In a knowledge-based organization, it is the individual worker's productivity that makes the entire system successful. In a traditional workforce, the worker serves the system; in a knowledge workforce, the system must serve the worker (Peter Drucker 2002).
Abstract

The research detailed in this thesis analysed the performance evaluation (PE) of academics in eight New Zealand (NZ) universities. Academics are employees in these universities that are involved in teaching and research activities. Based on the interdisciplinary literature, this study conceptualised that PE can have at least four types of emphases. Firstly, the performance of academics in an NZ university can be evaluated on the basis of their adherence to set of principles, guidelines or procedures to perform their job; this was conceived as a process/procedure focused evaluation. Secondly, performance can be evaluated through social, collaborative or team mechanisms, which was conceptualised as a people focused evaluation. Thirdly, performance can be analysed on the basis of produced outputs, that is, an outcome focused evaluation. Finally, academics can be evaluated according to universities’ performance benchmarks through supervision and observation mechanisms, which was conceived as PE with a behavioural focus. The PE of an academic can focus on one or a combination of these approaches.

Academics’ perceptions about their PE focus will influence their attitude, performance behaviours and thus performance. However, for such an assertion to be made, the need is first to explore academics’ perceptions about the focus of their PE. To measure such perceptions, this research employed a mixed methods approach; in particular, it employed an intra-method approach, which allowed the utilisation of quantitative and qualitative elements in the same instrument. To achieve its objectives, an online instrument was developed with 65 items which was rolled out to 7,637 academics in eight NZ universities. Responses from 1,083 academics highlighted that their PEs had procedural, outcome and people foci; that is, the NZ universities employed a combination of approaches in evaluating the teaching and research performance of their academics.

According to social influence theory, an individual’s attitude is influenced by external or internal reasons, which are categorised as compliance and internalisation, respectively. Social influence theory also argues that compliance and internalisation based attitude will be underpinned by the perceptions of the influencing agent’s resource control and credibility. The influencing agent provides a model to an individual for the targeted behaviours. The individual complies with the demand of the behaviour due to external pressures because the individual perceives the influencing agent as the holder of resources which are instrumental in achieving the individual’s personal objectives. On the other hand, the individual accepts the presented
behaviour due to its congruence with his/her value system. In this instance, the individual exhibits an internalised attitude because the individual perceives the influencing agent as credible. This study conceived that PE is an influencing agent and therefore can influence academics’ attitudes towards compliance or internalisation. In its second research objective, this study therefore set its objective to investigate whether academics’ perceptions of PE’s focus will influence their attitude to take the form of compliance or internalisation.

To achieve the objective of RQ 2, this study divided this objective into 10 hypotheses. To address each of the 10 hypotheses, logistic regression, multinomial logistic regression, multilayer perceptron (MLP), contingency and various descriptive analyses were conducted. Data for teaching and research groups were subjected to these statistical analyses. The results from the teaching group showed that academics are 64% more likely to show an internalised attitude with a perceived people focus, while the probability of being internalised further increases 5% with each point increase in the perception of the people focus. These results were reaffirmed by a multinomial logistic regression, which highlighted an increased likelihood ratio of being internalised with each point increase of the 7-point internalisation scale. With such a predictive model, the study was successful in correctly predicting 64% respondents to be internalised, which were cross-validated through the results of the MLP. For the research group, the results highlighted a negative association of internalisation with a perceived outcome focus of PE. The logistic regression results highlighted that with each point increase in the perception of an outcome focus, respondents’ probability for being internalised further decreases by 6%, whereas the probability for being internalised increases with a decrease in an outcome focus. The multinomial results, however, highlighted a positive association of a perceived people focus with internalisation and a negative association with an outcome focus. The predictive model for the group was successful in correctly predicting 57% of respondents in the internalisation category, which was also substantiated by the MLP results. In achieving the objective of RQ 2, the regression analyses identified that for an academic to exhibit compliance or internalised based attitude, perceptions of resource control or credibility are not essential as argued by social influence theory. These results were corroborated with the qualitative findings, which supported the study’s assertion that PE processes utilising external pressures result in a compliance based attitude amongst NZ academics.

An attitude based on internalisation results in enhanced organisational identification and organisational citizenship behaviours, thereby resulting in enhanced employee performance. Based on this premise, this study set its third research objective to examine a relationship
between internalised academics and their research performance. Research performance was assessed as PBRF based categories of A, B and C. To achieve this objective, multinomial logistic regression and contingency analyses were conducted. The results highlighted a significant association between internalisation and an academic’s research performance. It was, however, dependent upon an academic’s service period; that is, internalisation along with a longer service period results in a higher research performance, at the A level. On the other hand, a compliance based attitude along with a longer service period did not achieve the A level of performance and reached the maximum level of B even in cases with greater than 20 years’ service.

Academics are key performance units in universities’ productivity. This study provides empirical evidence from eight NZ universities that to improve the future performance of academics and subsequently of universities, there is a need for people focused PE processes, as the existing outcome based PEs are resulting in compliance and negatively influencing academics’ performance.
Keywords

Academics
Academics’ Performance Evaluation
Accountability
Attitude
Attitudinal Change
Compliance
Higher Education
Human Resource Management
Internalisation
Management Accounting
Management Control
Mixed Methods
New Zealand
New Zealand Universities
Perceptions
Performance Appraisal
Performance Evaluation
Performance Evaluation Focus
Performance Management
Research Performance
Social Influence
Strategic Human Resource Management
Teaching Performance
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### Abbreviations

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<th>Description</th>
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<tbody>
<tr>
<td>BSC</td>
<td>Balanced Scorecard</td>
</tr>
<tr>
<td>DV</td>
<td>Dependent Variable</td>
</tr>
<tr>
<td>EFA</td>
<td>Exploratory Factor Analysis</td>
</tr>
<tr>
<td>ERI</td>
<td>External Research Income</td>
</tr>
<tr>
<td>HOD</td>
<td>Head of the Department</td>
</tr>
<tr>
<td>HR</td>
<td>Human Resource</td>
</tr>
<tr>
<td>HRM</td>
<td>Human Resource Management</td>
</tr>
<tr>
<td>IV</td>
<td>Independent Variables</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
</tr>
<tr>
<td>MLP</td>
<td>Multilayer Perceptron</td>
</tr>
<tr>
<td>NZ</td>
<td>New Zealand</td>
</tr>
<tr>
<td>OCB</td>
<td>Organisational Citizenship Behaviours</td>
</tr>
<tr>
<td>OECD</td>
<td>The Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PAF</td>
<td>Principal Axis Factoring</td>
</tr>
<tr>
<td>PBRF</td>
<td>Performance-Based Research Fund</td>
</tr>
<tr>
<td>PE</td>
<td>Performance Evaluation</td>
</tr>
<tr>
<td>PLOC</td>
<td>Perceived Locus of Causality</td>
</tr>
<tr>
<td>PM</td>
<td>Performance Management</td>
</tr>
<tr>
<td>PMS</td>
<td>Performance Management Systems</td>
</tr>
<tr>
<td>RDC</td>
<td>Research Degree Completions</td>
</tr>
<tr>
<td>RQ</td>
<td>Research Question</td>
</tr>
<tr>
<td>SDT</td>
<td>Self-Determination Theory</td>
</tr>
<tr>
<td>SHRM</td>
<td>Strategic Human Resource Management</td>
</tr>
<tr>
<td>TEC</td>
<td>Tertiary Education Commission</td>
</tr>
<tr>
<td>VIF</td>
<td>Variance Inflation Factor</td>
</tr>
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</table>
Statement of original authorship

I certify that the substance of this thesis has not been already submitted for any degree and is not currently being submitted for any other degree or degrees. I certify that to the best of my knowledge any help received in preparing this work, and all sources used, have been acknowledged in this thesis. I further certify that work produced in this thesis is the original work of the author.

Ehtasham Ghauri, 17 May 2018
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Dedication

To our future – the children of the world, children in conflict zones and children in deprived communities who are not blessed with the boon of education – the only thing that can change the course of humankind.
Performance evaluation, social influence and academics’ performance behaviours

Chapter I: Introduction

Nothing can be more erroneous than viewing maturity as the goal of the development ... it is part of the nature of life to strive to fill each moment with a richness of value (Wilhelm Dilthey 1894).
1.1 Introduction

All things living are in search of a better world. Men, animals, plants, even unicellular organisms are constantly active. They are trying to improve their situation, or at least to avoid its deterioration...Every organism is constantly preoccupied with the task of solving problems. These problems arise from its own assessments of its condition and of its environment; conditions which the organism seeks to improve...We can see that life — even at the level of the unicellular organism — brings something completely new into the world, something that did not previously exist: problems and active attempts to solve them; assessments, values; trial and error (Karl Popper 2000)\(^1\).

1.1.1 Chapter outline

The chapter is divided into eight sections. After the introduction in section 1.1, the chapter provides the background of this research in section 1.2, which helps to identify the gaps and significance of this research; this is highlighted in section 1.3. This further led this chapter to draw the study’s objectives in the form of three research questions (section 1.4). Research objectives need a theoretical framework to be achieved; this is detailed in sub-section 1.4.1. To address the study’s objectives, a précis of the methodological approaches employed in this study are briefed in section 1.5, while the thesis outline is mentioned in section 1.6. Prior to the conclusion in section 1.8, this chapter highlights the limitations of this research (section 1.7).

1.2 Background of the study

Performance is a context-specific phenomenon (Lebas 1995). Studies focusing on performance therefore require an understanding of the related context and the definition of performance in that context (Otley 1999). Organisations continually aspire to improve their performance. For this purpose, organisations will employ performance measurement and management systems. It is argued that strategically aligned performance measurement and management systems will facilitate organisations to overtake their competitors by 51% on financial and 41% on non-financial performance measures (Berntal, Rogers & Smith 2003).

In an effort to reap such benefits, performance measurement becomes the core element in generating information to manage and to improve future performance (Lebas 1995; Otley 1999). This further enables an organisation to create a performance grounded culture.

\(^1\) In Search of a Better World: Lectures and Essays from Thirty Years by Karl Popper.
Performance measurement of an individual employee, termed as performance evaluation in this study, is a key brick in the wall of organisational performance. It provides information to the organisation about what worked and why, what did not work and how can it be fixed (Behn 2003).

Performance evaluation (PE) is employed as an accountability (Frink & Ferris 1998) as well as a control mechanism (Ouchi 1979) to influence organisational activities (Simons 1995) and employee behaviours (Anthony, Dearden & Govindarajan 1992). PE as an accountability and control mechanism has been a focus of studies in management accounting, human resource management (HRM), accountability as well as psychology.

A key purpose of PE as a control mechanism is to keep performance and employee behaviours as close as possible to the desired organisational benchmarks. In pursuing such a path, PE will inadvertently or consciously focus on the outcomes, that is, emphasise what is achieved. Ideally, an employee’s actions or behaviours interact with external factors to produce the required outcomes. Despite an employee’s control on performance behaviours, the factors beyond the employee’s discretion may not join with the behaviours to result in an outcome (Govindarajan 1984). The theory of planned behaviour contends that when employees perceive they have minute control on their performance, they are less inclined to perform productive behaviours (Ajzen 1985; Madden, Ellen & Ajzen 1992). Moreover, when the focus is solely on the net outcome, there will be little information to identify areas of future improvement (Lebas 1995). Adelberg and Batson (1978) therefore contend that concentration on outcomes wastes resources. Although in larger organisations, outcome based approaches reduce the opacity in task-results relationships between one organisational function and another, this should not encourage an organisation towards a global outcome approach (Ouchi & Maguire 1975).

PE mechanisms can also emphasise employees’ procedural adherence or become ‘process focused’, that is, put the emphasis on how an employee should perform (De Langhe, Van Osselaer & Wierenga 2011; Ferris et al. 2008). Procedural evaluation models however, provide limited employee behaviour control (Bovens 2005), form a rules-based regime (Behn 2001) and curb collaboration in an organisation (Bauman 1994).

PE mechanisms, according to Ouchi and Maguire (1975), also utilise surveillance and supervision mechanisms to reach a conclusion on an employee’s performance. Such a PE is categorised as having a behavioural focus. According to Ouchi (1979), for a behavioural
evaluation to be successful, a supervisor should have provided detailed instructions to an employee so that his/her performance of an activity can be evaluated and a value assigned to it. Ouchi believes that such evaluative approaches reside in Weber’s bureaucracy.

According to Ouchi (1979) and Thompson (2010), PE, as a control mechanism, can also emphasise social mechanisms, values and organisational traditions, which further embeds newer employees into the existing shared organisational culture. Organisations possessing such means to measure performance are believed to have a people focus in their performance evaluation. When evaluation is focused on the competencies of group or socialisation processes or are people focused, these allow the group to develop professional abilities, autonomous regularity (Durkheim 2014; Ouchi 1980). Among these situations, employees are disciplined by the cohort values and shared beliefs (Kanter 1972). A people focused evaluative mechanism, according to Kanter, is more demanding since an individual is intrinsically bound to adhere to the norms and traditions of the group.

An organisation therefore may be implementing either one of the aforementioned foci or a combination of them to evaluate employees’ performance. When communicating these expectations, the delivery of such a strategic communication will involve managerial interpretations and may result in ambiguity. Nishii, Lepak and Schneider (2008) contend that in such instances employees will rely on their perceptions about what they are supposed to perform. According to Wright and Nishii (2008), employee perceptions are a trigger factor in influencing the way employees will perform their job activities or performance behaviours.

Employee behaviours that translate into organisational performance are performance behaviours (Griffin & Moorhead 2012). It is argued that appropriately designed PE mechanisms will not only influence employee performance behaviours (Micheli & Manzoni 2010) but will also result in enhanced individual performance (Aguinis 2009). However, traditional cybernetic evaluative models will incur variable influences on employee attitudes, which may result in an employee’s alienation from organisational strategic objectives (Bazerman, Beekun & Schoorman 1982; Kehoe & Wright 2013; Ouchi 1979; Rose, Kumar & Pak 2011; Williams & Anderson 1991). In other words, monitoring and evaluation models will introduce goal incongruence.

Although employees surrender their autonomy to allow organisational superiors to direct, evaluate and monitor their performance (Ouchi 1979), social influence theory (Kelman 1958) argues that under monitoring and evaluation models, individuals’ attitudinal responses can be
transient or permanent in nature. When employees exhibit performance behaviours due to external pressures in order to seek approval, win rewards or avoid punitive actions from the evaluating authority, compliance is the employees’ attitudinal response (Kelman 1958, 1961, 1974a, 1974b). According to Erdogan et al. (2004), in a compliance based attitude, employees will not feel obligated to perform beyond the specified behaviours. On the other hand, there are certain essential behaviours, where employees perform beyond the job description (Katz 1964). Kelman (1958) labelled such an attitude as the consequence of internalisation and is exhibited when an employee consents to an influence that is intrinsically satisfying and matches the value system of the employee. Such productive behaviours, according to Romzek (1996), are exhibited not because of rewards but because they are coherent with the employee’s internal values. Internalised employees are self-starters and are willing to invest maximised efforts for the benefit of their organisation. Ferris et al. (2008) argue that exploring a compliance versus internalisation approach can facilitate to devise measures, which can give employees a sense of appreciation and reduce resentment towards dynamics of strategy that limit their autonomy. Aucoin and Heintzman (2000b) contend that finding approaches to resolve such dissension should always be a work in progress.

PE, as an accountability mechanism, is thus argued to be a social phenomenon (Tetlock 1992). Hence, PE gets influenced by organisational social, cognitive and environmental dynamics, which subsequently influence employees’ behaviours and performance (Ferris et al. 2008). Nonetheless, behaviours cannot be understood unless both the stimuli and responses and their inter-relation are examined (Follett 1924). Research in PE traditionally overlooks such social stimuli and their relation with employee behaviours, which indeed require attention and particularly the context where PE takes place (Kloot & Martin 2000).

