

**HIGH-PERFORMANCE WORK PRACTICES AND EMPLOYEE RESILIENCE IN
NEW ZEALAND'S PUBLIC SERVICES: A CONDITIONAL INDIRECT EFFECT
MODEL OF LEADERSHIP STYLES**

BY

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ABSTRACT

This study considers the relationship between high involvement work practices (HIWP) and employee resilience, as moderated by leadership style. It offers an empirical test of a structural model exploring these relationships in New Zealand's core public sector.

The 2016 Workplace Dynamics Survey, undertaken by the New Zealand Public Service Association (PSA) and Victoria University of Wellington, gathered information on the psychological outcomes of workers' job experiences and the organisations for which they worked. All participants were PSA members and were asked questions regarding their jobs, workplaces, and personal lives. The original sample included 14125 participants. For the current study, the sample was subsequently narrowed down to core public sector members both managerial and non-managerial employees were selected, and items with missing values were imputed using the Expectation-Maximisation logarithm –the imputation resulting in 7326 unique replies for this study.

Confirmatory factor analysis (CFA) was used to test the measurement model, and structural equation modelling (SEM) was used to explain the relationship between, on the one hand, the four organizational elements as comprising HIWP –power, information, knowledge, and rewards (PIRK) –and employee resilience, on the other. The hypothesized structural model was then tested, parameters were estimated, and moderators added to see if they could explain variation (heterogeneity) in the effect sizes.

According to the model, HIWP positively affects individual employee's self-reported resilience and that this relationship is moderated by and perceived through management style. The model investigates the relationship between a second-order latent variable encompassing the combined effect of the PIRK attributes on a first-order latent variable measuring employee resilience. The model also posits that this relationship is direct and indirect, through two first-order latent variables measuring constructive and laissez-faire leadership styles.

This study adds theoretical and practical knowledge by demonstrating that leadership style matters in the relationship between human resource management and the capacity of employees to positively cope, adapt and even thrive in dynamic environments. This research's key finding is that HIWP is positively related to employee resilience and that leadership style mediates that

relationship. The results of this study further indicate that, while an individual's level of education moderates the relationship between HIWP and employee resilience, the employee's ethnicity and tenure on the job do not. Finally, this study offers proposals for future research, including data collection and recommendations for practitioners.

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CHAPTER 1

Introduction

High-Performance or High involvement work practices are not novel theories, but have been known by HR and management professionals since the 1930s. They have recognized that involving employees in the same direction as the organization can positively impact the positive morale behaviour of employees and ultimately on organizational performance. Identifying this relationship has been of extreme importance for research. However, the majority of the study conducted in high involvement work practices are from the private sector.

More often, New Zealand adopts private sector processes in the public sector, which allow researchers to test the impact of such practices on employee performance in the public sector. Due to the political and economic reforms in the late 20th and 21st centuries, the public sector has continued to follow the practices that originated in the private sector. This comprises of how people have handled the organization and the expectations of their performance outcomes. As cited by the State Services Commission, the most valuable asset is the people" (SSC, 2018).

The research looks at the impact of HIWP have on employee resilience and how leadership impact employees' behaviour in the public sector. Many empirical studies that are published in this arena belongs to the private sector. Therefore, it is not always amicable to implement private sector practices in public sector. The researcher was particularly interested in employees' ability to adapt to a rapidly changing business environment and factors that influence their ability to be resilient. Hence the research derived into the following title for the thesis.

1.1 Title:

"High-involvement work practices and employee resilience in New Zealand's public services: a conditional indirect effect model of leadership styles"

1.2 HIWP, Leadership, Resilience and this Research

This research focuses on large-scale data derived from a survey developed by researchers at Victoria University of Wellington's School of Management's Centre for Labour and Employment and Work (CLEW) conducted web based by the PSA, with ethical approval obtained from the Human Ethics Committee in March 2016 (Plimmer et al., 2016). The survey findings discuss about New Zealand public sector employees. Survey shows that the public sector employees are mature, educated, and frequently carry out administrative work. Further, it revealed that some public sector employees work additional uncompensated hours and do not have Flexi working hours. The findings also revealed that most workers have job security, they are aware of their role expectations, and have the authority to make decisions. However, these employees do not consider that their employers support them strongly to carry out their work effectively (Plimmer et al., 2016).

Strategic human resources management discuss that high involvement work practice (HIWP), enables organizations to become more effective and competitive. HIWP encourages decentralised decision-making within firms. Employees should be given the required information, skills, and incentives, and they should be held accountable for making decisions, particularly in the areas of rapid response to change, improvement, and innovation. Takeuchi et al. (2009) defined HIWP as "a collection of distinct but interconnected HR management techniques aimed at improving employee and firm performance outcomes by enhancing workforce competence, attitude, and motivation".

Resilience is dynamic concept. It is a person's ability to adjust to adversity in a way that restores natural balance and allows them to function successfully in a stress-free environment Bonanno (2004) as cited in (Mostafa, Gould Williams, et al. 2015). Some capabilities can be developed in an individual or a system to improve and thrive in changing environments. Organisations want to be resilient today to face the competitive and changing business environment. Hence having a resilient workforce during change and uncertainty is an asset for organisations.

However, little is known about the degree to which HIWP influence in enhancing employee resilience and how this relationship is impacted by the presence of different leadership styles. Leadership is highly culturally oriented, embracing traditional ideas, values, and customs as well as a preoccupation with preserving the environment (Nanjundeswaraswamy and Swami

2014). Leaders in organisations may empower and develop people, and resilient employees can help organisations become more resilient through their collective activities. The effective use of collective resources will enable workers and organisations to not just deal with, but to thrive during adversity.

Although researchers assume that a frontline manager's leadership behaviours have a major impact on the implementation of HR policies, however it is unclear that what kinds of leadership behaviours contribute towards implantation of HR practices or how they impact the process. In order to learn more about this subject matter, the researcher focus on two types of leadership behaviour, namely constructive Leadership style and Laissez-faire leadership style.

This study furthers its research by examining HIWP as measured by the items associated with PIRK, commonly known as power, information, reward, and knowledge, and their relationship to employee resilience and specifically for the constructive and Laissez-faire leadership style. Constructive Leadership style is defined as a manager's activities and behaviours that promote employees' genuine interests, such as attractive and team-oriented choices and actions whereas laissez-faire leadership and so-called management by exception (passive) are described as avoiding interference, the absence of leadership, or both (Bass & Avolio, 1990) hold by the management of the public sector. The aim of the research is to better understand how HIWP impacts Employee resilience and how the behaviour of the employees can we impacted by the interference of different leadership styles in the organization. Hence, the following research question is outlined to guide the research:

1.3 Research question?

The impacts of human resource practices associated with High involvement work practices specifically targeting power, information, reward and knowledge (PIRK) on employee resilience and how this relationship is mediated by the presence of Laisses-faire and Constructive leadership styles in the New Zealand public sector?

Figure 1 depicts the conceptual framework adapted in this study. The next chapter focus on supporting the conceptual frame work with findings from past literature. The measures chosen in the survey predict the positive outcomes from Higher involvement work practices which were used to develop the hypotheses.

1.3.1 Conceptual Framework Adapted

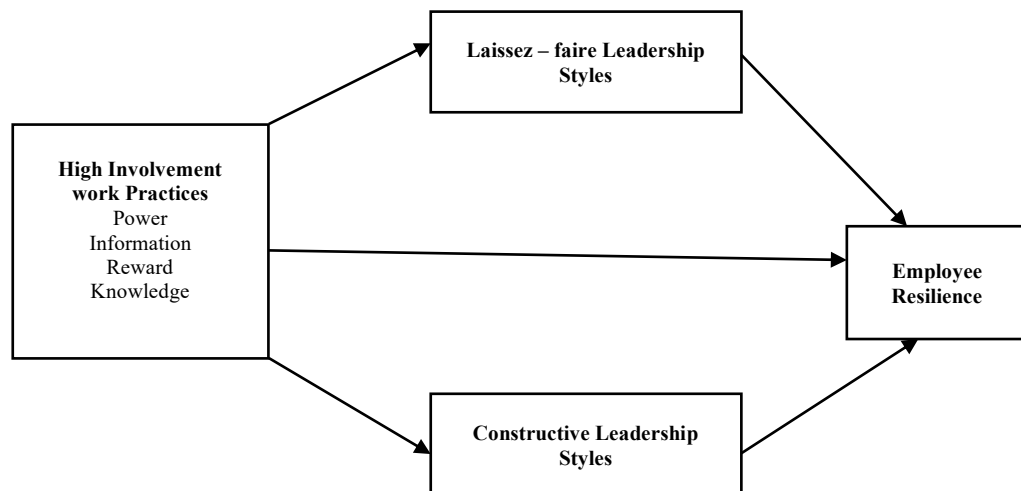


Figure 1: Conceptual Framework Adapted

The current study assumes that constrictive leadership style and Laissez-faire leadership style can play a mediating function between the HIWP and employee resilience based on the theoretical and empirical findings presented in chapter 2. The following hypotheses have been drawn to test these assumptions.

H1: Contractive Leadership style and Laissez-faire leadership will mediate the relationship between HIWP and Employee resilience

H2: HIWP will have a positive effect on employee resilience

H3: HIWP will have a positive effect on Constructive Leadership Style and Laissez-faire Leadership Style

1.4 The objective of the study

This research intends not to identify which organizational practices are best for employees but to understand factors that contribute to employee resilience and, in turn, better organizational outcomes. Previous literature has demonstrated a relationship between Leadership styles and high involvement work practices (HIWP) on employee resilience (Boxall & Macky 2009). The objectives of the research are outlined below.

Primary Research Objective

- To determine the impact that HIWP factors (PIRK) and Leadership styles has on Employee Resilience.

Secondary Research Objectives

- To determine the relationship between Leadership styles and HIWP among the public sector workers in New Zealand.
- To determine the relationship between HIWP and employee resilience among the public sector workers in New Zealand.

1.5 Overview of this study

Chapter 1 – offers an overview of the research. It gives context for the issue and examines high-involvement work systems in New Zealand and their relationship to public service. The research questions, the objectives, and the context of the survey from which the data are derived are presented in this chapter.

Chapter 2 – examines pertinent prior literature, which serves as the study's foundation. The history of high-involvement work practices, their origins, definitions, and fundamentals of measurements, and the setting in which this study is conducted are covered in this chapter.

Chapter 3 – discusses the research methodology followed in the study. The design rationale is justified first, followed by data collection, measurements, and the study participants. The considerations made to restrict the sample evaluated in the study are described in this chapter.

Chapter 4 – Outline the hypotheses tested and the data analysis approaches employed, such as factor analysis (FA) and structural equation modelling (SEM).

Chapter 5 – examine the results of derived between dependent and independent variables, as well as the use of higher-order latent variables.

Chapter 6 – analyses the findings, compares them to literature-based research and revisits the research topics.

Chapter 7 – Conclude the research by stating the limitations, the study's contributions and finishes with suggestions for future research.

1.6 Chapter Summary

This chapter introduced the concept of HIWP, employee resilience and the leadership styles. It provides an overview of the research as a whole and also provides a summary of all the chapters discussed in rest of the report. Next Chapter is focused on the relevant literature on HIWP, resilience, Leadership styles and the context of the New Zealand Public sector. Following chapter 2 the report presents the methodology chapter that presents the assumptions, data collection method and measurements chosen. After each chapter, there's a summary section to reflect on findings and discuss how the factors can influence the subsequent chapters. Finally, the research will conclude with a general discussion on limitations, contributions and suggestions of the study as a whole.

CHAPTER 2

Literature review

2.1 Introduction

Over the past decade Human Resource Management practices such as employee perception, behaviour, organisational performance has steadily grown and vividly evident by the studies conducted so far. The continuous changes occurring in the business world, fluctuations of the economies have impacted the labour market and increased the focus on this issue. The main aim of most profit-seeking organisations wants to derive the best out of the resources to improve their financial results (Ichniowski, 1990), to increase their competitive advantage (Barney, 1991), and enhance productivity growth (Wood, de Menezes & Lasaosa, 2001). Many researchers have dedicated in studying the process and practices that can enhance an organisation's workforce capabilities. Huselid (1995) states that investing in one particular Human resources process in a business could potentially increase the productivity level. Many organisations are making strong investments in HRM practices today to increase their competitiveness and promote employees' engagement.

Like any other investment, human capital must be measured in terms of return on investment (ROI), and all organisations are interested in understanding the effectiveness of the people management practices they have invested (Innocenti, Pilati et al. 2011). Over the past decade, researchers have explored the relationship between HRM practices and the organisational and individual performance indicators, to releve the 'black box' (set of intermediate factors that could explain the link between certain embraced HRM practices for better individual or organisational outcomes). Studies conducted so far has established many relationships, however, there are many grey areas that remain unclear about the systems that facilitate such relationship (Innocenti, Pilati et al. 2011). To understand such a relationship some studies have looked at inputs (New Zealand Productivity Commission, 2015), some other researchers studied output and outcome (Appelbaum et al., 2000), and some others reflected on both. Boxall and Macky (2010) state that they focused on worker responses and the organisational outcome as both are important factors in this chain.

This chapter contains the literature review from past researchers and built-up a key argument in relation to HRM practice and employee resilience and the development of thinking over the years among HRM, employees and organisational performance levels in different industry, national, social, economic and cultural backgrounds.

2.2 High-involvement work Process (HIWP)

Boxall and Macky (2009) state that it is valuable to observe that any HR system contains some work domain of the management and management of human resources who carry out the work. Hence, HR Systems consist of two categories of practice: work practices and employment practices Whitfield and Poole, 1997; Godard, 2004 as cited in Boxall and Macky (2009). Work practices are defined as performing the work the way it is organised with its current structure. Tailored jobs, self-managing teams with any opportunity to participate in change management and problem-solving relation to work process (for example, team meetings or quality circles). Whereas employment practices are any practice that involves employee recruitment, deploy, motivate, negotiate, consult, engage, inspire, develop and retain employees and terminating the employment contract (Boxall & Macky, 2009).

Work and employment practices linked to HR systems affect performance on numerous levels, according to Lepak et al., 2006; Boxall and Purcell, 2008 as cited in Boxall and Macky (2009). It has the potential to influence an individual employee's abilities (A), motivation (M), and opportunities (O) in terms of performance. AMO is a widely acknowledged theory that explains the relationship between human resource management and performance. The model is made up of key psychological ideas that are linked to three systems that form individual characteristics: ensuring that employees have the necessary skills, encouraging them to improve discretionary behaviour, and empowering them to achieve corporate goals. Ability is defined by KSA (knowledge, skills and abilities). As a result, ability-enhancing methods are designed to improve those three elements. Employee motivation is concerned with their drive to perform, which can be boosted by either extrinsic or intrinsic motivation. Opportunity is decided on the basis on job design theory or empowerment literature. Therefore, opportunity component consider individual characteristics but also considers work environment. . This is the 'AMO' model of individual performance created by Blumberg and Pringle (1982); Campbell et al. (1993); Huselid (1995), as cited in Boxall and Macky (2009).

Macky and Boxall (2008) mention in their research that it is descriptively useful to talk about the “high-involvement work process” (HIWPs), which helps to identify HIWP which are expected to affect company performance and employee outcome. Lawler’s (1986) work, as cited in Vandenberg et al. (1999), describes a framework that improves the psychological well-being of the employees.

While high involvement work practices consist of a broad range of HR practices, this thesis uses the Lawler approach, with four attributes. They are (i) Power to act and make decisions on all aspects of work (ii) Information about organisational performance, customer feedback, process, and quality. (iii) Rewards are linked to business outcomes and growth in capability and contributions and (iv) Knowledge of business, work, and total system (Vandenberg, Richardson et al. 1999). These four variables are observed to be mutually reinforcing, suggesting the HIWP intend to encourage the employee to enrich their knowledge and information to make better decisions and reward them for their performance (Macky and Boxall 2008). As mentioned by Galbraith in 1973, power, information, reward, and knowledge are discovered mostly in the upper management levels. The mere existence of the four attributes is not enough as it should be equally distributed among all levels of the organisation to reach its potential; employees must consider PIRK attributes as operational aspects of their job role (Vandenberg, Richardson et al. 1999).

Vandenberg et al. (1999), building on Lawler (1986)‘s work, constructed a model to investigate causal relationships between HIWP and organizational performance, Through the moderating influence of employee results, both directly and indirectly.

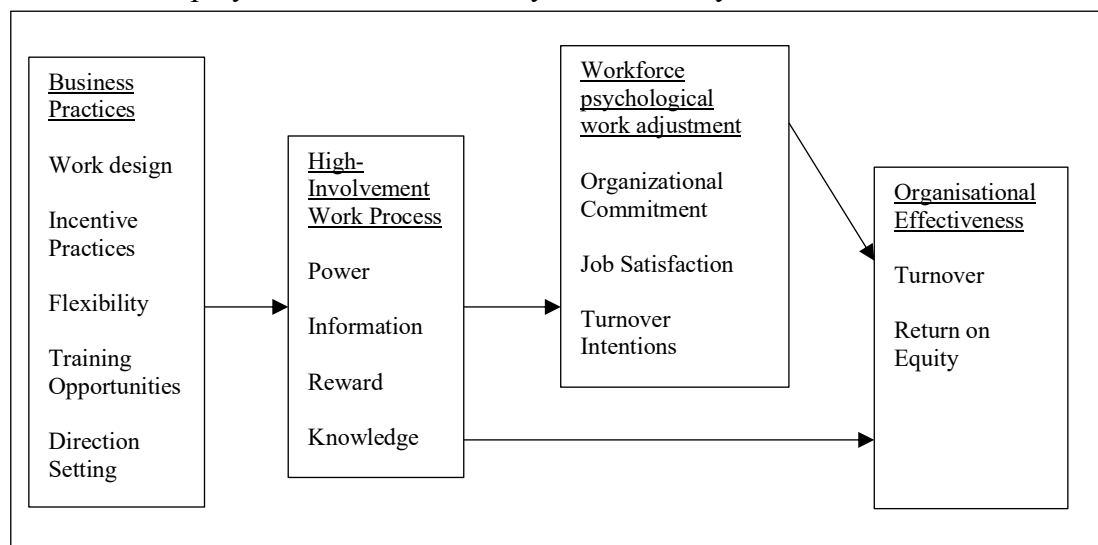


Figure 2: Model of High Involvement Work Processes
(Source: Vandenberg et al., 1999 as cited in Boxall & Macky 2009)

At the time, Vandenberg et al. (1999) 's study was among the most detailed descriptions of the variables and relationships in the field. The author first describes the PIRK relationship with HIWP. They found that the four attributes could support organizations in an individual level. Moreover, the researcher found out when the four attributes were treated as indicators of higher order "involvement" latent variable, it was revealed at involvement variable had direct influence on organizational effectiveness and indirect impact on employee morale. Further the researchers found out that cognitive path in which high-involvement processes take "better use of the skills and abilities" those employees have and a motivational path in which involvement activities increase "employee motivation and other affective reactions." Vandenberg *et al.*, 1999: 304 as cited in Boxall and Macky (2009). This is similar to Batt's (2002) distinction between a "direct" approach (improving employee skill levels and organisation centered knowledge) and an "indirect" path (improvement of worker satisfaction and motivation and reducing employee turnover). The direct path supports enabling employees (individually and collectively) to address work problems more effectively. In contrast, the indirect path supports ensuring that they desire to do so and continue to accept responsibility for doing it as cited in Boxall & Macky (2009).

2.3 What is High-Performance Work System (HPWS)

High-Performance Work Systems (HPWS) are a collection of Human Resource Management (HRM) techniques that focus on the key areas such as staffing, self- management teams, decentralized decision making, training, flexible work assignments, communication, and compensation (Evans & Davis 2005) as cited in Bendickson et al, (2017). Staffing consists of evaluation of assessing job fit and organisational fit.

