041	**	Supported
H4	Resilience	➡	Job Resource	.072	.094	0.769	.442	Unsupported
H5	Openness and Accountability	➡	Job Resource	.230	.119	1.933	*	Supported
H6	Governance Network	➡	Job Resource	.626	.130	4.825	***	Supported
H7	Job Resource	➡	Psychological Ownership	.148	.044	3.331	***	Supported
H8	Outcome Measurements	➡	Empowerment	.094	.036	2.605	**	Supported
H9	Task Interventions	➡	Empowerment	.507	.051	9.862	***	Supported
H10	Developing Capacity	➡	Empowerment	.330	.043	7.690	***	Supported
H11	Empowerment	➡	Psychological Ownership	.768	.058	13.329	***	Supported
H12	Psychological Ownership	➡	Innovation	.862	.033	25.966	***	Supported

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

5.10 Moderating the effect of trust

As explained earlier, the current study also theorised that the effect of psychological ownership on public employees' innovation behaviour would vary based on their trust level. As trust was hypothesised to play a moderating role in the conceptual model, the scores obtained for the trust items were averaged to yield a synthetic indicator of the construct. To address such an assumption, a multi-group analysis was carried out to verify whether or not trust moderates the relationship between psychological ownership and innovation.

The preliminary analysis, illustrated above, confirms that the four items used to assess trust are internally consistent and represent a reliable measure of the construct. Then, the scores for the four items were averaged to obtain a composite indicator of trust (mean= 5.09; SD = 1.18; median=5.25). A median split was performed based upon the trust scores to obtain

two sub-samples of subjects with a low level of trust (a low-trust sample size = 352) versus a high level of trust (a high-trust sample size = 361), respectively.

The study tested the model on each on the two sub-groups separately, in order to verify whether the model reaches an acceptable fit for each group [Low-Trust Model: X^2 /d.f. = 3.8; AGFI = 0.845; CFI = 0.923; RMSEA = 0.061; High-Trust Model: X^2 /d.f. = 3.512; GFI = ; AGFI = 0.839; CFI = 0.946; RMSEA = 0.057]. After estimating the model on each of the two sub-groups separately, in order to verify whether the model has an acceptable fit for each group, a multi-group analysis was conducted by comparing the two groups associated with different levels of trust.

Following Innocenti, Pilati and Peluso (2011), the moderating impact of trust was assessed by comparing the standardised estimates, p-value, and T-value of the same relationship for the low-trust and high-trust groups based on the multi-group analysis. The structural parameter b , associated with the relationship between psychological ownership and innovation, significantly changes intensity across the two sub-groups of subjects (Low-trust $\beta = 0.037$, $p > 0.05$; high-trust = 0.294, $p < 0.001$; Test of equality of parameters: $\beta = 0.862$, $p < 0.001$). To clarify our results, when trust is high, the path from psychological ownership to innovation is significantly stronger than when trust is low. In sum, this finding supports the hypothesis of a moderating role for trust in the model.

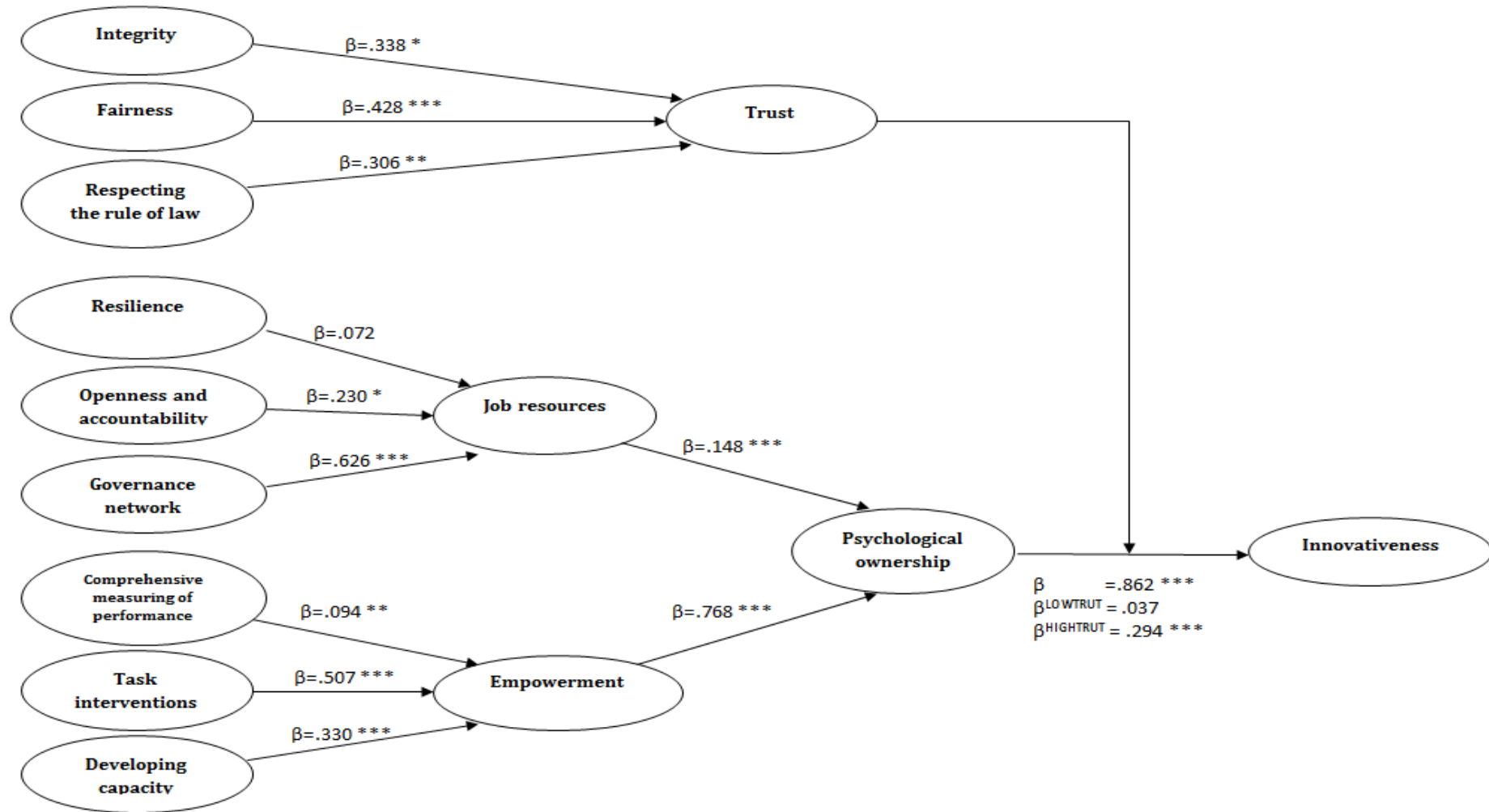


Figure 5. 4 Structural model (overall model)

H1: Public employees' perception of organisation's Integrity will increase their trust in the organisation.

Null Hypothesis H0: An organisation's integrity has no significant positive impact on public employees' trust in organisation. Alternative hypothesis H1: Public employees' perception of organisation's Integrity will increase their trust in the organisation. The estimated regression coefficient is $b = 0.338$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b = 0.338$, $t = 2.099$, $p = 0.036$). This means that research hypothesis H1 is supported.

H2: Public employees' perception of organisation's fairness will increase their trust in the organisation.

Null Hypothesis H0: Organisation's fairness has no significant positive impact on public employees' trust in organisation. Alternative hypothesis H1: Public employees' perception of organisation's fairness will increase their trust in the organisation. The estimated regression coefficient is $b = 0.428$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b = 0.428$, $t = 4.192$, $p = 0.036$). This provides evidence to support H2.

H3: Public employees' perception of organisation's respecting the rule of law will increase their trust in the organisation.

Null Hypothesis H0: Respecting the rule of law has no significant positive impact on public employees' trust in organisation. Alternative hypothesis H1: Respecting the rule of law will increase public employees' trust in organisation. The estimated regression coefficient is $b = 0.306$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b = 0.306$, $t = 3.041$, $p < 0.05$). This provides evidence to support H3.

H4: Public employees' perception of the organisation's resilience will be positively related with job resources availability for them.

Null Hypothesis H0: Organisational resilience has no significant positive impact on Job resource available for public employees. Alternative Hypothesis H1: Public employees' perception of the organisation's resilience will be positively related with job resources

availability for them. The estimated regression coefficient is $b = 0.072$. The t test results indicate that the null hypothesis of no significant effect cannot be rejected at the 0.05 level of significance ($b = 0.072$, $t = 0.769$, $p = 0.442$). This means that H4 is not supported.

H5: Public employees' perception of the practice of openness and accountability in the organisation will positively related with job resource availability for them.

Null Hypothesis H0: The practice of openness and accountability has no significant positive impact on the job resources available for public employees. Alternative hypothesis H1: Public employees' perception of the practice of openness and accountability in the organisation will positively related with job resource availability for them. The estimated regression coefficient is $b = 0.230$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b = 0.230$, $t = 1.933$, $p = 0.042$). This provides evidence to support H5.

H6: Public employees' perception of the practice of governance networks in the organisation will be positively related with job resources availability for them.

Null Hypothesis H0: The practice of governance network has no significant positive impact on the job resource available for public employees. Alternative hypothesis H1: Public employees' perception of the practice of governance networks in the organisation will be positively related with job resources availability for them. The estimated regression coefficient is $b = 0.626$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b = 0.626$, $t = 4.825$, $p = 0.001$). This provides evidence to support H6.

H7: Public employees' perception of the comprehensiveness of performance measuring in the organisation will be positively related with their empowerment.

Null Hypothesis H0: A comprehensive outcome measurement has no significant positive impact on the public employees' empowerment. Alternative hypothesis H1: Public employees' perception of the comprehensiveness of performance measuring in the organisation will be positively related with their empowerment. The estimated regression coefficient is $b = 0.094$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b = 0.094$, $t = 2.605$, $p = 0.009$). This provides evidence to support H7.

H8: Public employees' perception of the practice of task interventions in the organisation will be positively related with their empowerment.

Null Hypothesis H0: The practice of task interventions have no significant positive impact on the public employees' empowerment. Alternative hypothesis H1: Public employees' perception of the practice of task interventions in the organisation will be positively related with their empowerment. The estimated regression coefficient is $b = 0.507$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b=0.507$, $t = 9.862$, $p \leq 0.001$). This provides evidence to support H8.

H9: Public employees' perception of the practice of developing capacity in the organisation will be positively related with their empowerment.

Null Hypothesis H0: The practice of developing capacity has no significant positive impact on the public employees' empowerment. Alternative hypothesis H1: Public employees' perception of the practice of developing capacity in the organisation will be positively related with their empowerment. The estimated regression coefficient is $b = 0.330$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b = 0.330$, $t = 7.690$, $p \leq 0.001$). This provides evidence to support H9.

H10 Public employees' perception of the availability of job resources for them will be positively related to a sense of psychological ownership.

Null Hypothesis H0: Availability of job resource for public employees has no significant positive impact on the feeling of psychological ownership. Alternative hypothesis H1: public employees' perception of the availability of job resources for them will be positively related to a sense of psychological ownership. The estimated regression coefficient is $b = 0.148$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b=-0.148$, $t = 3.331$, $p \leq 0.001$). This provides evidence to support H10.

H11: Public employees' perception of empowering them will be positively related a sense of psychological ownership.

Null Hypothesis H0: Empowering public employees has no significant positive impact on the feeling of psychological ownership. Alternative hypothesis H1: Public employees' perception

of empowering them will be positively related a sense of psychological ownership. The estimated regression coefficient is $b = 0.768$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b = 0.768$, $t = 13.329$, $p \leq 0.001$). This provides evidence to support H11.

H12 There is a positive relationship between psychological ownership and public employees' innovativeness, and this relationship is moderated by the trust level; the relationship between psychological ownership and innovativeness which will be stronger in environments characterized by high trust in organisation than in those characterized by low trust.