Universities, around the world, are peculiar institutions, which have been interlaced with communities and other social and religious institutions (Jeavons 1994). These institutions served the interests of societies and communities for centuries and were therefore majorly funded by respective governments. In short, besides governments, there are no other institutions such as universities, which are ‘self-serving’, ‘other-serving’, and performing so many social functions (Marginson 2010, p. 14). Particularly, in OECD and the European contexts, with the emergence of new public management (NPM)2 ideology, the demands for

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2 Although the features introduced by NPM can vary across countries, NPM refers to the introduction and use of private sector management styles in the public sector (ter Bogt & Scapens 2012). NPM focuses on
transparency and performance also increased for universities, which necessitated universities to change their operational paradigms. Indeed, the argument for universities to be accountable for their performance, provide real world solutions, and diverse and interdisciplinary research cannot be underemphasised (Dingwall & Byrne 2015).

However, expectations to fulfil societal needs still prevail. To meet societal expectations of providing solutions, universities need to possess autonomy that can incubate creative ideas. One of the key elements of a university’s autonomy is academic freedom, which trickles down to the liberty possessed by an academic to pursue teaching or research activities without systemic pressure or fear (Berdahl 1990). In the pre-NPM era, universities and their academics were able to meet these societal objectives. Some of the key aspects in meeting such objectives were trust, collegial vision (Parker 2011), understandability of actions, predictability of results, high uncertainty of collegial controls (Thompson 1967), open and natural rather than closed rational systems, and ethical relations (Tourish, Craig & Amernic 2017). Moreover, a strong sense of community and sociability were the key contributors to academics’ and universities’ productivity (Fukuyama 1995).

Academics are the key contributors to universities’ productivity and strategic objectives. Academics’ contribution to institutional, governmental and societal objectives is possible because they are researchers, independent professionals, expert educators and public intellectuals (Parker 2011). Academics, in these institutions, are argued to be unique type of professionals who are engaged and intrinsically motivated towards pursuit of knowledge and activities in areas of their interest (Tourish, Craig & Amernic 2017). Academics therefore have contributed vastly to scientific, business, behavioural, sociological and psychological body of knowledge. This has become possible because academics’ ideas as teachers, researchers and practitioners are driven by creativity and innovation, which serve the world beyond university or institutional boundaries (ter Bogt & Scapens 2012). In order to be creative and innovative, academics need to possess freedom for selection of their teaching content and direction for future research (Horn 2000). Moreover, the driving element behind academics’ creativity and ideas are opportunities and career interests rather than formal planning and procedures.
(Duymedjian & Rüling 2010). Fukuyama (1995) considers social and collegial mechanisms to be vital to sustain creativity, trust and meet societal objectives and expectations. Such creativity fostering mechanisms were a norm as Parker (2011) observes that academics used to be involved in university decision making processes through social and collegial university mechanisms.

Prior to education sector reforms, universities, faced criticism and immense pressure from governments to perform and meet accountability expectations (Lord, Robb & Shanahan 1998; Taylor 1987). Especially in OECD countries, through the emergence of new public management (NPM) ideology, universities faced privatisation and funding cuts (Kogan & Kogan 1983). These changes also forced universities to change their operational models (Fitzgerald, White & Gunter 2012; Neumann & Guthrie 2002; Parker & Guthrie 1993) to achieve required efficiency objectives (Banks, Fisher & Nelson 1997). Universities mainly in the developed world now operate under a market based managerial environment (Parker 2011), although such a paradigm is also oozing out in other parts of the world.

New Zealand (NZ hereafter) universities are the recipients of significant government funding, which creates the need for their adherence to governmental policies for the purposes of productivity, efficiency and accountability. The definition of efficiency often interpreted in dollar values or savings may not be applicable across the range of organisations and institutions. Since NZ universities are the ‘wider state sector (State Services Commission NZ 2017)’3, they ought to be accountable and answerable for their spending. The primary objective of such or similar public sector entities is not to generate profits (XRB 2016, p. 4); it is rather to provide the focused services.

A review of the NZ universities’ annual reports also highlighted their shift toward research and research based teaching4 during the past two decades. Particularly in NZ, since the introduction of the Performance-Based Research Fund (PBRF), the shift has been pronounced because of the institutions’ efforts to compete for government funding, which is allocated on the basis of their research contribution. Under this public funding system, the underlying idea behind performance mechanisms at universities is efficient and effective.

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3 http://www.ssc.govt.nz/state_sector_organisations
4 For instance, according to the University of Otago’s annual report 2006, the strategic direction until the year 2012 is “to give greater emphasis to excellence in research and teaching” (UO 2007, p. 12). ‘Achieving research excellence’ and ‘achieving excellence in research-informed teaching’ receive priority in identification of six major milestones list. This focused approach towards research is also highlighted in the university’s 2020 strategic directions plan (UO 2013, p. 4).
utilisation of tax payers’ money (Hood 1995) and answerability for their performance (Shore 2008). However, commentators of the classic style university model argue that such a style of calculative practices and performance measurement in universities is changing the persona of a social institution. These practices therefore have been the focus of continuous criticism by many academic studies.

It is viewed that the deployment of performance measures has resulted in universities’ mutation towards a corporate-style business model (Parker 2011), which consequently has resulted in a ranking race not only between universities but also among academics. Since the deployment of accountability measures through performance management systems, there has been incessant growth in audit-based measures (Tourish, Craig & Amernic 2017) and a ‘mania for assessment’ (Collini 2010). Such types of performance management (PM) measures are replacing the sense of community and collegial ethos with quantifiable templates of key performance indicators (Shore & Wright 1999). Universities’ motives of profitability and transparency, imposed by authorities, are argued to contradict with academic freedom and institutional autonomy (Berdahl 1990).

Employing quantitative and audit-based measurements in universities threaten creativity (Craig, Amernic & Tourish 2014), influences institutional autonomy and academic freedom and supersedes “consensus style management” with an accounting based culture (Peters 1992a, p. 128). Moreover, emphasis on cost effectiveness results in loss of academic development and collaboration (Pollitt 1987). Ambitiously following the path of profitability is forcing academics to follow administrative agendas rather than creative research paths. Such measures of resource management are jeopardising the creative environment and are incoherent in fostering research (Elliott 1990). These techniques are corporate entrenched and unsuitable for such institutions as universities (Hodgkin 1993). Coy, Fischer and Gordon (2001) suggest finding alternative solutions that will enhance behavioural administration and academic collaboration.

Universities, on the one hand, have to compete for government funding based on their research contribution; while on the other hand, universities are expected to meet financial and productivity objectives. Employing performance measurement models either from public institutions or private organisations adds complexity in measurement mechanisms for these institutions. Nonetheless, different strategic intents require different sets of performance measures to achieve required objectives (Adler 2011). This obviously requires specificity and
a contextual approach in measurement mechanisms and their objectives (Levy & Williams 2004), since abundance in performance measures has shown to result in noise (Neves, Wolf & Benton 1986) and ‘DRIP’ (data rich but information poor) syndrome for an organisation (Poister & Streib 1999, p. 326). According to Craig, Amernic and Tourish (2014), the emphases of performance measurement in universities remain on the quantification of outcomes. Research is also evaluated on the basis of the produced outputs (Atiyah 1992). It further adds complexity by attempts to assign a numerical value to the efficiency of a process (Spee & Bormans 1992) or to behaviours that may or may not be quantifiable in nature. Such evaluation practices are underpinned by the idea that these will lead to the improved future performance of universities and academics (Boston et al. 1996; Linke 1992).

Ferris et al. (1995) argue that employees attempt to restore their freedom which they perceive to have lost through the imposition of evaluation mechanisms. The aforementioned critique highlights such a scenario, as it has been argued that the existing PE practices are detrimental for academic autonomy and freedom. Nonetheless, PE in an organisation should enable employees to envisage how it helps them achieve their personal and organisational objectives. Ouchi (1979) contends that if PE mechanisms are applied inhospitably and rely heavily on evaluating, monitoring and taking corrective measures, this will offend employees’ sense of autonomy and self-esteem – triggering incongruence. PE mechanisms can only provide the required benefits if these are properly designed and executed (Lawler, Benson & McDermott 2012).

Research in PE traditionally overlooks such core elements requiring attention and particularly the context where PE takes place (Kloot & Martin 2000). Research in PM is fragmented (Snell 1992; Stringer 2007) and PE in universities is an ignored area of investigation in the accounting literature (ter Bogt & Scapens 2012), which necessitates the need for empirical studies with wider theoretical boundaries and rationalistic solutions facilitating organisational decision making processes (Chenhall 2003; Covaleski et al. 2006; Otley 2001). PE of academics becomes a unique case for investigation; because academics, as employees, are not only expected to meet the benchmarks of their institution but are also expected to suggest practical avenues in the wider interests of the society. Universities, on the other hand, are unique social institutions with the strings attached to government funding and policies. These governmental measures likewise influence and supervise private universities, which not only have to adhere to such initiatives but also have to achieve their profitability objectives. This investigation into PE of academics therefore provides an interesting
opportunity to understand the dynamics of how PE influences performance behaviours from the perspective of business organisations as well as social institutions.

1.3 Significance of the study

Performance evaluation processes are vulnerable to social, interpersonal and external influences. In an effort to improve PE measures so as to improve future performance, the emphasis should be on factors influencing employees’ performance behaviours (Ferris et al. 2008). The emphasis leads to finding avenues that can create value (Simons 1995) and explore a compliance versus internalisation attitude approach (Ferris et al. 2008). Such an approach can help to dissolve intrinsic friction between the dynamics of strategy such as performance and accountability (Bouckaert & Peters 2002), and factors influencing employee performance behaviours in an organisation (Simons 1995).

Research on individual level accountability and control mechanisms such as PE is an evolving concept (Otley 2016). There is a considerable gap in the PM and management accounting literature about the understanding of PE processes (Ferris et al. 2008; Otley 1999, 2001), particularly in the context of universities (ter Bogt & Scapens 2012). For the most part, studies on such behavioural perspectives as compliance, identification and internalisation have focused on their influence on organisational commitment and organisational citizenship behaviours (Becker 1992; Meyer & Allen 1991; Rupp, Williams & Aguilera 2011; Sutton & Harrison 1993; Vandenberg, Self & Seo 1994), while studies on accountability have focused on corporate governance, social responsibility or leadership (Bryden 2002; Kearns 1996; Valor 2005). Moreover, studies on PE as a control mechanism have focused more on its influence on evaluators’ behaviours (Hirst 1983; Hopwood 1972; Otley 1978), while unimportance is observed towards accountability and behavioural influence on such employees as academics (London, Smither & Adsit 1997). Studies on PE have continually focused on the correction of the process or rating instruments (Ferris et al. 2008; Hopwood 1972; Kloot & Martin 2000; Pearce & Porter 1986), and somehow empirical studies have overlooked in-depth understanding of PE and of socio-political forces that influence performance as well as the evaluation process.

Critical analyses, personal experiences and the effects of results-based evaluation in universities and their culture as a whole have occasionally appeared in the literature (Craig, Amernic & Tourish 2014; Johnston 2016; Peters 1992b; Pollitt 1987; Shore 2008). While much of the critique relies on normative learning, few have empirically examined (Kallio & Kallio
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(2014; Martin-Sardesai et al. 2017) the influences on the academia in the post NPM era. Such studies in academia often take a holistic university wide approach. Since academics’ professional activities significantly differ from other professionals in academia with non-academic, administrative roles, the need of such studies is to consider academics as a separate unit of analysis if the PE processes of academics are to be improved. This study therefore segregates academics with normal research and teaching responsibilities from academics with administrative responsibilities. This segregation is of importance to this study because of different PE requirements for these two job roles.

The case for the context specificity of PE practices applies to universities more than any other business sector because of the significant influence of political, governmental and funding factors on universities. This further creates a need for context-specific understanding in order to suggest improvements, which may well be context specific in nature. As highlighted that universities are peculiar institutions. Although, the phenomenon of performance and its evaluation is contextual in nature (Hofstede 1978; Hopwood 1972; Lebas 1995; Otley 1999), NPM based performance themes of economic rationality and efficiency (ter Bogt et al. 2010) are commonly shared across various contexts (Hood 1995; Pollitt 2002; ter Bogt 2008). Likewise, universities being peculiar institutions show significant similarities in audit based PE mechanisms particularly across OECD and European countries (ter Bogt & Scapens 2012). The deployment of audit-based and KPI entrenched mentality about PE measures (Parker 2011) have been noted consistent among various contexts such as the UK (Johnston 2016), Australia (Martin-Sardesai et al. 2016, 2017), NZ (Lord, Robb & Shanahan 1998), Netherlands (ter Bogt & Scapens 2012), Germany, Sweden (Teelken 2012), Austria, Switzerland (Guenther & Schmidt 2015), Portugal (Carvalho & Diogo 2018) and Finland (Kallio & Kallio 2014), to name a few.

Such similarity of PE practices, among various contexts, can be considered as very peculiar to universities as institutions and may not prevail among other organisational sectors or industries. It is believed that an investigation of PE’s influence on academics’ performance behaviours, in the context of NZ, can provide information, which can be valuable for other contexts as well. Moreover, such an understanding will provide evidence that can enable academia decision makers to devise PE processes for academics, which may enable them to appreciate academic freedom, creativity and intrinsic will to exhibit productive and performance oriented behaviours. The focus of this study is on the areas of friction in PE, influenced by social and strategic factors (Bouckaert & Peters 2002; Ferris et al. 2008; Simons
which requires a deeper understanding of the relationship between compliance versus internalisation and academics’ performance.

This research will have implications for policy and practice. Determining the said relationships between compliance, internalisation, performance behaviours and performance can provide vital information about the existing PE processes, enabling a change in the focus of the existing PE processes, and may help devise PE processes that can give academics a sense of appreciation and reduce resistance towards organisational controls limiting their autonomy. Shore and Wright (1999) also emphasise finding alternative avenues of thinking to suggest mechanisms that can provide customised ways to measure performance, tailor collegial controls to augment accountability and restore academic trust and autonomy. Moreover, this investigation may help universities to transform academics’ PE measures with reduced accountability requirements as opposed to agency theory. This obviously does not preclude the need for accountability in organisations. The focus of this study is not on opting for self-serving behaviours, rather it is on removing such unwanted factors from PE as a loss of creativity in exchange for conformity (Staw & Boettger 1990), reduced risk taking (Weigold & Schlenker 1991), loss of teamwork (Deming 2000) or going an extra mile (conscientiousness) (Schnake & Dumler 1993). Finding an approach related to compliance, internalisation and PE focus, which can foster a culture of creativity and a climate to produce required performance behaviours, is the objective.

1.4 Research objectives

The previous section provided the précis of this study’s underpinning factors that can enhance the understanding of PE for academics in NZ universities. This study hence aims at three sequential research objectives, that is, perceived PE focus, PE focus’ influence on academics’ attitude and attitude’s influence on academics’ performance. These three objectives will be achieved through the following three research questions.

- **RQ 1:** How do academics in NZ universities perceive their performance evaluation process to be focused; is this process, outcomes, behaviour, people focused or an amalgamation of these foci?

- **RQ 2:** Does a perceived PE focus influence academics’ attitude towards compliance and/or internalisation and their performance behaviours?
RQ 3: Does an academic’s attitude taking the form of compliance or internalisation influence his/her research performance?

To achieve the envisioned objectives of this study, the relevant inter-disciplinary literature based on seminal theories and concepts from performance measurement and management, accountability, control, social psychology, HRM and organisational behaviour will be utilised. Social influence theory (Kelman 1958) will serve as an overarching construct to achieve the objectives of the study.