According to Becker and Huselid, 1998, Becker et al., 1997, Delery and Shaw, 2001, Huselid, 1995 as cited in Combs, Liu et al. (2006) HPWSs work by improving employees' knowledge, skills, and abilities (KSAs), empowering them to act, and inspiring them act upon. These assessments are based on knowledge, skills, and abilities (KSAs), which supports to choose the best candidate for the job. HPWS is defined as a bundle of separate but interlinked human resources functions designed to improve employees' skills and effort (Ma, Ma et al. 2020). Also HPWS is defined as a collection of internally consistent and coherent HR practises aimed at improving employee competence, motivation, and commitment. Becker and Huselid, 1998, Becker et al., 1997, Delery and Shaw, 2001, Huselid, 1995 describes that HPWS operated by

three mediators that affect organisational performance. (i) increasing employee knowledge, skill and abilities (KSAs), (ii) encouraging employees to act and (iii) motivating employees to act upon as cited in Combs, Liu et al. (2006). HPWS is a set of work practices that can help an organisation perform better. Performance, systemic impacts, and work practises are the three theories that underpin this concept. To understand the depth of HPWS, it is imperative to study these three concepts (Bendickson et al, 2017).

2.3.1 Performance

Following the first wave of research on work practises and organisational performance, several studies concentrated primarily on productivity-related performance metrics and confined the scope of the investigation to specific industries (Ichniowski et al. 1997; Ichniowski & Shaw 1998; Delery & Doty 1996; Delery et al. 1997; Cappelli & Rogovsky 1998; Batt 1999; and Appelbaum et al. 2000). While the approaches and types of data used in such studies vary, they all point to increased productivity as a measure of performance. Concentrating on a particular industry and looking at productivity has the distinct advantage of making performance measurements more comparable across surveys. In contrast to financial metrics such as shareholder value, which can only be collected at the corporate level, it also permits observations to be taken from units of analysis closer to where work activities occur (Cappelli & Neumark, 2001).

2.3.2 Systemic effects

To achieve organisational objectives, strategic bundling of Human Resource Management (HRM) practises operates as a comprehensive HRM system rather than individual HRM practises. The bundles of HR practices such as comprehensive selection process, learning and development, progressive based performance appraisal system and compensation, support effectiveness of each practice as those practices are supported by other practices in work place. The greater the total degree of bundling among the various components of HRM policies and practises, the better the organisational outcomes are stated to be. The concept of strategic bundling is concerned with whether an organisation's actions fit into a coherent system or "bundle" Delery and Doty (1996).

Dyer and Reeves, 1995; Becker and Gerhart, 1996; Delery and Shaw, 2001 are few of the HPWS papers that mention the concept of systemic effect. The status of MacDuffie (1995) as cited in Boxall and Macky (2009) HPWSs, the phrase “bundling” of work practises is important: it implies that practises should be followed in conjunction rather than separately, which aids in the definition of the relationship and exchanges between and among managers and employees in the workplace. This was further confirmed by Ichniowski et al. (1997), and Appelbaum et al. (2000) productivity gains will increase when the organisations embrace a combination of practices (Boxall & Macky, 2009).

Having cluster of chosen HR practises has systemic or synergistic impacts is a major aspect of the HPWS proposal. The amount to which this systemic notion spreads out to companion parts of a firm, such as its technology or proprietary knowledge, product or service mix, financing, supply chain, and governance, for example, varies widely in the literature. Bundling is viewed as a design issue within an HR system, for example, having consistent training with a shift to self-directed teams. It implies complementarity between changes in HR systems and other strategic changes in the workplace or producing unit in a broader sense. For example, Wall et al., (1992) mention moving toward high-involvement HR paradigm where management invest in implementing advanced technology in the workplace, however these will not react to its full protentional unless employees who are operating involve deeply in problem solving. The narrow definition of synergy is too limiting, which is embedded in work systems within large-scale production or operational strategies (MacDuffie, 1995; Purcell, 1999). Complementarity must be considered in the context of HR rules and procedures, but it must also be understood in the context of the workplace’s overall management structure.

2.3.3 Work Practices

The collective desire to boost productivity and performance through various Human Resources strategies and processes is not a new goal for businesses. During the early twentieth century, Frederic Taylor created scientific management ideas, which were later adopted in production units and centralised decision-making and problem-solving with managers. This notion revolutionised the manufacturing industry since workers’ strengths were efficiently directed towards task performance that matched their particular strengths and skills (Boxall & Macky, 2009). Around 15–20 years ago, the concept of High-Performance Work Systems (HPWS) emerged and spread. Cappelli and Neumark (2001) describe that the term appeared in public reports, America’s Choice: High Skills or Low Wages! (Commission on the Skills of the

American Workforce, 1990). The article brought up those employees were sceptical of Taylorist work structures and argued for more investment in higher-skilled workers and high-performance workplaces. In 1994, Appelbaum and Batt released *The New American Workplace*, which discussed the necessity for US businesses to develop their advanced work systems, such as those used in Japan, Lean Manufacturing, Socio-Technical System in Sweden, flexible specialisation in Italy, and diversified quality manufacturing in Germany. This message was bolstered in the year 2000 with the publication of *Manufacturing Advantage*, although Appelbaum et al. (2000) pointed out that technology advancements alone would not be enough to revolutionise the manufacturing industry in America; reforms to the labour structure are also required (Boxall & Macky, 2009).

According to Barney (1995), the existing literature on high-performance work systems (HPWS) emphasises the importance of employee involvement and dedication. Key components of HPWS, organisational performance, and successful attainment of organisational goals (Ramsay, Scholarios et al. 2000). According to Cooper, Liu, and Tarba, 2014; Luthans and Youssef, 2007; Ollier-Malaterre, 2010; Robertson and Cooper, 2011; Robertson, Cooper, Sarkar, and Curran, 2015; Stajkovic, 2006, there is growing interest in the relationship between employee resilience and organisational performance (Cooke, Cooper et al. 2019). However, relatively little is known about the impact of high-performance work systems (HPWS) on employee resilience, let alone how management behaviour and employee responses affect that relationship.

In recent years, a number of books have arisen emphasising the benefits of utilising high-involvement or high-commitment human resource practices, a system of human resource practices aimed at improving employees' skills, motivation, information, and empowerment. (Guthrie, 2001; Kochan & Osterman, 1994; Lawler, 1992; Levine, 1995; Pfeffer, 1998; Kochan & Osterman, 1994; Lawler, 1992; Levine, 1995; Pfeffer, 1998). Furthermore, new research has discovered actual relationships between these techniques' application and company performance (e.g., Arthur, 1994; Huselid, 1995; Koch and McGrath, 1996; MacDuffie, 1995). However, there is still a great deal of study to be done. Shaw et al, (1998) stated that few studies have looked at the factors and effects of turnover at the organisational level, which is relevant to this study. Guthrie (2001) provides the study with an association between employers' usage of high-involvement work methods, employee retention and productivity, similar to Arthur (1994) and Huselid (1995). Arthur (1994) discovered that human capital investments (through

the implementation of a “commitment” human resource system) and staff retention (turnover) have an interaction influence on business productivity.

2.4 Resilience

Resilience is known as a person’s ability to effectively adapt to adverse events where it helps to restore natural balance to work effectively in a stress-free environment, Bonanno (2004) as cited in (Mostafa, Gould Williams et al. 2015). There are only few studies conducted on how high-performance contributes to enhancing employee resilience or how high-performance HR practices contribute to individual resilience, which could lead to increased performance and employee engagement levels (Wang, Cooke et al. 2014). Many high performing organisations provide employees with information, skills, and incentives to promote innovation, quality improvements, and adjustment for changing environments. This is designed by creating appropriate attitudes, behaviour, and skills linked to both HR practices and HIWP that could further increase organisational flexibility, allowing the organisation to adapt effectively to face a competitive business environment (Cooke, Cooper et al. 2019).

Resilience is a widely known concept across many disciplines of studies (Beltman, Mansfield, & Harris, 2015; H. B. Kaplan, 2005; Luthans, 2002b; Masten et al., 1988). It is generally comprehended as a behaviour of “patterns of positive adaption during or following significant adversity or risk” (Masten, Cutuli, Herbers, & Reed, 2009, p. 118). However, there are general arguments on the notion of resilience. The broad definition has become more complex over a period of time. The concept of resilience is prominent in psychological studies, one such study by Block (1950,1952) classifies resilience as a unique set of personality trait, containing low levels of anxiety and the ability to adjust to any incidents. Block and Kreme (1996, p50) state that resilient individuals effectively control factors around his atmosphere and has a “psychological visibility” to be resilient for different set-ups. Moreover, Bhamra et al (2011) state in their book that resilient individuals share three characteristics: which are “An acceptance of reality, highly belief on life is meaningful and the ability on improvising.” Resilience has been studied in many areas such as biology, ecology, sociology and psychology and as in this research in organisational studies.

Resilience as part of Luthans Psychological Capital is a developmental construct that thus can be improved and enhanced (Masten 2001). However, it does include aspects of a basic human adaptational system which includes a statement, caring support, motivation to be effective in

the environment etc. In more simple terms, a psychological capacity to bounce back from uncertainty, failure, conflict, adversity, and increase responsibility, positive change, and progress (Luthans 2002). Huey and Weisz (1997); Hunter and Chandler (1999) as cited in Luthans (2002) resilience is commonly used among the words such as confidence and hope though it contains a conceptually different meaning.

Like confidence and optimism, the word resilience is so widely used that it needs to be conceptually distinguished from the other positive abilities. The difference between self-efficacy and resiliency, in simple terms, is that resiliency has a smaller reactive rather than proactive (Huey & Weisz, 1997; Hunter & Chandler, 1999). Resiliency appears to be more directly related to the empirical study of stress than the other POB capacities as a positive bounce-back reaction to a stressful occurrence. 'It is not what occurs to you that matter you to take it,' Hans Selye wisely observed. He explains that today's leaders and employees can have substantial implications for the workplace by taking today's difficult, changing environment via the positive psychological ability of resilience (Snyder, 2000).

As Masten (2001) pointed out, this resilience capacity is no longer considered uncommon in organizational behavioural professionals. To my knowledge, there have only been a few surface attempts (mainly at the organisational level) to apply resiliency to the workplace, in the study of stress, which has cations (e.g., see Doe, 1994; Home & Orr, 1998; Mallak, 1999). Resiliency appears to fit well the criteria of originality and meaningful measurement for inclusion as a POB capacity. Bernard (1991, 1993) has identified social competence, problem-solving skills, independence, and a sense of the future are all talents that could be learnt and fostered in leadership and human resource management, similar to how effectiveness (Bandura, 2000) and emotional intelligence are already being addressed (Goleman, 1998). The positive influence of resilient capacity and workers on effectiveness and performance improvement has yet to be established. However, with the evidence (e.g., Block & Kreman, 1996), highly resilient individuals tend to be more 'fuzzier', however organisations now find them as considerable. There is a strong link between resiliency and the ability to perform effectively in a wide range of situations (see Coutu, 2002), and this relationship extends to the workplace.

2.5 Leadership Styles

The term "leadership" has become unimaginative as it is a favourite nostrum, perhaps because of its confused and conflicting conceptualisations. It is a potent educational relationship that

encourages followers to achieve greater degrees of fulfilment and moral development (Burns, 1978). As Burns (1980) writes, “Only when leadership is seen as pervading virtually every level and sector of society, rather than being limited to formal government institutions, can one say with confidence that it is primarily in the crucible of leadership that ‘lower’ needs are transmuted into higher and political demands are refined” (p. 119). Because of this, leadership is divisive as conflict generates engaged leaders, who in turn generate greater conflict among the general public. Conflict over public expectations is also a key aspect in the democratisation of leadership (p. 453). It is a causal relationship; leadership makes a difference. The most visible act of leadership is establishing an institution, a social movement, a nation, a political party, or a bureaucracy that continues to exercise moral leadership and nurture required social change long. (p. 454).

Chung Hsiung Fang et al. discovered that leadership style has a positive impact on organisational commitment and job satisfaction and that work satisfaction has a favourable impact on organisational commitment and work performance. Leadership is highly culturally oriented, embracing traditional ideas, values, and customs as well as a preoccupation with preserving the environment. According to a study by Goh Yuan et al., the leader’s direct and extended family, clan, and tribe have a substantial impact on his or her leadership style. Employee perceptions of transactional or transformational leadership styles of executives have a strong positive link with perceptions of executive encouraging aspects of its innovation climate, according to a study by Lu Ye et al. as cited in Nanjundeswaraswamy and Swami (2014). This research is focusing on two leadership styles which are constructive and Laissez-faire leadership style.

2.5.1 Constructive Leadership

Constructive leadership is defined as a manager’s activities and behaviours that promote employees’ genuine interests, such as attractive and team-oriented choices and actions. This sort of leadership can be defined as a combination of pro-organisation and pro-subordinate decisions and behaviours (Einarsen, Aasland, & Skogstad, 2007). These leaders are concerned about their subordinates’ well-being while also being able to focus on the efficient use of resources and goal attainment in terms of the organisation’s legitimate interests (Huseyin, Arici & Kole, 2020). Constructive behaviours appear to be critical for leadership effectiveness; in fact, it has been demonstrated that supervisors who exhibit constructive leadership attributes

can guide and support their colleagues in accomplishing common goals (Glaso & Skogstad, 2018). According to Erkvall and Arvonen (1991), Fostering transformation and productivity while also improving employees' work experience is what a constructive leader. In New Zealand, high levels of constructive leadership among supervisors have been linked to low levels of bullying (Bentley et al., 2012). This finding demonstrates the importance of constructive leadership behaviour in reducing unfavourable workplace interactions.

Many published literatures discuss the link between transformational leadership and constructive leadership styles. Value-based and individualised interactions characterise transformational leadership, resulting in higher exchange quality and increased care for others' well-being. On the other hand constructive leadership also implies concern for members welfare, as leaders must understand needs desires and individual capabilities in order to inspire and motivate employees. This connection support to reduce the power distance between leaders and employees resulting in more closer relationship and individualized consideration. As a result of individualized consideration literature always merge transformation and constructive leadership styles together (Zohar 2002).

2.5.2 Laissez-faire leadership

In the notion of laissez-faire leadership and so-called management by exception (passive) are described as avoiding interference, the absence of leadership, or both (Bass & Avolio, 1990). There are rarely any transactions or agreements with followers under laissez-faire (avoidance) leadership. There is no attempt to encourage followers, recognise and satisfy their requirements; decisions are frequently delayed; feedback, rewards, and involvement are lacking; there is no attempt to stimulate followers or recognise and satisfy their demands (p. 20). According to Lewin, Lippitt, and White (1939), it is a type of leadership in which the leader has been nominated and still physically occupies the post of leader but has largely abdicated the obligations and duties that have been allocated to him or her. As a result, a laissez-faire leadership style indicates not only a lack of presence, a sort of zero leadership, but also a failure to meet the reasonable interests of subordinates and/or superiors. Poor leadership, including laissez-faire leadership, according to Kelloway (2005) and Skogstad et al. (2007) in Yang (2015), may be a root cause of specific workplace stressors such as role conflict, role ambiguity, and impressions of low-quality interpersonal treatment by the leader, with stressful events and strains, bullying as a result. However, empirical studies demonstrating such links

between laissez-faire leadership and workplace stressors and strains are rare. The majority of empirical research on laissez-faire leadership has concentrated on the direct links between work satisfaction, cohesion, and production (Bass, 1990) where subordinates' job happiness is negatively correlated with exposure to laissez-faire leadership behaviour (Judge & Piccolo, 2004). Burns (1978), under his research in transformational leadership, states that laissez-faire style is marked by a general failure to take responsibility for managing.

Traditionally, leadership research has focused solely on positive leadership traits like transactional, transformational and constructive leadership, as well as their positive outcomes, and their positive links with results for subordinates such as job satisfaction or organisational performance (Barling, Weber, & Kelloway, 1996; Bass, 1990; Lowe, Kroeck, & Sivasubramaniam, 1996; Tichy & Divanna, 1986). Surprisingly, despite the potentially devastating repercussions for subordinates and the business as a whole, empirical study on destructive leadership behaviours and their potentially detrimental influences is extremely sparse (Rayner & Cooper, 2003; Tepper, 2000; Zellars, Tepper, & Duffy, 2002). More often, the choice of the leadership style of a person can be a strategic choice, similarly, it could be how the subordinates perceived the style of the leadership Avolio et al., (2004); Gardner et al., (2005) in Yan (2015). Even though the majority of empirical studies on laissez-faire leadership show an adverse relationship with subordinates' attitudes and performance (Bass and Avolio, 1994; Judge and Piccolo, 2004 in Yang (2015)). Some suggest positive impacts of Laissez-faire leadership styles promote resilience and innovative ability in the subordinates.

Laissez-faire leadership style deals with autonomy and autonomous methods to lead and motivate their subordinates (Thomas and Velthouse, 1990). This is a method of promoting self-leadership (Manz and Sims, 1989, 2001). Baard et al., 2004; Liu and Fu, 2007 point out in Yan (2015) that positive association with managerial autonomy encourages greater involvement and the ability to be resilient. Hence the studies suggest that laissez-faire leadership can support and increase the innovative ability of their subordinates. This style of leadership encourages individuals to be independent to make their own decision in their job as well and enhance the entrepreneurial ability, as a result, this leadership quality enhance the level of confidence in an individual Theodosiou and Katsikea (2007) as cited in Yan (2015).

While a number of organisational features, such as leadership behaviours aimed at clarifying goals and expectations, fostering employee growth and participation, and providing support for

work and non-work demands, have been promoted as enablers of resilience development, there is limited empirical evidence to back up these claims. (Bardoel et al., 2014; Harland et al., 2004; King & Rothstein, 2010; Luthans & Avolio, 2003) – (Corina Cristiana NASTACĂ, 2020). However, the research conducted by Caniëls and Hatak (2019) suggest that employees will thrive and adapt to new atmospheres under laissez-faire leadership. Narcissists employees do not require socio-emotional direction to adapt to prosper in a dynamic workplace even if there are no clear objective specifications and rewards — they are prone to competition (Rosenthal & Pittinsky, 2006) as cited in Caniëls and Hatak (2019).

2.6 Construct of the Model

The research contributes to the High-Performance Work System (HPWS) work relationship between employee resilience and leadership behaviour at the individual level. The theoretical perspectives for the research are drawn from organisational psychology and human resources management. The JD-R model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) and strategic/high-performance HRM (Boxall & Macky, 2009) have been used as the foundation for developing the model for this study.

The Job Demands-Resources model

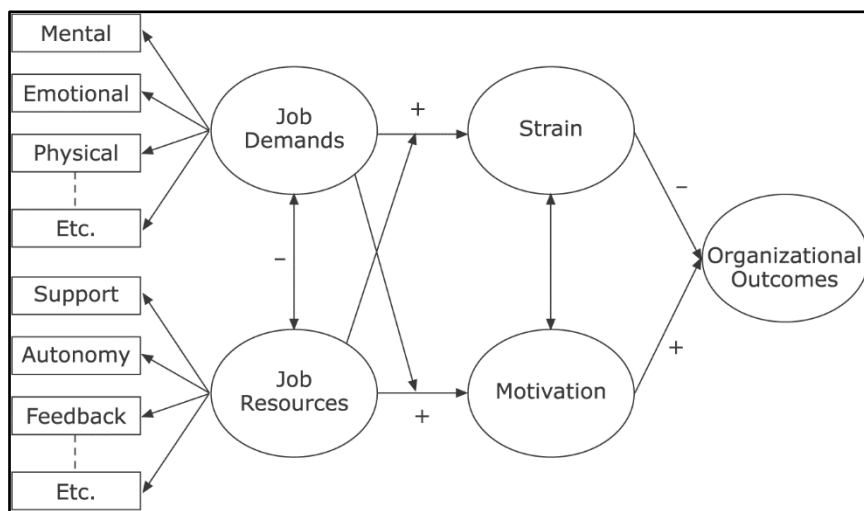


Figure 3: The Job Demands-Resources Model

Source: Bakker and Demerouti (2007)

The Job Demands-Resources (JD-R) model (Bakker et al., 2003; Demerouti et al., 2001) is based on the idea that each profession consists of unique set of risk factors in relation to job stress. It is divided into two groups as job demands and job resources.

Job demands are the aspects of a job that need continuous cognitive and emotional effort or abilities and are thus linked with physiological and psychological implications. High job pressure, an uncomfortable physical environment, and emotionally demanding clients are few examples for job demand (Meijman & Mulder, 1998 as cited in Bakker, & Demerouti 2007). Job resources are physical, psychological, social, or organizational aspects that involve either inability to effectively achieve a job goal, ability to lower the cost of job demands associated with physiological and psychological factors and promote individual growth, learning, and development capabilities (Bakker, & Demerouti 2007). Job resources are found at all levels of the organization's (for example, from Career opportunities, compensation, and benefit to job security,) also in social and interpersonal relations (includes participation in decision making, clear clarity about the job role,) finally job tasks (has, autonomy, performance feedback, the skill required for the job. Task identity, task significance). HIWP transform employees into hopeful, skilful and optimistic persons who become confident of their capabilities Luthans and Youssef (2004) as cited in Abubakar and Megdadi (2019). The presence of psychological and physiological resources could mitigate the cost and thereby HIWP can increase individuals' resilience, optimism, efficacy and hope.