Null Hypothesis H0: the trust level has no moderator impact on the relationship between psychological ownership and public employees' innovativeness. Alternative hypothesis H1: There is a positive relationship between psychological ownership and innovativeness, and this relationship is moderated by the trust level; the relationship between psychological ownership and innovativeness which will be stronger in environments characterised by high trust in the organisation than in those characterised by low trust. The estimated regression coefficient is $b = 0.862$. The t test results indicate that the null hypothesis of no significant effect must be rejected at the 0.05 level of significance ($b = 0.862$, $t = 25.966$, $p \leq 0.001$). This provides evidence to support H12.

5.11 Conclusion

This chapter has described the analytical procedures and the results obtained from them. In total, 713 responses were subjected to a set of statistical tests using SPSS version 23.0 and SEM, based on Analysis of Moment Structures (AMOS) version 23.0.

The demographic profiles of the participants were subsequently provided. This includes characteristics, such as gender, age, education level, and organisation type. The descriptive analysis, for example, showed that the gender of respondents is split almost equally. Additionally, the normality tests (mean, standard deviation, skewness and kurtosis) suggested that the collected data are normally distributed. Then, multicollinearity analyses were then employed in order to validate the regression assumptions. The Pearson's correlation test confirmed that the gathered data has no multicollinearity issues, as each construct of this study did not correlate with the other constructs at the level of 0.9 or above. Moreover, to check the reliability and validity of the measurement scales used in this study, a set of tests was employed. The values of the Cronbach's alpha suggested that all of the constructs are reliable, as they achieved a score greater than 0.70.

Next, Confirmatory Factor Analysis (CFA) using AMOS 23.0 was performed to evaluate the convergent validity. The results of the factor loadings of the items, AVE, and CR confirmed the convergent validity of the measures. Additionally, the analysis provided support for the discriminant validity of the measurement scales. The results of Harman's Single Factor Test and the CFA statistically showed that common method bias was not a major issue with regard to the collected data. Assessing the model fit based on several indicators showed that it had a good fit with the proposed framework.

Lastly, structural models using AMOS 23.0 were run in order to test all of the proposed hypotheses. The statistical figures provided support for 11 of the 12 hypotheses. The subsequent chapter will discuss the results generated from this part, and also link these results with the previous findings.

Chapter 6: Discussion

6 Discussion

6.1 Introduction

A fundamental question addressed in this study concerns how and whether the emphasis on the complementarities between a holistic approach of governance (rather than HRMP) and human capital can drive up human capital value in use, translating into a relative advantage; in this case, innovativeness. As I argue in this study, innovativeness for public organisations emerges from the complementarities between public organisations' governance structure and human capital. With respect to human capital, the dynamics play out differently than they do for other resources because employees enjoy perpetual ownership of their human capital. The results of the study confirm the importance of investigating the intermediate set of human capital-related constructs that contribute towards explaining the links between governance and organisational and individual innovativeness.

The proposed framework was developed on the basis of a combination of three theories: social capital theory, stakeholder theory, and institutional theory. Based on the path analysis, using the structure equation model, the results in Chapter Five present the hypothetical role of governance in understanding public employees' innovativeness behaviour via human capital value in use. In addition, this study has developed a framework that clarifies the influence of trust on the relationship between psychological ownership and innovativeness. As a result, 11 hypotheses are accepted. This chapter addresses methodological transparency, summarises the hypotheses and confirms whether or not the data assessment supports or rejects them, backed up by justifications drawn from the literature review. This chapter highlighted the validation and revision of the research framework's variables.

6.2 Methodological transparency

Methodological transparency is defined as “the degree of detail and disclosure about the specific steps, decisions, and judgment calls made during a scientific study” (Aguinis, Ramani and Alabduljader, 2018, p. 2). It is important to acknowledge here that transparency is conceptualised as a matter of degree, rather than as a dichotomous variable (present or absent). Researchers generally regard low methodological transparency as undesirable because it can reduce the credibility and trustworthiness of research results by precluding inferential reproducibility (Bergh *et al.*, 2017; Cortina *et al.*, 2017). Due to the availability of sufficient information, inferential reproducibility means the ability of other researchers to reach similar conclusions (not the same results) to those reached by the original authors (Aguinis, Ramani and Alabduljader, 2018). Aguinis, Ramani and Alabduljader (2018) proposed recommendations as a checklist regarding how to be more transparent regarding the empirical research process. It is important to note that transparency recommendations “are not about the appropriateness of methodological choices, but rather on making those methodological choices explicit” (Aguinis, Ramani and Alabduljader, 2018, p. 4). This study satisfies these recommendations in order to enhance the methodological transparency and improve the research quality. Table 6.1 summarises the recommendations and where each of these recommendations was fulfilled.

Table 6.1 Meeting the transparency recommendations by chapter

<i>Recommendation to</i>	<i>The chapter where the recommendation is met</i>
Enhance the methodological transparency regarding the theory:	
• Specify the theoretical goal	3
• Specify the research strategy	4
• Specify the level of analysis	4
• Acknowledge whether there was an expected <i>a priori</i> direction for the nature of relations as derived from the theoretical framework used	3
Enhance the methodological transparency regarding the research design:	
• Describe the type of research design	4
• Describe the type of data collection procedure	4

Chapter 6: Discussion

• Specify the location of the data collection	4
• Describe the type of sampling method	4
• Specify the sample characteristics	4
• Common method variance (statistical remedies)	5
<hr/>	
Enhance the methodological transparency regarding the measurement:	
• Provide a conceptual definition of the constructs	2
• Report all of the measures used and the indicators corresponding to each construct	4
• Provide evidence of construct validation	5
<hr/>	
Enhance the methodological transparency regarding the data analyses:	
• Report the specific analytical method used and why it was chosen	4 and 5
• Report the software used, including which version	4 and 5
• Report the methods and decision rules used to identify outliers	4
<hr/>	
Enhance the methodological transparency regarding the reporting of the results:	
• Report the missing data and information method	4
• Report the rate	4
• Report the results of all of the tests of assumptions associated with the analytical method	5
• Report the descriptive statistics and correlations	5
• Report the exact p -value to two decimal places	5
• Use specific terms when reporting the results	5
• Report and clearly identify the regression coefficients	5
<hr/>	

6.3 Discussion of the research hypotheses

This study examines the effect of nine components of governance (integrity, fairness, respecting the rule of law, resilience, openness and accountability, governance network, outcome measurement quality, task interventions, and developing capacity) on innovativeness in the human capital context (trust, job resources, empowerment and psychological ownership). Table 6.2 summarises the results. The discussion that follows is based on the complementarities that exist between the three contextual factors of governance structure (ethical climate, networks and intervention contexts) and the human capital-related constructs (trust, job resources, empowerment and psychological ownership), that affect public employees’ innovativeness.

Table 6. 2 Research hypotheses’ results

<i>Path</i>		<i>Hypothesis</i>	<i>Hypothesis supported</i>
Integrity	→ Trust	<i>H1: Public employees' perception of organisation's Integrity will increase their trust in the organisation.</i>	Yes
Fairness	→ Trust	<i>H2: Public employees' perception of organisation's fairness will increase their trust in the organisation.</i>	Yes
Respecting the rule of Law	→ Trust	<i>H3: Public employees' perception of organisation's respecting the rule of law will increase their trust in the organisation.</i>	Yes
Resilience	→ Job Resource	<i>H4: Public employees' perception of the organisation's resilience will be positively related with job resources availability for them.</i>	No
Openness and Accountability	→ Job Resource	<i>H5: Public employees' perception of the practice of openness and accountability in the organisation will positively related with job resource availability for them.</i>	Yes
Governance Network	→ Job Resource	<i>H6: Public employees' perception of the practice of governance networks in the organisation will be positively related with job resources availability for them.</i>	Yes
Comprehensive measuring of performance	→ Empowerment	<i>H7: Public employees' perception of the comprehensiveness of performance measuring in the organisation will be positively related with their empowerment.</i>	Yes
Task Interventions	→ Empowerment	<i>H8: Public employees' perception of the practice of task interventions in the organisation will be positively related with their empowerment.</i>	Yes
Developing Capacity	→ Empowerment	<i>H9: Public employees' perception of the practice of developing capacity in the organisation will be positively related with their empowerment.</i>	Yes
Job Resource	→ Psychological Ownership	<i>H10: public employees' perception of the availability of job resources for them will be positively related to a sense of psychological ownership.</i>	Yes
Empowerment	→ Psychological Ownership	<i>H11: Public employees' perception of empowering them will be positively related a sense of psychological ownership.</i>	Yes
Psychological Ownership	<i>Trust</i> → Innovation	<i>H12: There is a positive relationship between psychological ownership and public employees' innovativeness, and this relationship is moderated by the trust level; the relationship between psychological ownership and innovativeness which will be stronger in environments characterised by high trust in organisation than in those characterised by low trust.</i>	Yes

6.3.1 Discussion of the complementarities between the ethical climate context and trust

Starting with the factors that affect public employees' trust in the public sector due to an ethical climate context, integrity, fairness and respecting the rule of law are significant factors. As suggested by the path magnitude, fairness has a far higher magnitude than integrity and respecting the rule of law (0.428***, 0.338*, 0.306*), respectively. The findings show the amount of damage caused to trust by a poor ethical work climate in public organisations, whereas a good ethical work climate contributes to individuals' trust, which in turn positively facilitates the effect of psychological ownership on subsequent innovativeness. These results signify the uniqueness of public organisations as institutionalised environments. Public leaders must work continuously to develop norms whereby employees feel positive about the organisation's efforts to encourage ethical conduct and believe that their organisation is an ethical workplace (Overeem, 2015; IFAC and CIPFA, 2014).

Integrity

The path between organisational integrity and public employees' trust is positive and statistically significant ($\beta=0.338$, $p<0.05$). This provides evidence to support H1 that public organisations that maintain integrity are positively associated with public employees' trust. This is consistent with a growing area of research examining the consequences of integrity, that are typically considered positive (Ames and Flynn, 2007; Stouten *et al.*, 2013). For example, Fernandez, Cho and Perry (2010) provide theoretical support for the idea that integrity, as part of organisational justice, has a positive effect on performance (Fernandez, Cho and Perry, 2010).

Even though "there is a nearly axiomatic acknowledgement of the importance of integrity for building trust with followers" (Krylova, Jolly and Phillips, 2017, p. 196), leaders' ostensibly positive attributes may not always result in positive responses from their followers (Hewlin, Dumas and Burnett, 2017). For example, Hewlin, Dumas and Burnett (2017) argue integrity may create an uncomfortable work environment for subordinates, who are engaging in facade creation. Additionally, the experience of having a high-integrity leader might result in feelings of being "exposed," or being judged or under scrutiny (Stouten *et al.*, 2013).

When applied to the public sector, this result confirms that integrity is a “very important aspect of a government’s quality” (Overeem, 2015, p. 824), and a fundamental component of effective, modern leadership (Brown and Treviño, 2006; Krylova, Jolly and Phillips, 2017). The U.S. Office of Personnel Management (OPM) identified integrity as one of the five fundamental competencies prerequisite for entry to the Senior Executive Service (SES) (OPM, 2006). More specific to the arguments outlined in this study, the institutionalised environments in which public organisations operate impose strong demands with regard to legality (Fernandez, Cho and Perry, 2010), and may be important when exercising it within the organisation (Moldogaziev and Silvia, 2015). Although this study is based on the previous studies of Fernandez, Cho and Perry (2010) and Moldogaziev and Silvia (2015) that measure integrity’s effects in public organisations, these studies focus on the direct relationship between integrity and performance.

Fairness

The path between fairness and trust is positive and statistically significant ($\beta=0.428$, $p<0.001$). This provides evidence to support H2 that fairness within public organisations is positively associated with employees’ trust. This variable has the largest standardised coefficient in the ethical climate context. Higher levels of fairness in a public organisation appear to raise the trust of public employees. The combination of constituency demands, the political environment, and the legal requirements regarding public organisations necessitate the adherence to values of fairness and the equitable treatment of employees (Rainey 2009; Fernandez *et al.*, 2010).