As mentioned earlier, academics’ perceptions about their PE are a trigger factor for how they will perform their professional behaviours. However, to achieve the objective of RQ 1, this study will first define the constructs for perceived PE focus by utilising various theories from management control, accountability and HRM. The operationalisations will further facilitate in the measurement of these foci. To achieve the objective RQ 2, that is, perceived PE focus’ influence on academics attitude towards compliance or internalisation, this study will employ social influence theory (Kelman 1958). Since this study conceives of four types of PE foci, these will have a varying influence on academics’ attitude, which needs to be examined separately. This will be achieved by apportioning RQ 2 in 10 hypotheses (mentioned in detail in Chapter 3). In doing so, each of the foci will be analysed with each type of attitudinal response of compliance or internalisation. According to Kelman’s framework, compliance or internalisation based behaviours will be influenced by the perceptions of resource control or credibility of the influencing agent such as PE. This study therefore will explore a moderating relationship between perceived PE focus, academics’ attitudinal response and perceptions of resource control or credibility. It is believed that 10 hypotheses related to RQ 2 will help determine whether perceptions held by an academic about his/her PE focus influence the academic’s performance behaviours towards compliance or internalisation. To address its final objective, that is, RQ 3, this study will utilise concepts based on HRM and management accounting to explore whether a relationship exists between academics’ performance behaviours underpinned by compliance or internalisation and their research performance. Figure 1.1 illustrates the conceptual framework of this study.
1.5 Research approach

Research, being a systematic phenomenon (Saunders, Lewis & Thornhill 2015), requires a framework once the research objectives have been established (Cavana, Delahaye & Sekaran 2001). A research paradigm is the underpinning factor for the framework (Kuhn 2012). In contrast to a positivist or interpretivist paradigm, realism based studies focus on the importance of the studied context (Maxwell & Mittapalli 2007). Understanding the context becomes a key factor for studies investigating behaviours (Smith 1983). Studies in PM and particularly in management accounting have taken positivist approaches (Bisman 2010; Modell 2010) and fewer efforts have been made to use complementary approaches. Laughlin (1987) suggested using a common ground for empirical understanding of the researched issues. Modell (2010) argued that realism provides such a middle ground to employ complementary approaches in empirical studies. Based on the nature of the RQs, which are exploratory and explanatory in nature, a realism paradigm is deemed appropriate to achieve the objectives of this study.

The research design of a study closely relates to the nature of research questions. Since the focus of this study is on addressing more practical issues that can suggest decision makers
to improve future performance, employing a traditional mono-method approach may not enable unearthing the whole story, especially context-specific elements. In such cases, Modell (2010) suggests employing mixed methods approaches, which will further enable bridging the paradigmatic divide and attract attention from both industry and academia. This study therefore takes Johnson, Onwuegbuzie and Turner’s (2007) advice to employ a mixed methods approach for a richer understanding of its objectives. Kelman (1974b) also advised studies investigating behavioural changes in organisational contexts to apply a mixed methods approach.

Johnson and Turner (2003) suggest that studies can employ a mixed method approach by using an intra-method approach where closed and open-ended questions are used in a single data collection instrument. Such an approach complements the understanding of quantitative data through the qualitative comments, which is the fundamental principle of mixed methods research (Tashakkori & Teddlie 1998). Employing the intra-method approach facilitated this study to achieve generalisability (Saunders, Lewis & Thornhill 2015) and enhance credibility (Denzin 2009). Neuman suggests (2006) that when a study is investigating individuals’ self-reported beliefs, perceptions or behaviours, a survey questionnaire is the logical choice. To achieve the objectives, this study constructs a 65 item online survey, which is piloted with 25 academics prior to its roll out to 7,637 academics across eight NZ universities (see Appendix A for complete list of universities).

1.6 Thesis outline

The sequence in this investigational tale is detailed in this thesis in the following manner.

Chapter I laid out the background for this research while providing the roadmap to achieve the objectives of this study. The chapter briefed the research issues along with the research questions, related hypotheses, their justifications and methods in achieving the objectives.

Chapter II provides a detailed discussion on the existing literature in PM and particularly the PE of employees – the key contributors to organisational performance. It is discussed that PE is employed as an accountability as well as a control mechanism that aims to influence employee behaviours towards achieving organisational objectives. Based on the theoretical perspectives in accountability, management accounting, human resource management as well as social psychology, the chapter lays the ground in showing that PE can have predominantly one of four foci or an amalgamation of these. A PE’s focus, however, can be perceived in the
same or a different manner by the organisational employees. Since employees behave according to their perceptions related to factors in a given context, it is thus contended that the perceived PE focus will influence employees’ performance behaviours. This theoretical stance is applied in the context of the NZ higher education sector and its employees, that is, academics. This resulted in an exploration of the PE focus as perceived by an academic at an NZ university. It is also conceptualised that PE is an influencing agent, which dictates academics to perform in a certain manner. PE therefore influences academics’ behaviours to achieve universities objectives. Such persuasion towards specified behaviours, according to social influence theory, causes attitudinal changes, which can take the form of compliance or internalisation. This triggered the need to explore whether academics’ behaviours are influenced by such perceptions held by them about their PE. To do so, the chapter explains the need to identify the key reasons that underpin an academic’s teaching and research behaviours. The chapter finally reasons that compliant and internalised research behaviours will eventually influence academics’ research performance.

Chapter III details the methodological perspectives and measures employed in this study. In addition to the paradigmatic justification, the chapter offers the reasons to employ a concurrent mixed method research strategy in this study, which is less commonly employed in management accounting studies unlike other disciplines. The mixed methods approach in this study aims to triangulate the quantitative results with the qualitative findings. Data are collected through an online survey instrument, which according to many scholars provides comparable or even better response rates then paper based surveys. Responses from 1,083 academics enables the chapter to build the ground to suggest appropriate analytical techniques to achieve the exploratory and relational objectives of the study. The chapter also provides justification for the measures suggested for the data analysis. While highlighting the measurement strategy of the study, the chapter addresses the quality of the study and the researcher’s commitment to adherence to ethics and anonymity of the study respondents.

Chapter IV provides a detailed analysis of the collected data for the three RQs, including 10 hypotheses. Employing binary and multinomial logistic regressions, multilayer perceptron, contingency analyses and other analytical techniques, the results present a consistent pattern of academics’ perceptions about their PE as having a procedural and outcome focus along with the sporadic presence of the people focus in NZ universities. The chapter details through the logistic regression results that there is a higher probability for academics to exhibit internalised teaching behaviours under a perceived people focus and compliant research behaviours under
an outcome focus. By identifying the reasons to perform teaching and research behaviours, the chapter deduces that academics’ attitudinal patterns will influence their research performance. The quantitative results are further corroborated by the qualitative findings in the chapter.

Chapter V provides a detailed discussion of the results and findings in light of the existing literature. In addressing each of the RQ separately, the chapter further entails the results’ implications on existing PE processes or academics’ performance behaviours. The chapter notes that foci-based perceptions cause attitudinal changes in academics. It is highlighted that under a perceived outcome focus, academics’ attitudes will take the form of compliance, while under a people focus, their attitude is likely to take the form of internalisation. The chapter further notes that internalised academics are more likely to have a higher research performance as compared with compliant academics.

1.7 Delimitations

The study conceives that PE has at least four types of foci and these perceptions can influence academics’ attitudes towards compliance or internalisation. As mentioned, these conceptualisations are based on the literature in accountability, management control, HRM, social psychology and organisational behaviour. It is acknowledged that there may be alternative theoretical explanations. The conceptualisations utilised in this study may be context specific in nature. These are employed to achieve the objectives in the context of NZ universities. Moreover, due to the varying PE requirements, this study defines an academic as one with teaching and research responsibilities. In defining an academic, this study postulates that service and administrative activities of the academic are auxiliary in nature because the academic is essentially recruited for the purposes of teaching and research. While the conceptualisation of an academic in this study is based on the characteristics of public funded universities, it is believed that academics employed in private universities are evaluated through similar KPIs – as performance measurement and management literature in universities do not differentiate academics in private or public universities. Nonetheless, the funding bodies in case of private universities can be different. Finally, this study does not analyse the transition of PE processes from earlier mechanisms to NZ’s PBRF based or newer performance matrices; for such a historical perspective on transition please see an earlier study by Chong (2013).
1.8 Conclusion

The chapter laid out a brief description of this research. It was highlighted that perceptions held by employees such as academics can influence their future performance behaviours and subsequent performance. The existing interdisciplinary literature contends that PE can have various foci, which have the potential to influence employees’, such as academics’, attitudes. According to social influence theory, this influence can take the form of compliance or internalisation. Employees exhibiting compliance based behaviours will not perform beyond their job description, whereas internalised employees will be willing to go an extra mile for the benefit of their organisation. The chapter also highlighted that PE among academia is widely criticised and argued to be corporate entrenched; however, PE of academics is an under-researched area. PE is context specific in nature, especially when governmental and funding factors are involved. This may also be true for owners in case of private universities. It was highlighted that an investigation such as this of perceived PE focus on academics’ attitudes and performance can help to devise processes that can reduce friction between elements of strategy, such as PE, and academics’ performance behaviours.
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Chapter II: Literature Review
2.1. Introduction

I no longer feel the enthusiasm necessary to make a literary review what it should be. This is not to suggest that I consider literature to be at this time, or at any time, a matter of indifference. On the contrary I feel that it is all the more essential that authors who are concerned with the small part of “literature” which is really creative — and seldom immediately popular — should apply themselves sedulously to their work, without abatement or sacrifice of their artistic standards or any pretext whatsoever (T.S. Elliot 1939).

2.1.1. Chapter objectives

The previous chapter introduced the study concepts and laid out the reasons for the need for this investigation. This chapter intends to build the theoretical groundwork to justify the objectives of this study, and therefore discusses the existing literature relating to performance evaluation and particularly its role as an accountability as well as a control mechanism in organisations. This interrelationship can become complex when an organisation is influenced by policies, which may be developed by governments, politicians or board of directors of private universities. Universities are a peculiar example of such organisations; they are answerable to government, funding bodies or owners (in case of private universities) for their performance. PE complexity multiplies when employees such as academics are not only required to meet institutional objectives but also are charged with providing solutions to prevailing societal issues. These performance requirements will influence academics’ behaviours towards compliance or internalisation. In discussing these themes in the literature, this chapter develops the research objectives of this study.

2.1.2. Chapter outline

The purpose of the following sections is to review the literature relating to the research problem: Can an investigation of performance evaluation’s influence on attitudes and performance behaviours suggest improvement in the performance evaluation processes for academics in NZ universities? To comprehensively understand the literature surrounding the research problem, this chapter is structured in five sections related to the theoretical concepts. Performance is a multidimensional construct; section 2.2 therefore highlights the multi-faceted nature of performance. To improve and sustain the performance of an organisation or an employee, PM is the process through which managers influence employees to excel in achieving organisational strategic objectives. Section 2.3 discusses the literature related to the
importance of strategic alignment with performance management systems PMS. Because measurement is pivotal to management, sub-section 2.3.1 discusses performance measurement from an organisational perspective. For the purposes of this study, performance evaluation is conceptualised as an individual performance measurement process (sub-section 2.3.2) and is argued to be both an accountability (sub-section 2.3.4) and a control mechanism (sub-section 2.3.5). The interplay between control mechanisms and employee behaviours is discussed in sub-section 2.3.6, including social influence theory in sub-section 2.3.6.2. Section 2.4 reviews the literature on the influence of performance evaluation on academics as employees in NZ universities. Although studies have criticised the perverse effects of implemented performance measurement mechanisms (sub-section 2.4.2), the chapter concludes (section 2.5) by finding ways the study objectives may help to address some of the identified issues in the NZ higher education sector.

2.2. Performance

Performance, cannot be defined in absolute terms even in homogeneous businesses and is closely related to the context and purposes (Lebas 1995; Otley 1999). Performance is often interpreted as productivity, return on investment (ROI), effectiveness (aspired outputs), efficiency (minimum inputs to achieve outcomes) or economy (lowest costs for inputs) (Aucoin & Heintzman 2000b; Otley 2001). Performance however, is the result of set of actions today that will lead to measured value outcome tomorrow (Lebas & Euske 2002, p. 68). It is in fact the competency of the evaluated business function to successfully achieve future objectives (Lebas 1995). Bouckaert and Peters (2002) note an inherent strain between performance and accountability because performance of an individual (employee) or an organisation is the accountability for another individual (manager) or organisation (government or private institution). Such an idea necessitates defining performance in an organisational or sectorial context (Otley 1999) because contextualising performance is argued to be the vital factor between organisational success and failure (Muczyk & Gable 1987).

The diversity in contextual approaches or interpretations of performance has also resulted performance being investigated under the disciplines of management accounting, strategic management, psychology as well as strategic human resource management (SHRM). The focus of such investigations remained on how the performance of an employee, a business unit or an organisation can be measured, managed and hence improved.
To achieve the aspirations of sustained performance and sustainable future (Lebas 1995; Otley 1999), organisations implement an algorithm stated as management, which ensures efficient and effective use of organisational resources (Robbins et al. 2012). Since employees are a key resource facilitating an organisation to achieve its present and future aspirations, management therefore is ‘A structure of control, which ensures the compliance of subordinates and the direction of their activities along the lines laid down from above (Abercrombie, Hill & Turner 1984). These assurance mechanisms according to Simons (1995) are designed to meet information needs of strategic and operational managers to gather information about the implementation of organisational strategy. These mechanisms ensure that organisational activities are performed in a way that meet organisational definition of performance. Measures translating organisational strategy into results, that is, performance, its measurement and management is holistically described as performance management in the literature.

2.3. Performance management

The aggregation of performance measurement and management described as performance management (PM) is the

Continuous process of identifying, measuring and developing the performance of individuals and teams and aligning performance with the strategic goals of the organisation (Aguinis 2009, p. 2).

Anthony and Govindarajan (2007), however, view PM as the process of influence through which organisational managers influence organisational employees for the achievement of organisational strategic objectives. Other studies have also inculcated various attributes in the conceptualisations of PM (e.g., Adler 2011; Ferreira & Otley 2009; Otley 1999). The emphases of PM interpretations, however, remain on the achievement of organisational strategic objectives. According to Otley (2001), PM provides an overarching construct under which the strategic purposes of formal processes in an organisational context can be studied. The current ideology of PM therefore assumes strong strategic alignment between strategic objectives and PM mechanisms (Kloot & Martin 2000).

Performance management system(s) (PMS) as systematic routines weigh improvements made towards the achievement of organisational strategic objectives (Stone 2013). In quantifying such strategic achievements, PM has become the key pillar in the discipline of management accounting literature and has been widely researched (Broadbent & Guthrie 2008a; Van Helden 2005). According to Otley (2001), PM received a late attention as compared to other areas in management accounting discipline. Although PM specifically
received a late attention, the elements of decision making (information to facilitate future decisions), attention directing (areas needing development) and scorecard (current performance) (Simon et al. 1954) can be attributed as the foundations of PM quite early in the literature, which, at that time, were described as the three functions of management accounting information.

PM has been considered as a vital factor in achieving organisational strategic objectives; however, PMS have conventionally translated organisational success in terms of financial outcomes (Nilsson & Kald 2002). Such an approach was widely criticised in the 1980s and resulted in development of notable PM frameworks and techniques, for example, the balanced scorecard, the EVA, the results and determinants framework.