Hence, the JD-R model is used to investigate the relationship between HIWP, resilience, and leadership style in this study. Furthermore, Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) in Cooke, Cooper et al., (2019) extended the JD-R model to include personal resources (e.g., person-specific states such as self-efficacy and optimism) that can enhance motivation in the same way that job resources can. Buse (2017) mentions that an individual recovering from a traumatic event, spousal loss, assault, etc., found that self-efficacy supported recovering from the situation. The belief in one's own ability to succeed is referred to as self-efficacy. These ideas influence how a person thinks, acts, and feels. As per their study, those who believed they could endure hardship were more likely to restore their lives following the trauma. Hence, building self-efficacy can lead to resilience.

Individual resilience (Sweetman & Luthans, 2010 as cited in Cooke, Cooper, et al., 2019) can be regarded as a unique resource, whereas HIWP is considered a job resource. HIWP is a job resource and a new concept that, in some ways, increases HRM theory by suggesting a new means (i.e., job resource) by which Human resources Management might influence the HR-performance chain (e.g., influence employee attitudes and behaviours).

In JD-R model, leadership is included as a job resource specifically aspects like supervisory coaching or support according to Breevaart et al (2014). Researchers have pointed out that it is important to study the impact of leadership as leaders are supposed to balance the job resources and job demands of their subordinates in a manner that they maintain healthy, productive and motivated workforce. Leaders' carryout this by managing the allocation and the impact of job demands and job resources on their follower. (Schaufeli 2015). For example, transformational leaders contribute to a positive work environment by starting a motivational process that leads to increased productivity. Destructive leadership, on the other hand, can lead to role conflicts and results in burnout. As a result, Schaufeli (2015) examines leadership as a distinct feature that goes beyond a mere resource in order to investigate the specific impact of leadership on job demands and job resources.

The incorporation of leadership into the JD-R model

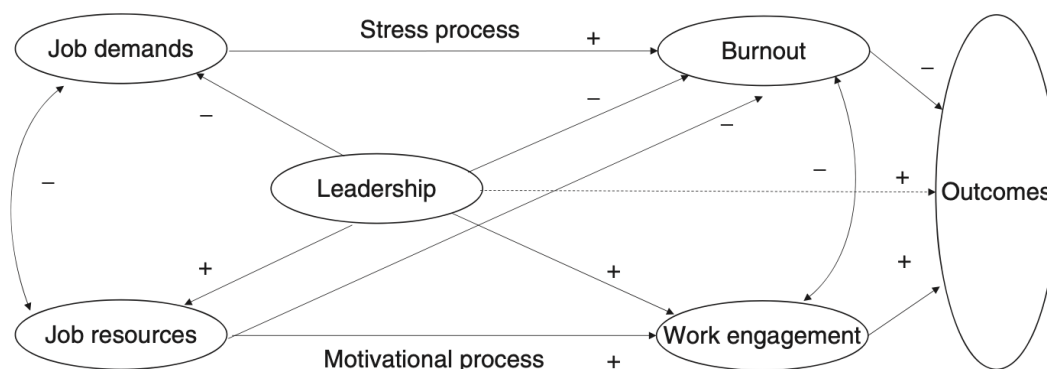


Figure 4 : The incorporation of leadership into the JD-R model

Source - Schaufeli (2015)

Constructive leaders encourage subordinates' intrinsic motivation, show concern for their needs, and provide work assistance to help them expand their responsibilities and take on additional challenges. As a result, we predict that constructive leadership will increase employee involvement in the overall business. Moreover, those who are highly resilient cope better with stress and unpleasant situations and hence have higher levels of positive affect (Wang, Li et al. 2017). Additionally, constructive leaders provoke positive emotions (Such as enthusiasm) in their team, which will have support the following to cope with burnout and stressors (Bass 1985; Bono et al. 2007 as cited in Wang, Li et al. (2017). Hence the researcher hypothesised that Leadership styles mediate the relationship between HIWP and employee's

resilience. Further Laissez-faire leadership style, a negative behaviour pattern, is introduced to understand what impact it can bring out in the relationship between HIWP and resilience.

2.7 Employee Resilience and HIWP

Increased global competition and growth in strategies put employees under pressure to perform and require them to be resilient in order to meet performance expectations. HIWP refers to a set of HR practices aimed at improving employee skills, engagement, and, ultimately, performance (Boxall & Macky, 2010). HIWP is a package of HR practices that include comprehensive selection process, learning and development, progressive based performance appraisal system and compensation and benefits Boxall and Macky, 2007 as cited in (Song, Gu et al. 2020). While there is no universal agreement on the ideal configuration or “bundle” of practices for the HIWP, it is widely agreed that the components should be diverse and mutually reinforcing (Cooke, Cooper et al. 2019).

Past literature on HIWP has shown a positive impact on individual capability and increase organisational performance (Cooke, Cooper et al. 2019). According to the literature, HIWP improves performance by enhancing employees’ knowledge, skills, abilities, and commitment by providing the information and discretion needed to effectively use these skills in their jobs. As a result, recent research has focused on analysing the HRM-performance chain and uncovering the HRM’s “black box” – the importance of employee attitudes in mediating the relationship between HIWP and individual performance. Employees are at the heart of innovation, speed, and adaptability and an organisation’s success is based on how well its employees respond to change (Cooke, Cooper et al. 2019). In this dynamic environment, having a resilient workforce that can respond positively and competently is essential to the organisation’s survival and future success.

As a result, businesses must invest in employee resilience development (Luthans, Vogelgesang, & Lester, 2006). The research will focus on findings on whether HIWP can help employees be more resilient. Individual resilience research in the workplace has centred on four interrelated areas, each with a slightly different perspective. Positive psychology views resilience as one of the four major positive dimensions of psychological capital (self-efficacy, hope, optimism, and resilience), each of which can encourage positive individual and organisational results when developed and effectively managed Luthans (2007). In this broad sense, HR intervention plays

a very important role in proactively managing employees' psychological capital. Hence "resilience" become the most critical factor in a turbulent and stressful work organisation.

The necessity for organisations to adopt a more positive approach to managing their human resources is a major argument in the positive psychology perspective. Employees' openness to workplace changes is seen as a forerunner towards resilience. Adaptability and flexibility from employees are needed to promote change and embrace change with a positive perspective as organisational change becomes a more continuous feature in light of growing competition. Career resilience, which is defined as the ability to bounce back after a career setback, is an area that has caught the attention of researchers. Another focus areas are on initiatives in resilience training to increase employee well-being and organisational performance. According to Wang et al. (2014), employee resilience can be understood as a set of abilities and qualities that can be cultivated through proper HR interventions. While the key elements of resilience used in existing studies differ, most of them emphasise flexibility, problem-solving skills, and interpersonal/social relationships as prominent factors. By giving relevant information, skills, incentives, and participation methods to their employees, high-performing businesses foster innovation, quality improvement, and rapid adaptation (Kling, 1995). The bundle of HR practises incorporated within the HIWP may enhance organisational flexibility by developing a varied range of talents and right attitudes and behaviours, allowing firms to adjust more effectively in a competitive context (Datta et al., 2005). According to Lengnick-Hall et al. (2011), an organisation's ability to be resilient in the face of adversity results from employee strategic management. HIWP should be aimed at improving employees' ability to deal with unanticipated problems. According to Luthans, Avey, Avolio, Norman, and Combs (2006), organisations that can construct and develop a resilient workforce will be more adaptable and successful.

HRM's influence on employee resilience has been highlighted in a new study. For example, according to Bardoel et al. (2014), a cohesive set of HR practises such as the development of social support at work, work-life balance practises, employee assistance programs, employee development programs, flexible work arrangements, reward and benefits systems, occupational health and safety systems, crisis management systems, and diversity management may strengthen employees. Furthermore, Wang et al.'s (2014) study on employee resilience in the Chinese banking industry found that the underlying abilities and behaviours related to an individual's degree of resilience may be improved and maximised through HR interventions,

including education, training, and development. When the HRM system is ‘strong,’ according to Bowen and Ostroff’s (2004) framework, HR practices are more likely to positively impact employee attitudes and, as a result, individual performance (e.g. Guest & Conway, 2011). Organisations must ensure that HRM communications are consistent, unique, and reflect consensus (Bowen & Ostroff, 2004).

HIWP is predicted to be favourably related to resilience, based on the existing literature. Further, Hodliffe (2014) and Cooke et al. (2019) in Rodríguez Sánchez (2021) reported that learning culture, leadership and participation of employees contribute to higher resilience in the organization. Vera et al. (2017) describe that HIWP and resilience are impacted by collective efficacy, transformation leadership and teamwork. Teams that believe in their ability to perform effectively in the future, especially in the face of obstacles, have higher levels of team resilience. Transformational leadership, in particular, is a significant resource for fostering team resilience. In addition, transformational leadership leads the team to a good adjustment and motivates and assists them in seeing changes or difficulties as chances for growth (Rodríguez Sánchez, 2021). Based on the factors the following hypotheses have been drawn to test this assumption:

H2: HIWP will have a positive effect on employee resilience

2.8 HIWP, Leadership and Employee Resilience

When top managers and HR Managers consistent with each other in articulating the messages about organizations strategic direction to employees, employees collective opinions are more likely to arise (Bowen & Ostroff, 2004; Sosik, Gentry, & Chun, 2012; Weller et al., 2018) as cited in Xi and Zhao (2019). The strategic leadership literature states that leaders are important to organisational effectiveness, through the role they perform and characteristics they demonstrate in the organization. Even though, HIWP seen as delivering important messages employees about the organization’s principles, employees actions and thinking about the HIWP are heavily influenced by the actions of the leaders of the organization Arthur, Herdman, and Yang, 2016 as cited in Xi and Zhao (2019). Employees are more likely to consider leaders whose leadership practises are aligned with the ideals underlying HIWP as “walking the walk,” which helps send strong, clear signals to employees.

The benevolent leadership conduct of frontline managers is often regarded as a constructive and well-accepted leadership behaviour by employees. A generous leader focuses on the interpersonal connection with his employees, paying attention to expressing concern and care for people, treating them with respect, and providing support both at work and in their personal lives. According to some studies, leaders' benevolent leadership behaviour acts as a motivator and inspire employees to have good faith, positive attitudes, and resilience behaviours towards their firms (Wang et al., 2011.). When leader's leadership behaviour reflects positive indicators which are consistent with the organisations HIWP, it likely supports to promote positive perceptions among employees. When leaders, on the other hand, act in ways that are contradictory with the firm's HIWP, it confuses employees, potentially jeopardising the transition of the firm's HIWP into employee perceptions and, eventually, firm performance. As Leaders' generous leadership conduct increases, it is expecting a favourable association between firm HIWP and employees' collective perceptions of HIWP to be higher.

A study conducted by McGovern et al. p34 as cited in (Yang & Lew 2020), revealed that the supervisor's motivation was the most influential factor in implementing HR practises, outweighing other factors such as targets, business values, and career progression prospects. Supervisors can establish the work culture that fosters creative thinking and innovative behaviour. This can be accomplished by implementing a set of high-performance work practises that encourage open communication, efficient resource distribution, and team member trust. In this regard, a supervisor's leadership behaviours are believed to be critical to the HIWPs' performance (Yang & Lew 2020). Hence, the researcher hypothesis:

H1: Contractive Leadership style and Laissez-faire leadership will mediate the relationship between HIWP and Employee resilience

Leadership styles are considered a significant variable that impact Employee resilience, helping employees adjust, adapt, and surpass problematic phases in their career. Some leadership practices support individuals to overcome stressors and increase their emotional intelligence. When a leader inspires, motivates, and develops a strong bond with his/her teammates could build employee confidence levels and develop their capabilities to respond to daily issues. It could foster in developing their career (Ahearne et al., 2005; Dierendonck & Dijkstra, 2012; Mills & Ungson, 2003; Scott, Hui, & Elizabeth, 2013; Seibert, Wang, & Courtright, 2011 as cited in Nguyen et al, 2016). When the person leading is behaving more like a leader than like a manager which result in more resilient workforce. As opposed passive leadership conduct

will result in less resilient workforce. Hence the practice of different styles of leadership styles could positively or negatively influence resilience in an organisation. Moreover, if the employee is resilient that could have a substantial impact on organisational resilience. Hence it is important that the leaders focus on employee resilience as the first step towards enhancing a resilient organisation.

There has been not much empirical research conducted in the field of leadership and resilience. Many of those researches discuss on the theoretical perspective of leadership and resilience. Those published papers do not present a direct relationship between the concepts. However, they discuss how leadership could impact organisational resilience.

Bardoel et al., 2014; Harland et al., 2004; King and Rothstein, 2010; Luthans and Avolio, 2003 as cited in Nguyen et al., (2016), state that organisations have initiated a number of features as enablers for resilience development, such as fostering employee growth and participation, leadership behaviour aimed at clarifying goals and expectations, supporting both work and non-work requirements. There is limited empirical evidence to validate these statements.

Researchers have shown increased interest in empowering leadership behaviour due to its impact in change-related outcomes in an organisational setting. Empowering leaders to develop subordinates enhances participative decision-making, delegation of authority, increased confidence in subordinates, and capacity to achieve results and personal support. This empowering leadership behaviour aim to achieve employee involvement within the organisation through encouraging stretch goals, autonomy, skill development which are underlying components of employee resiliency (ex: learning, adaptability and networking). As a result, it is believed that empowered leaders will have a favourable impact on staff resilience. (Nguyen et al., 2016).

Leaders and followers are at different levels of need, which influences their political views. Burns (1980) stated that individuals whose safety needs are dominant are more prone to react to political events with uncertainty and nervousness when dealing with normal political procedures, as well as a desire for a leader who can serve as a guide and a simplifier (p. 66). As a result, the level of need determines how followers respond in the 1930s, workers felt safe enough to throw their weight behind the economic struggle against industrial unionism because their immediate demands had been granted (p. 70).

Human needs, according to Maslow, are arranged in order of importance. Physiological needs come first in the formation of motives, followed by safety demands, and finally, stages where the desires for affection and belongingness take over. After a lower need has been met, a person might move on to the next higher level of need. Burns (1980) claims that such evidence exists and has been validated by historical experience, although the empirical studies are limited under Maslow's theory. Kohlberg's and others' studies on moral development provides a hypothesis that complements Maslow's. Moral development, according to this notion, develops in stages. Human behaviour is pushed to compliance in the early stages by the threat of punishment from a higher power. After then, there is a period of adolescent uniformity and conventionality. Morality is the consequence of rational decision and commitment to rationally decided ideals at their most mature degree. Leadership plays an important function in moving individuals from lower to higher levels of moral development and needs. True leaders emerge from self-actualising individuals who are driven by a want to learn, grow, and succeed rather than a desire to be famous, in other words, to fulfil themselves. True leaders are self-actualisers who are sensitive to the needs of others and learn from them (p. 117). Self-actualising leaders can guide their followers towards self-actualisation by assisting them in identifying their real needs (Burns, 1980). Hence, the researcher hypothesis:

H3: HIWP will have a positive effect on Contractive Leadership style and Laissez-faire Leadership Style

2.9 Public Services of New Zealand

A study conducted by Qiao, Khilji, and Wang (2009) show HIWP focused predominantly on manufacturing industries and aimed to explain how HIWP can increase the output of manufactured products or packaged goods (Cooke, Cooper et al. 2019). However, The difficulties faced in attempting to quantify public service outputs, though, no doubt, go some way toward explaining the relative dearth of empirical studies of HIWP in the public sector (Holt and Manning 2014). Additionally, studies in this area have, for the most part, focused on the implementation of HIWP and its effects outside of New Zealand, with notable exceptions to this being the work conducted in New Zealand (e.g., Boxall & Macky 2009; Macky & Boxall 2007; Macky & Boxall 2008).

In one study, Boxall and Macky (2009) found that New Zealand workers were more satisfied in their jobs when exposed to high involvement work practice. However, these authors also point out that pressure to work harder – ‘work intensification’ – without improvements in autonomy and rewards was also evident in some New Zealand workplaces. Boxall and Macky (2010) found that even though the workers they studied experienced a sense of empowerment at the workplace, information, reward, and knowledge attributes were less apparent. In their 2010 work, they found that while New Zealand workers experience a relatively high sense of empowerment in the workplace where as information, rewards, and knowledge were less evident. Macky and Boxall (2008) state that empowerment is considered enjoying more autonomous work which support to lower fatigue and lower stress levels that leads towards better work-life balance (Macky & Boxall 2008). This fact appeared in the results of the 2016 PSA survey, specifically about the perception of lower levels in reward and information.

Despite the fact that HRM methods such as HIWP are widely used in the industrialised world, it is crucial to look at the national context. It appears ill-advised to apply discussions to another country without taking into account its political, economic, and cultural factors. Erickson and Kuruvilla (1998) utilised recent events in New Zealand to demonstrate their applicability of evolutionary biology’s punctuated equilibrium model to national industrial relations systems. New Zealand exemplifies global trends by attempting to change its markets to improve competitiveness. The “New Zealand experiment,” as Kelsey (1995) coined it, has been extreme (Guthrie, 2001) and recognised as the most extensive and far-reaching economic reform attempted by any member of the Organisation for Economic Co-operation and Development (OECD) (Bray & Walsh, 1998). Following decades of stagnant economic development and productivity, New Zealand implemented radical free-market reforms in 1984, including deregulation of product and financial markets, extensive privatisation of state-owned companies, removing import restrictions, and eliminating agriculture subsidies. Following these economic reforms, the Employment Contracts Act (ECA) of 1991 completely demolished the long-standing industrial relations system of obligatory unionism (through union shop clauses), centralised collective bargaining, and an automatic extension of agreements to entire industries. The ECA drastically altered New Zealand’s industrial relations landscape by abolishing this structure and any statutory safeguards for unions. Competitive advantage, which was rarely spoken in New Zealand company a few years ago, is now a need for survival. New Zealand businesses have traditionally been portrayed as conservative or lacking in

creativity in their approach to HRM, perhaps in part due to the labour market's long history of substantial union density mixed with centralised bargaining (Boxall, 1993).

According to Crocombe, Enright, and Porter (1991), lack of sophistication and creativity has been recognised as a barrier to enhancing productivity, and New Zealand employers have been advised to address the problem. Given recent prescriptive writing and actual evidence, these warnings seem especially pertinent (Arthur 1994; Becker & Gerhart 1996; Delery & Doty 1996; Huselid 1995; Koch & McGrath 1996; Kochan & Osterman 1994; Lawler 1992; Levine 1995; MacDuffie 1995; Pfeffer 1998; Youndt et al, 1996). HR innovation is linked to increased organisational productivity and long-term competitive advantage. High participation (Lawler, 1992), high commitment (Arthur, 1994), high-performance (Huselid, 1995), and sophisticated (Koch & McGrath, 1996) work practises having all been used to describe these approaches.

As states by Demircioglu, 2018; Ospina, 2017; van der Wal, 2017; Zeier, Plimmer, and Franken, 2018 cited in Franken, Plimmer et al. 2020 Rather than the rational and linear leadership tactics used earlier, public administration requires a more decentralised, organic, and adaptive leadership strategy. Dunoon (2002) as cited in Franken, Plimmer et al. (2020) the common premise of leadership styles to take joint effort while resolving a complicated problem, to deal with emergencies, and to assess post-crisis scenarios in order to adapt to needs and the environment traditional leadership styles, on the other hand, still prevail in the public sector. One reason for this could be because the necessity for hierarchy in the public sector grows because of increased public scrutiny and accountability (De Waal, 2010; Taylor, 2017 as cited in Franken, Plimmer et al. 2020). As a result, public administrators are caught between local responsiveness, hierarchical structure, and increased public sector responsibility. According to Zeier et al., 2018, even if public managers ignore some of these polarities, it is unlikely to be apparent; yet, public managers do not desire or have the knowledge to deal with such friction (Franken, Plimmer et al. 2020).