A meta-analysis reveals that fair practices within organisations determine organisational performance (Colquitt *et al.*, 2001). More precisely, numerous scholars have emphasised the importance of fairness within organisations as a factor that enhances employee motivation and determines the quality of individuals' lives within the organisations (Adams, 1965; Colquitt *et al.*, 2001). Moreover, perceptions of fairness have a significant impact on employees’ work outcomes and their level of commitment to the organisation (Simons and Roberson 2003; Moldogaziev and Silvia, 2015). However, as Simons and Roberson (2003) propose, the relationship between fairness and these outcomes may be indirect in nature.

In particular, human capital creates unique challenges and management dilemmas in pursuing its value because employees’ utility functions encompass not only the economic

exchange dimension, but also the affective relationship (free will) dimensions (Baron and Kreps, 1999; Chadwick, 2017). The arguments outlined in this study have stronger connections with public organisations' specificity, in ways that have been obscured by the field's traditional emphasis on classic human capital theory which, ironically, originated in the field of labour economics. Indeed, this study weaves these disparate themes together to create a more comprehensive view of how public employees' interactions with organisation's fairness. This study extended the research on fairness by focusing on the indirect relationship between the perception of fairness and employees' outcomes as a result of trust. The results show that shared perceptions of organisational environments (or climates) exist with regard to the fairness of the policies' treatment and procedures.

Respecting the rule of law

Respecting the rule of law has a positive and highly significant path that leads to employees trust in organisations ($\beta=0.306$, $p<0.01$). This provides evidence to support H3 that public employees' trust is positively associated with respecting the rule of law. Similarly, Weibel *et al.* (2016) find that control mechanisms enhance trust in the organisation. Conversely, tight or overly strict controls diminish trust and change the attribution process (Malhotra and Lumineau (2011). Concurrently, a lack of control is perceived as undermining trust (Weibel *et al.*, 2016). Optimal control, which is neither excessive nor inadequate, is expected to help to convey the organisational preferences regarding achieving the rule objectives and so, in turn, increase the stakeholders' trustworthy behaviour (DeHart-Davis, 2009). The construct's indicators of respecting the rule of law provided in this study may offer a good example of optimal control in public organisations.

The argument outlined in the public administration literature is that lawfulness is the second most important public sector actual value, a view that is consistent with the result of this study. Lawfulness is defined as acting in accordance with the existing laws and rules (Van der Wal *et al.*, 2008). Similarly, DeHart-Davis (2009) finds that following the government rules and regulations plays a key role in public administration value. In addition, following rules is considered a factor on the ethical climate scale by ötken and Cenkci (2012). Moreover, Lane (1994, p. 144) notes that "public administration is at its core about implementing the rule of law". Crucially, all levels of public sector entities may be involved in interpreting, applying or enforcing laws (IFAC and CIPFA, 2014).

6.3.2 Discussion of the complementarities between networks' context and job resources

With regards to the networks' context; openness and accountability, and governance networks are significant factors. As suggested by the path magnitude shown in Figure 6.2, governance network is found to have a far higher magnitude than openness and accountability (0.626*** versus 0.230*). However, resilience is not significantly associated with job resources ($\beta=0.072$, $P>0.05$).

Resilience

Contrary to our expectations, there is no significant association between resilience and public employees' cooperation and availability of information. Therefore, there is no evidence to support H5 that public organisations' resilience is positively associated with job resources available to the employees. This might be because the way in which the hierarchy is structured affects the outcomes (Bunderson *et al.*, 2016). For clarity, the relationships between employees are the critical unit of analysis for predicting organisational resilience (Branicki, Steyer and Sullivan-Taylor, 2016). Therefore, possibly, the unified centralised hierarchies within Saudi public organisations may lead to less internal communication than this study anticipated (Aiken and Hage, 1968).

Organisational resilience harks back to Meyer's (1982) oft-cited point that this term refers to an organisation's ability (embodied in the design of its formal structures, resources, ideologies, and routines) to absorb a discrete environmental jolt and restore the prior order. This dynamic would involve an interaction between the actors: the individuals and the institutions (Williams *et al.*, 2017). Organisations are social systems composed of parts that may be hierarchical in relation to one another (Kahn *et al.*, 2018). Therefore, resilience is weakened when parts of the system become fragmented (distanced, withheld, or treated with indifference) (Shalev and Errera, 2008). This fragmentation sharply impedes or blocks the flow of resources between the different parts (Kahn *et al.*, 2018). Public organisations can heighten the frequency of their internal cooperation and communication channels, and so then their resilience by moving towards a decentralised structure (Van Der Vegt, *et al.*, 2015). This study qualifies the functionalist perspective by proposing a positive pathway from hierarchy to innovativeness via improved coordination/information-enabling within public organisations, while also demonstrating the need to elaborate further on the conflict perspective on hierarchy.

It has been suggested that centralised hierarchies create more conflict within hierarchical teams and reduce team performance (Harrison and Klein, 2007) because they can create a tense intra-team environment (Van der veegt *et al.*, 2010; Tost, Gino and Larrick, 2013; Greer *et al.*, 2018), provokes contests and conflicts over the ranking of the team members (Greer and Van Kleef, 2010) and can lead to greater task ambiguity and increased disagreement over about the hierarchical ranking (Greer *et al.*, 2018; Kahn *et al.*, 1964).

Openness and accountability

The path between openness and accountability, and job resources, is positive and statistically significant ($\beta=0.230$, $p<0.05$). This provides evidence to support H4 that digital reporting by small companies is negatively associated with the complexity of the process.

Government transparency does not always produce positive outcomes (Cucciniello, Porumbescu and Grimmelikhuijsen, 2015). A growing number of scholars and practitioners are beginning to debate the role of transparency in the practice of public administration. Some scholars have forcefully argued that efforts to enhance openness often do more harm than good, reasoning that continual efforts to enhance transparency have fuelled indecision and so, ultimately, dysfunction within government (Grumet, 2014). Cucciniello, Porumbescu and Grimmelikhuijsen (2015), for example, report that transparency is less effective in engendering trust in and the legitimacy of government. Here, the result shows that this negative effect is only half of the openness story. In fact, enhancing openness will bring about improvements to the quality of government; for instance, greater trust in government and reduced public corruption (Piotrowski 2008; Roberts 2006; Benito and Bastida 2009; Bertot, Jaeger, and Grimes 2010; Welch, Hinnant, and Moon 2005; Worthy 2010).

Typically, the dilemma for public organisations seeking outcomes from openness is that its effects differ according to a number of factors, such as the area of government, policy domain, and citizen characteristics (de Fine Licht 2014; de Fine Licht *et al.*, 2014; Grimmelikhuijsen and Meijer, 2014). Perhaps more importantly, by broadening the focus of research from value of openness to assessing where and how it works, this study shifts our theoretical attention from external effects to the effects of openness on the insiders, the public employees. Essentially, the current research extends our knowledge by confirming that openness has a positive impact on job resource availability for public employees.

Governance network

The results demonstrate a direct path from governance network via public governance to job resources, which is positive and highly significant ($\beta=0.626$, $p<0.001$). This provides evidence to support H6 that governance networks are positively associated with job resource availability to public employees.

Governance networks' particular strength lies in their ability to align dispersed actors with different roles and interests. The advantages of network coordination are considerable, including an increased capacity to plan for and address complex problems, enhanced learning, the mobilisation and exchange of resources across organisational and sectoral boundaries, and contributing towards making public governance more effective (Provan and Milward, 1995; Kickert *et al.*, 1997; Koppenjan and Klijn 2004; Provan and Kenis, 2008; Hartley *et al.*, 2013). Through strategic engagement, information is provided to reduce the risks and transactions costs to government and its entities, minimise the effect of conflictual politics, access more effectively complementary sets of resources and knowledge and then enhance organisations' innovative performance (Klijn and Koppenjan, 2012; Dagnino, Levanti and Destri, 2016). Therefore, the formal institutions of government are supplemented (Kooiman, 1993).

This result is consistent with the recent argument on governance networks by allowing public organisations to gather information and inspiration, formulate and test their ideas, and engage in processes of mutual learning and resource exchange (Provan and Kenis, 2008; Klijn, 2008; Torfing and Ansell, 2017; Sørensen and Torfing, 2018). Governance networks are found to provide public employees with the knowledge, ideas and resources they need to stimulate innovation and help their organisations to flourish. It is highly important for public sector organisations to engage comprehensively with 'institutional' stakeholders by developing both formal and informal communications which may require different behaviour from public employees (IFAC and CIPFA, 2014).

Therefore, it is necessary for public affairs leaders to motivate their employees and identify the tools and instruments for the new governance (Bingham, Nabatchi and O'Leary, 2005; Tummer and Knies, 2016). Investing in the education and retraining of public managers to make them better prepared to play a key role in solving wicked and unruly problems through collaboration will be necessary (Crosby, 't Hart and Torfing, 2017). It makes more

sense to broaden the perspective and examine the role of networks and partnerships as the venues in which public innovation emerges, not through the heroic efforts of strategic public managers but through dispersed efforts and distributed leadership, whereby much of the enabling work can be performed by public employees without formal authority within the government system.

6.3.3 Discussion of the complementarities between interventions and empowerment

With regard to the interventions context, comprehensively measuring performance, task interventions and developing capacity are significant factors. As suggested by the path magnitude displayed in Figure 6.2, task intervention and developing capacity are found to have a higher magnitude than comprehensively measuring performance (0.507*** ; 0.330***; 0.094**), respectively.

Comprehensively measuring of performance

Comprehensively measuring of performance has a positive and significant path leading to public employee empowerment ($\beta=0.094$, $p<0.01$). This provides empirical evidence to support H7 that the comprehensive measuring of performance by public organisations is positively associated with employee empowerment.

This finding is consistent with the finding in the literature that the comprehensive measuring of performance may stimulate employee initiative to improve operational performance (Groen, Wouters and Wilderom, 2012), and so increase job performance (Groen, Wilderom and Wouters, 2017) and empowerment (Spreitzer, 1995; Hall, 2008). For clarity, “when the performance measures are of better quality, employees can engage in clearer discussions with their managers about their performance, which may increase their autonomous work motivation” (Groen, Wilderom and Wouters, 2017, p. 115).

The results show that the important factors in determining the appropriate performance indicators are the level of resilience (IFAC and CIPFA, 2014), accuracy (Cho and Poister, 2013), and quality (Groen, Wilderom and Wouters, 2017) in order to determine whether the performance measures reflect the performance accurately. This gives employees a heightened sense of performance control, which elevates their actual job performance. This study offers insights into how better-quality performance measures are found to give public

employees a sense of control over their own performance, which in turn enables them to perform better.

Public employees' acceptance of performance appraisal is operationalised in terms of procedural and distributional justice in performance appraisal. This study offers a new perspective on how to encourage public employees to embrace performance appraisal by explaining how employee acceptance of such appraisal can work in harmony with the intrinsic motivation of public employees, and provide supporting evidence for the effectiveness of enabling formalisation. The path to improving effectiveness, and gaining the support of employees, is anchored in enhancing employee perceptions of the importance of the appraisal process and its usefulness in developing their career-building capacity.

Task interventions

Task interventions has a positive and highly significant path leading to employee empowerment in public organisations ($\beta=0.507$, $p<0.001$). This represents empirical evidence to support H8 that task interventions by public managers are positively associated with public employee empowerment. Therefore, public employees with a higher degree of task intervention tend to be more prepared to experience a heightened sense of empowerment, which elevates their actual job performance. The result contrasts with those of previous studies on leadership (in its various forms), which note the role of leaders or the management in general as an antecedent of individual empowerment (Edwards and Collinson, 2002; Kark, Shamir and Chen, 2003; Liden, Wayne and Sparrowe, 2000; Sparr and Sonnentag, 2008; Gabriel *et al.*, 2014; Wong and Giessner, 2018). However, in the current study, it is demonstrated for the first time that task intervention leads to public employee empowerment.