These frameworks argue that organisational success is multifaceted and dynamic (Emmanuel, Otley & Merchant 1990), which further implies that there can be no single approach in achieving results due to diverse underpinning factors. According to the results and determinants framework, organisational success is characterised by results (competitiveness and financial performance) and determinants (quality, flexibility, resource utilisation and innovation) (Fitzgerald et al. 1991). To sustain organisational performance, Fitzgerald et al. argue that an organisation should focus on market share, profitability and growth, along with productivity, efficiency and innovation in processes. Fitzgerald et al.’s model therefore focuses not only on the external factors of an organisation but the internal factors as well to sustain organisational performance. However, in their balanced scorecard (BSC), Kaplan and Norton (2005) capture the elements of Fitzgerald et al.’s ‘determinants’ in a single measure of internal business processes. By aligning organisational strategy with performance measurement mechanisms, BSC, as a PMS, can derive outstanding improvements in organisational products, processes, customers and market development (Kaplan & Norton 1995). According to Kaplan and Norton, BSC is grounded in organisational strategic vision and thus balances external and internal factors. BSC thus provides information to managers to achieve objectives without compromising on key success factors. Otley (2001), however, argues that the BSC focuses to generate stakeholder’s value and may not be very beneficial at operational management levels, where cost centres cannot be developed. The emphasis of these PM frameworks and techniques have predominantly taken an institutional or instrumentational approach that intend to measure and influence organisational achievement towards strategic objectives (Modell 2009).
Although institutional factors significantly influence PM design and practices (Verbeeten 2008), Otley (1999) argues that a PM framework, ideally, should answer five elements to amicably manage organisational performance. These are ‘pivotal factors for organisational success, strategies’, ‘plans implementation and their measurement’, ‘intended level of performance’, ‘rewards related to performance’ and ‘information channels’.

The essence of PMS is the integration and interconnectivity between PM processes. The pivotal nature of PMS is its strategic alignment with every organisational function, which cannot be overemphasised. Because when strategy is embedded in every level’s performance (Kaplan & Norton 2001), then organisational emphases change from mere measurement to management of performance (Kloot & Martin 2000). As highlighted earlier that PM frameworks predominantly emphasise financial performance, maximising shareholder’s wealth, information generation or improve accounting figures in financial statements; thus managerial and PMS focus remain on financial objectives while ignoring the people who will achieve those objectives; as a result, there is poor execution of strategies (De Cieri et al. 2008). While financial focus can be an enabling factor rather than the primary objective (Kaplan 2001), De Cieri et al. contend that PM, plays a key role in implementation of organisational strategies. It is therefore a key responsibility of organisational decision makers to find avenues for the best practices for strategic implementation. Best practices however may not be practicable for all organisations; because best practices may induce motivations but at the same time may leave organisations and individuals with varying performance demotivated (Bouckaert & Peters 2002).

In an effort to achieve competitive advantage, employ best practices or improve employee performance, organisations may be tempted to copy-and-paste PM practices from other contexts or organisations. The contingency view of people management practices disproves such notion of 'one size fits all' approaches. These need to be contextualised and modified in accordance with organisational and sectorial factors (Boxall & Purcell 2011). Moreover, inappropriate and inadequate PMS can also be misleading for organisational resources, activities and performance (Bouckaert & Peters 2002). According to Finegold and Frenkel (2006), when organisations take a casual approach towards employee management, this triggers goal incongruence between employees and the organisation. In other words, employees may prefer to exhibit behaviours that help them meet their personal objectives. The planning and design of PM processes at the strategic level will therefore influence organisational members at the tactical and operational levels as well.
Although performance of an employee is traditionally believed as an equivalent to outcome (Otley 2001), such outcome however is argued to be influenced by psychosomatic factors (Brown & Leigh 1996) and climate in the organisation (Lawler, Hall & Oldham 1974; Liao & Chuang 2004; Schneider & Bowen 2010). Performance of employees is interwoven with factors such as their efforts (Brown & Leigh 1996), attitudes (Brayfield & Crockett 1955), behaviours, motivation, personalities (Frei & McDaniel 1998), their participation (Mia 1989), their emotional stability (Salgado 1997) and also their perceptions about organisational processes (Shadur, Kienzle & Rodwell 1999) and the organisation. Thus, the design and implementation of PMS can either help the organisation to achieve or sway it from its strategic objectives. Adler (2011) therefore emphasises that the dynamics of strategy should take employee behaviours into account because the ultimate objective of PM is to persuade employees to implement organisational strategy to improve organisational performance.

Due to its close influence on employees, PM has also been a continuous focus of attention in the discipline of HRM, which takes rather employee-centric PM approaches. Cascio and Aguinis (2008) reveal the importance of the topic by highlighting that it has been the most published area of research in the Journal of Psychology in the last decade. Likewise, performance measurement and management research from organisational and employees’ perspectives has been widely published in the major accounting journals (e.g. Bol 2011; Broadbent & Guthrie 2008b; Bushman, Indjejikian & Smith 1996; Govindarajan 1984; Hopwood 1972; Van Helden 2005).

Although, from an HRM perspective, Pulakos (2004) characterises PM to be of multiple benefits for an organisation as illustrated in Figure 2.1, PM is confronted with consistent evidence that these processes are poorly managed and are unable to manage employee performance (Aguinis, Joo & Gottfredson 2011). Among organisations, such evidence also triggers the perception that PM is a bureaucratic necessity (Pettijohn et al. 2001; Stewart & Woods 1996). According to Bouckaert and Peters (2002), PM may not resolve performance problems but rather introduce new and exacerbate existing problems.
Some of the reasons for negative perceptions about PM are that research in PM, from the perspectives of management accounting as well as HRM, has followed a piecemeal approach (Snell 1992; Stringer 2007). PM research is found to be overwhelmingly descriptive, prescriptive and suffering from lack of cumulative theorising (Modell 2009, p. 278). The research is isolated from real management issues among organisations (Dunne, Harney & Parker 2008; Otley 2001; Tourish 2015). It thus needs to provide rationalistic theoretical solutions (Chenhall 2003; Covaleski et al. 2006), widen its boundaries beyond measurement data and enable managers to implement performance measures that facilitate organisational decision making processes (Otley 2001). Pulakos (2004) argues that organisations that intend to achieve too many objectives from PM eventually kill the process without yielding any benefits from it. In contrast, the encouraging evidence from a 15 country study by Bernthal, Rogers and Smith shows that 91% of the organisations implemented formal PM (cited in Cascio 2006). According to Bernthal, Rogers and Smith, organisations implementing formal PM are likely to outperform their competitors 51% on financial measures and 41% on non-financial measures of employee retention and satisfaction. In an effort to reap such PM benefits, organisations should employ and integrate performance measurement mechanisms from business functions to the individual level of employees (Stein 2000).
Measurement is the key component of management (Cavalluzzo & Ittner 2004). In essence, it is the measurement information which guides the management process that may be administrative, developmental (Budworth & Mann 2011) or strategic in nature (Cleveland, Murphy & Williams 1989). Lebas (1995) views performance measurement and management as cyclic, feedback and feed-forward mechanisms. Performance management is preceded by performance measurement that prompts management and therefore returns back to measurement processes. In other words, performance management is led and followed by performance measurement. Nielsen and Ejler (2008) note complementarity between performance measurement and performance management. Verbeeten (2008) argues performance measurement to be one of the objectives of performance management processes in an organisation. Likewise, Kaplan and Norton (1995) contend that effective measurement should be a fundamental part of management processes.

2.3.1. Measurement: key to management

Measurement is central to management (Lebas 1995; Otley 1999). While measurement of performance takes place at almost every functional and individual level of any organisation, the key issue remains that of why there is a necessity to measure performance. Kouzmin et al. (1999) argue that deployment of measurement mechanisms enable activity assessments across similar functions, which further facilitates the creation of a performance grounded culture in an organisation. One of the key purposes of performance measurement is to filter out valid and reliable information about the performance (Cavalluzzo & Ittner 2004) of an employee or a business unit. However, all this valid and reliable information will be of no use if management processes in an organisation are unable to achieve the pre-defined objectives of a measurement system (Behn 2003) and facilitate decision making processes (Hammer 2002). According to Behn (2003), there can be eight organisational perspectives and purposes for measuring performance. Figure 2.2 presents Behn’s eight organisational purposes to measure performance.
In addition to the factors identified by Behn as exhibited in Figure 2.2, performance measurement undoubtedly benefits an organisation in planning decisions for recruitment and selection, training and development and measuring the effectiveness of the PMS. Nonetheless, all the purposes to evaluate performance reside in the pivotal purpose ‘to improve future performance’ (Behn 2003, p. 591) underpinning organisational intentions towards a results-led management rather than rules-led management (Behn 2002). If this is not the underlying intention or the objective to measure performance, then all the procedural implementation is a mere waste of resources and, of course, time. Behn (2003) argues that organisations, for the most part, will often overlook the key element ‘to improve future performance’ and so performance measurement systems find themselves in a mere analysis of the past figures.

Despite abundantly applied performance measurement techniques, organisations struggle to streamline the measurement information to the subsequent stages of management (Otley 2001). Although measurement data do not instantaneously facilitate decision making processes (Nielsen & Ejler 2008), there is a common misconception among organisational managers about its self-explanatory nature (Williams, McShane & Sechrest 1994). Indeed measurement data need to be decoded into information and compared with the organisational benchmarks to make meaningful inferences in order to take corrective actions (Otley 1999). Nonetheless, aggregation and summaries of measurement data have the potential to deceive organisational decision makers (Williams, McShane & Sechrest 1994). Thus, misinterpretations of such measurement data can lead to inappropriate managerial decisions.
According to Hopwood (1972), organisational managers often intentionally refute the measurement data and decisions are made that can be detrimental for organisational future. Among public sector institutions, studies find that politicians will utilise least amount of performance data for decision making processes (Olson, Humphrey & Guthrie 2001; Pallot 2001; ter Bogt 2001). Evaluative mechanisms will also evaluate and reward part of the performance, which have further found to produce undesirable effects (De Bruijn 2002; Gray & Jenkins 1993; Smith 1995; Van Thiel & Leeuw 2002). For a promising organisational future with an intention to improve, measurement information therefore becomes foundational for management’s successful future decisions.

### 2.3.2. Performance evaluation

Performance measurement mechanisms are employed at individual employee levels to evaluate an employee’s contribution to overall organisational performance. The performance evaluation (PE) of an individual employee is traditionally termed as performance appraisal. Although, performance appraisal is commonly misconceived as PM among organisational sectors, PE according to Armstrong (2009), is the systematic process of evaluation on the basis of pre-defined performance indicators while highlighting the areas of improvement for future development. Such systematic assessment facilitates and legitimises the organisation to reward or discipline an employee while providing feedback to improve future performance (Stone 2013). Thus, the process of PE persuades employees in the organisation to envision the linkages between their, functional and organisational objectives (Spitzer 2007). This strategic link between employees and organisational objectives gives employees a ‘line of sight’ (Boswell 2006, p. 1489), a unified direction and a psychological contract towards the achievement of organisational strategic objectives (Dransfield 2000).

Through reward and discipline mechanisms PE holds employees answerable for their work related behaviours (Ferris & Treadway 2008; Ittner & Larcker 1998), thus acting as an accountability mechanism. This further allows an organisation to contain employees’ self-serving or work-aversive behaviours (Kunz & Pfaff 2002). PE hence acts as a behaviour control mechanism (Ferris et al. 2008). PE is therefore argued to be an accountability (Ferris et al. 2008) as well as a control mechanism (Behn 2003; Kerr 1988; Otley 1999). Since the process of PE also provides future directions for an improved performance, a pivotal purpose of PE thus coincides with accountability objective, that is, the ‘continuous improvement’(Aucoin & Heintzman 2000b, p. 272) in performance. According to Aucoin and Heintzman, the ideology of results-based management requires organisations to move away from command-and-control
centres, nurture progression in practices, employ methods that promote performance and hold employees answerable for their performance.

2.3.3. Performance evaluation as accountability

In order to hold employees answerable for their performance and behaviours, PE is employed as an accountability mechanism in organisations (Cavalluzzo & Ittner 2004; Hall et al. 2007; Ittner & Larcker 1998). Bovens (2005) identifies accountability as a particular set of institutionalised social relations which can be empirically studied. Accountability mutates its meanings with the implemented model in an organisation. Despite its elusive interpretations (Sinclair 1995) and a its use as a buzz-word to include everything from control to ethics (Kearns 1994), accountability, originating from accounting, is the institutionalised measures for presenting accounts and details (Bovens 2005). Furthermore, accountability as a social relation is the process where an accountor (actor or employee) is obligated to explicate (behaviours or results) to an accountee (accountability forum, supervisor or an authority) (Ijiri 1983) as illustrated in Figure 2.3.

Figure 2.3: The accountability process

![Accountability Process Diagram](image)

Source: Developed and modified⁵ for this study based on Bovens (2005).

However, this sequential process should entail an actor’s or accountor’s accessibility to account giving while the actor or accountor should feel obligated to inform about conduct,

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⁵ In the original Bovens’ (2005, p. 186) illustration of five phases of accountability, justification is described as ‘debating’, which is then directed to ‘judging’ (recommendations) for formal or informal ‘sanctions’ (decisions). The researcher believes that justifications are part of the account giving and evaluation process. Moreover, there is always a higher probability of rewards than sanctions; therefore it is replaced with decisions (preceded by recommendations from a senior manager) followed by actual rewards, development or discipline implementations.
tasks and outcomes to a particular forum or an accountee. In cases of discrepancies, this can also trigger submission of justifications and legitimacy of the exhibited conduct. The explanations should be addressed to the specific forum. Finally, with the possibility of debate, this engaging process should end with a decision to reward, develop or sanction the actor or accountor (Bovens 2005). The process elaborates that accountability is implemented in organisations to reward, develop or censure; nonetheless, there should be specific purposes, what an organisation intends to achieve, due to the costs associated to the process. Accountability mechanisms can help an organisation to achieve three purposes: to control (Aucoin & Heintzman 2000b), to sustain integrity (Rose-Ackerman 1999) and to improve performance (Aucoin & Heintzman 2000a). Accountability⁶, as an umbrella for transparency, responsiveness and answerability (Bovens 2003) therefore, not only helps an organisation to build integrity and a positive image beyond its boundaries but also fosters internalised behaviours (Aucoin & Heintzman 2000a). However, the specific purposes can also differ from one organisation to the other depending upon the implemented accountability model.

Accountability models emphasise or focus on certain elements upon which an employee or an organisation will be held answerable or evaluated for the exhibited performance. Hall et al. (2007) term the degree to which employees are held responsible for processes or outcomes as the 'accountability focus' of the organisation. According to Siegel-Jacobs and Yates (1996), accountability in an organisation can have at least two foci. An organisation can have a procedural or process focused accountability or an outcome focused accountability. In public sector institutions, hierarchical accountability models are commonly applied due to their simplicity and the ability to target persons responsible for opportunistic behaviours. These models emphasise a procedural approach (Roberts 1991) or are process focused (Siegel-Jacobs & Yates 1996). Merchant (1982, p. 45) labels emphasis on employees’ adherence to organisational rules, guidelines or procedures as ‘action accountability’. According to ter Bogt (2003), organisations and management accounting studies became more interested in process and operation based performance indicators during the 1990s. These type of models, however, can face complexity due to the chain of command (Bovens 2005) and adherence to the prescribed set of guidelines. Such models are viewed to provide limited control on employee behaviours (Bovens 2005). Bauman (1994) argues that such forms of evaluation favour a reign

⁶According to Bovens (2007, p. 453) accountability is often confused with transparency, which is not enough to constitute a form of accountability as transparency does not necessarily involve scrutiny by a specific forum (see Bovens 2007 for details).
of rules, promote individualism and desist collaboration. Under these models, an employee’s interaction in the formal and informal places of an organisation can also vary. According to Roberts (1991), formal regions are affected with silence, individual differences and superficial engagement of conformity, whereas there will be contrasting engagement, mutual gratitude and interaction among the same employees under non-formal conditions.