2.10 Chapter Summary

The whole chapter focusses on examining past literature that supports to the foundation of the research question “The impacts of human resource practices associated with High involvement work systems specifically targeting power, information, reward and knowledge (PIRK) on

employee resilience and how this relationship is mediated by the presence of Laissez-faire and Constructive leadership styles in the New Zealand public sector?”.

The chapter explore on foundation, origins, definitions, of HIWP and HPWS, Employee resilience and Laissez-faire and Constructive leadership style. The researcher identifies the JD-R model as the basis and foundation for choosing the conceptual frame work designed for the research.

2.11 Conceptual Frame Work with Hypotheses

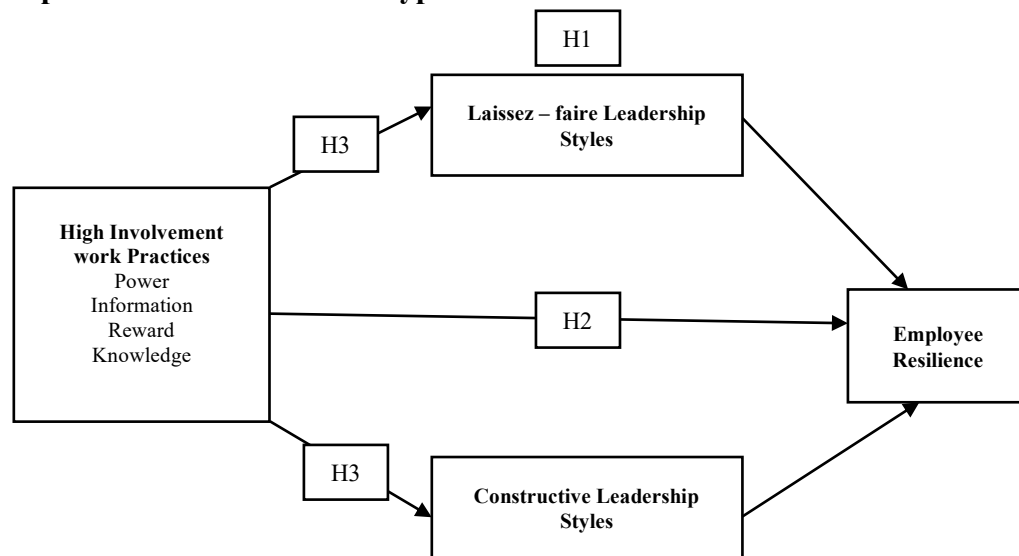


Figure 5 : Conceptual Frame Work with Hypotheses

Next chapter discuss the research design and methodological approach followed in the research. Further the chapter reviewed the HIWP and leadership setting of the public sector in New Zealand as the sample set the researcher uses to analysis the data is from New Zealand public sector. It also found that fostering resilience in public sector employees is a difficult challenge for managers, and that typical leadership methods are unlikely to satisfy. This has particular implications for the research question on how the relationship between HIWP and Resilience is mediated by the presence of Laissez-faire and Constructive leadership styles?

CHAPTER 3

Research design

3.1 Introduction

The chapter delves into the research design, rationale for the research, data gathering techniques, limitations, sample and measures. It looks at the results of the 2016 Workplace Dynamics in New Zealand Public Services survey, which served as the study's primary data source.

3.2 Rationale

This research contributes to the existing literature of Human Resources Management in many ways. Primarily, the study focuses on the suggested structural model that explains the effects of HIWP on employee perception towards leadership styles and employee resilience. Finally, the research examines the connection in the context of New Zealand's public sector.

The research adopts a quantitative method and employs some of the assumptions related to quantitative data interpretation, such as applying statistical analyses for large data sets (O'Leary, 2014). It is suggested, however, that this theory does not prevent the researcher from examining positivist viewpoints.

The data for the study was obtained from an existing data source of 2016 pf PSA which was conducted in collaboration with CLEW and Victoria University of Wellington. Hence the "data set" will be defined as an existing data which is use to answer important research question. As the researcher uses an existing data set, the researcher did not work around the choice of epistemology, research design, options for data collection.

Using an existing data set has some advantages. It helps in getting data faster is especially true for longitudinal research. Also, when compared to establishing a new research procedure to recruit individuals and gather data, using an existing data set saves a significant amount of time. It is usually far less expensive to use already acquired data. Further, most prospective research studies involve some level of risk to the subjects, a researcher who uses an existing data collection has the advantage of not placing those subjects in danger because they have already endured the burdens connected with participating in the study.

However, the data set used in this study could be subjected to information from a previous research study as it was previously collected and examined by other researchers. Few other disadvantages are as existing data sets will invariably differ from what the researcher would have obtained if the study had been designed prospectively. History bias may be an issue in the social sciences, especially if the data collection is older than a few years. Moreover, existing data set may not be able to answer particular research question, in which case a prospective study would be the only option to gather results that are reasonably relevant to the research question.

The analysis uses structural equation modelling (SEM), a standard multivariate analysis method used to examine behavioural models (Hair et al., 2010). This technique permits the researcher to examine all possible complex relationships and multidimensional phenomena (Tabachnick & Fidell, 2007). As an outcome, the researcher can offer theoretical background with various meanings and perspectives (Hair et al., 2010). Although Guba & Lincoln (1994) mention the potential openness to multiple meanings and the level of uncertainty, also several phenomena that could emerge and influence each other simultaneously appear to compile well with the post-positivist views.

Although much available literature on SEM strongly suggests researchers base the evaluations firmly on theory (Hair et al., 2010). Nevertheless, it does not halt the research from questioning “why” when the data interpretation does not equal the theory precisely. This permits the researcher to reflect and provide further context to the data through her own experience in human resources and acknowledge her position within the study. Some of the key motives for conducting this study were to put some of the researcher’s experiences in context, test and question some of her assumptions about probable causal links, and open up further talks regarding actual experiences working for the government.

3.3 Method of Data Collection.

The study’s data was obtained from a 2016 survey of PSA members, conducted in collaboration with Centre for Labour, Employment, and Work (CLEW) and Victoria University of Wellington, to reveal New Zealand public sector employees’ perceptions of managerial practice (Plimmer et al., 2016). The PSA emphasised the importance of the survey mainly because it helps to understand people’s daily work routines. It significantly helps to understand

the workplace culture and how people are handled. The survey report furnishes many more details.

Employee surveys are one of the most prevalent methods for researchers and HR professionals to collect data, according to Langford (2009). Employee surveys help explain the organisation's role, monitor its performance, compare it with other organisations, and evaluate the possible relationship between practices and end outcomes (Kraut, 2006).

The PSA conducted the survey online, designed by researchers from the School of Management's Centre for Labour, Employment, and Work (CLEW). The Human Ethics Committee at Victoria University of Wellington granted ethical permission, and the survey was conducted in March 2016 (Plimmer et al., 2016). PSA members were asked to respond to a survey on their work lives and the organisation they worked. The survey was constructed based on current national and international survey work. The study also looked at the experiences and perspectives of worker's issues such as job satisfaction, motivation, job security, sexual harassment, and bullying at the workplace. Some other areas are job demands such as Flexi working hours, resource availability for working to carry out their job, including power for access to information, knowledge enhancement, decision making, and employee rewards.

Further, the survey looks at management and leadership qualities and explores whether the manager's constructive, responsive, and responsible for creating a better working environment for workers. Seven-point, six-point, five-point, and four-point Likert scales were employed in the survey based on previous studies (for example, Six-point scale, 1 = strongly disagree to 6 = strongly agree). In addition, the majority of the PIRK and Leadership styles and employee resilience measures were considered reliable (Plimmer et al., 2016). Below table provides the descriptive statistics of the survey items.

3.4 Descriptive Statistics for the Survey Questions

Construct	Question Item (from Plimmer et al, 2016)	Variable Name	<i>(Responses were measured on a 6-point Likert scale, with over 3 indicating agreement and under 3 indicating disagreement)</i>			
			Mean	Median	Mode	St Dev
Power	2.1.1 I have enough freedom over how I do my job.	PIRK_P1	4.79	5	6	1.614
	2.1.2 I have enough authority to make decisions necessary to do my job.	PIRK_P2	4.89	5	6	1.477

	2.1.3 I am given enough authority to act and make decisions about my work.	PIRK_P3	4.93	5	6	1.462
Information	4.1.1 Management gives sufficient notice to employees prior to making changes in policies and procedures.	PIRK_I1	4.15	4.16	6	1.834
	4.1.2 Management takes time to explain to employees the reasoning behind critical decisions that are made.	PIRK_I2	3.49	3	1	1.964
	4.1.3 The channels of communication from employees to top management are effective.	PIRK_I3	4.05	4	6	1.873
	4.1.4 The channels of communication from employees to other levels of management are effective.	PIRK_I4	4.06	4	6	1.732
Reward	2.5.1 There is a strong link between how well I perform my job and the likelihood of receiving recognition and praise.	PIRK_R1	4.05	4	6	1.741
	2.5.2 There is a strong link between how well I perform my job and the likelihood of receiving a raise in pay/salary.	PIRK_R2	4.03	4	6	1.726
	2.5.3 There is a strong link between how well I perform my job and the likelihood of receiving high performance appraisal ratings.	PIRK_R3	5.89	6	6	0.92
Knowledge	2.7.1 I am satisfied with the number of training and development programs available to me.	PIRK_K1	5.42	6	6	1.297
	2.7.2 Overall, I am satisfied with my training opportunities.	PIRK_K2	5.68	6	6	0.982
	2.7.3 I am satisfied with the quality of training and development programs available to me.	PIRK_K3	5.78	6	6	0.947
Employee Resilience	3.4.1 I effectively collaborate with others to handle unexpected challenges at work.	Employee_r esilience_1	5.63	6	6	1.019
	3.4.2 I successfully manage a high and intense workload for long periods of time.	Employee_r esilience_2	5.76	6	6	1.147
	3.4.3 I resolve crises competently at work.	Employee_r esilience_3	6.11	6	6	0.714
	3.4.4 I effectively respond to changing conditions at work.	Employee_r esilience_4	5.54	6	6	1.108
	3.4.5 I continually evaluate my performance and improve the way I work.	Employee_r esilience_5	5.96	6	6	0.845
	3.4.6 I approach managers when I need their support.	Employee_r esilience_6	5.61	6	6	1.042

	3.4.7 I learn from mistakes at work and improve the way I do my job.	Employee_r esilience_7	3.9	4	5	1.713
	3.4.8 I use change at work as an opportunity for growth.	Employee_r esilience_8	3.9	4	5	1.748
	3.4.9 I seek assistance and resources when I need them at work.	Employee_r esilience_9	3.4	3	2	1.693
	3.4.10 I adapt to change and come out stronger.	Employee_r esilience_10	3.72	4	5	1.625
Constructive Leadership	4.2.1 Encourages thinking along new lines.	Construtive _leadership_ 1	4.5	5	4	1.614
	4.2.2 Gives recognition for good work.	Construtive _leadership_ 2	4.6	5	4	1.69
	4.2.3 Pushes for growth and improvement.	Construtive _leadership_ 3	4.68	5	4	1.691
	4.2.4 Sets clear goals for work.	Construtive _leadership_ 4	4.61	5	4	1.652
	4.2.5 Defines and explains work requirements clearly to subordinates.	Construtive _leadership_ 5	4.56	5	4	1.63
	4.2.6 Is flexible and ready to rethink his/her point of view.	Construtive _leadership_ 6	4.44	4	4	1.726
Laissez-Faire leadership	4.2.7 Fails to interfere until problems become serious.	Laissez_fair e_leadership 1	3.38	3	2	1.706
	4.2.8 Avoids getting involved when important issues arise.	Laissez_fair e_leadership 2	2.72	2	2	1.617
	4.2.9 Is absent when needed.	Laissez_fair e_leadership 3	2.92	2.92	2	1.491
	4.2.10 Waits for things to go wrong before taking action.	Laissez_fair e_leadership 4	2.66	2	2	1.578
	4.2.11 Shows that he/she is a firm believer in "If it ain't broke, don't fix it".	Laissez_fair e_leadership 5	3.23	3	2	1.597
	4.2.12 Demonstrates that problems must become chronic before taking action.	Laissez_fair e_leadership 6	2.62	2	2	1.601
	4.2.13 Avoids making decisions.	Laissez_fair e_leadership 7	2.51	2	2	1.556
	4.2.14 Delays responding to urgent questions.	Laissez_fair e_leadership 8	2.6	2	2	1.585

Table 1: Descriptive Statistics for the Survey Questions
(Source: Plimmer et al, 2016)

School of Management at Victoria University of Wellington and The Centre for Labour, Employment and Work (CLEW) invited members of the PSA to take part in the survey by e-

mail. Invitations to participate were also distributed through PSA publications and union communication. It was entirely voluntary, and members with no e-mail address were provided alternative ways to participate in the survey. The respondents cover the public sector agencies such as local government, state sector, community public service organisations, and district health boards. The online survey was available for three weeks, from 5 February -07 March 2016. PSA was able to receive 14,125 responses for the survey, which represent 25% of the total public sector employees of New Zealand (Plimmer et al., 2016). According to Desmond and Plimmer (2014), part-time, fixed-term, and contract workers' perspectives are not reflected in this type of study since they are less likely to be PSA members. The anonymity of the respondents was maintained by removing identifying information from individual responses (Plimmer et al., 2016).

Out of the 14,125 sample the researcher only selected the responses of the New Zealand's core public service agencies and the other responses were removed from the sample. Further, participants who failed to reply to specific demographic related questions and those who could not answer 95 percent of the questions were removed from the dataset. Next, the dataset's missing value patterns were investigated, and items with missing values were imputed using the Expectation-Maximisation logarithm. There were (638) outlier in terms of age. The respondents reported being 99 years old. As these are public sector employees and their retirement age is at the age of 65, hence those responses were removed from the sample. There were 25 numbers of outliers in term of tenure of employment. The respondents reported being in public services for 99 years those responses were removed from the data sample. Finally, variable items and missing values were recoded.

During the 2013 PSA survey, the responses had a mid-range rating on most important issues, indicating patterns of "pervasive ambivalence," in which participants chose neither agree nor disagree, "sometimes," nor a mid-point rating on the seven Likert scale questions. This raised a matter of concern as the mid-range answers of the participants did not reveal the factual information of the public sector employees. However, the 2016 PSA survey addressed much of the same topics as the 2013 survey, with a stronger emphasis on issues such as employee resilience and items related to PIRK and leadership styles. As a result, the author based this analysis on survey results from 2016.

This report, however, is not the same as the original survey. The initial survey describes and analyses the status and dynamics of New Zealand's public sector employees. It was carried out as part of PSA's objective to improve public sector workplaces by providing better jobs and greater public and community service.

Furthermore, the original survey was designed to answer many different issues on the surface level than the research questions in this study, which is a known research problem with secondary data. As a result, the original survey drew responses from a broader range of individuals from a broader range of public-sector companies than the study's target group.

This research examines the association between HIWP and employee resilience using a subset of the data from the PSA survey. Only personnel working for one of New Zealand's core public service agencies were included in the imputed data set of 14,126 responses for this study (see Appendix 1 for a list of New Zealand's key public service organisations).

Outlier observations were defined as those with at least one response with a z-score of more than three standard deviations above or below the mean, as detected by the SPSS software program. They were eliminated from the sample to reflect the population better. This leaves a sample of 7326 unique observations for factor analysis, an appropriate ratio of observations to variables (Hair et al., 2010).

3.4.1 Constraints

For numerous reasons, this research looks at the core public service. To begin with, practical considerations indicate considerations on a single group rather than wider varied groups. Second, the core public sector differs from the broader public sector regarding governance procedures and demographic characteristics (Plimmer, Cantal & Qumseya, 2017; Holt & Manning, 2014). Additionally, concentrating on the experiences of workers who do not have administrative responsibilities has relevance. Furthermore, focusing on the experiences of workers who do not have managerial responsibilities has merit. According to Geare et al. (2006), managers' assessments usually tend to be positive and homogeneous than other employees. For instance, the original survey results showed higher mean values for managers and non-manager.

3.5 Measures

3.5.1 High-involvement work process

This section summarises the PSA survey items used in this study. The author employs PIRK items to assess employees' perceptions of High-Performance work systems instead of those promoted by managers. This 32-item scale was deemed suitable for various reasons, with a few minor wording changes made by the original authors. (Vandenberg et al., 1999). Firstly, this scale is not specific to one workplace or a sector as the human resources practices and processes may differ among the organisation, even in the same industry. Secondly, as Boxall and Macky (2009) mentioned, the availability of policies within an organisation is not the same as the workers experiencing high involvement at the workplace. Accordingly, survey items questioning participants on their experiences in relation to the PIRK attributes were considered a measure of the availability of High-performance work systems in the organisation.

Three items related to 'Power' or job autonomy measured the participant's opinion and experiences of the level of sufficient authority to complete their jobs satisfactorily and the ability to participate in decisions that affect their occupations. The survey uses four items to form 'information' construct and question participants knowing the correct information to complete their job. This includes the extent to which they are aware of the policies, goals, and procedures and information regarding reasons behind critical decisions and organisational changes. This also covers how managers are aware of their co-workers' opinions, needs, and feelings. Hence, the survey questions regarding the upward flows of information to management about employees.

Further, survey participants were asked three questions related to the 'reward' mechanism of how performance is linked to reward and recognition in their workplace. Such as promotion opportunities, monetary and non-monetary benefits, compliment good performance, and whether effort, performance, and performance incentives are linked and consistent within the organisation. The survey comprises three items associated with the 'knowledge' construct. These question items inquire about an individual's knowledge to better complete their job through quality training and development programs inside the organisation (Plimmer et al., 2016).

3.5.2 Employee resilience

The survey participants were questioned about their ability to be resilient in the organisation, which is defined as “employee capability, facilitated and encouraged by the organisation, to use resources to constantly adapt and thrive at work, especially when presented with difficult circumstances” (Näswall, Kuntz, Hodliffe, & Malinen, 2013) as cited in Plimmer, et al. (2016). PSA survey adapted questions designed by the Resilient Organisations Research Group. They studied resilience from the employee’s perspective and the perspective of the organisation with the goal of improving understanding of the factors that contribute to worker resilience. The key outcomes for organisations committed to developing resilient workers, namely engagement, high performance, and wellbeing Näswall et al (2013). The PSA survey uses these ten items to identify the employee’s ability to continually adapt and flourish in the organisation with the available resources.

3.5.3 Managers’ leadership style

The manner in which leaders treat their employees overall work experience and the working atmosphere is measured under manager’s leadership style as cited by Bentley et al., 2012; Kristensen, Hannerz, Høgh, and Borg, 2005, as cited in Plimmer et al. (2016). To measure this construct, the survey uses two types of leadership styles Constructive leadership and Laissez-faire leadership styles. The study employed five-question items to assess Constructive leadership style, which is described as the ability to drive change and productivity while also improving workers’ work experience defined by Erkvall and Arvonen, 1991 in Plimmer, G., Cantal, C. (2016). This outcome of such leadership behaviour is vital to understand the ability to decrease negative interactions in the workplace. On the other hand, the survey uses eight items to measure Avoidance of decision-making, lack of input to staff, and failure to recognise or intervene in delicate circumstances are all examples of laissez-faire leadership by Bass and Avolio, 1990; Hauge, Skogstad, and Einarsen, 2007 in Plimmer, et al (2016). This leadership style often has the opposite effect of a constructive leadership style.

3.6 Controls and moderators.

According to Kim and Kang (2013), a worker’s employment status, whether working as a permanent employee or a temporary contractor, can affect their commitment levels. Although temporary workers’ collaboration and loyalty to the organisation may be influenced by

incentive programs, similar to permanent employees, temporary employees should be given a chance to develop competencies that support organisational strategies.

Employees' health and psychological well-being can impact the number of hours worked during a day (full-time or part-time), while this may depend on how much autonomy the individual has. Robone, Jones, and Rice (2011) revealed that Part-time employees' research health is negatively influenced by the number of hours they work. According to Fenton O'Creevy (1995), studies of employment attitudes should account for part-time status since research shows that full-time and part-time workers may have different levels of job satisfaction.