Performance is improved not because of communication, feedback and discussion per se but because they provide employees with an increased understanding of the expectations and strategies regarding goal accomplishment (London *et al.*, 2004). Thus, the concern from an evaluation standpoint is whether the employees have adequate information to understand the specific expectations and strategies regarding goal accomplishment, which is an important dimension of empowerment. A 'deep dive' of this sort is anticipated by Sparr and Sonnentag (2008), considering how the feedback environment affects employees' personal control of information (their belief that they are able to access critical information

within the workplace), and helplessness (feelings of uncertainty in regard to individual performance), with results demonstrating that the feedback environment positively affects these motivational constructs. Arguably, public employees will be more likely to feel empowered in their work when their leader establishes open communication with them and acts in accordance with the goal (Maynard, Gilson and Mathieu, 2012). This shows solid support, indicating that public managers share a vision and create a climate whereby employees feel inspired and self-confident and so, in doing so, build empowerment. This interdependence between public employees and managers assesses how they may impact on the development of empowerment.

The literature on intervention orientation asserts that employees vary with regard to their willingness and ability to receive, process, and use feedback (Dahling, Chau, & O'Malley, 2012; Gregory & Levy, 2012; Linderbaum & Levy, 2010; London and Smither, 2002). This harks back to Tsui's (1984) oft-cited point, that followers have their own expectations of what leaders should or should not do in relation to their relational and task responsibilities. From this perspective, the feedback environment will be beneficial for those who are favourably orientated towards feedback but may be less beneficial to those who do not necessarily wish to receive or use feedback. It is vital to understand the role of feedback orientation therefore, given that the benefits of a supportive feedback environment may not empower all employees.

Developing capacity

Developing capacity has a positive and highly significant path leading to employee empowerment in public organisations ($\beta=0.330$, $p<0.001$). This represents empirical evidence to support H9 that developing the capacity of public employees is positively associated with empowering them. This contends that training aims to enhance public employee empowerment and consequently preserve important work-related outcomes because these employees receive detailed information on how to carry out their tasks more efficiently (Van Erp *et al.*, 2018).

In the public sector, it is better to focus on employees than the direct service because they actually perform the task and ensure its quality (Van Wart, 2003). Perhaps the most important thing for employees is to feel a 'fit' between their own ability and the demands of their job (Han *et al.*, 2015). Hence, a critical challenge for public sector organisations is not

only to find “people with the right skills, appropriate qualifications and mind-set” (IFAC and CIPFA, 2014, p. 23), but also the fact that “subsequent training and development need to be driven by matching organisational and individual development requirements” (p. 26). Given this, Van Wart (2003) famously defined public sector leadership as the process of developing/supporting followers (Orazi, Turrini and Valotti, 2013), including providing subordinates with opportunities for personal growth (Fernandez, Cho and Perry, 2010) and initiating a highly supportive climate (Bliese and Halverson, 2002). This makes the new role of leaders more focused on developing and supporting a work environment that facilitates employees’ success and transfers the traditional leadership responsibilities to the team members (Rapp *et al.*, 2016; IFAC and CIPFA, 2014). In short, when managers “exhibit encouraging leader behaviours” (Kirkman and Rosen, 1999, p. 60) and create personal development opportunities and potential career progression (IFAC and CIPFA, 2014), investment in resources through training employees (Van Erp *et al.*, 2018) should increase the sense of team empowerment to a greater extent (Rapp *et al.*, 2016). If this does not occur, the risk or failure associated with creativity is high (Hon and Lui, 2016).

6.3.4 Job resources and empowerment as routes to psychological ownership

An important set of results is that the path between job resource availability for public employees and their feeling of psychological ownership is positive and highly significant ($\beta=0.044$, $p<0.001$). This provides evidence to support H8 that the availability of resources for public employees is positively associated with their sense of psychological ownership.

Also, the results demonstrate a direct path from empowering public employees to their sense of psychological ownership, which is positive and highly significant ($\beta=0.058$, $p<0.001$). This provides evidence to support H9 that a sense of psychological ownership is positively associated with empowering employees in public organisations.

Employees feel a sense of belonging when they experience the organisation as a place where they feel comfortable, happy, and safe (Van Dyne and Pierce, 2004). Psychological ownership can be caused by a feeling of efficacy and efficiency through effective interactions and cooperation in working environments (Pierce *et al.*, 2001; Han *et al.*, 2015; Bandura, 1977; White, 1959). When employees feel that they share similar values with their employing organisation, this may be of benefit to the organisation, since actions such as helping behaviour and sharing that information that they ‘own’ can lead to positive changes

in employees' involvement (Callier, 2017; Han *et al.*, 2015) and their sense of psychological ownership (Dawkins *et al.*, 2017). Reciprocal and exchangeable relationships develop between the organisation and its employees through a psychological contract. As a consequence, employees who are satisfied with their 'psychological contract' may feel like 'insiders' (Masterson and Stamper, 2003). In a nutshell, job resources, such as cooperation, information, sharing knowledge and experience between the stakeholders, are important routes to psychological ownership (Pierce *et al.*, 2001).

Participation in decision-making is likely to enhance the employees' sense of control over the target of ownership (Pierce, Kostova and Dirks, 2001). Empirical studies find a positive association between employee participation in decision-making and psychological ownership (Chi and Han, 2008; Han *et al.*, 2010; Liu *et al.*, 2012). With respect to participation in decision-making, it is important to acknowledge here that ownership is experienced and defined in terms of a 'bundle' of rights (Pierce *et al.*, 1991). A view that is consistent with this logic, the right to information about the target of ownership and the mission of the organisation, the right to have a voice in decisions that impact the target, its goals, and its performance, lead employees to feel that they know their organisation better and, as a result, may develop a sense of psychological ownership towards it (Pierce *et al.*, 1991; Pierce *et al.*, 2001). Moreover, promotion, training, and development are various aspects of organisational life which are considered to form part of the psychological contract between employees and their organisation (Han *et al.*, 2015; Rousseau, 1990).

The results present a synthesis of the extant theoretical conceptualisations of psychological ownership, together with the empirical evidence on its antecedents and outcomes. In fact, this present study aids our understanding of how psychological ownership develops and influences workplace outcomes. This study's perspectives may also offer avenues for expecting culture to be an important determinant of psychological ownership (Dawkins *et al.*, 2018). The results suggest that that this sense of ownership manifests itself in a similar way in both more collectivistic Eastern cultures and more individualistic Western ones.

6.3.5 The Moderating Effect of Trust

Another major theoretical outcome of the current investigation is the moderating effect of trust. In particular, this study hypothesises that the effect of psychological ownership on innovativeness is moderated by the employees' trust in their organisation. To the best of

our knowledge, this is the first attempt to explain the moderating role of trust in the relationship between psychological ownership and innovativeness in public organisations. This research fills that gap by empirically explaining how gender moderates this relationship.

As predicted, the results showed that psychological ownership has a positive and significant effect on innovativeness for the high-trust group (PO → IN: $\beta = 0.294$, $p\text{-value} < 0.001$), but an insignificant impact for the low-trust group (PO → IN: $\beta = 0.037$, $p\text{-value} > 0.05$). This finding supports the hypothesis regarding a moderating role for trust in the model.

The results of the study confirm the importance of investigating the intermediate set of factors that may contribute to explaining the 'how' of the links between psychological ownership and innovativeness. The results confirm the need to investigate the relationship between psychological ownership and public employees' innovativeness under particular circumstances as they highlight the fact that particular individual conditions, such as the level of trust in the organisation, may influence this relationship. The findings show that, in high employee-organisation trust relationships, perceptions of psychological ownership are linked with higher levels of performance and innovativeness. This suggests that psychological ownership yields beneficial outcomes for both individuals and their employers.

From our distinctive approach, the results indicate that people differ regarding their reaction to the psychological ownership of individual conditions, and that these conditions can modify the impact of a sense of psychological ownership on employees' positive attitudes towards their work and the organisation. This confirms the role of managers in establishing relations that might call for trust. This is in line with the results of several studies (Hutchinson and Purcell, 2003; Purcell *et al.*, 2003) that show that increasing the leaders' focus on their workforce is likely to enhance employee motivation and extra-role behaviour, thereby highlighting the key role played by managers in reinforcing their positive impact on employees.

The findings point to the role that employee trust in their organisation plays in facilitating high self-efficacy and producing the desired employee workplace attitudes and behaviour. To date, the literature on studies on trust has shown that trust in the organisation is positively associated with employee workplace attitudes and behaviour. Our results identify

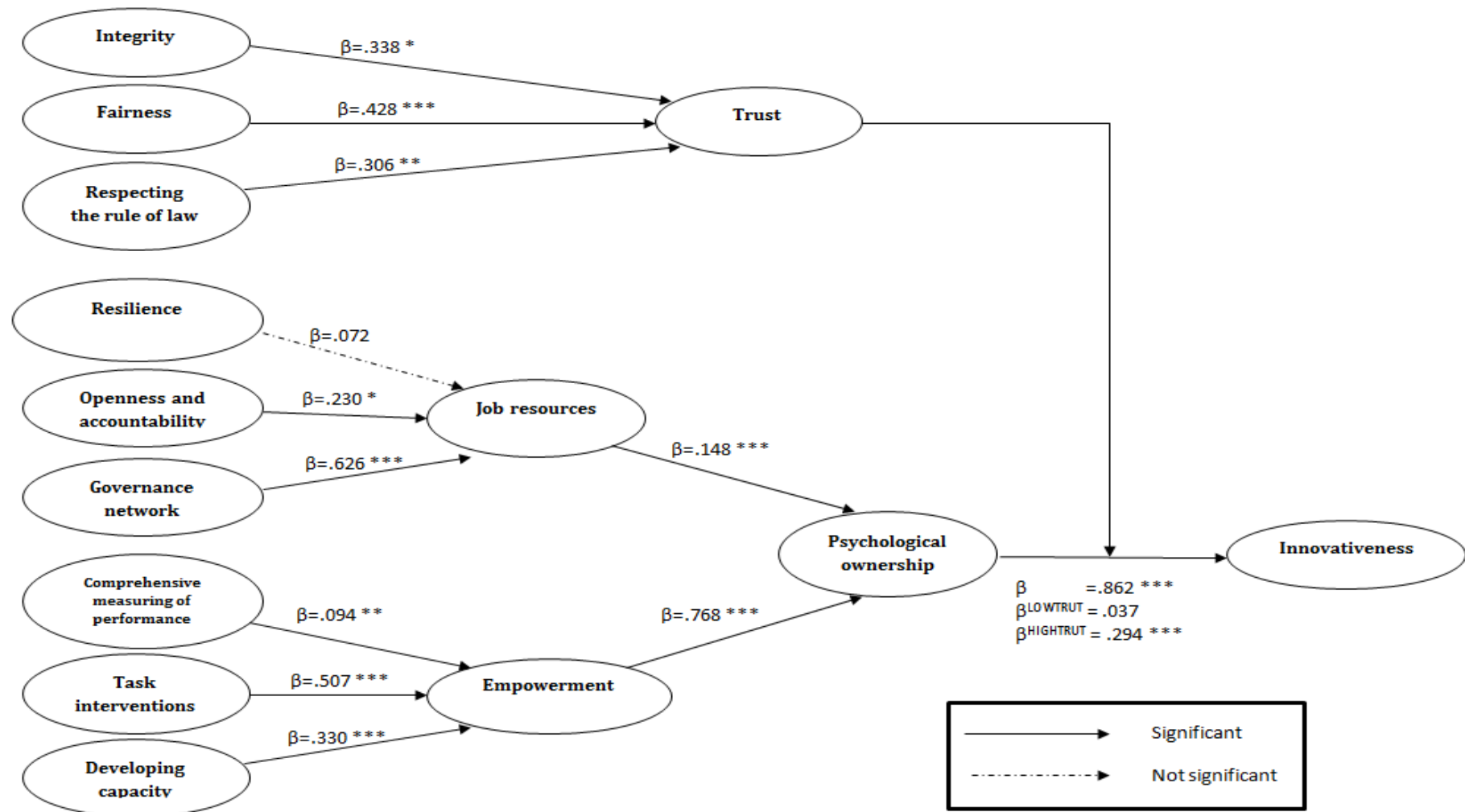
an additional path whereby trust in the organisation is relevant to employee attitudes and behaviour: for those employees experiencing high levels of trust in their organisation, having a high level of self-efficacy is accompanied by higher innovativeness. Thus, the study provides empirical support for the theoretical work of Dirks and Ferrin (2001) that found that trust in the organisation moderates employee motivation and workplace behaviour and outcomes, so that examining trust as a moderator adds value to the literature beyond an investigation of its main effects.