Among private sector organisations, however, individual accountability models are commonly employed to hold each employee answerable for the contributed performance (Bovens 2005). Nonetheless, there is evidence that such models are also implemented in public-funded institutions. Individualistic models, on the one hand, either reward or censure employees’ behaviours on their individual performance; while on the other hand, these serve as a prophylactic mechanism to keep employees within the required behavioural boundaries of the organisation (Bovens 2005). Bovens argues that external factors, such as organisational hierarchy, pressure to comply with organisational practices, group thinking and cohort pressure, can present challenges to perform according to organisational benchmarks.

If organisational benchmarks are rooted in the achieved outcomes, then such individualistic evaluation is categorised by Siegel-Jacobs and Yates (1996) as outcome accountability or an outcome focused evaluation. Hopwood’s (1972, p. 160) ‘budget constrained style’ of evaluation closely resides with an outcome based accountability. Ideally, an employee’s actions or behaviours interact with external factors to produce the required outcomes. Despite an employee’s control on behaviours, the factors beyond the employee’s discretion may not join with the behaviours to result in an outcome (Govindarajan 1984). Since the emphasis is rendered to the outcome, personal, cognitive and social factors in the process are ignored to meet instrumentalational requirements of the evaluation process, which can further introduce unintended behavioural consequences (Hopwood 1972). Adelberg and Batson (1978) therefore find that concentration on outcomes wastes resources. One of the key purposes of evaluation processes is to remove blemishes from past performance and take corrective actions to improve future performance. If the focus is purely holistic or rendered to ‘net outcome’, then there will be little information available to pinpoint to take corrective actions (Lebas 1995). This also becomes a critical point in accountability mechanisms’ development and management, as organisations, for the most part, will have only outcome based budgeting processes (Otley 1999). For an individual evaluation model to succeed, an organisation should embrace openness and allow ample freedom to employees to behave according to the
benchmarks. If this cannot become a possibility, then an employee may be held unreasonably answerable under an individual accountability model (Bovens 2005).

If excessively employed, each of the aforementioned evaluation foci can produce unwanted effects. For instance, excessive procedural control can result in a rules-led management and a bureaucratic organisation (Behn 2001). Overemphasis on integrity can lead to a procedure-based organisation, diminishing its efficiency and effectiveness (Anechiarico 1996). Entrenchment in transparency can result in non-productive decisions rather than improved performance (Adelberg & Batson 1978). If PE as an accountability process is pressurised in an organisation, this may inhibit employees from conceiving creative ideas and risk taking to avoid denunciation (Behn 2001) and will ‘turn timid employees into cowards’ (Zegans 1997, p. 115). To achieve the objectives of ‘an account giving process’, an organisation therefore should not only take into account internal organisational social factors but also external factors because factors such as culture, values and norms will also influence employee behaviours.

Accountability is central for sustainable social systems (Frink & Klimoski 2004). It is the shared perspective and combination of internal, external, formal and informal factors (Dose & Klimoski 1995; Erdogan et al. 2004). Kearns (1996) specifies accountability to be the combination of legal, economic, cultural and socio-political factors that explain do’s and don’ts to employees. Accountability measures therefore cannot be secluded from social, emotional, cognitive, political and relationship factors. Informal accountability measures, such as organisational norms, beliefs, values and culture, significantly influence how formal accountability measures are perceived and the extent to which employees feel answerable for their performance. This can be stated as the perceived level of accountability by an employee. This relationship allows to define a social system in terms of ‘shared expectations’ (Frink & Klimoski 2004). However, foundational models of accountability, such as agency theory or pyramid model, disregarded social contexts where decisions are made (Tetlock 1985). Frink and Klimoski (1998) regard accountability as a cement, binding social systems. Because if employees are not held answerable for their actions, there will be no shared view and expectations to create an organisational culture, further undermining the stability of a social system (Tetlock 1992).

In view of the discussed concepts of performance and accountability, it can be inferred that performance as well as behaviours are constrained by the boundaries of accountability.
Accountability is not only embedded in organisational formal and informal processes but is also interwoven with social factors. As dictated by accountability systems, such as PE, performance behaviours should be the set of distinct behaviours that will lead to anticipated organisational objectives (Bowlby 2008). Nonetheless, it creates the need for explicit definitions of interlocking behaviours (Ferris, Schellenberg & Zammuto 1984; Schuler 1989) that facilitate an organisation’s achievement of its strategic objectives (Snell 1992). To be certain that behaviours meet benchmarks, organisations implement mechanisms that dictate employee behaviours while comparing their achieved results with the assigned objectives. Such mechanism of accountability, to ascertain and evaluate performance, is described by Tannenbaum (1968; 2013) as control.

**Figure 2.4: Accountability and control**

As illustrated in Figure 2.4, control and accountability are interwoven constructs; the relationship, however, also relates to the definitions an organisation has contextualised according to its objectives, purposes and industry environment. Despite its interactional nature (Schlenker & Weigold 1989), accountability is delegated, shared and defined to people with authority and responsibility – who are then subjected to control (Aucoin & Heintzman 2000a). PE is not only described as a formal accountability (Cavalluzzo & Ittner 2004; Ferris et al. 2008) but also as a control mechanism (Behn 2003; Kerr 1988; Otley 1999). PE as a control mechanism holds employees answerable for their performance (Ferris & Treadway 2008) during a given period of time.
2.3.4. Performance evaluation as control

Performance evaluation employed as a control mechanism provides employees with guidance about organisational expectations and establishes benchmarks of performance and behaviours. The interpretations of control, however, can vary from social domains to business organisations and not-for-profit organisations. Rathe (1960, p. 32) noted more than 57 interpretations of control in the first half of the twentieth century. Tannenbaum (1968) considers control research as the summation of influences and relations in an organisation. In business organisations, however, control is viewed as:

*The process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of organisation’s objectives’* (Anthony, Dearden & Vancil 1972, p. 5).

Simons (1995) views control as:

“... The formal, information-based routines and procedures managers use to maintain or alter patterns in organisational activities” (p. 5).

Control therefore has two underlying objectives in an organisation: implementing measures that help the organisation to smoothly progress towards its objectives and to continually strive to improve (Ouchi 1979). These purposes coincide with the aforementioned accountability objectives. Since organisations implement control processes to manage people and processes, control is often termed as management control. Lebas and Weigenstein (1986) view management control as the process of obtaining information that organisational functions are synchronised for optimal resource allocation to achieve organisational objectives. To obtain such information, an organisation will have formal procedures that facilitate controllers to monitor efficient and effective use of resources and to observe the progress being made towards organisational objectives. Otley (1999) argues that such evaluation information also enables managers to sustain positive behavioural patterns in an organisation. Hopwood (1972) however, warns that evaluation information based on accounting systems should be used with caution for decision making purposes. Nonetheless, a key mechanism of control is to keep performance behaviours and achievement as close as possible to the desired organisational objectives.

Traditionally, organisations tend to apply mechanistic models of control designed for machines or technical apparatuses. The philosophy of mechanistic control utilises a negative feedback system and measures the achievement with a comparison to objectives for deviances
and appropriate corrections (Hofstede 1978). Wiener (1961) coined this as a cybernetic control, which was originally presented to deal with the transfer of messages.

According to Wiener (1961), the chain of feedback to and from a control centre can facilitate the execution of the best control system, i.e. a linear control system, which enables the subtraction of the outputs from the inputs added by the control centre. Cybernetic control employs the oscillation of feedback between results and benchmarks. Wiener (1961) argues that proper transmission of information, along with supervision, results in better performance, which may not be dependent on a good effector (e.g. employee). Hofstede (1978) believes, to implement such control proper communication is essential, while values and paradigm differences among employees and controllers\(^7\) add complexity in obtaining the desired benefits. Moreover, the application of cybernetic control assumes the presence of standards (benchmarks with which the comparisons will be made), measurable achievement (to obtain exclusive information about outputs) and the variance between outputs and the benchmarks (Hofstede 1978). The absence of specific benchmarks or difficult-to-measure outputs (Cavalluzzo & Ittner 2004) can result in imbalance in the equation and controllers may not have ample information to draw conclusions to improve future outputs.

Due to the simplicity in application and the beneficial results in output based organisations, cybernetic control has been extrapolated to sectors, where its application is producing unwanted effects (Anthony 1965; Hofstede 1978). Nonetheless, when dealing with people, management control becomes a social process (Drucker 1964; Hofstede 1978) rather than a mechanistic approach (Lebas & Weigenstein 1986). Extrapolation of mechanistic approaches in human organisations do not serve the purposes of control (Hofstede 1981). Wiener’s philosophy was of course applied in line with Taylor’s industrialist paradigm; that is, enhanced supervision and efforts of a worker result in enhanced productivity. Since business and institutional environments have gone through significant change and still facing increasing competition by local and global organisations (Otley 2016), the need is to find avenues that facilitate to adopt need of the day practices rather than ag-old industrialist paradigm. Cybernetic systems measure compliance against pre-defined behaviours rather than performance (Landau & Stout 1979). In today’s organisational environment therefore,

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\(^7\) Differences in thinking patterns among different professionals, e.g. academics and auditors or entrepreneurs and public sector managers. Thinking pattern differences between academics and managers have also been highlighted in the case of an NZ university by Chong (2013). In the personal experience of the researcher, these paradigm differences became obvious when, during a student programme in the university, an administrator commented that academics are highly intelligent but know nothing about administration.
favouring cybernetic systems highlights managerial tendencies to empower themselves by controlling employee behaviours through performance measurement systems (Behn 2003). Ingraham and Kneedler (2000) argue that cybernetic approaches of control are rooted in principle-agent theory, that is, how processes can control employee behaviours.

### 2.3.5. Control appropriateness

The application, design and the specifications of a control cannot be universalised. Hopwood (1976) contends that the design of management control and organisational structure cannot be separated as these are interdependent. Contingency theory of management accounting therefore views that the choice of a control mechanism will depend upon the dynamics, contextual factors and strategy of an organisation (Otley 1999). Hofstede (1981) contends that control should not take a global approach in an organisation; it should have a serving mechanism to align with the type of activities in a particular organisational function. In fact all the management accounting research and practices are contingent in nature and need to explore mechanisms that can be the most appropriate for an organisation (Otley 2016).

Organisations however tend to neglect such interdependencies in control design (Otley 2016). The study and research of control thus require a careful understanding of specific aspects, activities, appropriate coherence between activities and control, and the tasks-results relationship of a particular organisational function rather than the whole organisation (Otley 1980; Ouchi 1977; Ouchi & Maguire 1975). Such concept of contingency theory of management accounting (Chenhall 2007; Otley 2016) additionally seeks for the appropriateness of control in an organisation, understanding of the recruitment processes, training and development, socialisation processes, formality, bureaucracy and measurement of outputs.

Management control in an organisation can emphasise two elements or can have two foci to gather performance information. Management controls can be applied as behaviour control (action control) and output control (results control) (Ouchi & Maguire 1975, p. 559; ter Bogt 2003, p. 313). Behaviour control seeks to evaluate performance through surveillance and supervision of an employee’s work specific actions or behaviours; Merchant (1982, p.45) labels such mechanism as ‘specific action control’. To reward such specific actions, organisations utilise market control mechanisms, which allows an organisation to set prices for each of the tasks that facilitate to achieve organisational objectives (Arrow 1974). Obviously, in the execution of tasks, there are elements of supervision, instructions to employees and their
surveillance to accomplish the assigned tasks and objectives. However, task completion is driven by rules and guidelines. For a rule to be utilised as a PE benchmark, a supervisor should monitor performance, assign a value to the activity and then compare the assigned value with the benchmark to determine the level of satisfaction (Ouchi 1979). Such an evaluative approach based on the prescribed guidelines is termed by Ouchi as bureaucratic control, which can said to be closely associated with the idea of procedural evaluation (Siegel-Jacobs & Yates 1996).

According to Ouchi (1979), bureaucratic control is commonly preferred by organisations because market mechanisms cannot ascertain the settings needed for smooth task prices. All market controls are therefore subject to bureaucratic mechanisms. Ouchi (1979) contends that supervision and direction to subordinates reside in the core ideology of Weber’s bureaucracy. Output control or ‘results accountability’ (Merchant 1982, p.45) on the other hand pays keen attention to the results produced by an employee (ter Bogt 2003). Because output control reduces the variety of contingencies (Turcotte 1974), evaluation of employees through supervision and surveillance (behaviour control) can be replaced by management by records (output control) (Blau 1956; Blau & Scott 1962). Despite behaviour and output controls being extreme ends (Reeves & Woodward 1970), the idea of replacing the one with the other to serve the same organisational purposes is quite appealing (Ouchi & Maguire 1975). This ideal scenario can, however, only exist when organisational objectives are very clear, and the tasks-results relationship is completely understood at every level in the organisation (Thompson 2010). If objectives cannot be agreed upon, then output control cannot be applied, and if the tasks-results relationship is not clear, then behavioural control cannot be implemented. Moreover, to deploy output controls, managers should have clear knowledge of results or outcomes required, which should also be measurable in nature (Merchant 1982; Hofstede 1981).

Smaller organisations do not meet the justification to employ output control because the tasks-results relationship is commonly understood Ouchi (1977). In larger and complex organisations, the inclination to apply output control is due to the opacity in the task-results relationship between one organisational function and the other. This, however, should not push an organisation towards a global approach as contingency theory of management accounting seeks for contextual approaches. Since tasks-results relationships are quite clear among members in a particular organisational function (subunits), contextualised PE measures across various functional units can thus be implemented. Output controls become obviously practicable because the results achieved by a function are easily understandable by other
organisational functions and therefore serve as a common language across the organisation (Ouchi & Maguire 1975). In practice, however, organisations do apply output controls where managers have the least knowledge of the tasks-results relationship.

Moreover, in difficult to measure activities, for instance in public sector organisations (Mintzberg 1996), employing output control is viewed by Ouchi and Maguire (1975) as managers’ legitimisation approach to project their satisfactory performance. Ouchi (1979) contends that complexities for control mechanisms arise when outputs are a cumulative effort, for instance, surgeons and nurses in an emergency room, academics in a university department or even a teacher in a classroom. The performance of a teacher in a classroom is dependent on the efforts exerted by the students to succeed in addition to the teacher’s method or effort in teaching. According to Broadbent, Dietrich and Laughlin (1996), professional services such as health and education entail implicit competencies and cannot be quantified through key performance indicators (KPIs).

Although output controls may serve as a common language of understanding among organisational functions (Ouchi & Maguire 1975), organisations struggle to gain cohesion among different groups of professionals from diverse functions (Ouchi 1979) sharing the same organisational objectives. Since professionals in organisational functions are programmed with different paradigms, socialisation processes can catalyse control in organisations (Ouchi 1979). These processes influencing a group can be unique to an organisation or an industry (Trist & Bamforth 1951) because these facilitate them to develop professional competencies, jargon or coherence in objectives. Clan\(^8\) refers to such unique properties of a unique group (Ouchi 1980). In relation to control for a specialised group, clan control facilitates more regularity, socialisation and provides directions (Durkheim 2014). Contrary to surveillance and procedural approaches, clan control provides a more disciplined approach through a strong shared belief that individual objectives are embedded in wider interests (Kanter 1972). Ouchi (1980) maintains that when individuals’ objectives and organisational objectives are inter-woven, teamwork is common and performance evasion is unlikely to happen. To understand such mechanisms, Follett (1998) emphasises to study groups, their reactions, their homogeneity and heterogeneity and nonphysical forces that influence their performance.