3.7 Participants

The study comprises a sample size of 7326 complete responses, which include responses from core public service agencies and has selected responses of those who do not manage any staff. A small portion of the sample is combined of the age group of 19 – 13 under the categorisation of under 24. The sample does not represent all Core public service agencies as of March 2016. Some agencies did not respond to the survey, several agencies were removed due to imputation, and few other agencies were removed due to representation of managers only. As a result, such responses were not taken into account in the analysis.

3.8 Chapter Summary

This Chapter discusses the methodological approach and the framework used for the research. The researcher selected an existing data set to analyse the research question. It Identifies the advantages and disadvantages of using an existing data set. The chapter delves with measurements of each variable. It further discusses of the data cleansing to suit to the research by imputing non-value adding data of the 2016 Workplace Dynamics in New Zealand Public Services survey, which served as the study's primary data source.

CHAPTER 4

Method

4.1 Introduction

The hypotheses evaluated and additional tests carried out under confirmatory factor analysis (CFA), or measurement model and structural equation model (SEM) through standardized regression analysis the unobserved variables are examined and discussed in this section of the research. To establish the association between variables, identify common factors, and test ideas, confirmatory factor analysis methods are used.

4.2 Hypotheses

Following hypotheses were derived after great deal of researching on past literature and the measures chosen in the survey predict the positive outcomes from Higher levels of performance systems were developed as hypotheses.

H1: Contractive Leadership style and Laissez-faire leadership will mediate the relationship between HIWP and Employee resilience

H2: HIWP will have a positive effect on employee resilience

H3: HIWP will have a positive effect on Contractive Leadership style and Laissez-faire Leadership Style

4.4 Assumptions

4.4.1 Independence

During the administration of the surveyed individual unique URL links were sent for each participant; therefore, it is assumed that one response from one participant and considered that opinion and thought of other participants did not influence their responses. The imputation process further supported this by removing responses with more than a 5% incomplete rate.

4.4.2 Sample Size

Yong and Pierce (2013) advocate a sample size of at least 300 participants to minimise data inaccuracy, with each variable having at least five to ten observations. Hence the researcher

considered a sample size of 7326 responses from the PSA survey to carry out the data analysis for the proposed conceptual model.

4.4.3 Normality

The imputation technique eliminated missing data, which was confirmed by a data normality test. The Kolmogorov-Smirnov and Shapiro-Wilk Normality Tests findings, which exhibit significance levels < 0.05 for deviations from a normal distribution (Allen & Bennett, 2010), meaning that each variable is not necessarily distributed in a regular manner. However, these tests are sensitive to deviations from normality during a more extensive simple size study, and factor analysis is thought to be relatively resistant against normality assumption.

Skewness is a measure of how symmetrical a variable's distribution occurs. The distribution of responses for a variable is considered to as skewed if it spans towards the right or left tail of the distribution. Kurtosis is a metric for determining whether or not a distribution is overly skewed. The pattern of responses is considered a normal distribution when both skewness and kurtosis are zero. A general rule for skewness is that if the number is greater than +1 or lower than -1, the distribution is significantly skewed. The usual rule for kurtosis is that if it is larger than +1, the distribution is too peaked. Similarly, a kurtosis of less than -1 implies an excessively flat distribution. Non-normal distributions have skewness and/or kurtosis that are greater than these limits (Hair 2014) .

4.4.4 Methodologies Utilised

The survey items were tested through SPSSV.27 IBM and SPSS AMOS V27. It was used to analyse and develop the Confirmatory Factor Analysis (CFA) and the Structural Equation Model (SEM), which will help the researchers examine the data in-depth relating to the adopted conceptual framework. AMOS analyse method was chosen for the data analysis because of its capability to analyse model structures. AMOS software specifically uses to run structural equation modelling, path analysis and confirmatory factor analysis. The software allows the researcher to draw models graphically using the tools available on the software. AMOS allows the researcher to estimate, specify, and access your model in the form of a diagram, as well as establish the link between variables. This aids the researcher in validating and testing the data. AMOS also enables researchers to create models that depict relationships by allowing them to combine variables. The path analysis method assists the researcher in gaining understanding

into casual models in order to increase variable linkages. By using AMOS the researcher can also impute numeric values in AMOS, allowing them to create a comprehensive numeric database anytime they need it. Hence AMOS is a beneficial software to use for the research's data analysis.

4.6 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is used to figure out the dataset's factor structure. In CFA, we confirm the factor structure generated in EFA. Hair et al. (2010) state that, unlike EFA, the theory should drive the CFA model testing.

A measurement model will be drawn to examine the relationship between variables (items) that form together to create a construct, following the structural model will then indicate the relationship between variables. It is essential to run the measurement model first to determine the model fit, as otherwise, testing the structural model first could provide incorrect outputs (Joreskog & Sorbom, 1993).

The construct of HIWP consisting of power, information, reward, and knowledge is positively related to each other, equally positively related to employee resilience and leadership styles. According to Vandenberg et al. (1999), the conceptual foundation of PIRK attributes should be regarded collectively. However, the literature on PIRK attributes is ambiguous on whether or not PIRK attributes mutually reinforce each other.

There are selected studies that offer valuable insight into the theory and a guiding conceptual model of investigation links in terms of the high-involvement work practices. Vandenberg et al. (1999) work described through Lawler's (e.g., 1986) works for their study. Vandenberg et al. (1999) state in Boxall and Macky (2009) that they developed a conceptual model in which company or employer practices are connected to the involvement process, which in turn are linked to worker psychological states. They propose two paths: a cognitive path in which high-involvement procedures take advantage of employees' "skills and abilities" and a motivational approach that involves practices to boost employee satisfaction and other affective reactions (Vandenberg et al., 1999: 304 in Boxall and Macky, 2009).

Vandenberg et al. (1999) apply a higher-order latent variable factor to operationalise the four aspects of PIRK, a way of capturing the essence of a concept by identifying the common factors

that drive its various elements and naming it as involvement. This research adapts Vandenberg et al. (1999) of higher-order factors to analyse the construct for PIRK.

In this study, the CFA procedure will assess model fit, model reliability and validity, invariance testing, and common method bias. The thresholds that were employed are listed below:

Test, methods, and threshold adapted in the model

Test	Measures	Threshold/Range	Source
Identification	Correlation estimates between constructs	-1.0 - + 1.0	Hair et al. (2010)
Reliability	Construct Reliability (CR)	$\alpha > .70$	Hair et al. (2010)
Model fit	Chi-square	Low, "to support the model as representative of the data."	Hair et al. (2010, p 652)
	CMIN/DF (likelihood ratio)	<5.0	Schumacker and Lomax (2004)
	Comparative Fit Index (CFI)	>0.95	Hu and Bentler (1999)
	Standardised Root Mean Square (SRMR)	<0.9	Hu and Bentler (1999)
	Root Mean Square Error of Approximation (RMSEA)	<0.05	Hu and Bentler (1999)
	the p-value for a test of close fit (PClose)	>0.05	Hu and Bentler (1999)
	Adjusted Goodness of Fit Index (AGFI)	>0.80	Hu and Bentler (1999)
Validity	Average Variance Extracted (AVE) (<i>convergent validity</i>)	>0.5	Hu and Bentler (1999)
	Square Root of AVE (<i>discriminant validity</i>)	Should be more significant than any inter-factor correlation	Hair et al. (2010)
	MSV (maximum shared variance)	= or >0.5	Hair et al. (2010)
	MaxR (Maximal Reliability)	> 0.7	Hair et al. (2010)
Contribution of items to factors	Loadings	0.5 < good 0.7 < ideal	Hair et al. (2010)

Measurement invariance (chi-square tests)	Between-groups comparison of regression weights and critical ratios	There are no significant differences in the z-scores of at least one indication on each factor between groups.	
Common Methods Bias (CMB)	Harmon's One-Factor Test	<50 percent of variance is explained by any single factor	
	Common Latent Factor (CLF)	<0.2 reductions in path estimates	Podsakoff et al. (2003)
	Partial Correlation/addition of marker variable	Negligible or no differences when comparing structural parameters of the model containing the marker variable to those in the model without the marker variable.	Podsakoff et al. (2003)

Table 2: Test, Methods, and Threshold adapted in the model

(Sources: Hu & Bentler (1999), Podsakoff et al. (2003), Schumacker & Lomax (2004), Williams et al (2009), Hair et al. (2010).

AMOS will suggest correlating various error terms within the model. However, there is an argument between the merits and demerits of correlating error terms in SEM. Some critic against the correlating error terms only to pursue the model fit on modification indices as per statistical criteria, not considering any theoretical reasoning for the correlation. Hermida (2015) mentions that this threatens the researcher's ability to understand the phenomena under study, complicates the structure of the relationships in the model, and thereby constrains generalisability.

In one study, Landis, Edwards, and Cortina (2009) suggest that certain situations are permissible to conduct a correlation of error terms when it indicates that they share similar meanings. Perusing this rationalisation, this study will correlate certain error terms only if they show similar factors, further if the wording of such error term items comprises the same aims. Hence, the study will consider that the theoretical relationships are alike.

4.7 Structural Equation Method (SEM)

The Structural Equation Method is widely regarded as one of the most effective methods for evaluating models with direct and indirect effects. It has been one of the most popular techniques for testing theory-based research fields in human resources and organisational behaviour. Williams et al. (2009) state that SEM analyses have been famous for verifying theory-based hypotheses in management disciplines such as organisational behaviour and human resources over the last few decades. They are appealing because they make it possible to relate latent variables to indicators and test relationships. As suggested by Williams et al. (2009), SEM is commonly used on questionnaire data; hence, it can be considered an appropriate analytical method to test the relationships suggested in this study.

Figure 4 depicts the model that will be examined in this study. First, the measurement model was used to analyse the relationships among the latent variables and their measures (items). Then, the initial structural model was used to explore the links among the latent variables.

When it comes to mediational analysis, SEM has various advantages. SEM is a more powerful statistical tool for examining latent variables with many indicators (Holmbeck, 1997). SEM supports to control measurement errors in the model for relations among variables tested, as a result, measurement errors and underestimating of mediation effects are avoided (Baron & Kenny, 1986; Hoyle & Smith, 1994). Third factor is SEM enables the examination of a more complex model; it allows to analyse more than one mediator along with dependent variables at the same time (Hoyle & Smith, 1994). SEM illustrates a clear model that ensures all relevant paths are included and tested without being avoided (Baron & Kenny, 1986) as cited in Cheung & Lau (2008). Hence, the researcher chooses SEM to analyse the model as the researcher is looking at examining the moderating relationship of leadership styles between HIWP and employee resilience.

4.7.1 Structural Model

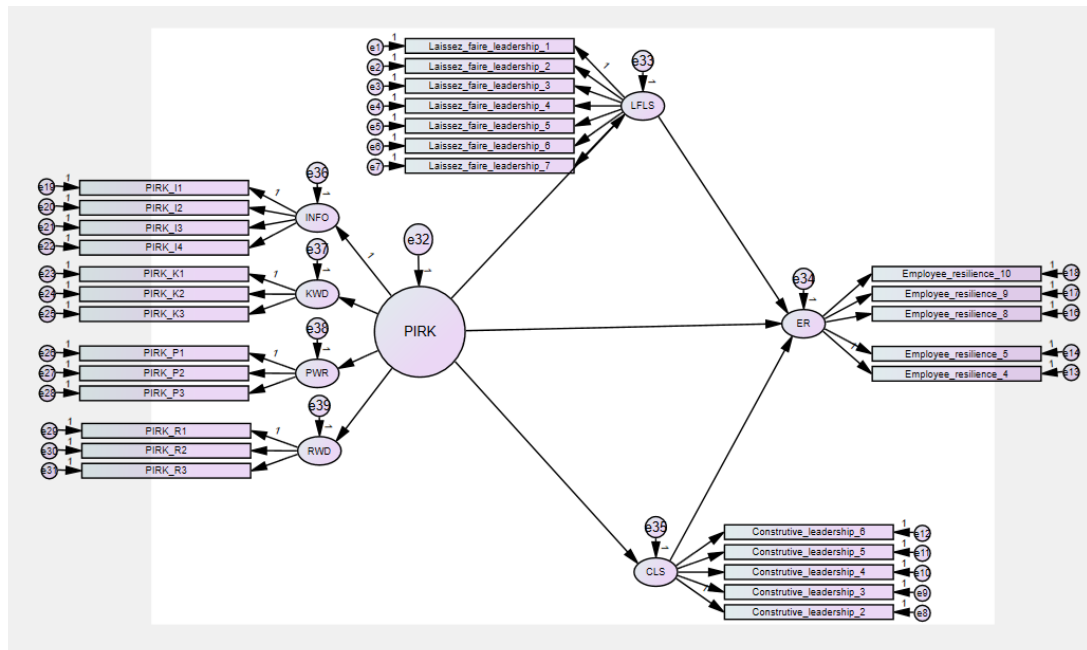


Figure 6: Structural Model with Hypotheses

4.8 Chapter Summary

The Chapter delves with why AMOS statistical tool was used to analyses the data. Further the chapter presents why confirmatory factor analysis (CFA), or measurement model and structural equation model is used to identifying the validity of the data set and identifying the model to analyse the hypothesis present in chapter 3.

CHAPTER 5

5.1 Introduction

This chapter presents the results of the data analysis using the SPSS and AMOS software programs. The descriptive data and decisions were made during an exploratory, and confirmatory factor analyses are discussed in this chapter and how they influenced the construction of the structural model. Finally, hypothesis test results are presented to derive the information to test the hypothesis defined in this research.

5.2 Descriptive statistics

Demographic factors of this study primarily represent the core public service. There is a significant difference that can be observed in relation to age, gender, tenure of employment, level of education, and scale of income. The proportion of women who participated in the survey is higher, representing 70% of public servants (PSA 2020).

The level of education illustrates a significant difference where participants had higher than average educational levels. The total participants had 75% post-high school certificates, and another 48% had bachelor's or higher education levels. This indicates twice the figure of New Zealand's working population compared to the previous year's surveys.

The length of the employment also represents 37.9% has been in the organization for 11 years. The figure slightly represented the data gathered in the SSC survey (2015), in which the average tenure was nine years. In addition, 58% percent of this sample earned a gross salary between \$40,000 to \$70,000 per annum, representing the average public sector salary of \$69,661 and the median of \$59,573.

Demographic comparisons: PSA survey vs SSC survey

Categories		Sample (%)	Public Service (%)
Age	Average	45 years	48 Years
Gender	Male	33%	27.7%
	Female	67%	72.3%
Highest Qualification	Secondary/high school	22%	19.2%
	Post-secondary	26%	28.6%
	University degree or equivalent	25%	24.6%
	Postgraduate	20%	24.0%

Table 3: Demographic comparisons: PSA survey vs SSC survey
(Source: PSA, 2016)

Refer appendix 2 has a more extensive breakdown of the sample's demographic characteristics.

The mean of the responses represents that both men and women had a positive outlook towards employee resilience. Similarly, each gender seems to be sharing equal “Power” the authority they have over their job in the organization. However, there is a low indication for the Laissez-faire Leadership style in both genders. Laissez-faire leadership is defined as the avoidance of making decisions, the lack of input from employees, and the failure to recognise or interfere in delicate situations (Bass & Avolio, 1990; Hauge, Skogstad, & Einarsen, 2007, as cited in PSA 2016). This would be an indication of the characteristics of the selected sample.

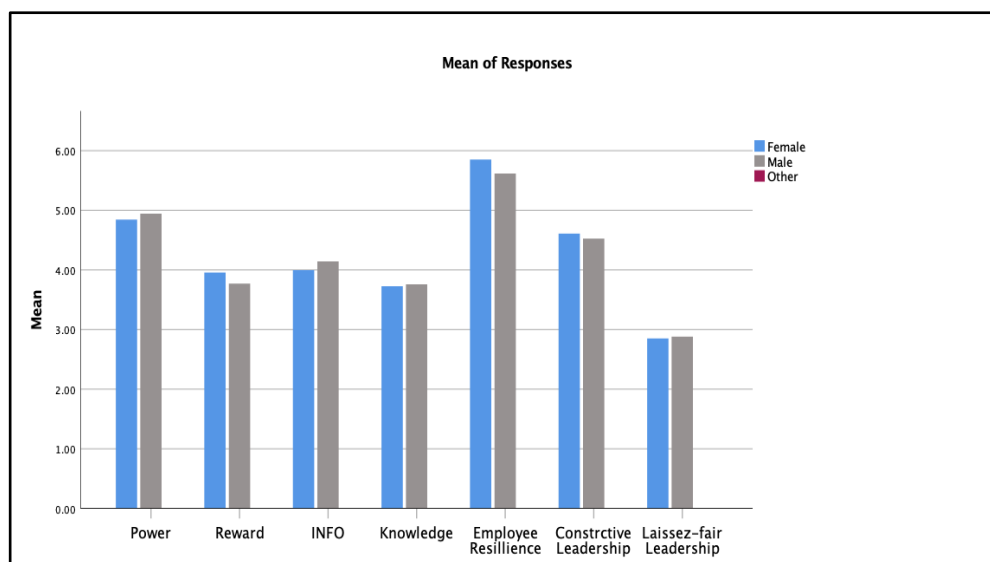


Figure 7: Demographic comparisons: Mean Responses of Survey

5.3 Confirmatory Factor Analysis.

The next phase in the scale development was to conduct Confirmatory Factor Analysis (CFA) on the seven factors identified through Exploratory Factor Analysis (EFA). AMOS was used to carry out the analysis (Albright & Park, 2009). The rationale for performing CFA is to comprehend. Further the factors gathered from EFA to psychometrically evaluate the measure equals to construct validity of the developed model (Harrington, 2009). CFA is “usually supported by past exploratory analyses” since it requires a strong theoretical and empirical foundation to begin with. The central goodness of fit Indices (GFI) used in the CFA was CFI, RMR, and RMSEA (Beauducel & Wittmann, 2005).

5.3.1 Factor loadings

According to Hair et al. (2010), the measurement relationship between constructs and items is influenced by the fundamental assessment of construct validity. The data set used in the research showed that item loadings and their related construct were 0.6 and, several constructs exceeded 0.7, which is considered optimal for factor loading.

Model fit measurement

Measure	Estimates	Threshold	Interpretation
CMIN	7639.411	-	
DF	384.000	-	
CMIN/DF	19.894	Between 1 and 3	Terrible
CFI	0.955	>0.95	Excellent
RMSEA	0.051	<0.06	Excellent
PCLOSE	1.000	>0.05	Excellent
SRMR	0.033	<0.08	Excellent

Table 4: Model Fit Measures for Measurement Model

(Source: Gaskin, J & Lim, J 2016).

The model chi-square abbreviated CMIN in AMOS, is a model error measure used to determine if the indicated covariance matrix of a given model differs from the observed covariance matrix, which the structured model completely describes. A good model match is shown by a lower and insignificant CMIN, implying no difference between these two models. The above table displays the results of the model fit. The interpretation of data threshold was set derived by Hu and Bentler (1999), cut-off criteria for fit indexes in covariance structural analysis by Gaskin and Lim (2016).

The minimal discrepancy divided by degrees of freedom is called CMIN/DF (relative chi-square). The model was rejected if the relative chi-square was larger than 3.00 (Ullman, 2001). However, Garson (2015) suggests providing the relative chi-square statistic labelled as CMIN/DF in AMOS denotes model errors for the terms and arrows. Despite the lack of a universally accepted cut-off score for model adequacy, the CMIN/DF range can be as high as 5 to be regarded as an acceptable model fit. Misfit in measurement error is measured by modification indices (MI), which indicate how well the hypothesised model fits the data (Joreskog & Sorborn, 1993). The addition of freely estimated parameters to the hypothesised model re-specifies the model. Because AMOS use a stepwise method for MI estimation, each time one model parameter was introduced, all MI values changed significantly from one tested parameterisation to the next. As a result, the model's first target for modification was the error covariance with the highest MI. Covariances represent the cross-loading of paired items with the largest MI value (Garson, 2015).

Garson (2015) also suggest if the chi-square was relatively large, which is to be expected for a large sample size, and it is frequently used in conjunction with other goodness-of-fit measurements as evidently described above. The sample size may have also influenced the CMIN/df: typically, a result of less than 3.0 indicates a good fit, while bigger results may be acceptable (Hair et al., 2010).