6.4 The validation and revision of the research framework

This research used convergent and discriminant validity tests to ensure that the constructs' measurements represent the concept of interest accurately. This research analysed convergent validity by using factor loading, Composite Reliability (CR) and Average Variance Extracted (AVE) (Hair *et al*, 2014; Hair, Babin and Krey, 2017). As an instruction, factor loading must obtain all of the standardised regression values greater than 0.50 and, in addition; the critical ratio (t-value) must be greater than 1.96. An approximation that is useful to adopt is that the AVE weight has to be greater than 0.5 and the CR should be greater than 0.70 (Hair *et al*, 2010; Hair *et al*, 2014; Hair, Babin and Krey, 2017). This research's construct exceeded the smallest pre-requisite for the factor loadings and t weights, CR and AVE respectively. Therefore, all of the values suggested that there was a great deal of convergent validity for the entire items utilised in the measured framework. This research analysed discriminant validity by contrasting the AVE weights of any two items with the square of correlation amongst the two research variables (Hair *et al*, 2010). Discriminant validity is vital when the AVE is higher than the squared correlation between the constructs. These research outcomes illustrate a significant level of discriminant validity because, for each research construct, the AVE values were higher than the squared correlation.

This research used Cronbach's Alpha (α) to assess the reliability of the research items. As a rule of thumb, a value of ≤ 0.90 demonstrates outstanding reliability, 0.70-0.90 high reliability, 0.50-0.70 average reliability and ≤ 0.50 low value (Hinton *et al*, 2004). The outcomes of the existing research show that all of the items have a level of reliability above 0.70. Therefore, this signifies excellent reliability for all of the items, which illustrates the constancy of the scale. Therefore, this research's constructs displayed a high level of

reliability and validity. Figure 6.1 presents the revised framework, clarifying the relationships between the research framework constructs.



*** $P < 0.001$, ** $P < 0.01$, * $p < 0.05$

Figure 6. 1 Revised framework of the relationships (overall framework)

6.5 Summary

This chapter reflected the outcomes of the research hypotheses presented in Chapter 5 using the structural equation model (SEM). First, it discussed the research hypotheses and the results that supported each hypothesis in prior studies. The discussion of the outcomes emphasised the significant input into the public sector domain. Overall, these tests indicate that all of the relationships in the model are statistically significant, with the exception of one: resilience does not have a significant impact on job resources. Furthermore, the result supports the hypothesis of a moderating role for trust in the model. The structural parameter β , associated with the relationship between PO and IN, significantly changes intensity across the two sub-groups of subjects.

With respect to human capital, the dynamics play out differently than they do for other resources because employees enjoy perpetual ownership of their human capital. The results of the study confirm the importance of investigating the intermediate set of factors that contribute to explaining the 'how' of the links between governance, and organisational and individual innovativeness. This study assesses how the complementarities between governance and human capital translate into a relative advantage; in this case, innovativeness. This study empirically test the model using data collected from 713 public employees in Saudi Arabia. As such, our study echoes Peters and Pierre's (2017) call to examine the individual-level within public organisations. This study represents an excellent opportunity to gain access to a significant number of public organisations in Saudi Arabia, a country where public organisations are rarely involved in research for academic purposes. In addition to this, the study makes several major contributions, which will be discussed in the next chapter.

The next chapter draws the overall conclusions. In addition, it discusses the theoretical contribution, practical implications, and recommendations, while also considering the limitations of the study that also represent avenues for future research.

Chapter 7: Conclusion

7. Conclusion

This chapter revisited the aim of this research and the objectives, and then assessed the accomplishment of each objective within the research. It summarises the empirical results obtained from this study and then outlines the theoretical and managerial implications of the results. It formulates effective managerial strategies and recommendations for public organisations that offer a better understanding of the main motives underlying public employees' innovativeness. Finally, it identifies the limitations of this study before offering suggestions for future research.

7.1 Introduction

Human capital is vital to the success of public organisations. However, research has largely neglected the dynamics of change in human capital in response to organisations' governance structure. This study has investigated the avenues that public sector organisations could take into consideration to create innovativeness among employees. These avenues leverage an organisation's capabilities and resources to enhance public employees' innovativeness. The two resources (governance structure and human capital) are interrelated, and together determine the extent to which public organisations garner innovation. With respect to the evolution of the governance paradigm over time, public organisations' options with regard to enhancing innovation are far broader than has been commonly acknowledged to date.

7.2 Fulfilling the research aim and objectives

This research aimed to investigate the effects of the complementarities between the holistic approach of governance and human capital on public employees' innovativeness in the context of Saudi Arabia. This was done by developing and testing a research framework based on a combination of different theories (social capital theory, stakeholder theory and institutional theory) to describe where and how an organisation's governance drives human capital value creation towards innovativeness. In order to achieve this aim, this research is based on a number of objectives. Table 7.1 below indicates each objective and the respective chapters in which these objectives are addressed.

Table 7. 1 Objectives and the chapters in which these objectives were addressed

<i>Objective</i>	<i>The chapter where the objective is met</i>
Objective 1: To provide a critical review of the governance, human capital and innovation literature to identify the research gaps, deficiencies in the literature, and the main constructs of this research, and also to address the research questions.	2
Objective 2: To develop a conceptual framework and associated hypotheses to address the research gaps and questions.	3
Objective 3: To evaluate empirically the proposed hypotheses and validate the proposed framework using the Structural Equation Modelling (SEM) technique.	4, 5
Objective 4: To discuss and link the findings to previous research, identify the managerial and theoretical implications of the key findings and offer a conclusion and recommendations for future research.	6,7

7.3 Summary of the study's procedures and results

The study developed a conceptual framework to explain how nine elements of governance (integrity, fairness, respecting the rule of law, resilience, openness and accountability, governance network, the comprehensive measuring of performance, task interventions, and developing capacity) are related to the complementarities with human capital-related constructs (trust, job resource, empowerment, and psychological ownership), and then contribute to public employees' innovativeness. Moreover, it explored the moderating role of trust level in the relationship between a feeling of psychological ownership and innovativeness. In particular, the framework employed in this study attempted to address the following research questions: (1) *What are the effects of the complementarities between a holistic approach of governance and human capital on public employees' innovativeness?*, and (2) *How does trust in an organisation influence the impact of a sense of psychological ownership on public employees' innovativeness?*

The framework consists of 14 main variables. All 14 variables are modelled as multiple-items, as they are measured by more than one indicator. The items were chosen after testing to obtain reliable responses from the respondents (Collis and Hussey, 2014). They are measured using a seven-point Likert scale in order to mitigate response set bias (Fernandez *et al.*, 2015). The measurement items and the results of the validity analyses are summarised in the Appendix. Integrity, Fairness, Respecting the rule of law, Resilience, Openness and Accountability, Governance Network, Comprehensive Measuring of performance, Task-interventions, and Developing capacity are the nine constructs that capture the extent of the implementation of good governance from the IFGGPS perspective, where 7 = Extremely agree and 1 = Extremely disagree. Trust, job resources, Empowerment and Psychological ownership are the four human capital-related constructs, where 7 = To a great extent and 1 = Minimally. The innovativeness-related three indicators are operationalised using two dimensions: encouragement to innovate and innovative behaviour while, in the measures, 7 = Always and 1 = Never.

The sample for this study was obtained using a convenience sampling procedure. A mixed-mode questionnaire survey of public employees in Saudi Arabia was conducted for this study (De Beuckelaer and Lievens, 2009; Van Engen, 2017). Data were collected by asking the public employees a number of carefully-structured items. To guide this process in order to build very high-quality measurement models, this study followed the concluding recommendations of Hinkin (1998), Fernandez *et al.* (2015), Wright *et al.* (2017), and Somers (2018) to operationalize the constructs and develop the questionnaire for public employees. All of the scales were professionally translated following the five-stage framework (TRAPD) to ensure conceptual equivalence (Harkness, Van de Vijver, and Mohler, 2003; Brislin, 1970).

The study applied the normality test to confirm that the research data were drawn from a population with a normal distribution (Field, 2000) and that the normality assumption was not disregarded. The study concentrated on the Jarque-Bera (Skewness-Kurtosis) evaluation to diagnose possible deviations from normality (Kim, 2016). Table 5.7 shows the constructs' skewness and kurtosis, both of which lie within the acceptable range. Table 5.8 presents the mean, standard deviation and correlations for all of the variables that were analysed in this study. Further, the reliability of all of the constructs employed in this study was considered,

and their Cronbach's alpha coefficient was over the agreed baseline of 0.7 (Nunnally, 1978). In order to meet the statistical requirements for proceeding to the confirmatory analysis (CFA), two tests were conducted to measure the sample adequacy. These tests were the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of Sphericity (Hinton *et al.*, 2004). The results of these tests were reported in table 5.10. The study finds that they exceed the required minimum values and indicate the appropriateness of the data for performing CFA.

Prior to the hypothesis testing, a measurement model was estimated using the CFA of all of the 14 constructs to ascertain the validity of the study variables (Anderson and Gerbing, 1988). To allow a full test of measurement validity, CFA was conducted in two stages: (1) Construct Validity, including convergent and discriminant validity; and (2) Goodness of Fit indices (Hair, Babin and Krey, 2017). For the convergent validity, all of the composite reliabilities (CR) (ranging from 0.719 to 0.9) exceeded the 0.70 benchmark, and the average variance extracted (AVE) was greater than 0.50. Thus, these measures demonstrated adequate convergent validity (Henseler, Ringle and Sinkovics, 2009; Hair *et al.*, 2014; Hair, Babin and Krey, 2017). The discriminant validity of the measures was assessed by comparing any two constructs' average values of variance extracted in relation to the square estimate correlation of these two constructs. The construct had significant, good discriminant validity when the square root of the AVE of the multi-items' reflective constructs exceeded the absolute value of the alternative construct correlations (Hair *et al.*, 2014). As shown in Table 5.12, all of the reflective constructs met this criterion.

In general, no absolute standard exists for good fit because more complex models should be judged by less strict criteria (Hair, Babin and Krey, 2017). The measurement model fitted the data satisfactorily ($\chi^2/df = 2.218$; goodness-of-fit index (GFI) = 0.910, confirmatory fit index (CFI) = 0.956, Tucker Lewis Index (TLI) = 0.950; root-mean-squared error of approximation (RMSEA) = 0.041) (Bentler and Bonett, 1980; Carmines and McIver, 1981; Browne and Cudeck, 1992; Vandenberg and Lance, 2000; Hair, Babin and Krey, 2017). Taken together, these results show that the measures in our study possessed adequate reliability and validity. Thereafter, as this study utilised self-reported data drawn from single respondents, a Harman's one-factor test was conducted to rule out common method bias. The items from all 14 factors were combined into a single factor so that there was no rotation (Malhotra,

Kim and Patil, 2006). The total variance of the one-factor model indicated that common method bias was not a significant issue in this study (Podsakoff *et al.*, 2003).

With regard to H1, H2 and H3, Table 6.2 shows that integrity, fairness and respecting the rule of law are positively related to trust ($\beta=0.338$, $P < .05$; $\beta= .428$, $P < .001$; $\beta= .306$, $P < .001$) respectively, in support of H1, H2 and H3. H4, H5 and H6 pertain to the effects of networks on the availability of job resources for public employees. The results showed that organisations' openness and accountability and governance network were positively related to the availability of job resources for public employees ($\beta=0.230$, $P < 0.05$; $\beta=0.626$, $P < 0.001$) respectively, which supported H5 and H6. However, resilience was not significantly associated with job resources ($P=0.072$, $P > 0.05$), and thus does not support H4. H7 to H9 assessed the relationship between intervention and empowerment. Outcome measurements quality, task interventions and developing capacity were positively associated with empowerment ($\beta= .094$, $P < .05$; $\beta= .507$, $P < .001$; $\beta= .330$, $P < .001$) respectively, and so supports H7, H8 and H9. In the human capital context, for H10 and H11, which focus on the role of job resources and empowerment in the emergence of psychological ownership, the interaction between both of these and psychological ownership was significant ($\beta= .148$, $P < .001$; $\beta= .768$, $P < .001$) respectively, and so supports H7, H8 and H9. In the human capital context, for H10 and H11, which focus on the role of job resources and empowerment in the emergence of psychological ownership, the interaction between both of these and psychological ownership was significant.