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\(^8\) The idea of clan control resembles the construct of ‘organic solidarity’ presented by Durkheim (1893; 2014, Chapter V) as the common consciousness that creates a bond among different individuals and groups in society. According to Durkheim, it is the sentiment of social integration as a form of informal bond that is essential for the functions of a formal organisation.
As mentioned earlier that the degree to which employees are held responsible for their performance is an accountability focus in the organisation. Studies in accountability and control have cited various types, evaluation styles, emphases or criteria upon which the performance of an employee can be evaluated. Ouchi and Maguire argue that an organisation can have a behavioural or an outcome based evaluation; while Ouchi and Durkheim are of the idea that an organisation should strengthen social mechanisms so that employees are intrinsically bound to perform according to the organisational norms of performance. Merchant (1982), Siegel-Jacobs and Yates (1996) and De Langhe, Van Osselaer and Wierenga (2011) highlight that performance can be evaluated on the basis of an individual’s adherence to organisational rules, procedures and guidelines. Hopwood (1972) also highlights three styles of PE on the basis of accounting information, which again reside closely to an outcome based PE. Moreover, Verbeeten (2008) based on the Merchant’s and Ouchi’s frameworks concludes evaluation to be having three emphases, that is, output, action and clan controls. Nonetheless, Merchant merges procedural evaluation and behavioural evaluation in a single type of action controls. This study therefore conceives that PE as a performance justification process can have four foci. Although PE foci are conceptualised on the basis of wider literature in accountability and control (see detailed conceptualisations in section 3.4), it is believed that such conceptualisations encompass PE emphases an organisation may have implemented. While organisations are tempted to copy practices, related to PE or other processes, from other organisations, the contingency view of management accounting as well as people management practices emphasises contextual relevance. Research in control traditionally will look for relationships between one independent and one dependent variable (Otley 2016); however, to understand multiple interactions, the need is to analyse multiple factors that can help to design effective controls (Fisher 1995). Thus, the four PE foci utilised as independent variables will enable to understand multiple emphases rendered in a PE process in a particular context, which can provide key information beneficial for the design of PMS. Table 2.1 briefs features of the four PE foci.
Table 2.1: PE foci

<table>
<thead>
<tr>
<th>PE focus</th>
<th>Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedural or process focused</td>
<td>Evaluation on the basis of adherence to organisational rules, procedures, SOPs, guidelines or best practices.</td>
</tr>
<tr>
<td>Outcome focused</td>
<td>Evaluation on the basis of outcomes produced by an employee.</td>
</tr>
<tr>
<td>Behaviour focused</td>
<td>Evaluation on the basis of supervision and surveillance of employee’s key activities that constitute performance.</td>
</tr>
<tr>
<td>People focused</td>
<td>Evaluation on the basis of contribution to team, collaboration, organisational traditions, norms or core values.</td>
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</table>

Regardless of the implemented PE focus in an organisation, a key factor for the success of an organisation as well as its PMS is the answer to the questions: What is the intended level of performance and relationship of rewards to such intended level (Otley 1999)? Such intended level of performance also outlines the intended PE focus. Employees, on the other hand, may perceive their evaluation to be differently focused as compared with the organisational intention because of their personal experiences and interaction with the PE process. For instance, an organisation may have implemented an outcome based evaluation and therefore have defined boundaries of behaviours accordingly. However, messages communicated through various channels about the intended evaluation may give varied interpretations building employees’ perceptions about what they are supposed to do (Anthony, Dearden & Govindarajan 1992, p. 56). For instance, employees therefore may perceive the ‘intended outcome focused’ evaluation as a ‘process focused’ evaluation or otherwise and act accordingly.

Research in performance management and people management practices often fail to differentiate between intended and perceived practices (Khilji & Wang 2006; Piening, Baluch & Ridder 2014). As previously highlighted, management control is not a mechanical process and is designed by strategic managers to influence other members of the organisation to implement the organisation’s strategies (Anthony, Dearden & Govindarajan 1992, p. 10). It is therefore believed that unless there is ideal strategic communication in an organisation, employees will perform their behaviours according to their perceptions. Wright and Nishii (2008) also suggest that employee perceptions of HR practices such as PE can potentially affect their future attitudes and behaviours. Parks, Kidder and Gallagher (1998, p. 697) contend that it is the perception that builds an employee’s attitude and behaviours rather than ‘objective reality’; to understand employee attitudes therefore, the need is understand their perceptions.
‘their reality’. Moreover, perceptions of employees’ about their PE or PE focus is not found to be a key variable of research in management control studies (see Otley 2016). In order for PE to provide the desired effects, employee perceptions and interpretations must first be understood (Nishii, Lepak & Schneider 2008). According to Nishii, Lepak and Schneider, prior to exploring the influence of the PE focus on employee behaviours, the need is first to investigate employee perceptions about their PE focus, which will be the emphasis of this study’s first objective. In essence, it will be employees’ perception of a PE focus that will influence their behaviours. However, prior to moving to its next objective, the need is to identify the types of behaviours that may be underpinned by the perceptions of a PE focus.

2.3.6. Control, influence and behaviours

Since perceptions differ from one employee to another, research therefore reveals that different control mechanisms result in different behavioural responses, levels of employee commitment or alienation from organisational strategic objectives (Bazerman, Beekun & Schoorman 1982; Kehoe & Wright 2013; Kelman 1958; Ouchi 1979; Rose, Kumar & Pak 2011; Williams & Anderson 1991). PE as control therefore should enable employees to envisage how these measures are facilitating them in achieving their personal and organisational objectives. If control mechanisms are too entrenched in evaluation, supervision and corrective actions that will offend employees’ sense of autonomy and self-esteem – triggering indifference (Ouchi 1979). As a result of this indifference and organisational alienation, employees will require more supervision. Managers therefore should be able to foster mechanisms that enhance employees’ psychological bond with the organisation (Romzek 1990). According to Romzek, psychological ties help organisations to retain knowledge workers who will embrace organisational values and exhibit behaviours that lead to improved organisational performance. Since functional units in an organisation are not linked physically, these ought to be linked psychologically (Katz & Kahn 1978). Katz and Kahn contend that this can become reality provided that employee attitudes, perceptions and beliefs enable to induce the required organisational performance behaviours. However, such behavioural variance, according to Kelman (1961), is due to an individual’s attitudinal response that resultantly changes subsequent behaviours. Kelman (1958) describes such behavioural variance as the result of social influence.
### 2.3.6.1. Attitude, influence and behaviours

Human behaviour is argued to be preceded by instant information processing on the basis of belief\(^9\), attitude\(^10\), intention (Fishbein & Ajzen 2010), self-efficacy\(^11\) (Bandura 1977) or trying (Bagozzi & Warshaw 1990). According to the theory of reasoned action (Fishbein & Ajzen 1975), behaviours that are performed with an underlying reason are predominantly underpinned by an individual’s intention to perform the particular behaviour.

The intention of an individual to perform a particular behaviour, however, is the function of normative influences (Eagly & Chaiken 1993), subjective norms (Ajzen & Madden 1986), perceived norms (Fishbein & Ajzen 2010) or ‘the social pressure to act as attributed to significant others’ (Bagozzi & Lee 2002, p. 226). Additionally, for a positive intention to result in a behaviour, it is conditioned on a favourable attitude, which will further result in higher perceived control\(^12\).

**Figure 2.5: Relationship between attitude and perceived behavioural control**

In simplistic terms, behaviour is immediately preceded by behavioural intention, which is reliant on three factors: attitude, perceived norm and perceived control towards the particular behaviour, as illustrated in Figure 2.5. An individual can only be said to be in control of his/her own behaviour if the individual has the option to perform it or not (Ajzen & Madden 1986),

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9. Belief is ‘the probability dimension of a concept – e.g. the concept probable or improbable’; while belief about an object is ‘the probability dimension of a concept where the concept is a relational statement – e.g. Africans have dark skin’ (Fishbein 1963, p. 233).

10. Attitude is the ‘evaluative dimension of a concept – e.g. the concept good or bad, and is the mediating evaluative response’ (Fishbein 1963, p. 233).

11. According to the social learning theory (Bandura 1977), self-efficacy is an individual’s belief in his/her capability to perform a particular behaviour.

12. Perceived behavioural control is not to be confused with the idea that the individual behaviours are controlled by an organisation through management control functions. Perceived behavioural control is an individual’s belief to be in full control of a particular behaviour; the higher the perceived behavioural control, the stronger the intention to perform the behaviour.
and if the individual believes that the required resources are available to perform the behaviour – that results in higher perceived behavioural control (Ajzen 2002). However, the more influencing forces present, the less the individual will be in control to perform the behaviour. The key emphasis thus remains on the performance of behaviours under certain conditions (Fishbein & Ajzen 1975). Kelman (1974b) contends that behaviours exhibited under certain conditions are the consequence of attitudinal changes and are induced behaviours. Kelman (1958) labelled the process that produces induced behaviours as the social influence.

### 2.3.6.2. Social influence

Social influence is said to occur when an individual’s behaviour is the result of an intervention (induction\(^{13}\)) by an influencing agent (Kelman 1958, 1961, 1974a, 1974b). The exhibited behaviour is argued to be an induced behaviour that may have been different in the absence of the influencing agent. Such a process assumes that the intervention by the influencing agent directs the individual to change his/her behaviour from \(point A\) (individual’s original behaviour without intervention) to \(point B\) (influencing agent’s directed behaviour). Such directions toward a particular behaviour (or set of behaviours) by the influencing agent results in a change in behavioural beliefs, thus interfering in the sequence of behavioural beliefs to behaviour. The said intervention by the influencing agent can be intentional, unintentional or a mix of both. According to social influence theory, in cases of intentional intervention, the influencing agent provides guidelines and behavioural options for the expected pattern of behaviour while notifying the attached rewards and penalties with the expected behaviour. In the case of unintentional intervention by the influencing agent, however, there is a general description of a model with examples, which is further communicated through behavioural expectations, symbols and norms. In essence, social influence is the blend of intentional and unintentional intervention by the influencing agent as illustrated in Figure 2.6.

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\(^{13}\text{Induction is the extent to which the behaviour presented by an influencing agent relates to the goals important for an individual (Kelman 1961). Kelman (1974, p. 128) explains that induction is 'whenever an influencing agent offers or makes available to an individual some kind of behaviour and communicates something about the probable effects of adopting that behaviour'. The influencing agent points to a direction where the individual can select his/her response. Such responses or pattern of behaviour by the individual may contrast with the individual's personal beliefs and opinions. This study uses the word 'intervention' to avoid inter-disciplinary confusion. Such implementation is based on the premise that an influencing agent intervenes in the normal behavioural process and thereby influences subsequent behaviours.}\)
Theory of social influence (Kelman 1958) asserts that intervention by the influencing agent by providing the expected pattern of behaviour will result in change in the behavioural beliefs of the individual, thus causing a change in attitude and subsequently behaviours. The schematic link of intervention leading to induced behaviour can be illustrated as Figure 2.7.

For the social influence to incur change in behavioural beliefs, there are certain underlying conditions. Such resultant attitude change is only assumed to happen when there is clear intervention (induction) by the influencing agent, there is a recognised relationship between the expected behaviours and the influencing agent, the influencing agent and the...
individual hold recognised positions in the social system, goals important to the individual are made available and the influencing agent is in the possession of power\textsuperscript{14} to hold the individual’s resources that may be important for the individual to achieve his/her goals (Kelman 1974b). The conditions to trigger change in behavioural beliefs are illustrated in Figure 2.8.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2.8.png}
\caption{Conditions to change behavioural beliefs}
\end{figure}

Under these conditions, the individual is likely to embrace the directed (induced) pattern of behaviour. Such acceptance to exhibit an expected set of behaviours can take three forms according to social influence theory. If the individual exhibits or agrees to perform the new set of behaviours (offered by the influencing agent) because he/she perceives the influencing agent as the controller of resources which limit individual’s choices, the individual is argued to be under the influence of ‘compliance’. It is the individual’s consent to accept influence to achieve favourable reaction from the influencing agent to win rewards or to avoid denunciation. Secondly, if the acceptance of the new set of behaviours is based on the individual’s attraction towards them while seeking a continued relationship, the influence has taken the form of ‘identification’. It is the individual’s conscious attempt to adopt or imitate the behaviours of another person or a group (Kagan 1958). Finally, if the individual perceives the influencing agent as credible, expert and trustworthy, and the set of behaviours (offered) match the value system of the individual, the influence has taken the form of ‘internalisation’. In essence,

\textsuperscript{14} Power, according to Kelman (1958, p. 54), is defined as ‘the extent to which the influencing agent is perceived as instrumental in the achievement of the individual’s goals’. Swasy (1979, p. 340) explains that power is ‘the total possible change which one social agent can cause in another person’s attitude, behaviour, beliefs etc.’ Mowday (1978, p. 178) broadly refers to power as the ‘generalised ability to change the actions of others in some intended fashion’. The difference between power and authority is that authority is the ‘legitimate power based on formal position’.
Kelman’s social influence theory argues that an attitude change, underpinned by certain conditions, can take three forms.

Compliant behaviours are the product of social affect and do not relate to personal beliefs or values of the individual. Compliance is a form of exchange between adopted behaviours and rewards rather than a shared belief in an organisation (O'Reilly & Chatman 1986). The concept of compliance, as the consequence of attitude change, closely resides with constructs such as motivation or an individual’s intention to act. Compliance therefore resembles constructs such as ‘external motivation’ in the self-determination theory (SDT), that is, an external reason to act in obedience with the requirements of significant others (Ryan & Connell 1989); ‘social attitude shift’, that is, an individual’s attempt to conform to expectations (Tetlock, Skitka & Boettger 1989); and ‘imitation learning or imitative behaviour’ in Kagan’s concept of identification, that is, a behavioural attempt to imitate a model that is reinforced by direct rewards (Kagan 1958). According to Sears, Maccoby and Levin (1985, p. 370), even in the absence of rewards or any penalties, such ‘role practice’, however, is continually exhibited by individuals because of their desire to re-enact pleasing experiences. Smith, Organ and Near (1983) see compliance as an impersonal conscientiousness that indirectly facilitates others rather than a direct help to anyone in the system. In a sense, the positivist ideas of agency theory also relied on a compliant approach, highlighting that business objectives contrast with employee self-objectives and employees are self-centred (Merchant & Van der Stede 2012) and will not act in accordance if not closely monitored (Eisenhardt 1989).

Development in management philosophies may have resulted in the dissolution of time-and-motion control mechanisms (Behn 2003). Nevertheless, organisations establish benchmarks and then measure employees’ compliance against those benchmarks, which is, of course, the focal point of principal-agent theory, that is, how principals control the behaviour of their agents (Ingraham & Kneedler 2000). Such measurement systems, according to Kaplan and Norton (2005), are entrenched in an industrial age paradigm.

Identification occurs when an individual seeks to establish or maintain a relationship with another person or a group (Brown 1969). In other words, identification occurs when the individual imitates the behaviours exhibited by another person or a group because such an approach highlights association with the characteristics of the person or the group (Kelman 1961). Identification in the context of an organisation, however, is the influence referred to the characteristics of a group, their collaboration and their interdependence that may attract other
individuals (Brown 1969). Kelman (1958) argues that such a phenomenon is not limited to behaviours only; this also includes embracing ideas and beliefs where the individual would just like to be another person. Unlike compliance, identified behaviours are not conditioned on observation and surveillance; however, identification occurs only when an identified role is activated or an individual is within the radius of that relationship. Such a relationship, according to Kelman, is because of self-satisfaction rather than rewards. Ouchi (1979) states that identification lies between internalised and compliant behaviours, and has the capacity to mutate with the passage of time into internalised values of a clan.