Several statistical features are examined and the traditional goodness of fit measurement to ensure that the model is more acceptable. Referring to the chi-square or CMIN/DF, the model does not meet the cut-off limitation for good model fit. A smaller random sample of 500 cases was used to test this possibility. The CMIN/DF of the model with a smaller sample becomes much lower in an acceptable range at 2.303, as shown in Table 7. This gives more assurance that the sample size will not affect the analysis, which provides more tolerance to disregard significant CMIN/DF statistics for the entire sample.

Therefore, the researcher conducted the goodness of model fit measure with an observation of 500 cases, which gave excellent scores for all the measures related to model fit. Hence, we can conclude that the CMIN/DF is higher in the main research because its observations size is more than 7000. Therefore, the measuring model's fit measures were considered to be satisfactory.

Model fit Measure for 500 Observations

Measure	Estimates	Threshold	Interpretation
CMIN	948.964	-	
DF	412.000	-	
CMIN/DF	2.303	Between 1 and 3	Excellent
CFI	0.948	>0.95	Acceptable
RMSEA	0.047	<0.06	Excellent
PCLOSE	0.051	>0.05	Excellent
SRMR	0.329	<0.08	Excellent

Table 5: Model fit Measure for 500 Observations
(Source: Gaskin, J & Lim, J 2016)

5.4 Validity Test

The test of validity tests the average variance extracted (AVE) and construct reliability (CR) for the seven constructs that attained appropriate levels. The model's convergent validity must be tested because it indicates the consistency of the factors and items that make up the measure (Guo et al., 2008). According to Carter (2016, p.734), When performed at the factor level (rather than between scales), discriminant validity examines the distinctness of factors within a measure to demonstrate that "the hypothesised separateness of subscales is actual." Variables are supposed to have a stronger relationship with their own subscale/factor than with any other component in the model.

AMOS suggested removing employee resilience-7 "I learn from mistakes at work and improve the way I do my job." This resulted in a lower score for the average variance extracted (AVE). The researcher decided to remove employee resilience- 7 as the researcher discovered similarities between two of the questions used in the survey that indicated the behavioural characteristics for employee resilience based on previous literature. Employee resilience -5 "I continually evaluate my performance and improve the way I work." This is similar to the behaviour of making use of mistakes as a teaching tool against Continuously reviewing one's performance to do it better (Naswall et al., 2015 & Kuntz et al., 2017).

Hence, the model achieved convergent validity. The AVE scores are all above 0.5, as indicated by the results. The reliability is achieved as demonstrated by all above 0.7. The factor structure's discriminant validity was also accomplished on the AVE's square root higher than the inter-factor relationship with the item (Hair et al., 2010).

Reliability and validity measures for measurement model

	CR	AVE	MSV	MaxR (H)	LFLS	CLS	INFO	ER	KNW	PWR	RWD
LFLS¹	0.901	0.574	0.479	0.929	0.757						
CLS²	0.923	0.707	0.479	0.928	-0.692	0.841					
INFO³	0.903	0.701	0.328	0.906	-0.474	0.572	0.837				
ER⁴	0.814	0.527	0.067	0.844	-0.113	0.238	0.258	0.726			
KNW⁵	0.963	0.898	0.234	0.977	-0.353	0.444	0.484	0.126	0.947		
PWR⁶	0.905	0.763	0.211	0.933	-0.363	0.430	0.459	0.181	0.426	0.873	
RWD⁷	0.860	0.673	0.307	0.864	-0.409	0.554	0.524	0.195	0.465	0.434	0.820

Table 6 : Reliability & Validity Measures for Measurement Model

(Source: Gaskin, J & Lim, J 2016)

¹ Laissez-faire Leadership Style

² Constrictive Leadership Style

³ Information

⁴ Employee Resilience

⁵ Knowledge

⁶ Power

⁷ Reward

Measurement Model

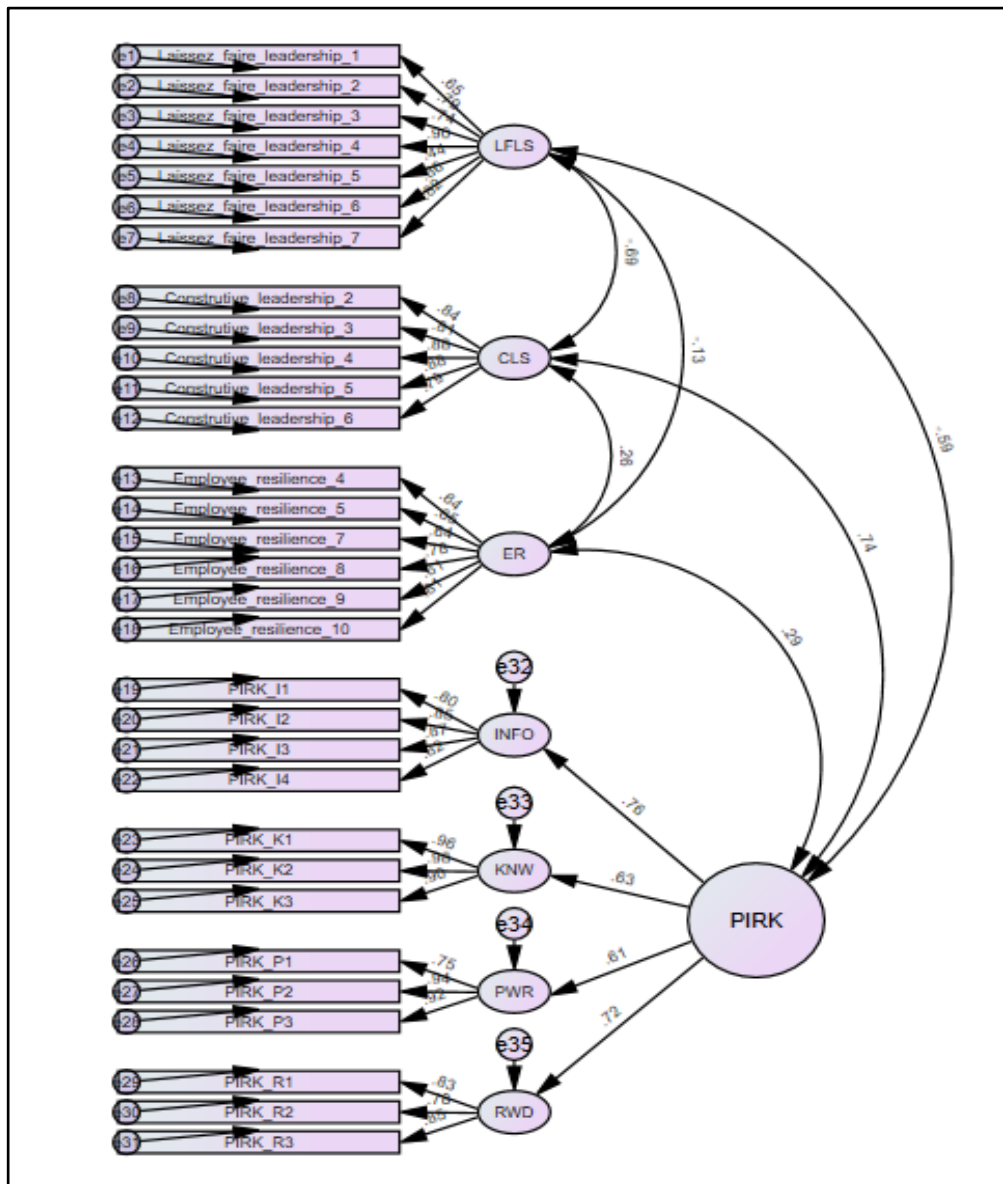


Figure 8: Measurement Model

5.6 Invariance

Invariance should be checked to guarantee that the measurement model exhibits identical representations of the same constructs when applied to diverse groups (Hair et al., 2010). A multi-group moderation test in AMOS was used to test for invariance of the sample size, commonly used in measurement models. The sample was randomly divided into two groups of roughly equal size. The critical ratios between parameters were determined by comparing the regression weights or factor loadings for both groups. The results revealed that the factor structure and loadings were sufficiently similar in both groups, with good model fit statistics in both situations. This was repeated with age by dividing the sample into two, one below 45 years and one above 45 years; the results had the same positive findings.

5.7 Common Method Bias (CMB)

According to Jakobsen and Jensen (2015), when researchers use the same data source to measure independent and dependent variables simultaneously, a technique known as common method bias (CMB) must be considered. Recognising CMB is critical when dealing with variables in a dataset that may have inflated (or deflated) correlations due to common biases (Spector, 2006). Employee resilience, for example, could have an overstated association with the independent variable of leadership styles. As a result, some scholars argue for the importance of preventative measures during the survey administration and design phase (Brannick, Chan, Conway, Lance, & Spector, 2010), while others claim the need for post-hoc statistical procedures to manage for it (Lindell & Whitney, 2001), and Spector (1987) state that still others argue that it is a “mythical” phenomenon.

Hence, steps were taken to address CMB by conducting post-hoc statistical analyses as the researcher had no control over changing the construct of the survey (Podsakoff et al., 2003). PIRK, laissez-faire leadership style, constrictive leadership style, and employee resilience were tested using Harman’s One-Factor Test items. The items for PIRK, laissez-faire leadership style, constrictive leadership style, and employee resilience were used in a Harman’s One-Factor Test. An unrotated EFA revealed seven factors with eigenvalues larger than 1.0, with the largest component accounting for 37.08 percent of the variation. When the EFA was confined to a single component, the test yielded a similar result (36.51 percent). Podsakoff et

al. (2003) note that the test is insensitive, and that the inclusion of multiple factors does not always imply that the measures are free of CMB, but this is less than the generally used 50% maximum cut-off value.

To adjust for the impacts of an unmeasured latent method factor, Podsakoff et al. (2003) propose allowing items to load on both their theoretical constructs and a Common Latent Factor (CLF) and comparing the relevance of structural characteristics with and without the CLF in the model. The CLF methodology has the benefit of eliminating the need to identify and measure the relevant element theoretically. The number of standardised regression weights or factor loadings between the constructs and some of their items dropped by more than 0.2 when a CLF was added in the measurement model (suggesting a lot of shared variances).

This might be a result of a measurement error. Putting the validity of the conclusions drawn from the relationships between data in jeopardy. As described by Podsakoff et al. (2003), a partial correlation between variables is another CMB test used in the model. This necessitated the addition of a marker variable that was not theoretically predicted to have a relationship with any of the other variables in the model, allowing any relationships found in the model to be attributed to CMB.

Procedures that may help to decrease the likelihood of CMB were also implemented in the initial survey design. To distinguish between questions about independent factors (PIRK) and dependent variable (Employee resilience) several more questions were employed (Podsakoff, MacKenzie, & Podsakoff, 2012). Boxall and Macky (2007) mentioned that workers are the best people to ask about their own experiences with HRM at work; therefore, surveying them is a smart option. Respondents were also given confidentiality and privacy of their responses, which may encourage them not to be reluctant and change their responses artificially (Podsakoff et al., 2003). As a result, it was determined that CMB was implausible based on the results of the experiments and the survey structure.

The standardised regression weights/component loadings for the measurement model were calculated using a bootstrap study of 10,000 samples to provide 95 percent confidence intervals. Appendix 4 has the complete list of both bootstrapped and un-bootstrapped results of the measurement model.

Factor Loading for Measurement model – both bootstrapped and un-bootstrapped

Parameter		Un- Bootstrapped	Bootstrapped Results					
		Estimate	Mean	SE	Lower	Upper	Bias	P
Power	PIRK	.578	.578	.011	.556	.600	.000	.000
Information	PIRK	.728	.728	.009	.709	.745	.000	.000
Reward	PIRK	.681	.681	.011	.659	.702	.000	.000
Knowledge	PIRK	.590	.590	.011	.568	.610	.000	.000
CLS	CLS	.840	.840	.005	.829	.850	.000	.000
LFLS	LFLS	.745	.745	.007	.728	.760	.000	.000
ER	ER	.690	.690	.010	.670	.710	.000	.000

Table 7 : Factor Loading for Measurement model Summary

Conclusions

A total of seven theoretically and statistically valid constructs were created by validating the measurement model using CFA techniques on a sample of 7326. This set of seven constructs can be utilised to validate the structural model's relationship between HIWP (as measured by PIRK) and employee resilience, leadership styles as stated in Hypothesis 1,2, &3.

5.8 Structural equation modelling

The majority of the model fit metrics were inside the range, indicating that a large sample size was well-fit. The model fit metrics generated during the measurement model were not different from the model fit measures derived during the structural model. Bollen and Diamantopoulos (2017) discuss the formative versus reflective models. Although the reflective model draws and utilities higher-order factors, the formative measurement theory assumes that the measured variable causes a construct.

Despite the fact that a formative measurement theory requires that measured variables build a construct, this model uses higher-order elements. Hence it is a reflecting model. The components of PIRK, power, information, reward, and knowledge, are operating as indicators rather than causes. On the other hand, the constrictive leadership style, Laissez-faire leadership style, and employee resilience causes a construct and is considered a reflective model. Three different alternative models were compared to the suggested model: First-order PIRK to higher-order PIRK Employee resilience; Higher order to first order constructive leadership style and first-order employee resilience: Higher-order to first-order Laissez-faire leadership style to first order employee resilience. This is presented in the following figure 5.

5.81 Comparison of different suggesting models.

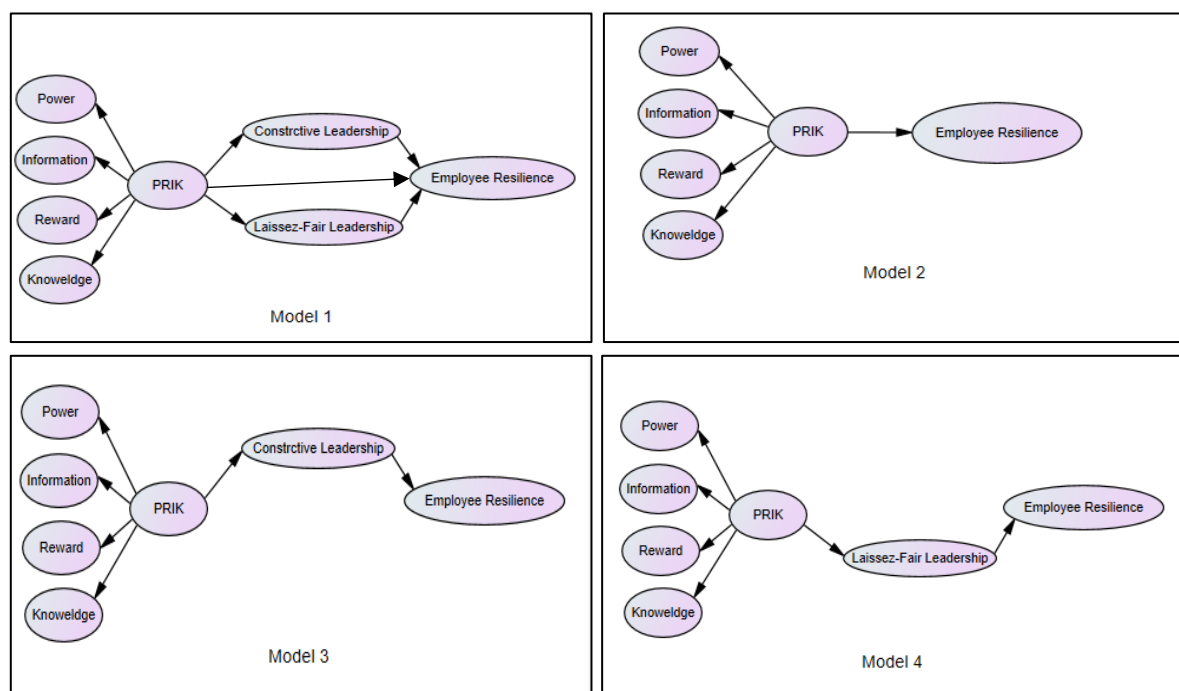


Figure 9: Comparison of Different Structural Models

Comparison of different structural models

Model	Chi-square	DF	CIMN/DF	CFI	RMSEA	SMAR	PCLOSE
1 – Model	8373.847	396	21.146	0.951	0.049	0.052	1.000
2 – Model	3422.025	147	23.279	0.966	0.055	0.041	0.000
3 – Model	6426.690	246	26.125	0.952	0.059	0.045	0.000
4 – Model	5252.188	293	17.926	0.962	0.048	0.055	0.997

Table 8: Comparison of Different Structural Models

In terms of model fit, the initially proposed model fit for the goodness of fit scores. Hence it was adopted in the subsequent analyses. It also fits best with Vandenberg et al. (1999) theory of higher-order factors for both PIRK, for Employee resilience Wang et al., (2014) and leadership styles MacKenzie et al. (2001) were specified as higher-order factors as their dimensions and scale items represented them.

Comparing the model 1 and 2 (that is without the leadership styles) denotes that the presence of leadership styles such as constructive and laissez-faire leadership styles directly impacts employee resilience.

Laissez-faire leaders avoid being involved in decision-making, being unavailable when needed, and delaying responses to urgent questions. As a result, such a leader appears to have a lower likelihood of instilling approach-coping behaviour (and thus resilience) in his or her subordinates. As per the results of the research conducted by Dumdum et al. (2002), mentioned in (Harland, Harrison et al. 2005, Caniëls & Hatak 2019) reported laissez-faire leadership behaviours is likely to be positively correlated with resilience. In conclusion, H1 demonstrates that CSL and LFLS styles are the mediating component in the relationship between resilience and HIWP, as expected by the researcher.

Effect of leadership styles

Model	Path			Estimate	Standard Error	P-Value
Model 1 (With Leadership styles)	PIRK	--->	Constrictive Leadership Style	0.830	0.25	***
	Constrictive Leadership Style	--->	Employee Resilience	0.069	0.13	***
	PIRK	--->	Laissez-Faire Leadership Style	-0.709	0.20	***
	Laissez-Faire Leadership Style	--->	Employee Resilience	0.193	0.12	***
	PIRK	--->	Employee Resilience	0.386	0.25	***
Model 2 (Without Leadership Styles)	PIRK	--->	Employee Resilience	0.300	0.09	***

Table 9: Effect of Leadership styles

Given the sample size, bootstrapping was used. When the sample size approaches 400, the technique becomes more sensitive, and goodness-of-fit metrics may imply poor fit. Hair et al. (2010) mentions that utilising large samples could affect a significant result. Bootstrap analysis of 10,000 samples was utilised to acquire 95% confidence intervals for the Factor loading or standardised regression weights. Appendix 4 presents the full list of bootstrap results.