To test the moderating role of trust (H12), multiple-group SEM was used (Innocenti, Pilati and Peluso, 2011; Hair, Babin and Krey, 2017). The scores for the four items were averaged to obtain a composite indicator of trust (mean= 5.09; SD = 1.18; median=5.25). A median split was performed, based upon the trust scores, to obtain two sub-samples of subjects with a low (low-trust sample size = 352) versus a high level of trust (high-trust sample size = 361), respectively. After estimating the model on each of the two sub-groups separately, in order to verify whether the model had an acceptable fit for each group, a multi-group analysis was conducted by comparing the two groups associated with different levels of trust. This finding supports the hypothesis regarding a moderating role for trust in the model. The structural parameter β , associated with the relationship between psychological

ownership and innovativeness, significantly changed in intensity across the two sub-groups of subjects ($\beta^{\text{LOWTRUT}} = 0.037, p > 0.05$; $\beta^{\text{HIGHTRUT}} = 0.294, p < 0.001$).

7.4 Theoretical Implications

The empirical findings of this study enhance our knowledge of the complementarities that exist between governance and human capital with regard to public employees' innovativeness and offer a number of theoretical contributions that extend the existing literature in several ways.

This study's perspectives offer a new way of seeing and investigating the relationship between governance and innovativeness. This is the first study that identifies the potential complementarities between governance structure and human capital (Chadwick, 2017). It adds to our understanding of the theoretic relationship between governance and innovation an important dimension that has been largely unexplored hitherto. It contributes to research on the prominent role of the complementarities between governance and human capital within public sector organisations, translating into public employees' innovativeness. The study extends the research domain by providing novel insights into the way in which human capital intermediates the effect of governance structure on public employees' innovativeness. The results of the study confirm the importance of investigating the intermediate set of factors that contribute towards explaining the 'how' of the links between governance and organisational and individual innovativeness. With respect to human capital, the dynamics play out differently than they do for other resources because employees enjoy perpetual ownership of their human capital.

Accordingly, this study generates new insights about the design of governance for an organisation where human capital is a more important resource than financial capital. The developed framework depicts how the existence of complementarities between an organisation's governance and key human capital-related constructs drive innovativeness and thereby adds to the extant literature that, for many years, has focused primarily on HRMP as the antecedent (Huselid, 1995; Delery and Doty, 1996; Guthrie, 2001; Raineri, 2017). Thus, the conceptual framework and empirical findings of this thesis will help both scholars, and practitioners to develop a better understanding of how to govern public employees to produce greater organisational performance beyond the HRMP and

traditional high-performance models. Indeed, the study of the effect of norms and practices on governance at a given period of time in Saudi Arabia entails more than addressing questions on governance from purely economic and legal perspectives, and necessitates instead a broader focus on societal norms, cultural attributes, and ethical values.

Additionally, the governance typology developed in this study is based on a more holistic approach of governance, whereby multi governance mechanisms are intertwined and several disciplines taken into account, making the contribution of this thesis more novel in nature (Rediker and Seth, 1995; Sirmon *et al.*, 2011; Misangyi and Acharya, 2014; Bouckaert, 2017). The discussion about the governance paradigm has recently broadened significantly. A number of new themes have developed out of this conversation, including stakeholder engagement, networks, effectiveness, ethics, and transparency. This thesis weaves these disparate themes together to create a more holistic view of governance. This study finds that different governance mechanisms may work together as complements, rather than substitutes, to enhance organisational performance (Tihanyi, Graffin and George, 2014; Misangyi and Acharya, 2014). As the taxonomy of the theoretical contributions suggests (Colquitt and Zapata-Phelan, 2007), this reconceptualisation of the governance construct is considered to be an important contribution of this study, as the research to date has predominantly considered the impact of governance from a narrow perspective.

One way this study contributes to theory is by challenging assumptions of conflicts held in governance research that are reflected in both theory and empirical research. Because the intertwined mechanisms and accelerated development of governance cannot be reduced to a simple convergence model or unified theory (Gospel and Pendleton, 2003; Ansell and Torfing, 2016; Bouckaert, 2017), the contributions of this study more or less explicitly focus upon the theoretical underpinnings and insights from three broad conjectural fields that are rooted in different social science disciplines but have cross-disciplinary relevance (Shaw *et al.*, 2018). This study breaks from the traditional, agency conflict between stakeholders and managers and uses a combination of theories (social capital theory, stakeholder theory and institutional theory) to describe where and how an organisation's governance drives human capital value creation towards innovativeness. The arguments outlined in this study find that interdependency and collaboration, rather than conflict, should be the primary mind-set with regard to public governance.

Another contribution to research from the study's findings is on the link between ethics and innovation. This research clearly illustrates the importance of including ethics effects in theories explicitly where in literature's previous, for some reason, "little theory provided for why ethical climate should be associated with various outcomes" (Mayer, 2014, p.436). Organisational ethical climate is an important aspect of the organisational context that has generated a consolidated stream of *stakeholder theory* research. However, surprisingly, Nedkovski *et al.* (2017) find only three articles (i.e. Ruppel and Harrington, 2000; Mulki *et al.*, 2006; DeConinck, 2011), all are conducted in the private sector, that have studied organisational trust as a consequence of ethical climate. The study emphasizes on Vanhala and his colleagues' arguments that trust in the organisation mirrors the employees' positive expectations about its ethical climate (Vanhala, Puumalainen and Blomqvist, 2011; Vanhala and Ritala, 2016).

Also, the focus here is on an important but largely ignored issue in the previous research: the moderating role of trust in facilitating the effect of psychological ownership on subsequent innovativeness (Brown, Crossley and Robinson, 2014; Dawkins *et al.*, 2017). Thus far, research on ethics and innovation has focused on opportunities to do wrong in order to benefit the self, finding that innovativeness thinking makes it more likely for employees to cheat (Baucus *et al.*, 2008; Gino and Ariely, 2012; Vincent and Kouchaki, 2016). In contrast, this study finds that moral insight is particularly important in preventing territorial behaviours. The findings highlight how adopting an ethical climate helps individuals utilizes their sense of psychological ownership constructively to explore alternative solutions and improve performance. Specifically, the results of this study indicate that enhancing the ethical climate within public organisations (involving integrity, fairness and respecting the rule of law) can generate high levels of trust among public employees, which in turn strengthens the effect of psychological ownership on subsequent innovativeness. Moreover, the study provides further support to the contention that high levels of trust within teams facilitate team cohesion which in turn leads to innovativeness. While trust is generally considered an individual phenomenon, it is also possible to understand it at the organisational level which has to do with public managers' attitudes and behaviours since they contribute through their managerial practices to gauge the levels of trust in organisation.

Although Amabile *et al.* (1996, p. 1156) argue that, “resources refers to everything that the organization has available to aid work in a domain targeted for innovation”, this study presents more fully understanding how various types of sector differ is a way to begin to redress that imbalance by focusing explicitly on resources that are depleted on a daily basis and that are most proximally related to important job outcomes (Gilbert, Foulk and Bono, 2018). This study also makes theoretical contributions to the understanding of networks in public organisations. This study contributes to *social capital theory* by demonstrating that not only internal but also external social capital networks are helpful theoretical concepts for understanding network effectiveness. The results suggest that various networks could be an effective way of taking public innovation field research forward. Although researchers have made progress in identifying, *separately and directly*, the relative advantages of different network structures for a variety of outcomes, for example, innovation and career advancement (Burt, 2004; Fleming, Mingo and Chen, 2007), this study advances the research state of the art, highlight the importance of linking networks, resources, and public innovation, finds network fragmentation creates a host of negative consequences for members of an organisation.

Additionally, the study is also unique in that it examines enhancing effects of an intervention. Public organisations have myriad goals in which public managers are likely to practice multiple interventions at once to find the correct mix of activities (Melton and Meier, 2016). However, previous studies on *institutional theory* mainly focused on single intervention, such as training intervention (Kim *et al.*, 2018). Given the growing interest in interventions within the work and organisational contexts, this research demonstrates how the effectiveness of an intervention can be evaluated using multi-resources: comprehensive measuring of performance, task-intervention, and developing capacity. This study’s findings demonstrate that public employees’ empowerment can be enhanced through these interventions. This study yields new understandings about how psychological ownership emerges in public organisations sector. The framework elaborates that the motivating potential of job resources and personal resources (empowerment) lead to positive individual outcome (psychological ownership). Altogether, these implications are potentially great and (if replicated) may require revision of many “truisms” found in the selection literature.

7.5 Empirical contribution

Methodological advances are required in the field of governance research. Previous studies have focused on archival data for their empirical analyses; thus Aguilera, Florackis and Kim (2016, p. 177) state that they expect to see future research using more appropriate methods to deal with the endogenous nature of the relationship between governance and organisational outcomes. They argue that using primary data obtained from surveys will provide a clearer understanding of this relationship. Public administration scholars have shown an analogous propensity regarding the necessity for methodological advances, particularly since the previous studies are not conducive to an understanding of 'real world' (Peters and Pierre, 2017). Therefore, the previous studies on the public sector failed to make a contribution to public administration as an academic discipline. Contributions can only come from theoretically-informed empirical study of the practice of public administration (Peters and Pierre, 2017). Accordingly, Van Engen (2017) and Peters and Pierre (2017) argue that deductive theorising about the behaviour of individuals within public sector is essential. In response to this, this study offers an empirical contribution by conducting a questionnaire survey of public employees. This study fills a gap in the literature by using a survey questionnaire to investigate public employees' innovativeness, influenced by the complementarities between governance structure and human capital. Most of the studies on governance have so far focused on archival data for their empirical analyses. Despite their obvious attractiveness, data that lie in the public domain are less suitable for analysing governance attributes such as dynamics and culture.

7.6 Managerial implications and recommendations for practice

The results of the complementarity logic between governance structure and human capital have several important implications that might enhance current managerial practice in the public sector organisations. Under the context of widespread financial constraint, complementarities between governance structure and human capital can increase human capital value in use with relatively small concurrent increases in the cost of human capital. Whereas prior research in governance has focused on interventions that mitigate misconduct in organizations, this research sought to identify simple to implement practical solutions that equip public employees for challenges and innovativeness.

The impact of such complementarity logic on public sector administrative efficiency may be substantial. This study's framework suggests that it may be more fruitful for organisations to invest in capabilities that create human capital instead of employing inherently scarce human capital. In such circumstances, the key strategic issue is how organisations purposely create and manage those capabilities. The ability and choices of leaders in bringing resources to bear on strategic matters are one of the most vital drivers of innovation. Not only the HRM department, but all management levels can be strategically valuable when they help their organisation to leverage its human capital value.

Moreover, management actions can increase the value in use when they enhance organisations' ability to generate complementarities between governance structure and human capital. This study urges public organisations to develop a wide governance structure in order to improve innovativeness through such complementarities. Due to this, I believe that building such a governance system that supports innovativeness is relevant for the whole management and strategy of the organisation. At the same time, understanding the antecedents and consequences of human capital value should prompt the design of intervention strategies.

The results of our study suggest that the work environment matters and the amount of damage caused to trust by a poor ethical work climate in public organisations is greater. When the internal environment is favourable, the investment made by organisations to increase the self-efficacy of their employees to produce the desired workplace outcomes pays off by way of stronger innovativeness. However, when investment is made by an organisation in an unfavourable internal environment, having employees with high confidence seems to be less beneficial. Therefore, public managers should not only invest in increasing the self-efficacy of their employees, but also invest in building trust so that their employees will experience less unpredictability and feel a greater desire to benefit the organisation.