In an effectively performing organisation, there are certain essential behaviours which go beyond the prescribed roles (Katz 1964). Kelman (1958) labelled these as the consequence of internalisation, which is the condition when an employee consents to an influence to maintain the harmony in behaviours that are integrally gratifying and match the value system of the employee. Such behaviours are displayed because they are internally rewarding and pleasing, solve a problem or are insisted by personal values (Kelman 1961). Internalised employees are influenced by the credibility of the influencing agent rather than its characteristics. Internalised employees are self-starters and are willing to invest maximised efforts for the benefit of the organisation; these behaviours are exhibited not because of rewards but because such behaviours are coherent with the employees’ internal values (Romzek 1990). Internalisation is the adsorption of beliefs because of their match with a value system (Kelman 1961). However, according to Kelman, internalised responses should not be taken as a permanent change or that they will be exhibited regardless of the social situation. If there are competing forces and values in the internalisation process, then an individual may choose another option.

Internalisation is not only necessary for market control due to the absence of hierarchical supervision; it is also necessary for a clan control. Moreover, internalisation as a form of exchange between internal and external social values is coherent with the idea of generalised accountability, which argues that employees will be internally inclined to go beyond the radius of specified or unspecified behaviours (Erdogan et al. 2004). Describing in the domain of organisational citizenship behaviours (OCB), Organ (1988) argues that discretionary individual

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15 For example, children’s aspiration to be like their parents, or among showbiz people, wearing and talking like Elvis Presley highlights identification.

16 For instance, an academic may be internalised towards research activity but if there is a soccer or baseball game on the TV, the academic may set aside research activity and watch the game because of a competing force to the research activity.
behaviours, not triggered by formal rewards or enforceable by job description, elevate the operational effectiveness of an organisation. Such behaviours become critical for success because an organisation is always in need of individuals who can perform beyond their specified roles for the benefit of the organisation (Mowday, Porter & Steers 1982). In essence, internalisation is what a ‘good employee ought to do’ (Smith, Organ & Near 1983, p. 657).

The concept of internalisation may seem to overlap with the concept of commonly known, intrinsic motivation, which is the set of behaviours ‘that are not energised by psychological drive for rewards’ (Vansteenkiste, Lens & Deci 2006, p. 20). Deriving from the concept of motivation, that is, ‘factors that give impetus to action’ (Deci & Ryan 1985, p. 3), intrinsic motivation is the urge to engage in an activity that is integrally interesting (Ryan & Deci 2000). In other words, intrinsic motivation is behavioural intention that is internally rooted. Internalisation, however, is the process of attitudinal change, and is the predecessor of intrinsic motivation (Hayamizu 1997). According to Ryan and Deci (2000), internalisation is the process of taking in a value leading to integration where individuals completely absorb the values as their own. Such process of internalisation highlights an individual’s behavioural change from a reflexive compliance to autonomous productive behaviours and collaborative commitment.

Although there is no consensus in the social psychology and behaviour literature about the absolute spot of action of social influence on an individual’s behaviour, whether it be on attitude (e.g. Kelman 1958) or on intentions through subjective norms17 (e.g., Ajzen 1985; Fishbein & Ajzen 1975, 2010); social influence has multiple routes that influence individuals’ behaviours (Bagozzi & Lee 2002). The focus of this study is not to indulge in philosophical discussion related to the point of action of influence on behaviour; this study rather takes a functionalist approach (Burrell & Morgan 2001) to identify influence mechanisms that intervene in performance behaviours. Fishbein and Ajzen (2010, p. 24) contend that understanding such a chain of ‘deliberate and spontaneous decision making process’ can help us understand the differences in behaviours among individuals with similar perceived behavioural control and norms. Nonetheless, such process needs contextual understanding because general dispositions become poor definitions and predictors of behaviours in a particular context (Ajzen 1991).

17 See ‘reasoned action model’ (Fishbein & Ajzen 2010).
Studies on such behavioural perspectives as compliance, identification and internalisation for the most part have focused on their influence on organisational commitment, attachment or organisational citizenship behaviours (e.g., Becker 1992; Meyer & Allen 1991; Rupp, Williams & Aguilera 2011; Sutton & Harrison 1993; Vandenberg, Self & Seo 1994). Moreover, studies on control and PE have rendered more focus on its influences on evaluators’ behaviours, while unimportance is observed towards accountability and its behavioural influence on employees (London, Smither & Adsit 1997). Studies on PE have continually focused on the correction of the process or rating instruments (Ferris et al. 2008; Hopwood 1972; Kloot & Martin 2000; Pearce & Porter 1986), validity of research process instead of changing practices (Folger, Konovsky & Cropanzano 1992; Latham 2006), and somehow empirical studies have overlooked in-depth understanding of PE and interacting factors that influence performance behaviours, performance as well as the evaluation process.

It is recalled that PE can have at least four types of foci and therefore can have diverse implications in employee attitudinal responses and behaviours. PE as an awarding or censuring mechanism can hold resources that are vital for the achievement of an employee’s organisational as well as personal objectives. Employees may also perceive their PE as a credible mechanism to enhance their future performance. In light of social influence theory, this study contends that PE acts as an influencing agent, incurs attitudinal changes and thus triggers induced behaviours because PE directs organisational employees to perform particular behaviours, that is, from point A to point B. Such theoretical background leads this study to assert that perceptions of a particular PE focus can impel employees towards compliant attitude, or if the required behaviours match with the value system of the employee, they can induce internalised attitude (Figure 2.9). According to Kelman (1961), such an understanding of attitudinal changes due to influence can enable predicting future behaviours that may be underpinned by certain conditions vis-a-vis conditions that might lead to certain behaviours. Follett (1924) argues that certain behaviours cannot be understood unless the stimulus, the response and their interdependencies are examined. Studies, however, traditionally examine one factor in the equation, perceiving the other variables to remain constant. A common error in this approach is the further extrapolation of such results from the particular to the general.
PE processes are vulnerable to the aforementioned endogenous as well as exogenous influences. In an effort to improve PE measures so as to ‘improve future performance’, the emphasis should be on understanding social, procedural and strategic factors influencing employees’ performance behaviours (Ferris et al. 2008). Moreover, employee performance behaviours should be considered as economic factors in the performance equation of an organisation (Verbeeten 2008). Nonetheless, behaviours cannot be understood unless both the stimuli and responses and their inter-relation are examined (Follet 1924). The emphasis also leads this study in finding avenues that can create value (Simons 1995) and seeking an approach associated with the psychological constructs of compliance and internalisation (Ferris et al. 2008). Such an approach can help to dissolve intrinsic friction between the dynamics of strategy and factors influencing employee performance behaviours (Simons 1995). Being by-products of a social system, many dimensions of performance may resist quantification (Ouchi & Maguire 1975); thus, means are needed which can foster the required organisational citizenship behaviours (Ouchi 1979). In doing so, flexibility for professional decisions needs to be inculcated. Moreover, caution should be exercised for the temptation to replace measurements with rigid formulistic control mechanisms and PMS with no provisions for discussions (Aucoin & Heintzman 2000b).

2.4. Performance evaluation in New Zealand universities

Accountability, as a cement binding social systems (Frink & Klimoski 1998), views organisations, irrespective of their business type, as having the responsibility to adhere to political, economic and societal expectations. The notion that institutions breathe in an audit society and are answerable to the society puts equal responsibility on private, public or semi-
public autonomous organisations. Bovens (2005) labels this as the problem of many eyes. Public sector organisation in general and academic institutions such as universities in particular, have become a true example of such assertion.

2.4.1. Universities’ performance

Among public sector institutions, the last two decades have seen a significant shift in their performance measurement and management practices. Change to such PM practices has been internationally termed as New Public Management (NPM). NPM initiatives were the consequence of financial stress and general belief about public institutions’ inefficiency and wastefulness (Modell 2005a, p. 56). It is observed that government institutions either published their accounts very delayed, which only provided information about the inputs such as budgets while no emphasis was given to actual performance (ter Bogt 2003). NPM based mechanisms therefore focused on performance measurement in public sector in an attempt to make budgeting output focused, less incremental (Lynn 2006) and give ‘primacy to accounting practices and processes’ (Kurunmäki, Lapsley & Miller 2011, p.1). Thus the deployment of these initiatives have seen public sector institutions’ more emphasis to outputs; although such emphasis is conventionally equated with private or business sector organisations (ter Bogt 2003). Among most of the western or developed countries, the introduction of such PM initiatives was not limited to sectors such as education, health, local governments and security forces (Van Helden 2005; Verbeeten 2008).

These reforms are underpinned by the beliefs of openness, transparency (ter Bogt & Scapens 2012), economic justification, efficiency, deployment of business administration instruments (ter Bogt et al. 2010), and justification for utilising taxpayers’ money (Hood 1995). NPM based performance measures thus emphasise, active role of professional managers with discretionary powers, which ensure value for money, performance audits (Boyne et al. 2002; Lonsdale 2000; Pollitt 2003; Power 1996) and ‘hands-on-management’ (Hood 1995, p.97). Since the deployment of these PE mechanisms, there has been a significant shift from historical implicit and qualitative performance standards, self-management by professionals (ter Bogt & Scapens 2012), process based evaluation (action control, procedural evaluation, bureaucratic control) towards outcome based PE (output control) (Guthrie, Olson & Humphrey 1999;

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18 To ensure that such mechanisms are implemented, the US enacted ‘Government Performance and Results Act (1993); similar initiatives were commenced in Canada, Australia, New Zealand, the UK and other countries (Atkinson and McCrindell, 1997; Hood, 1995; Smith, 1993).
The emergence of NPM paradigm has resulted in a significant shift and proliferation in PE practices (Nielsen & Ejler 2008; Parker & Guthrie 1993).

To achieve the objectives of efficiency and accountability, NPM based measures advocate for a mechanistic notion of performance where pre-defined performance objectives guide strategic initiatives and managers for the achievement of institutional objectives (Bevan & Hood 2006; Newberry & Pallot 2004). Since NPM based mechanisms are driven by the idea of ‘managing for results’ (Modell 2005a, p. 56), studies have been curious in understanding whether NPM initiatives and practices have proven successful in improving institutions’ performance (Brignall & Modell 2000; Heinrich 2002; Hood 1995; Hyndman & Eden 2000; Ittner & Larcker 2001; Van Thiel & Leeuw 2002). Cavalluzzo and Ittner (2004, p. 243,) find a meagre evidence that such mandated (emphasis in the original) performance measurement enhances performance or accountability. This perhaps can be due to the reason that most of the public sector activities are hard to quantify or measure (Mintzberg 1996), NPM based measurement mechanisms further add problems and complexities (Modell 2005a) in evaluating activities (Cavalluzzo & Ittner 2004) where an appropriate performance indicator is unlikely to be available (Hyndman & Eden 2000).

Universities have been closely knit within social networks, communities and religious institutions since medieval times (Jeavons 1994). While NPM based performance mechanisms have significant influence on universities practices, the expectations of better financial performance and transparency, expectations and perceptions to serve society still prevail. Deployment of performance measurement and management measures in universities has seen an increasing role of managers with a decreasing role of academics as decision makers and managers (Salter & Tapper 2002; Deem 1998, 2004; Keenoy & Reed 2008). NPM based measures in universities are therefore generally termed as ‘managerialism’ in universities (Coy, Fischer and Gordon 2001).

Prior to the introduction of reforms in the higher education sector, universities faced criticism, immense pressure to perform and meet public and societal expectations (Lord, Robb & Shanahan 1998; Taylor 1987). Like other public institutions, universities at that time were unable to satisfy the governmental benchmarks of transparency and financial performance. One such example is that NZ universities’ annual reports focused on ceremonial activities and

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19 In the context of public institutions’ management, managerialism, according to ter Bogt and Scapens (2012, p. 490), is an approach through which ‘the public sector politicians set policies and professional managers are responsible for their implementation through the use of private sector management styles’.
provided minute information related to financial objectives, outcomes, staff and performance indicators (Banks, Fisher & Nelson 1997). Universities therefore were pressurised through various institutional channels that led the implementation of NPM and accounting based performance measurement systems (Lapsley & Miller 2004; Townley 1997). Consequently, universities faced privatisation, funding cuts from respective governments (Kogan & Kogan 1983) and had to seek strategic alliances and mergers for their survival. After the introduction of efficiency measures and performance indicators (Peters 1992), universities had to change their operational models to achieve the required efficiency (Banks, Fisher & Nelson 1997). Governments also initiated new funding policies for universities (McNay 2015), which emphasised on excellence and quality. The funding policies have been institutionalised through frameworks such as Research Excellence Framework (REF in the UK), Excellence in Research in Australia (ERA), Performance Based Research Fund (PBRF in NZ), and also in the Netherlands (Evans 2014; Martin & Whitley 2010; Parker 2011; Van Der Meulen 2007; Whitley 2007). Universities’ funding from respective governments is now reliant on research and teaching performance evaluated through these frameworks.

Research performance is quantified on the basis of number publications in internationally ranked journals produced by academics in a university; likewise, teaching performance related to the degrees completed, number of students and quality of teaching in the institution (ter Bogt & Scapens 2012). Regardless of context, public or private universities, these quantitative mechanisms to evaluate research and teaching performance are now becoming a norm in many countries (Broadbent 2007; Modell 2003). The matrices of research published in internationally ranked journals and teaching performance are also the basis of university rankings across the globe, which consequently has enforced a competition and ranking race among institutions and academics. The information generated by these performance matrices further guide universities in their management (Adler & Harzing 2009; Brooks 2005; Dill & Soo 2005) and resource allocation in order to retain or improve their ranking that can enable to attract more students, that is, customers. Resultantly, these performance measures are tricked down to departmental and individual academic levels and thus receive considerable attention by managers and decision makers in a university who are more concerned about the numbers that can attract more funding (Martin-Sardesai et al. 2016).

The implementation of mechanisms seeking enhanced transparency, improved performance (Boston et al. 1996) and efficiency also caused immense changes in NZ universities. Nonetheless, such changes are argued to have resulted in improved performance
of NZ universities. According to the Ministry of Education (MoE), all NZ universities are now ranked among the top 500 international QS rankings, which is not achieved by universities in Australia, the UK or Canada (Smart 2014). The 2010 Tertiary Education Commission (TEC) (2011) performance report highlighted universities’ performance as significant and they were awarded $1.38 billion in funding. Universities in NZ, like other developed countries, now operate in a market based and ‘business-like’ managerial environment (Broadbent & Guthrie 2008b; English, Guthrie & Parker 2005; Fredman & Doughney 2012; Giroux 2016; Parker 2011; Teelken 2012).

Although universities are said and perceived to be social institutions to meet societal expectations, it is worth noting that the evidence of record profit by universities does highlight their financial orientation20. For example, NZ universities generated more than 500 million dollars through commercialisation of research in 2015 (Universities New Zealand 2016). Despite universities’ huge contribution to respective countries’ economies (e.g., 3–6% of the NZ GDP), the key question arises whether these institutions are housing processes to foster creativity and provide academics enough space to cultivate their ideas.

To further analyse the universities’ financial, business or market orientation, this research compared universities’ incomes since the implementation of reforms. The NZ universities, for the most part, highlight a steady financial growth as highlighted in Figure 2.10. The surplus/deficit trends in Figure 2.11, however, are quite comparable among the universities, and obviously highlight larger expense trends among these organisations. It is worth noting, however, that the growth (Figure 2.10) may also have been contributed by market dynamics, universities’ business and revenue-generating orientation, changing trends in technology and/or internationalisation. The proponents of the implemented reforms may infer such growth as the consequence of reform processes. Although the financial performance of universities is not available for the pre-reforms periods, the current income and surplus growth trends cannot be exclusively attributed to the implemented transparency measures.