Structural model

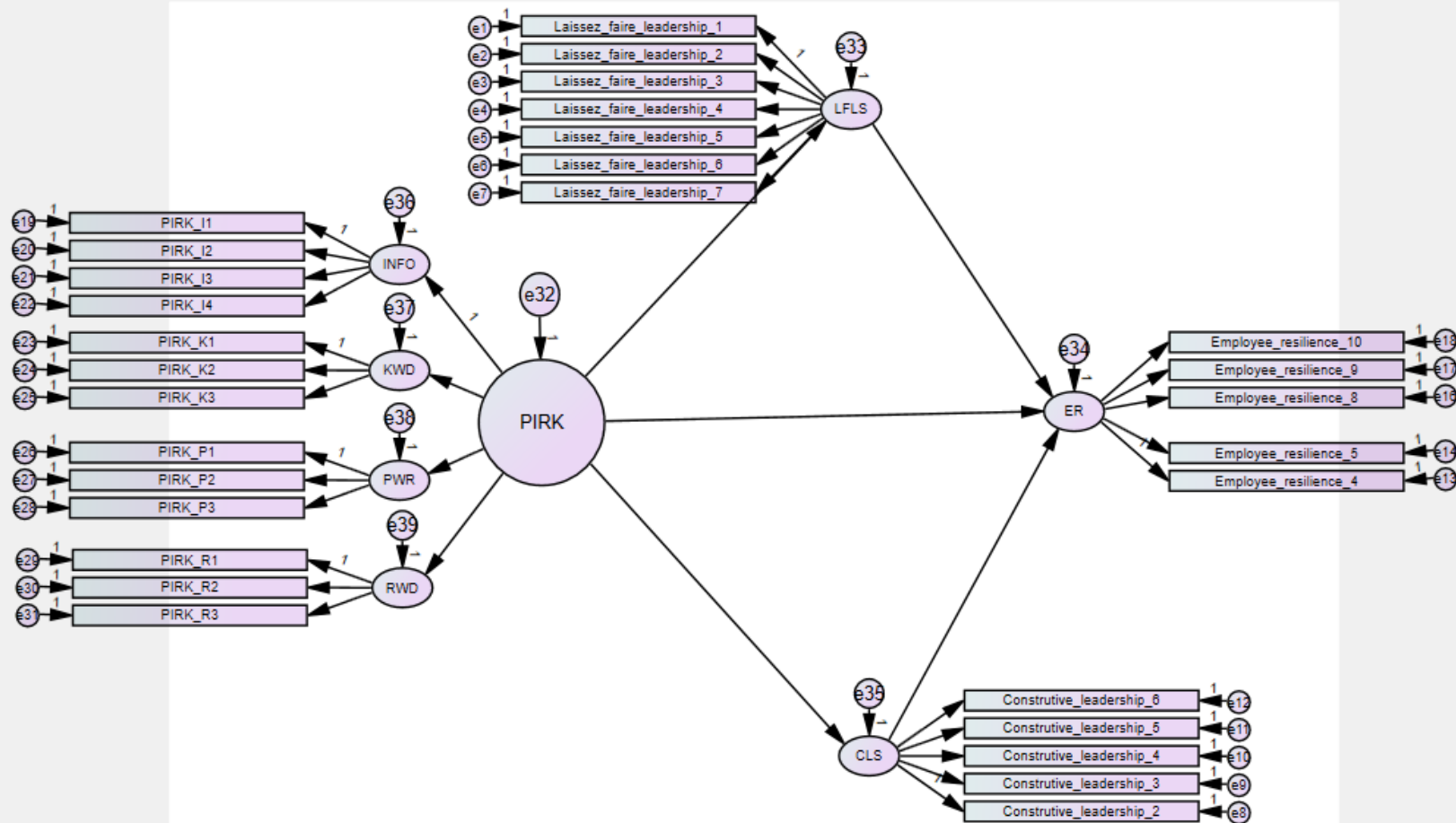


Figure 10: Structural Model

5.9 Major Findings

The below table displays the AMOS output of the unstandardized and standardized regression coefficients. The table provides an overview of the unstandardized estimate, its standard error. The value associated with the “P-value” (Probability value) links to the null hypothesis that the test is zero, as shown in the below table. All of the regression coefficients in the model are significantly different from zero beyond the .01 level

Standard Regression Weight for Structural Model 1 – both bootstrapped and un-bootstrapped.

Parameter			Un- bootstrap ped	Bootstrapped Results					
			Estimate	S.E.	Mean	Lower	Upper	Bias	P
PIRK	->	LFLS	-.709	.011	-.709	-.730	-.688	.000	.000
PIRK	->	CLS	.829	.008	.829	.813	.844	.000	.000
LFLS	->	ER	.193	.024	.193	.148	.240	.000	.000
CLS	->	ER	.069	.033	.068	.001	.132	.000	.048
PIRK	->	ER	.386	.040	.386	.309	.469	.001	.000

Table 10: Standard Regression Weight for Structural Model 1

Each unstandardized regression coefficient represents the amount of change in the dependent or mediating variable for each one-unit change in the variable predicting it.

The path from PIRK to LFLS, predicts that if an organisation implements HIWP, PIRK increases by one unit on its scale, leads to a .709 decrease in Laissez-faire leadership style. Conversely, the path from PIRK to CLS predicts that if an organisation implements HIWP so that PIRK increases by one unit on its scale, there would, on average, be a net increase in CLS of .829.

The path from LFLS to E.R. predicts that, if the leadership style under which the employee works is one unit higher than that under which the typical (or average) public sector employee works, the employee’s resilience would be .193 more than that of the average NZ public sector employee. In the contrary, the path from CLS to ER predicts that, if the leadership style under which the employee works is one unit higher than that under which the typical (or average) public sector employee works, the employee’s resilience would be .069 less than that of the average NZ public sector employee.

The total effect (i.e., both direct and indirect effects) of PIRK on ER is 0.386, which indicates that, if PIRK increases by one unit on its scale and allowed LFLS and CLS to vary as they

naturally would (i.e., by holding both variables constant), there would be a net increase in E.R. of .386.

In general, the model data illustrate the positive impact of CLS suggests that the presence of CLS enhances the effects of HIWP. The opposite, though, appears to be the case for LFLS, which seems to mitigate or even counter the positive direct impact of HIWP on ER.

A noteworthy feature of the model is that it shows a negative relationship between PIRK and LFLS; however, there is a positive relationship between LFLS and ER. Abele, Spurk et al. (2012) mention that Laissez-faire leadership styles promote bullying/ mobbing, which are not factors for employee resilience. Rather than supporting an employee attempting to reach for their potential, individuals and groups who bully and mob others cause them social harm, stress, and the ability to be resilient. Although many researchers discuss about the negative relationship associated with LFLS and ER, this research indicates a positive reaction. This sheds light on the theoretical background that points out Laissez -faire leadership styles bring out the best in employees by encouraging them to be independent and confident, which results in their resilience to cope with the situation.

The path from PIRK to CLS predicts that if an organisation implements HIWP so that PIRK increases by one unit on its scale, there would, on average, be a net increase in CLS of .829. The path from CLS to ER predicts that, if the leadership style under which the employee works is one unit higher than that under which the typical (or average) public sector employee works, the employee's resilience would be .069 less than that of the average NZ public sector employee.

On the other hand, HIWP to CLS presents a highly positive relationship, this could be because of the characteristics of a constructive leaders. By nature, constructive leaders are proactive continuously encourage their staff to act in the organisation's best interests by supporting its goals, objectives, strategies, and tasks which involves with high-involvement work systems for the betterment of the organisation. However, the direct association between CLS and ER illustrates a negative relationship. Even though the previous research findings suggest a positive outcome of constructive leadership behaviour, the negative outcome may depict otherwise.

This behavioural pattern of Constructive leaders encourages employees to think creatively and look at challenges as opportunities for improvement. Luthans et al. (2006) claim that, as the impact of positivity in the workplace becomes more widely recognised, it is critical to

understand what factors influence employee resilience. Constrictive leaders pay attention to emotional aspects, consider employee requirements, and provide social support. When faced with adversity, resilient employees can successfully cope, adapt, and recover when the emotional support is received by their constructive leaders. Emotional support increases a wide range of personal resources and, as a result, improves work engagement, which results in employee resilience.

Standard Regression Weight for Structural Model 1 – both bootstrapped and un-bootstrapped.

Parameter			Un-bootstrapped	Bootstrapped Results					
			Estimate	S.E.	Mean	Lower	Upper	Bias	P
INFO	<-	PIRK	.728	.009	.728	.709	.745	.000	.000
KNW	<-	PIRK	.590	.011	.590	.568	.610	.000	.000
PWR	<-	PIRK	.578	.011	.578	.556	.600	.000	.000
RWD	<-	PIRK	.681	.011	.681	.659	.702	.000	.000

Table 11: Standard Regression Weight for Structural Model 1

The path between PIRK to information, as shown in the above table, predicts if an organization implements HIWP so that the information increase by one unit on its scale, and there would be an average increase of .728 in Information.

The path between PIRK to knowledge, as shown in the above table, predicts if an organization implements HIWP so that the knowledge increase by one unit on its scale, and there would be an average increase of .590 on employee knowledge.

The path between PIRK to Power, as shown in the above table, predict if an organization implements HIWP so that the Power increase by one unit on its scale, and there would be an average increase of .578 on autonomy.

As shown in the above table, the path between PIRK to Reward predicts if an organisation implements HIWP so that the Reward increases by one unit on its scale and there would be an average increase of .681 on reward and recognition.

Power related to the degree of autonomy experienced by employees in the public sector explains how self-directed they are in their work. This path direction indicates that the responses were relatively positive as they agreed they had the freedom and authority to do their job. Path direction between HIWP and Information shows that .728 believe they are aware of the goals,

objectives, policies, procedures, and reasons for certain decisions made in the company. This is what is referred to as information. This also includes how the managers are informed about the general feeling among the employees of their opinions, issues, needs, and emotions. The estimates for reward also indicate a positive association with every one unit increase of PIRK increase 64% in rewards. Reward involves how well the performance of employees is linked to the reward and recognition process of the public sector of New Zealand. Even though the results depict a positive relationship between PIRK and Reward, the overall PSA survey points out the results were weak, defining that the employee is not rewarded for their good performance.

Overall, the above table shows that the PIRK attributes are positively related. For example, employees have the authority and freedom to perform their jobs. However, the respondents do not have access to top management and reward and recognition for good performance. This reflects upon Vandenberg, Richardson et al. (1999) findings that PIRK attributes must be equally distributed among all levels of the organisation to enhance its maximum potential. Moreover, this is also evident with the conclusion from Boxall and Macky (2010) that New Zealand workers experience a relatively high sense of empowerment in the workplace; information, rewards, and knowledge were less evident.

Unstandardised Estimates of Structural Model 1.

Parameter			Unstandardized Estimate
LFLS	<-	PIRK	-0.78
CLS	<-	PIRK	1.18
ER	<-	LFLS	0.10
ER	<-	CLS	0.03
ER	<-	PIRK	0.23
INFO	<-	PIRK	1.00
KNW	<-	PIRK	0.98
PWR	<-	PIRK	0.68
RWD	<-	PIRK	1.02

Table 12 :Unstandardized Estimates of Structural Model 1.

Standard regression weight for Structural Model 2 – both bootstrapped and un-bootstrapped.

Parameter			Un-bootstrapped	Bootstrapped Results					
			Estimate	S.E.	Mean	Lower	Upper	Bias	P
ER	<-	PIRK	.299	0.15	.299	.270	.328	.000	.000
INFO	<-	PIRK	.746	0.10	.746	.727	.765	.000	.000
KNW	<-	PIRK	.653	0.10	.653	.633	.674	.000	.000
PWR	<-	PIRK	.627	0.11	.627	.606	.648	.000	.000
RWD	<-	PIRK	.700	0.12	.700	.677	.723	.000	.000

Table 13: Standard Regression Weight for Structural Model 2

The direct path from PIRK to ER predicts that if an organisation were to implement HIWP no more and no less so than the typical (or average) NZ public sector organisation (i.e., holding P, I, R, and K constant at their respective means) and the leadership style under which the employee worked was no more and no less constructive and no more and no less laissez-faire than the typical or average NZ public sector employee works (i.e., holding CLS and LFLS both constant at their respective means across the whole sample), the employee's resilience would be 29.9 % higher than the mean.

As shown, the direct link between HIWP and ER has a favourable influence. Employee resilience, according to Wang et al. (2014), is a collection of talents and characteristics that may be developed via proper HR interventions. By providing relevant information, skills, incentives, and participation to the employee support to increase adaption of employees to the work atmosphere which enables the capacity to be resilient (Kling,1995).

5.10 Chapter Summary

In conclusion, this chapter presented the results of the survey related to this research. The final survey aimed at identifying the impacts of human resource practices associated with High involvement work practice (PIRK) on leadership styles and employee resilience in the New Zealand public service. In this section, different statistical test using AMOS was conducted to evaluate the models general model fit, validity and common method biases. Finally, the researcher was able to achieve the expected H1 and H2.

CHAPTER 6

6.1 Discussion

This study uses large-scale data derived from the PSA survey developed by researchers from Victoria University of Wellington's School of Management's Centre for Labour, Employment and work (CLEW) in conjunction with the New Zealand Public Service Association. It assesses the impact of the use of Lawler's (1986) four dimensions of high involvement work practices (HIWP) – workplace power (P), information (I), reward(R), and knowledge (K) – on employee resilience, as mediated by two distinct leadership styles – constructive (CLS) and laissez-faire (LFLS). Ethical approval for this research was attained from the Human Ethics Committee at Victoria University of Wellington in March of 2016 (Plimmer et al. 2016).

The study extensively contributed to the broad theory and examined the relationship among HIWP, Leadership styles and employee resilience to the literature added by authors like Lawler (1986), Vandenberg et al. (1999), Luthans (2010), Wang et al. (2014) and Bardoel et al. (2014). The model's relative strength derived a higher- Order Factors for PIRK attributes which highlighted involvement. Generally, the survey represents a sample from the public sector who are well-educated, well- experienced and frequently performed clerical/administrative or professional duties. The findings indicated that they are resilient with their job.

Most noteworthy among the findings of the quantitative analysis suggests the significance of high involvement work practices and leadership styles on employees' resilience. Further, it identified and emphasised the influence of leadership on employee resilience how the Leaders' behaviours that can harm employee resilience were also identified in the study.

6.2 Hypotheses

H1: Contractive Leadership style and Laissez-faire leadership will mediate the relationship between HIWP and Employee resilience

This hypothesis was supported. The model explores the link between a higher-order latent variable covering the combined effect of the PIRK attributes and a first-order latent variable measuring employee resilience (Lawler, 1986, Vandenberg et al., 1999, Boxall & Macky, 2009). The presence of Leadership styles increase' HIWP's direct impact on the first-order components of employee resilience.

This reflects on the previous research findings on the relationship between resilience and the positive effect of Constructive Leadership styles Ahearne et al., 2005; Dierendonck and Dijkstra, 2012; Mills and Ungson, 2003; Scott, Hui, and Elizabeth, 2013; Seibert, Wang, and Courtright, 2011 as cited in Nguyen et al. (2016). Empowered leaders help their subordinates build self-management abilities by delegating authority, participatory decision-making, assuring meaningful work, showing confidence to achieve outcomes and supportiveness. This pattern of leader's behaviour encourages and empower subordinates to involve in the organization by developing skill, ability and networking, which are the aspects of employee resilience. The positive association of HIWP on leadership is therefore connected to employee resilience, as supported in the research published by Nguyen et al. (2016).

Bass (1987) states in Wang, Li et al. (2017) that individuals with a high level of positive affect are more likely to be engaged at work. People who are extremely resilient cope better with stress and bad experiences and hence have higher levels of positive affect. Leadership is an important environmental aspect that can influence employee resilience at work. Constrictive Leadership also has a strong emotional component. Hence, constructive Leadership is critical for promoting good well-being, according to positive psychology and positive organisational behaviour studies. By responding to and supporting their employee's needs and assisting them in coping with pressures, constructive leaders may provoke emotions of happiness, excitement and resilience in their followers (Bono et al., 2007 as cited in Wang, Li et al. 2017).

Afore mentioned leadership is solely associated with positive effects of leadership traits and their positive outcomes which are more often discuss. In contrast to the constructive leadership style, laissez-faire leadership style is associated with negative effects. However, the analysis support that Laissez -faire leadership style fosters employee resilience the most, with a positive

degree of significance between Laissez -faire leadership style and employee resilience. This reflects the theory of Thomas and Velthouse, (1990) describe that laissez-faire leadership style deals with autonomy and the autonomous method that encourages self-leadership in employees that support the employees to stand on their own to cope of the situation. Further, Theodosiou and Katsikea (2007) as cited in Yan (2015) that this leadership style increases the level of authority an employee possesses in their job by increasing level of independence, thereby indicating the confidence the leader has over their subordinates. Hence, employee thrive to their best under LFLS.

The survey findings suggest moderate levels of P, I, R and K in the New Zealand public sector. It indicates that employee is generally resilience in their workplace. As the employees are aware of their job duties and have the authority/power to make decisions in their role and have the knowledge to perform the job. And they are monetarily rewarded for their work. These are factors that correlate for a person to build resilience qualities.

They show that, when mediated by LFLS, the (total) relationship between PIRK on ER is negative. Nevertheless, this isn't because of the (direct) relationship between LFLS and ER, as one might assume. Rather, this is because the relationship between PIRK and LFLS is negative. This suggests that, when employees are given the appropriate combination and amount of PIRK (the four key elements that promote employee involvement), whatever positive impact LFLS by itself has on ER is effectively reversed, as is the positive direct impact of PIRK itself on ER.

One explanation for this could be that employee involvement is, in many respects, antithetical to LFLS. That is, while they can be supportive of their subordinates, laissez-faire leaders are themselves typically uninvolved, which often results in a lack of cohesiveness.

Moreover, although many employees may welcome the autonomy LFLS affords them, this leadership style is also associated with increased employee disengagement, which contributes to low morale, lack of commitment, and manifesting in high turnover, absenteeism, and work stoppage. This contrasts with participative/democratic leadership style, which is characterized by collective decision-making and encourages active involvement on the part of all members or employees in that process (Avolio, et al, 1999; Nayad, 2011; Mullins, 2013).

H2: HIWP will have a positive effect on employee resilience and H3: HIWP will have a positive effect on constructive and laissez-faire Leadership Style

Based on the work of Vandenberg, Richardson, and Eastman (1999) and Langford (2009), the model investigates the relationship between a second-order latent variable encompassing the combined effect of the HIWP attributes on a first-order latent variable measuring employee resilience.

This hypothesis was supported. The research data indicated a favourable direct relationship between HIWP and employee resilience, as reflected by Wang et al. (2014) and Bardoel et al. (2014). They claim that human resource practice has the potential to enhance employee resilience. The effect of higher-order factors HIWP and Employee resilience is similar to Cooper et al.'s (2014) model between HPWS and employee resilience. Both HIWP and HPWS are interconnected through HR practices designed and used to enhance the employee effectiveness in the organization. The impact of HIWP on employee resilience reflects the interrelated effects of various HRM practices that have the opportunity to enhance employee resilience through enhanced leadership styles methods and employee involvement.

The positive effect of employee resilience for HIWP indicates that New Zealand's public sector workforce has the ability and the qualities that can be cultivated for higher levels of resilience. This supports the findings of past research undertaken by Wang et al. (2014), Cooper et al. (2014), as cited in Cooke, Cooper et al. (2019) extend the mode of JD-R to include personal resources such as self-efficacy, which supports a person's ability to recover from an adverse situation results in employee resilience. Furthermore, the literature suggests HIWP increases employee knowledge, skills, abilities and dedication by offering the information and discretion necessary to use these capabilities in their occupations effectively. (Preuss, 2003).

CHAPTER 7

7.1 Limitation of the study.

The study investigated the relationship of a high involvement work systems via power, information, reward and knowledge, and employee resilience mediated by leadership styles such as constructive and Laissez-fair styles. In this section, the researcher has identified several limitations which provide the potential for future research, contribution to future research and conclusion.

This study contains several potential limitations. First, the survey's cross-sectional nature restricts causal findings. Secondly, single-source data is the possibility of common method variance (Podsakoff et al., 2012). Where the respondents understanding of their company employment policies could be biased (Boxall et al. 2015) and that some responses to the survey may have been influenced as a result.

Compared to average women in the public sector, the sample used in this study had a more significant percentage of women, and participants had lower average salaries and higher employment lengths. More than one-third of those respondents (38%) have worked for the same company for 11 years or more. Although the majority of employees are in non-management jobs, roughly 13% are team leaders or managers. This might be a result of the sample selection delimitations. These factors might have hindered some potential significant output for research analysis. Because of the over-representation of women in the public sector, certain men's perspectives may be overlooked. The overall sample consists of 54.7% of New Zealand European and only 10.7% Maori employees, and the sample consisted of only 4% of Asians, 7% other Europeans. The sample's Asian and other ethnicity representation is insufficient to determine the generalizability of the sample's findings.

Only 25% of the overall sample consists of employees working in clerical and administrative tasks, with the rest working in various positions. Hence, participants worked in a wide range of professions and levels within the public sector. Thus the findings are not restricted to one job or occupation within the government sector. Public service departments employ 44 percent of participants, whereas district health boards employ 26 percent. Others work for local governments, state agencies, and community public service organizations.

There may also be limitations to extending these findings to the rest of New Zealand's working population, which is often younger, lower-paid, less educated, and ethnically diverse than the public sector (Statistics New Zealand, 2015). Furthermore, the public sector has a more significant union density than the private sector. Ryall and Blumenfeld (2016) state that Union membership in the New Zealand public sector was 60% in 2016, higher than in Australia, the United Kingdom, and the United States, and significantly higher than the national density of 17.7%. Furthermore, as stated previously country's culture may have an impact on worker's experiences. These characteristics may restrict generalizability within the New Zealand workforce or across different national contexts.

This study analyses data from a 2016 survey conducted by Victoria University and the PSA and focuses on the association between HIWP and employee resilience using a subset of the survey's data. When researchers use existing data, they might ask "new questions from old data" (O'Leary, 2014, p. 255). Further, stated by Vandenberg in Hurley et al. (1997) that the validity and relevance of this work have already been established by PSA practitioners and the University's administrators. Therefore, "the factors are linked to known conceptual bases." This allows the research to access substantial sample sizes and participant groups (McCall et al., 1991), and it is focused on measures validated previously.