Accordingly, these results signify the uniqueness of public organisations as institutionalised environments. Public leaders must work continuously to develop norms whereby the employees feel positive about the organisation's efforts to encourage ethical conduct and believe that their organisation is an ethical workplace. In fact, the results obtained may help

managers to better understand how trust is constituted within public organizations. The findings demonstrate the importance of public organisation to start creating positions (e.g., compliance officers and ethics representatives) and services (e.g., ethics hotlines, and counselling) to help public employees address such difficult ethical challenges that arise in their organisations. In fact, the findings suggest that managers interested in developing trust in the organisation should focus on promoting policies and practices that encourage the development of not only principled but also benevolent ethical climate.

The approach developed in this study is an effort to advance public employees' innovativeness by integrating insights from research on networks in organisations to demonstrate the importance of considering organisations' external patterns of collaboration and their internal environments. The framework envisioned collective psychological ownership emerging within a highly interdependent group. Thus, public managers seeking to stimulate innovation should consider structuring teams in ways that limit fragmentation among their employees and seek to reassure employees that accepting help from their colleagues will benefit them and the organisation. Also, employees obtain frequent exposure to new knowledge which stimulates ideas from external networks. From the perspective of public management, the results reiterate the importance of collaborative networks where more frequent contacts with bridging partners increase information availability for employees.

7.7 Study limitations and opportunities for future research

These research outcomes yield several theoretical and practical implications. As a preliminary study designed to address a complicated phenomenon in the public sector, the results of this study should be considered in the light of certain limitations:

- This topic is a rich opportunity for future research, since other interrelationships between the key constructs, beyond those discussed in this thesis, are likely to exist. As the conceptualisation of the governance paradigm as well as the constructs involved continue to evolve and expand (Tihanyi, Graffin and George, 2014), scholars will have many opportunities to shape the dialogue regarding what constitutes good governance and how it may work well as a complementarity together with other factors.

- There is still much work to be done regarding gaining a better understanding of these relationships by expanding the sphere of the research and developing more complex models which can embrace financial and economic indicators alongside public employees' innovativeness.
- This study intentionally adopted a very broad definition of hierarchy here—of vertical differences in socially valued resources. There is much left to be understood about the different ways hierarchies are constructed in teams in terms of the types of resources on which hierarchies are based as well as the form or structure of vertical differences. Thus, future research would benefit from deeper understanding of the resources underlying hierarchy.
- Since the study data are cross-sectional in nature, future studies should focus on panel data to capture the longitudinal dimension of inherently dynamic phenomena.
- The study used convenience sampling (non-probability sampling) to determine the research sample and plan the data collection. Such an approach was restrictive because its outcome validation was applied to only a small group rather than a large population.
- The study focused solely on Saudi public sector organisations. Therefore, it would be interesting to test the conceptual framework in different cultures. This argument may be explained by the fact that developed countries, over a considerable period of time, have built up stable, informal institutions that influence almost every organisation in the country, which is the key to understanding governance. Conversely, developing countries may have various informal institutions that vary internally or are shared on a multi-country basis.

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Appendix

Appendix 1 Measurement items and validity

<i>Construct and source</i>	<i>items</i>	<i>Factor loading</i>
Integrity <i>CR=0.776, AVE=0.538</i> (Fernandez, Cho and Perry, 2010; Moldogaziev and Silvia, 2015)	My organization's leaders maintain high standards of honesty and integrity	0.752
	Prohibited Personnel Practices are not tolerated	0.653
	I can disclose a suspected violation of any law, rule or regulation without fear of reprisal	0.789
Fairness <i>CR=0.883, AVE=0.654</i> (Colquitt, 2001; Choi, 2009; Moldogaziev and Silvia, 2015)	Policies and programs promote diversity in the workplace (for example, recruiting minorities, training in awareness of diversity issues, mentoring)	0.853
	Managers/supervisors/team leaders work well with employees of different backgrounds	0.807
	Managers/supervisors/team leaders are committed to a workforce representative of all segments of society	0.844
	Managers/supervisors/team leaders refrain from improper remarks or comments	0.725
Respecting the rule of law <i>CR=0.829, AVE=0.620</i> (Victor and Cullen, 1988; Tummers and Knies, 2016; Borry, 2017)	It is very important to follow strictly the organization's rules and procedures here	0.691
	Whatever situation arises, my work division has written policies and procedures to follow	0.824
	My supervisor gives me and my colleagues the means to properly follow governmental rules and regulations	0.839
Resilience <i>CR=0.738, AVE=0.585</i> (Benito and Bastida, 2009; Standards for internal control in the federal government 2014)	A dynamic system of internal controls is in place to ensure the Strengthening of procedures and the integrity of information provided in the reports	0.756
	Management establishes an organizational structure, assign responsibility, and delegate authority to achieve the entity's objectives.	0.774
Openness and accountability <i>CR=0.738, AVE=0.585</i> (Tummers and Knies, 2016)	It is important to answer questions from clients	0.760
	Employees openly and honestly share the actions of our organizational unit with others	0.739
Governance network <i>CR=0.851, AVE=0.590</i> (Tummers and Knies, 2016)	Employees maintain many contacts with other organizations	0.661
	My supervisor encourages me and my colleagues to invest substantial energy in the development of new contacts	0.802
	We introduce other employees to contacts of our own networks	0.777
	My supervisor motivates me and my colleagues to regularly work together with people from our networks	0.823
Comprehensive Measuring of performance <i>CR=0.845, AVE=0.646</i> (Tummers and Knies, 2016)	The performance measures are objective and verifiable	0.821
	Your outcome is appropriate for the work you have completed	0.767
	Your outcome reflects what you have contributed to the organization	0.822
Task interventions <i>CR=0.887, AVE=0.664</i> (Fernandez, Cho and Perry, 2010; Moldogaziev and Silvia, 2015)	Managers communicate the goals and priorities of the organization	0.797
	Managers promote communication among different work units	0.852
	Managers review and evaluate the organization's progress toward meeting its goals and objectives	0.845
	Supervisors/team leaders provide employees with constructive suggestions to improve their job performance	0.762

	I am given a real opportunity to improve my skills in my organization	0.755
Developing capacity <i>CR=0.887, AVE=0.664</i> (Fernandez, Cho and Perry, 2010; Moldogaziev and Silvia, 2015)	Supervisors/team leaders in my work unit provide employees with the opportunities to demonstrate their leadership skills	0.831
	Employees have a feeling of personal empowerment with respect to work processes	0.821
	Supervisors/team leaders in my work unit support employee development	0.876
Trust in organization <i>CR=0.891, AVE=0.732</i> (Fernandez, Cho and Perry, 2010; Moldogaziev and Silvia, 2015)	Management at my organisation is sincere in its attempts to meet the workers' point of view	0.848
	I feel quite confident that the organisation will always try to treat me fairly	0.850
	we have confidence in one another in this workgroup	0.868
Job resources <i>CR=0.734, AVE=0.580</i> (Fernandez and Moldogaziev, 2011)	Stakeholders share their knowledge and experience	0.775
	The people I work with cooperate to get the job done	0.748
Empowerment <i>CR=0.845, AVE=0.577</i> (Fernandez and Moldogaziev, 2013; Barrick <i>et al.</i> , 2015)	I'm satisfied with the information I receive from management on what's going on in your organization	0.786
	Promotions are primarily based upon merit or performance as opposed to seniority	0.680
	The workforce has the job-relevant knowledge and skills necessary to accomplish organizational goals	0.780
	Employees are involved in decisions that affect our work	0.788
Psychological ownership <i>CR=0.900, AVE=0.692</i> (Avey <i>et al.</i> , 2009)	I'm confident in my ability to contribute to my organisation's success	0.809
	I feel I belong in this organisation	0.850
	I'm totally comfortable being in this organisation	0.828
	I feel this organisation's success is my success	0.839
Innovativeness <i>CR=0.882, AVE=0.714</i> (Scott and Bruce, 1994; Nicholson-Crotty, Nicholson-Crotty and Fernandez, 2017)	I feel encouraged to come up with new and better ways of doing things	0.851
	I am constantly looking for ways to do my job better	0.838
	Employees are allowed to try to solve the same problems in different ways	0.846

13/09/2017

تأثير الحوكمة على إبداع الموظفين في القطاع العام

تأثير الحوكمة على إبداع الموظفين في القطاع العام

أنا باحث في جامعة برونييل بلندن، المملكة المتحدة. لنيل درجة الدكتوراه، وكجزء من أطروحتي، أقوم بإجراء استبيان للبحث عن تأثير التغييرات الحديثة في إطار الحوكمة على أداء رأس المال البشري في القطاع العام في المملكة العربية السعودية.

يهدف الاستبيان إلى التعرف على تجاربكم النابعة من واقع مشاركتكم في أداء العمل الحكومي وذلك للمساعدة في فهم تأثير ممارسات الحوكمة في قدرة القطاع العام على تحقيق رؤية 2030

الاستبيان الذي صُمم لهذه الدراسة يتألف من ثلاثة أجزاء. الجزء الأول يقوم بقياس ممارسات الحوكمة في القطاع العام. الجزء الثاني يسأل عن تأثير ممارسات الحوكمة على أداء الموظفين والجزء الثالث يجمع بيانات حول المواصفات الديموغرافية للشخص الذي يقوم بتعبئة الإستمارة

إذا كنت موظف مدني في القطاع العام، ساكون ممننا للغاية إذا استقطعت جزء من وقتك للرد على هذا الاستبيان. علما بأن مشاركتكم طوعية (اختيارية) وجميع الردود ستظل مجهولة المصدر وسيتم التعامل معها بسرية تامة ولن يكون من الممكن لأحد تحديد المعلومات التي قمت بإرسالها.

تعبئة الاستبيان تستغرق من 10-15 دقيقة فقط. من وقتك وينصح بعدم الإطالة في أي سؤال. انطباعاتك الأولى هي عادة الأفضل.

أمل أن تجد تعبئة الاستبيان ممتعة، وشكراً لإتاحة الوقت للمساعدة. إذا كان لديك أي استفسارات أو تود الحصول على معلومات إضافية حول هذا البحث، لا تتردد في الاتصال بي.

مقدر لكم حسن تعاونكم

محمد بن صالح البخيتي

باحث دكتوراه

كلية إدارة الأعمال

جامعة برونييل - لندن

إيميل: bugmsa@brunel.ac.uk

مطلوب*

هل أنت موظف حكومي (قطاع عام)؟

1. كل من يشغل وظيفة مدنية في الدولة أياً كانت طبيعة عمله أو أسم وظيفته *
حدد دائرة واحدة فقط.

نعم

لا، التوقف عن ملء هذا النموذج

فيما يلي عددا من العبارات التي تمثل مؤشرات (النزاهة، العدالة واحترام القانون)، الرجاء اختيار مدى موافقتك من عدمها لكل عبارة بالنسبة للمنظمة التي تعمل بها

في منظمتي (الجهة التي اعمل بها) ...

2. 1. القادة وإصحاب المناصب العليا ينتهجون معايير عالية في الصدق والنزاهة *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الإطلاق موافق تماما

13/09/2017

تأثير الحوكمة على إبداع الموظفين في القطاع العام

3. 2. لا يمكن التسامح مع الممارسات المحظورة في جهة عملي *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1
غير موافق على الاطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
موافق تماما	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. 3. يمكنني التبليغ عن أي انتهاك للنظام في المنظمة دون خوف من ردة الفعل *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1
غير موافق على الاطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
موافق تماما	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. 4. أفعال الإدارة العليا تتفق مع القيم المتعارف عليها *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1
غير موافق على الاطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
موافق تماما	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. 5. يمكن الوثوق والاعتماد على الإدارة لتحقيق الوعود التي يطلقونها *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1
غير موافق على الاطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
موافق تماما	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. 6. السياسات والبرامج المتبعة في منظمتي تراعي الجميع وتعزز مفهوم المساواة *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1
غير موافق على الاطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
موافق تماما	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. 7. المدراء او المشرفين يتعاملون بطريقة حسنة مع جميع الموظفين من خلفيات مختلفة *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1
غير موافق على الاطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
موافق تماما	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. 8. المدراء والمشرفين ملتزمون بحقوق الموظفين على اختلاف شرائحهم المجتمعية *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1
غير موافق على الاطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
موافق تماما	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13/09/2017

تأثير الحوكمة على إبداع الموظفين في القطاع العام

10. 9. المدراء والمشرفين يمتنعون عن أي ملاحظات أو تعليقات غير لائقة بحق الموظفين *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق على الإطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

11. 10. من المهم جدا اتباع اللوائح والاجراءات بدقة *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق على الإطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

12. 11. من المتوقع ان جميع الموظفين ملتزمون باللوائح والاجراءات *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق على الإطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

13. 12. المدير يؤكد لي ولزملائي على أهمية اتباع الانظمة *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق على الإطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

14. 13. المدير يوضح لي ولزملائي الوسائل اللزامة لاتباعها لتطبيق الأنظمة واللوائح والسياسات الحكومية بشكل صحيح *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق على الإطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

15. 14. المدير يتأكد من أن الموظفين يتبعون اللوائح والاجراءات بدقة *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق على الإطلاق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

فيما يلي عددا من العبارات التي تمثل مؤشرات (ادارة المخاطر والرقابة، الشفافية والمساءلة و الحوكمة الشبكية) : الرجاء اختيار مدى موافقتك من عدمها لكل عبارة بالنسبة للمنظمة التي تعمل بها

في منظمتي (الجهة التي اعمل بها) ...