However, there are a few disadvantages of using an existing set of data. As O'Leary (2014) states, the researcher cannot make decisions, explore data as it is received, adjust the strategy, or ask follow-up questions to obtain a better understanding of the research topic. Furthermore, someone else developed ideas on how to manage and analyse missing data and how to account for biases. The original survey addressed a wide range of topics from psychological outcomes of workers' job experiences to organisational performance and capabilities. Therefore, the focus has been on a range of issues, and the depth given for this research area is limited. Hence it can be noted that the information received is limited and influenced by other factors. As previously stated, working with existing data prevents the researcher from refining measures and collecting new data, which could have helped address some of the issues that arose with the assessment. As a result, the researcher had to eliminate the job satisfaction and organisational commitment constructs from the analysis to obtain a more valid model.

Hair et al. (2010) stated that it was challenging to obtain the model to fit because of the sample size. Therefore, he proposes that more sophisticated models with large samples be evaluated using different Goodness-of-Fit levels than those previously regarded acceptable. This, impose

greater accountability on the researcher to avoid drawing inaccurate data in their analysis. Hair et al. (2010) also points out that decreasing the sample selection to increase model fit can lead to a loss of representativeness and generalizability.

For the analysis of complex relationships, the SPSS AMOS module also demonstrated its limitations. It was challenging to evaluate intersectionality in a meaningful way, for example, because the program would not allow groups smaller than a specific size. But, for example, being able to examine the impacts of both employment length and gender at the same time provided some important details of Employee resiliency and women's experiences with HIWP.

Finally, Jakobsen and Jensen (2015) point out that, regardless of the survey results, widespread use in public management research can lead to common method bias. They further highlight the influence of rating on attitude, perception, trust, and commitment due to social desirability. Although Podsakoff et al. (2003) Although they acknowledge that some of these concerns are valid, they also point out that social desirability bias is less prevalent in paper or computer surveys than in one-on-one interviews.

Furthermore, because the data analysis was limited to a subset of the overall population, the author believes that the findings should be repeated across the entire population to allow for broader generalizability. The research was conducted in a public sector setting, limiting the generalizability of the results to that setting and limiting the findings to apply in the other sectors. Additionally, the final survey had a relatively large sample size, and the characteristics of the respondents were typical of the whole public sector.

Given that the data was collected in 2016, the data set might be a little outdated. During the last five years, the number of factors could have changed related to the age of employees work in the organization and Ethnicity, giving the number of rising immigrants to New Zealand. Further, the findings could have impacted if the data was gathered in the year 2020 with the covid outbreak, which could have given insight as to how employees could bounce back at their workplace after the prolonged lockdown, whether they would prefer a work environment before covid-19 or preferring a more flexible working environment or Felix working hours.

7.2 Contribution for Future Research

Despite the study offering insights into the experience of employees and the working environment of the public services, future studies can further expand into the private sector and the methods used. More specifically, expanding the survey to the private sector will provide a broader understanding of and a better comparison of the employee experiences and their work environments that support them to be resilient.

The survey sample was underrepresented of employees from Asian and Pasifika cultures. It is advised to use a more comprehensive sampling technique to enlarge the sample representative's scope, which will support evaluating the data and finding the relationship with the variables. Future researchers may want to investigate a smaller sample size, if appropriate, to avoid some of the problems that come with big samples, such as software restrictions and difficulty reaching model fit measures. Further, the future researcher might want to distribute the survey only among organisations more relevant to the study and not to distribute to a general sector so that the research could be focused on one single industry. The large sample size makes it difficult to categorise managers and staff employees. Some managers may have followers, others may have the title but not followers. These factors could be identified during the survey design stage to capture those changes in the data set.

Future researchers may gather information from a number of sources on current practices and how they are received. The researcher must carefully note other factors that influence employee resilience or HIWP, such as job satisfaction and organisational commitment, work engagement, proactive leadership styles. Also, much care should be undertaken during the wording of the questions of Job satisfaction and motivation to prevent conflating with other constructs of the study. The researcher must focus on conducting interviews or focus groups discussions, as data obtained through focus groups and interviews might validate the statistical results received for the survey. Furthermore, performing longitudinal research, or at the very least periodical investigations of HIWP in the sector population, could be helpful in tracking changes over time.

The 2016 PSA survey provide details related to the time. However, over the last five years, changes that have occurred to Government policies (such as COVID-19 response, tax changes, and minimum salary increase) could make it not relevant to today's situation with the rapid economic changes occurring around the world.

Future researchers may include the control variables such as age, gender, ethnicity, tenure, and level of education with connection to income and job grade, providing a broader scope of effects for the study. As discussed during the study, most of the workforce consists of female workers and categorised under lower-income earners, which suggest the disparity of gender pay in the public sector. The ageing population is reflected in the sample. Hence, the senior manager, HR practitioner must focus on how they could balance the composition as this could impact HIWP and employee resilience in the long run and how to effectively manage future recruitment and retention in light of these changes.

The study contributed toward several related fields of Human resources management, leadership, Positive psychology and organisational behaviour. Beyond the focus on transformational leadership's role in increasing employee work engagement, future research should look at the resilience in mediating the between transformational leadership and work engagement during the COVID-19 pandemic. Work engagement has been supported to be influenced by proactive personalities. Future research should look at the moderating influence of proactive personality on the support of family and friends and the facilitating conditions for work engagement. Another element to investigate in future research is career adaptability, which is another form of resilience that helps individuals maintain their stability in the face of hardship. When employees are empowered, they devote to their tasks and are more satisfied and committed to their jobs. Psychological empowerment could be another area the future researcher could investigate, which could be predictors of job satisfaction and employee resilience. Future studies should focus on leaders' creative abilities during the COVID-19 pandemic and their influence on an organisation's capacity to innovate during a pandemic.

Finally, this research makes few important contributions to the literature on resilience, human resources management and leadership. First, the study illustrates how high involvement work practice can advance the development of employee resilience in the organisation. Secondly, the study is focused on New Zealand public sector, which provides a broader spectrum of how HIWP, employee resilience and leadership can foster in New Zealand. Thirdly, the research focuses on HIWP and how different leadership styles impact the employees' behavioural patterns in the organisation.

In conclusion, the current study reveals that high involvement work practices positively affect employee resilience, which is mediated by both constructive and laissez-faire leadership styles.

The findings help the researchers better understand the elements that promote HIWP and employee resilience in the workplace. Finally, the researcher hopes that the current study inspires more research into the relationship between employee resilience, stress, Proactive personalities, and leadership in the future.

7.3 Conclusion

The study observed a link between HIWP and employee resilience, backed by Wang et al. (2014) and Bardoel et al. (2014), who believe that HRM practices, particularly skill development and formal employee support systems, have the potential to boost employee resilience. The research furthers it by examining HIWP are measure by PIRK attributes commonly known by power, information, reward, and knowledge, their relationship to employee resilience, and specifically how the relationship is mediated by the styles of leadership.

This research delves into an in-depth literature review in understanding the associations between the conceptual model chosen for the study. The literature review discusses what organisational practices are best for employees about HIWP and how HIWP contributes toward higher resilient employees in the organisation. In addition, the literature review focus on behaviour patterns of the leaders to understand how their style of leadership in return support employees to become resilient. It contains a review from past researchers and built-up a key argument concerning HRM practice and employee resilience and the development of thinking over the years among HRM, employees, and organisational performance levels in different industry, national, social, economic, and cultural backgrounds. The researcher derived the hypothesis after careful consideration of the past literature and the possible relationship the research can examine among the variables.

The study's data was obtained from a 2016 survey of PSA members, conducted in collaboration with CLEW and Victoria University of Wellington, to reveal New Zealand public sector employees' perceptions of managerial practice (Plimmer et al., 2016). The research examines the association between HIWP and employee resilience using a subset of the data from the PSA survey. Only personnel working for one of New Zealand's core public service agencies were included in the imputed data set of 14,126 responses for this study. To handle data better, the sample size was reduced to 7326, which include responses from the core public service agencies. Responses with missing data were removed as they add no value to the study. SPSS statistical tool was used to generate exploratory factor analysis (EFA), and SPSS AMOS statistical tool was used to run confirmatory factor analysis (CFA), or measurement model and structural equation model (SEM) through regression analysis. The descriptive data and decisions were made during EFA analysis, and confirmatory factor analyses discuss the influence of the variables for constructing the structural model. The research sheds light on

using structural equation modelling on higher-order components to investigate the relationship between employee resilience and HIWP attributes.

The suggested model was compared with three other possible models: Higher-order PIRK to first-order Employee resilience; Higher-order to first-order constructive leadership style and first-order employee resilience; Higher-order to first-order Laissez-faire leadership style first order employee resilience. The initially proposed model fits the model fit score, and hence it was adopted for the analysis of the study.

The model found that HIWP positively impacts employee resilience, with the link being mediated by the leaders' behaviour patterns in the organisation. As per the work carried out by Vandenberg, Richardson, and Eastman (1999) and Langford (2009), the model examines the relationship between HIWP attributes on first-order latent variables measuring employee resilience. Further, the two leadership styles, constructive and laissez-faire leadership styles, support the direct relation between HIWP and employee resilience. As per the findings, LFLS has a greater effect on ER than CLS due to the different traits of the leaders.

This research makes a significant contribution in several ways. First, it focuses on HIWP in previously understudied contexts, such as New Zealand, and specifically employees' experiences in the New Zealand public sector. The public sector should be looked at as a whole rather than as individual agencies, which backs up recent efforts in the state sector to build a more cohesive strategy and collective action around common goals (SSC, 2017). Second, it supports research that suggests that involving employees in organisational decision-making, including training and correctly compensating them, can improve employee resilience and, as other research implies, organisational performance.

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Appendix 1

Core- Public Sector Organizations

(Note: not all were represented in this study's sample)

Crown Law Office
Department of Conservation
Department of Corrections
Department of Internal Affairs
Department of the Prime Minister and Cabinet
Education Review Office
Government Communications Security Bureau
Inland Revenue Department
Land Information New Zealand
Ministry for Culture and Heritage
Ministry for Pacific Peoples
Ministry for Primary Industries
Ministry for the Environment
Ministry for Women
Ministry of Business, Innovation, and Employment
Ministry of Defence
Ministry of Education
Ministry of Foreign Affairs and Trade
Ministry of Health
Ministry of Housing and Urban Development
Ministry of Justice
Ministry of Māori Development—Te Puni Kōkiri
Ministry of Social Development
Ministry of Transport
New Zealand Customs Service
New Zealand Security Intelligence Service
Oranga Tamariki—Ministry for Children
Public Service Commission
Serious Fraud Office
Statistics New Zealand
Te Kāhui Whakamana Rua Tekau mā Iwa—Pike River Recovery Agency
The Treasury

Appendix 2

Demographics of the sample

Complete Responses N= 7326

Age

Age Range	Frequency	Percent
18-24	150	2.05%
25-34	1130	15.42%
35-44	1081	14.76%
45-54	2561	34.96%
55-64	1902	25.96%
65+	502	6.85%

Table 14: Demographics - Age

Ethnicity

	Frequency	Percent
NZ European	3975	54.7%
Māori	2150	29.3%
Other	1211	16%

Table 15: Demographics - Ethnicity

Education Level

Education Level	Frequency	Percent
No qualifications	191	3.6%
Secondary/High school qualification	1188	22.6%
Post-secondary certificate/Trade certificate/Diploma	1352	25.7%
University degree (e.g., BA)	1308	24.9%
Post-graduate qualification (e.g., PG Dip, MA, PhD)	1037	19.7%
Other	156	3%

Table 16 : Demographics - Education Level

Gender

	Frequency	Percent
Female	4633	63.24%
Male	2693	36.76%

Table 17: Demographics- Gender

Income

	Frequency	Percent
Less than \$20,000	37	0.51%
\$20,001 - \$30,000	170	2.32%
\$30,001 - \$40,000	344	4.70%
\$40,001 - \$50,000	1971	26.90%
\$50,001 - \$60,000	2074	28.31%
\$60,001 - \$70,000	925	12.63%
\$70,001 - \$80,000	655	8.94%
\$80,001 - \$90,000	591	8.07%
\$90,001 - \$100,000	271	3.70%
\$100,001 - \$150,000	260	3.55%
\$150,001 or more	28	0.38%

Table 18: Demographics - Income

Tenure of Employment

	Frequency	Percent
Less than 1 year	750	10.23%
1–5 years	1929	26.33%
5–10 years	1897	25.89%
11 years or more	2750	37.53%

Table 19: Demographics - Tenure of Employment

Appendix 3

Pattern Matrix

Pattern Matrix ^a							
	Factor						
	1	2	3	4	5	6	7
PIRK_P1_1						.864	
PIRK_P2_1						.940	
PIRK_P3_1						.929	
PIRK_R1_1							.774
PIRK_R2_1							.954
PIRK_R3_1							.880
PIRK_K1_1					.974		
PIRK_K2_1					.972		
PIRK_K3_1					.936		
Employee_resilience_4_1				.756			
Employee_resilience_5_1				.765			
Employee_resilience_7_1				.732			
Employee_resilience_8_1				.789			
Employee_resilience_10_1				.817			
PIRK_I1_1			.881				
PIRK_I2_1			.908				
PIRK_I3_1			.906				
Information_1_1			.812				
Construtive_leadership_2_1		.858					
Construtive_leadership_3_1		.929					
Construtive_leadership_4_1		.883					
Construtive_leadership_5_1		.857					
Construtive_leadership_6_1		.793					
Laissez_faire_leadership_1_1	.909						
Laissez_faire_leadership_2_1	.886						
Laissez_faire_leadership_3_1	.725						
Laissez_faire_leadership_4_1	.821						
Laissez_faire_leadership_6_1	.819						
Laissez_faire_leadership_7_1	.744						

Figure 11: Pattern Matrix

Appendix 4

Factor loadings or Standardised Regression Weights for measurement model – Un-bootstrapped

			Estimate	S.E.	C.R.	P
LFLS	<---	PIRK	-.709	.020	-39.137	***
CLS	<---	PIRK	.829	.025	48.153	***
INFO	<---	PIRK	.728			
KWD	<---	PIRK	.590	.024	40.968	***
PWR	<---	PIRK	.578	.018	36.961	***
RWD	<---	PIRK	.681	.024	41.869	***
ER	<---	LFLS	.193	.012	8.757	***
ER	<---	PIRK	.386	.025	8.911	***
ER	<---	CLS	.069	.013	2.137	.033
Laissez faire leadership 1	<---	LFLS	.648			
Laissez faire leadership 2	<---	LFLS	.793	.020	58.507	***
Laissez faire leadership 3	<---	LFLS	.737	.018	55.192	***
Laissez faire leadership 4	<---	LFLS	.900	.020	64.379	***
Laissez faire leadership 5	<---	LFLS	.442	.018	35.177	***
Laissez faire leadership 6	<---	LFLS	.863	.020	62.430	***
Laissez faire leadership 7	<---	LFLS	.822	.020	60.174	***
Construtive leadership 2	<---	CLS	.838			
Construtive leadership 3	<---	CLS	.810	.011	83.719	***
Construtive leadership 4	<---	CLS	.883	.011	96.202	***
Construtive leadership 5	<---	CLS	.883	.011	96.274	***
Construtive leadership 6	<---	CLS	.787	.012	80.120	***
Employee resilience 4	<---	ER	.631			
Employee resilience 5	<---	ER	.611	.024	43.534	***
Employee resilience 8	<---	ER	.795	.028	52.650	***
Employee resilience 9	<---	ER	.580	.021	41.715	***
Employee resilience 10	<---	ER	.837	.027	53.936	***
PIRK_I1	<---	INFO	.806			
PIRK_I2	<---	INFO	.853	.013	82.796	***
PIRK_I3	<---	INFO	.866	.013	84.412	***
PIRK_I4	<---	INFO	.823	.012	79.060	***
PIRK_K1	<---	KWD	.957			
PIRK_K2	<---	KWD	.982	.005	216.471	***
PIRK_K3	<---	KWD	.902	.006	148.102	***
PIRK_P1	<---	PWR	.751			
PIRK_P2	<---	PWR	.935	.014	83.269	***
PIRK_P3	<---	PWR	.922	.014	82.682	***
PIRK_R1	<---	RWD	.829			
PIRK_R2	<---	RWD	.778	.014	71.332	***
PIRK_R3	<---	RWD	.852	.014	77.579	***

Table 20 : Factor loadings For Measurement Model – Un-bootstrapped

Factor loadings/ Standardised Regression Weights Structural model – Bootstrapped

Parameter			Estimate	SE	Mean	Lower	Upper		P
LFLS	<---	PIRK	-.709	.011	-.709	-.730	-.688	.000	.000
CLS	<---	PIRK	.829	.008	.829	.813	.844	.000	.000
INFO	<---	PIRK	.728	.009	.728	.709	.745	.000	.000
KWD	<---	PIRK	.590	.011	.590	.568	.610	.000	.000
PWR	<---	PIRK	.578	.011	.578	.556	.600	.000	.000
RWD	<---	PIRK	.681	.011	.681	.659	.702	.000	.000
ER	<---	LFLS	.193	.024	.193	.148	.240	.000	.000
ER	<---	PIRK	.386	.040	.386	.309	.469	.000	.000
ER	<---	CLS	.069	.033	.068	.001	.132	.000	.048
Laissez faire leadership_1	<---	LFLS	.648	.010	.648	.627	.667	.000	.000
Laissez faire leadership_2	<---	LFLS	.793	.008	.793	.777	.808	.000	.000
Laissez faire leadership_3	<---	LFLS	.737	.008	.737	.722	.752	.000	.000
Laissez faire leadership_4	<---	LFLS	.900	.004	.900	.892	.908	.000	.000
Laissez faire leadership_5	<---	LFLS	.442	.013	.442	.417	.467	.000	.000
Laissez faire leadership_6	<---	LFLS	.863	.005	.863	.851	.873	.000	.000
Laissez faire leadership_7	<---	LFLS	.822	.006	.822	.810	.833	.000	.000
Construtive leadership_2	<---	CLS	.838	.005	.838	.827	.847	.000	.000
Construtive leadership_3	<---	CLS	.810	.007	.810	.797	.822	.000	.000
Construtive leadership_4	<---	CLS	.883	.005	.883	.873	.892	.000	.000
Construtive leadership_5	<---	CLS	.883	.005	.883	.874	.892	.000	.000
Construtive leadership_6	<---	CLS	.787	.006	.787	.774	.798	.000	.000
Employee resilience_4	<---	ER	.631	.012	.631	.607	.654	.000	.000
Employee resilience_5	<---	ER	.611	.011	.611	.588	.633	.000	.000
Employee resilience_8	<---	ER	.795	.008	.795	.778	.810	.000	.000
Employee resilience_9	<---	ER	.580	.012	.580	.554	.603	.000	.000
Employee resilience_10	<---	ER	.837	.007	.837	.822	.851	.000	.000
PIRK_I1	<---	INFO	.806	.007	.806	.792	.820	.000	.000
PIRK_I2	<---	INFO	.853	.006	.853	.840	.865	.000	.000
PIRK_I3	<---	INFO	.866	.006	.866	.853	.877	.000	.000
PIRK_I4	<---	INFO	.823	.007	.823	.808	.837	.000	.000
PIRK_K1	<---	KWD	.957	.002	.957	.952	.961	.000	.000
PIRK_K2	<---	KWD	.982	.002	.982	.978	.985	.000	.000
PIRK_K3	<---	KWD	.902	.004	.902	.893	.909	.000	.000
PIRK_P1	<---	PWR	.751	.008	.751	.735	.766	.000	.000
PIRK_P2	<---	PWR	.935	.004	.935	.926	.943	.000	.000
PIRK_P3	<---	PWR	.922	.004	.922	.913	.930	.000	.000
PIRK_R1	<---	RWD	.829	.007	.829	.815	.841	.000	.000
PIRK_R2	<---	RWD	.778	.007	.778	.765	.792	.000	.000
PIRK_R3	<---	RWD	.852	.006	.852	.839	.864	.000	.000

Table 21: Factor loadings For Structural Model – Bootstrapped