13/09/2017

تأثير الحركة على ابداع الموظفين في القطاع العام

16. **15.** يوجد نظام فعال للرقابة الداخلية لضبط الاجراءات وسلامة المعلومات المقدمة في التقارير *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

17. **16.** الهيكل التنظيمي والصلاحيات وتفويضها صارم وواضح *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

18. **17.** تقوم الادارة بردة فعل سريعة لاي مخاطر من شأنها تعطل تحقيق المنظمة لاهدافها *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

19. **18.** المدير يؤكد لي ولزملائي على عدم توتير علاقة منظمنا بالجهات السيادية بالدولة *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

20. **19.** نقوم بتطبيق قرارات الجهات العليا بسرعة ودقة أي كان نوعها *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

21. **20.** وحدة المراجعة الداخلية تعمل بشكل فعال *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

22. **21.** يتم توضيح آلية تآلية العمل لاصحاب المصلحة (العلاء وغيرهم من الاطراف ذات العلاقة) *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

13/09/2017

تأثير الحوكمة على ابداع الموظفين في القطاع العام

23. من المهم الاجابة على تساؤلات العملاء *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

24. تقوم بمشاركة المعلومات بمصادقية مع وحدات المنظمة الاخرى *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

25. المدير يبحثنا على شرح الاسباب وراء اتخاذ قرارات معينة *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

26. نحافظ على التواصل مع المنظمات الاخرى *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

27. المدير يبحثنا على استثمار جهد كبير في تطوير قنوات اتصال جديدة مع المنظمات الاخرى *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

28. نقوم بتعريف بعضنا البعض بقنوات الاتصال التي نعرفها بالجهات الاخرى للاستفادة منها في مجال العمل *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

29. المدير يبحثنا للعمل والتعاون مع الاطراف وقنوات الاتصال التي تملكها *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

غير موافق على الاطلاق موافق تماما

13/09/2017

تأثير الحوكمة على إبداع الموظفين في القطاع العام

30. 29. المدير يبحث على تطوير العلاقة والتواصل مع اشخاص من وحدات اخرى داخل منظمنا *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
غير موافق على الاطلاق موافق تماما

فيما يلي عددا من العبارات التي تمثل مؤشرات (قياس الاداء، التدخلات المهمة و تطوير قدرات الموظفين) : الرجاء اختيار مدى موافقتك من عدمها لكل عبارة بالنسبة للمنظمة التي تعمل بها

في منظمتي (الجهة التي اعمل بها) ...

31. 30. مخرجات (نتائج) عملي تعكس بدقة الجهد المبذول *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
غير موافق اطلاقا موافق تماما

32. 31. عناصر تقييم الاداء الوظيفي مناسبة للمهام الموكلة لي *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
غير موافق اطلاقا موافق تماما

33. 32. مخرجات عملي تعكس مدى مساهمتي في المنظمة *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
غير موافق اطلاقا موافق تماما

34. 33. درجة التقدير العام لادائي التي حصلت عليها مبرره نظرا لادائي الفعلي *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
غير موافق اطلاقا موافق تماما

35. 34. المدراء يسعون لتحقيق اهداف المنظمة وبراعون مصالحها *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
غير موافق اطلاقا موافق تماما

13/09/2017

تأثير الحوكمة على ابداع الموظفين في القطاع العام

36. 35. المدراء يعززون التواصل بين مختلف الوحدات الادارية بالمنظمة *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق اطلاقا	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

37. 36. يقوم المدراء بمراجعة وتقييم تقدم المنظمة نحو تحقيق اهدافها *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق اطلاقا	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

38. 37. المدراء يزودون الموظفين باقتراحات بناءة لتطوير اداءهم *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق اطلاقا	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

39. 38. أحصل على فرصة حقيقية للتطوير *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق اطلاقا	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

40. 39. المدراء يوفرّون للموظفين الفرصة لتطوير مهاراتهم الادارية والقيادية لاعدادهم لمناصب اعلى *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق اطلاقا	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

41. 40. الموظفون لديهم الشعور بالتمكين من خلال العمل داخل المنظمة *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق اطلاقا	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

42. 41. الإدارة تدعم تطوير الموظف *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	
غير موافق اطلاقا	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	موافق تماما

فيما يلي عددا من العبارات التي تمثل العناصر الرئيسية للبيئة المثالية لاداع موظفي القطاع العام (الثقة، كفاية الموارد، التمكين والملكية النفسية): الرجاء اختيار مدى موافقتك من عدمها لكل عبارة بالنسبة للمنظمة التي تعمل بها

13/09/2017

تأثير الحوكمة على إبداع الموظفين في القطاع العام

في منظمتي (الجهة التي اعلم بها) ...

43. 42. موارد مالية كافية *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
الحد الأدنى الى حد كبير

44. 43. بيئة العمل المادية تسمح للموظفين بأداء اعمالهم كما يجب (درجة الازعاج، درجة الحرارة، الاضاءة، النظافة) *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
الحد الأدنى الى حد كبير

45. 44. يمكن الحصول خلال فترة قصيرة على الموارد اللازمة لدعم المبادرات الجديدة *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
الحد الأدنى الى حد كبير

46. 45. الموظفون الذين اعلم معهم متعاونون لاتجاز العمل *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
الحد الأدنى الى حد كبير

47. 46. يشارك اصحاب المصلحة معارفهم وخبراتهم معنا *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
الحد الأدنى الى حد كبير

48. 47. الادارة صادقة في محاولاتها لتحقيق تطلعات الموظفين والالتقاء مع وجهات نظرهم *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
الحد الأدنى الى حد كبير

49. 48. يبدو ان الادارة تقوم بعملها بكفاءة *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1
الحد الأدنى الى حد كبير

13/09/2017

تأثير الحكمة على إبداع الموظفين في القطاع العام

50. 49. أشعر بثقة ان منظمتي ستعاملني دائما بعدالة *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	

الحد الأدنى	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الى حد كبير

51. 50. الثقة متبادلة بين الموظفين *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	

الحد الأدنى	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الى حد كبير

52. 51. أنا راضي عن مستوى المعلومات ذات الصلة بالمنظمة التي تصلني من الادارة مما يقييني على اطلاع دائم *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	

الحد الأدنى	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الى حد كبير

53. 52. الترقبات تعتمد على الجدارة ومستوى الاداء *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	

الحد الأدنى	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الى حد كبير

54. 53. الموظفون يملكون المعارف والمهارات اللازمة للمساهمة في تحقيق اهداف المنظمة *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	

الحد الأدنى	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الى حد كبير

55. 54. الموظفون يشاركون بالقرارات ذات الصلة باعمالهم *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	

الحد الأدنى	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الى حد كبير

56. 55. انا واثق من قدرتي على المساهمة في نجاح منظمتي *
حدد دائرة واحدة فقط.

	7	6	5	4	3	2	1	

الحد الأدنى	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الى حد كبير

13/09/2017

تأثير الحركة على إبداع الموظفين في القطاع العام

57. 56. أشعر بالتماتي لهذه المنظمة *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

الحد الأدنى الى حد كبير

58. 57. بشكل عام انا "مرتاح" في هذه المنظمة *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

الحد الأدنى الى حد كبير

59. 58. أشعر بأن نجاح المنظمة هو نجاح لي *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

الحد الأدنى الى حد كبير

60. 59. أشعر بالتحفيز للوصول لمستوى اعلى من الانجاز والابتكار عند تنفيذ العمل *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

أبدا دائما

61. 60. انا ابحت باستمرار عن طرق جديدة و أفضل للقيام بمهامي *
حدد دائرة واحدة فقط.

7 6 5 4 3 2 1

أبدا دائما

البيانات الشخصية

62. جهة عملك *
حدد دائرة واحدة فقط.

وزارة والجهات التابعة (وزارة التعليم، وزارة الخدمة المدنية، وزارة الداخلية،)

هيئة: جهة مستقلة لها رئيس معين ومجلس إدارة يرأسه الوزير الاقرب لنشاطها (معهد الإدارة العامة، جامعة، المؤسسة العامة للتأمينات الاجتماعية،)

مؤسسة: لها شخصية اعتبارية وتقدم خدمة لتحقيق المصلحة العامة (ديوان المراقبة العامة، هيئة مكافحة الفساد،)

63. الجنس *
حدد دائرة واحدة فقط.

ذكر

أنثى

13/09/2017

تأثير الحكمة على إبداع الموظفين في القطاع العام

64.

العمر *

حدد دائرة واحدة فقط.

الى 30 31-40 41-50 51-60 اكبر من 60

65.

المؤهل العلمي *

حدد دائرة واحدة فقط.

ثانوية ومايعادلها فأقل بكالوريوس جامعي ماجستير دكتوراة

66.

كم مرة في الاسبوع تقابل رئيسك بالعمل؟ *

حدد دائرة واحدة فقط.

نادرا جدا نادرا من حين لآخر غالبا ما اقبله اقبله يوميا

67.

عدد سنوات الخبرة في عملك الحالي *

حدد دائرة واحدة فقط.

أقل من (5) سنوات من (5) سنوات الى (10) سنوات من (10) سنوات الى (15) سنة من (15) سنة الى (20) سنة أكثر من (20) سنة

68.

طبيعة وظيفتك *

حدد دائرة واحدة فقط.

 وظيفة إشرافية (يتطلب شغلها الاشراف على عدد من الموظفين بالإضافة الى المهام التشغيلية الاخرى) وظيفة غير إشرافية (لا يتطلب شغلها الاشراف على الموظفين ويؤدي شاغلها مهام تشغيلية فقط)

مدعوم من

Google Forms



College of Business, Arts and Social Sciences Research Ethics Committee
 Brunel University London
 Kingston Lane
 Uxbridge
 UB8 3PH
 United Kingdom
 www.brunel.ac.uk

22 September 2017

LETTER OF APPROVAL

Applicant: Mr. Mohammed Albakhiti

Project Title: Recent Changes in Governance Framework and the Implication on Innovation in the Public Sector-Saudi Arabia

Reference: 7298-LR-Sep/2017- 8379-3

Dear Mr. Mohammed Albakhiti

The Research Ethics Committee has considered the above application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that the conditions of approval set out below are followed:

- The start date cannot pre-date receipt of ethical approval on 22nd September 2017 i.e. the date of this letter. Any data collected before approval was given cannot be included in the project.
- The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment.

Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee.
- Approval to proceed with the study is granted subject to receipt by the Committee of satisfactory responses to any conditions that may appear above, in addition to any subsequent changes to the protocol.
- The Research Ethics Committee reserves the right to sample and review documentation, including raw data, relevant to the study.
- **[delete for staff applications]** You may not undertake any research activity if you are not a registered student of Brunel University or if you cease to become registered, including abeyance or temporary withdrawal. As a deregistered student you would not be insured to undertake research activity. Research activity includes the recruitment of participants, undertaking consent procedures and collection of data. Breach of this requirement constitutes research misconduct and is a disciplinary offence.

Professor Thomas Betteridge

Chair

College of Business, Arts and Social Sciences Research Ethics Committee
 Brunel University London