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20 For instance, Australian universities made $16.6 billion in profits in 2014 (Hare 2015), which is unarguably more than the surplus of many countries. Likewise, NZ universities generate an average of 4.5 billion annually (Universities New Zealand 2016) and two of the NZ universities joined the billion dollars club (Field 2011).
NZ universities generate more than one billion dollars of funds annually from international students (Universities New Zealand 2016), while statistics from domestic students

21 Note: The data used in these graphs are not adjusted, these are the actual values mentioned by the universities’ annual reports.
are unavailable. Regarding research, however, contrary to the previous funding and support, existing processes now require NZ universities to earn the funding through their research contribution (Craig, Amernic & Tourish 2014). This process of university research funding in NZ is termed as the ‘Performance Based Research Fund’ (PBRF), which allocated its first funding of $238 million in 2003-2006 (Tourish, Craig & Amernic 2017). According to the TEC, PBRF aims to increase the quality of basic and applied research, support for teaching and learning at degree levels, assist universities to upgrade their competitive rankings, provide robust public information to stakeholders on research outputs, while supporting new researchers and research activities that provide macro-environmental benefits to NZ (TEC 2014a, p. 4). Moreover, the emphasis of PBRF is on supporting researchers and students in creation of innovative knowledge, and application and dissemination of this knowledge to students and the community (TEC 2006, 2013). PBRF’s quality evaluation therefore measures a university’s performance on the basis of research degree completions (RDC) and external research income (ERI). Defined by the TEC in mathematical equations, this quantitative process assigns 60%, 25% and 15% to quality evaluation, RDC and ERI, respectively22 (TEC 2008, p. 13). The quality evaluation comprises subject-based categories, their weightings and the employment tenure of a particular academic. ERI is the funding and support provided by bodies other than the government to a university, its subunits, research programme or an individual researcher (TEC 2008). Based on the matrices, PBRF, further categorises each of the research active university academics into performance grades as: R (inactive), C (local reputation), B (national reputation) and A (international reputation). Smart (2009) argues that greater scrutiny at NZ universities with the introduction of PBRF has resulted in a significant increase in research productivity. Smart further concludes that conditioning government funding on performance paved the way to change institutional behaviours. Although such NPM based performance measures are argued to have resulted in high financial performance, By, Burnes and Oswick (2013) point out the unintended side-effect of these measures, that is, compromise on academic freedom, which is further influencing professional and institutional autonomy, and intellectual independence.

To be responsive to social expectations means universities need greater autonomy. According to Berdahl (1990), the autonomy of a university is composed of academic freedom, substantive autonomy and procedural autonomy. Academic freedom is central to knowledge

22 From 2016, however, this proportion has changed to 55%, 25% and 20% to quality evaluation, RDC and ERI, respectively (TEC 2014).
generating activities in a university (Latif 2014). Berdahl views academic freedom as the liberty possessed by an academic to pursue teaching or research objectives without fear of censure or termination. To accomplish financial performance objectives, universities need to install mechanisms that ensure transparency and put controls in place, which may not only influence academic freedom but may also affect universities’ autonomy. Berdahl views the interplay of academic freedom and universities’ financial objectives to be paradoxical in nature.

Contrary to universities’ financial motives, creativity, academic freedom and quest for knowledge are viewed as the creed of these institutions. According to Sir Ken Robinson (2006), creativity is unarguably as important as literacy; if one is petrified of making mistakes to avoid denunciation or not prepared to be wrong, there is a meagre chance of conceiving anything original. Craig, Amernic and Tourish (2014) argue that universities today stand on foundations of original theories and scientific contributions laid in the last century. Ambitiously following the path of profitability by universities is forcing academics to follow administrative agendas rather than creative ideas and research interests23 (Gibbons et al. 1994).

2.4.2. Critique on performance evaluation in universities

In order to meet government expectations as well as attract funding, universities have to align their internal performance measurement systems with the performance benchmarks of quality, research and degree completion set by the funding frameworks. Such alignment and focus on outputs, performance indicators and quantitative inferences are quite visible in NZ universities’ annual reports (e.g., University of Auckland 2014; University of Otago 2014). Despite the results and achievements highlighted by the TEC, academics rarely consented for such measures’ advantageous effects on them as well as universities. Along with Parker (2011), Coy, Fischer and Gordon (2001), Shore (2010) and Turk (2008), commentaries by the proponents of the classic style university model argue that such a calculative style of performance measurement is moving universities away from collegial style of administration and changing the persona of a social institution.

Since the introduction of managerial measures or audit culture (Shore 2008) to quantify performance (MacRury 2007) in universities, there has been consistent criticism from academic sectors. Brownstein (1989) labels managerialistic these measures as a political

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23 Nonetheless, this is also influencing the criteria on which research students are taken into universities. Students, keen to be accepted, have to pursue research ideas of their tentative research departments to amass publications. This approach particularly in NZ is driven by universities’ intent to obtain more funding from the government through PBRF evaluation matrices.
agenda to control universities. Elliot (1990) argues that such measures of resource management jeopardise the research environment and are incoherent in fostering research. In spite of all the repulsion and criticism, the ‘crude form of positivism’ (Peters 1992, p. 137) or the ‘managerialist paradigm’ prevailed and changed the course of how the performance of universities as organisations and academics as individuals is evaluated.

Studies have also highlighted such approaches’ influences on academics as well as universities as the social institution (Coy, Fischer & Gordon 2001; Kallio & Kallio 2014; Martin-Sardesai et al. 2017; Teelken 2012). Audit and market based performance evaluation approaches are perceived as inappropriate for peculiar social institutions such as universities because such measures threaten creativity (Craig, Amernic & Tourish 2014). Employing private sector management practices to measure performance is viewed as replacing ‘consensus-style management’ with an accounting based culture further influencing institutional autonomy and academic freedom (Peters 1992a, p. 128). The emphasis on cost effectiveness and efficiency may also result in loss of academic development and professional collaboration (Pollitt 1987). In a similar vein, Lindsay (1981) states that implementing managerial mentality in universities faces complexities. These techniques are viewed as too corporate entrenched and unsuitable for such institutions as universities (Hodgkin 1993). Coy, Fischer and Gordon (2001) suggest finding solutions to measure performance in behavioural values like altruism and collaboration.

PE in universities or the philosophy for constant supervision (Collini 2010, 2012) is seen to be a strategy to replace collegial norms with hierarchical power (Parker 2011) and to quantify compliance to objectives (McIntyre 2000). The emphasis of these measures remains on quantification of outcomes (Craig, Amernic & Tourish 2014) where processes such as research and teaching are evaluated on the basis of outputs (Atiyah 1992). The instruments evaluating performance are entrenched in the notion of KPIs, which basically attempt to assign a numerical value to the efficiency (Spee & Bormans 1992) or activities of an academic that may be innately ‘hard-to-measure’ (Cavalluzzo & Ittner 2004, p. 244). This practice is underpinned by the assertion that such implementation will guide towards an improved performance of academics as well as universities (Linke 1992).

According to the aforementioned critique, it can be asserted that PE in universities is caught between public governance and corporate paradigms. On the one hand, like private business organisations, universities intend to implement predominantly an outcomes based
definition of performance; while on the other hand, universities as public-funded institutions are highly influenced by government’s political, educational and financial policies. Such influence thereby does not allow universities to practice solely under a market based paradigm. Because the development and application of PE in universities is influenced by government polices (Cave et al. 1988), Lapsley and Miller (2004) contend that the implemented quantifiable approaches therefore should not be confused with the way performance is measured in private sector organisations. Nonetheless, different strategic intents require different sets of performance measures to achieve required objectives (Adler 2011).

2.4.3. PE’s influence on academics’ performance behaviours and performance

Universities face the problem of many eyes (Bovens 2005), and academics are the core units of productivity in terms of their research contribution. In such a complex social system, many dimensions of performance may resist quantification (Ouchi & Maguire 1975); some facets of performance therefore may require a ‘soft judgement’ that cannot be achieved through strictly defined ‘hard measurement’ approaches (Caruana, Ramaseshan & Ewing 1998, p. 59).

Since the Second World War, developed countries in particular have experienced a massive development in higher education. Such ‘massification’ of research, though, is dominated by academic elites and requires strong socialisation efforts (Gibbons et al. 1994, p. 70). In complex research projects involving multiple institutions, it further adds financial and administrative requirements.

Accountability in the educational sector is traditionally prescribed in terms of transparency in the financial activities of universities (e.g. Coy, Fischer & Gordon 2001; Coy & Pratt 1998). PM approaches in universities seemingly assume that measuring outcomes is equivalent to being accountable. Indeed, efficiency, as a measure of performance, is basically one of the objectives of accountability, which stands above the rest of the objectives set by an organisation. Nonetheless, the central aim of accountability is to improve performance (Aucoin & Heintzman 2000b) while achieving the balance between accountability mechanisms and ample freedom for employees for effective performance (Smith 1971). Aucoin and Heintzman (2000a) believe that finding such a balance should always be a work in progress. PM as an accountability mechanism among universities therefore targets the main productivity unit of these organisations, that is, academics.
Let alone the fact that academics have been very critical and sceptical about performance measures adopted by universities (or forced by government); there has been a research neglect in suggesting alternative approaches in the performance measurement of academics. According to ter Bogt and Scapens (2012), the need is for the evidence that how these PE mechanisms are used to evaluate performance and how they affect or influence individual academics in universities. Acknowledging that many of the implemented KPIs may not measure an academic’s contribution, the subject did not receive much attention on how to fix this issue and devise some measures, which can facilitate to measure the performance of an academic. While the empirical evidence is still emerging, the emphasis of previous literature, for the most part, has taken an institution based anecdotal and normative learning approach rather than one based on substantive empirical evidence. PE is a context specific phenomenon and, especially in higher education sector, factors of funding agencies and political influence make PE in universities rather more contextual in nature. Besides universities, larger scale empirical evidence related to NPM based PE practices in social institutions is still scarce (Godard 2010; Hood 2007; Van Helden 2005).

As the literature has highlighted, PE can have at least four types of foci. Behavioural and organisational implications related to each of the foci were also discussed. As highlighted, prior to asserting the influence of HR processes, such as PE on academic’s attitude and subsequent behaviours, the need is to understand academics’ perceptions and interpretations of the existing PE practices, which will be the underpinning factor in attitudinal responses. Contrary to the traditional approaches of correcting evaluation instruments, this study therefore first explores the perceived PE focus by an academic. To achieve this objective, this study frames its first research question (RQ) as:

RQ 1: How do academics in NZ universities perceive their performance evaluation process to be focused; is this process, outcomes, behaviour, people focused or an amalgamation of these foci?

This research postulates that PE is an influence mechanism, which provides a model for performance behaviours and subsequent performance. The perceptions held by an academic related to the PE focus will influence the academic’s attitude and subsequent performance

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24 During a personal discussion about this research with a renowned US state university professor, the response was an immediate answer ‘we already know that’. The researcher believes that such an assertion and normative understanding in academia has kept academics from exploring and providing empirical evidence to improve their own performance evaluation issues.
behaviours towards compliance or internalisation. In an effort to investigate academics’ attitudinal changes and behaviours, this study sets the ground for its second RQ as:

**RQ 2:** Does a perceived PE focus influence academics’ attitude towards compliance and/or internalisation and their performance behaviours?

As highlighted in earlier sections of the literature, internalised academics are strategically aligned and perform, whereas compliant academics may perform just to meet the organisational benchmarks. To understand the compliance and internalisation based attitudes’ relation to an academic’s research performance, this study sets its third RQ as:

**RQ 3:** Does an academic’s attitude taking the form of compliance or internalisation influence his/her research performance?

By achieving the aforementioned three RQs, this study intends to achieve its aim, that is, *Can a compliance versus internalisation approach suggest improvement in the performance evaluation processes for academics in NZ universities?*

The researcher believes that by examining the dynamics of influence-driven behaviours and the existing focus of PE mechanisms will help policy makers devise evaluation systems that may help restore academic freedom and creativity while persuading academics towards internalised performance behaviours. Since PE is a dynamic phenomenon and needs to be contextualised according to environmental, organisational and sectorial variables, it is therefore believed that research on the behavioural aspects of PE is an on-going process. Shore and Wright (1999) emphasise finding alternative avenues of thinking to suggest mechanisms that provide customised ways to measure performance, tailor collegial controls to augment accountability and restore academic trust and autonomy. According to a study by Chong (2013), long serving academics favour a collegial ethos, while comparatively newer academics do not see any problem with the changes in management practices. This further highlights that such collegial norms and traditions of creativity and academic freedom may be self-dying with the passage of time. The researcher believes there is a need for empirical evidence on the situation in NZ which may open avenues of enhanced understanding of academics’ PE and provide suggestions to improve these measures.
2.5. Conclusion

Performance management systems strategically aligned can offer significant benefits for organisations, managers as well as employees. Being systematic routines, performance management systems focus on a unified direction of achieving organisational strategic objectives. Performance measurement systems being the key element of performance management focus on their purpose to improve future performance while providing information to managers and facilitating decision making processes in an organisation. Performance evaluation, an individual employee’s measurement, is deduced to be an accountability mechanism, which through an account-giving process provides information to reward, censure or develop an employee. The foci of such performance evaluation measures can be outcome, procedural, behavioural or shared in nature. These can further influence employee performance behaviours. PE processes therefore can influence employees’ attitudinal responses and behaviours, which may be compliant or internalised in nature. Such behavioural change can also influence an employee’s future performance. Studies have highlighted that a compliance versus internalisation approach can help to resolve intrinsic friction between dynamics of strategy and performance evaluation processes that define boundaries of their behaviours. Determining such relationships between compliance, internalisation and factors underpinning the performance of academics in NZ universities is the objective of this study. It is believed that exploring such relationships may help to devise PE measures which may foster academic freedom, enhance collaboration, going an extra mile and removing unwanted elements of PE, that is, lack of creativity in exchange for conformity.

Having described the theoretical concepts in this chapter, it is now necessary to capture these ideas in an operationalisation framework to achieve the objectives of this study. Hence, the next chapter will discuss the key constructs of the study, their operationalisation in the context of NZ higher education sector as well as research methodology implemented to achieve the objectives of this study.
“The need of reason is not inspired by the quest for truth but by the quest for meaning” (Hannah Arendt 1981).
3.1 Introduction

Social science was actually the pursuit of self-knowledge; in seeking clarity about why people selected and acted on certain values, we were ultimately seeking clarity about the meaning of our own conduct (Smith 1983, p. 7).

3.1.1 Chapter objectives

The previous chapter reviewed the literature related to the objectives of the study. This chapter intends to discuss operational definitions of the study constructs along with methodological approaches employed to achieve the research objectives. Research is driven by a researcher’s philosophical stance. The philosophical orientation or researcher’s paradigm guides subsequent chosen research methods as well as data collection techniques. While the research can choose an appropriate mechanism to collect its data, it must abide by ethical considerations related to the context. This sequential process leads researchers to analyse the data to draw inferences for a meaningful understanding. In doing so, the chapter details the boundaries of interpretations of the study, that is, its limitations.

3.1.2 Chapter outline

The chapter is divided in 10 sections. After an introduction (section 3.1), the chapter mentions the purpose of this research in section 3.3 after restating the research objectives (section 3.2) that have emerged through the review of the literature in Chapter 2. This follows operationalisation of the study constructs in section 3.4. To achieve the objectives, this research then justifies its philosophical orientation (section 3.5), which leads to its theoretical approach required for theory generation in section 3.5. Theory, however, cannot be developed without a theoretical approach (section 3.6) and an appropriate research design. Section 3.7, therefore, discusses research design as well as the research strategy. This follows a brief description of the data analysis approaches adopted in this study (section 3.8). Prior to the conclusion (section 3.10), section 3.9 mentions the processes implemented to satisfy the ethics requirements of this study.

3.2 Research objectives

The previous chapters and sections built the rationale to achieve the objective of this study, that is,
Can an investigation of performance evaluation’s influence on attitudes and performance behaviours suggest improvement in the performance evaluation processes for academics in NZ universities?

To achieve this aim, the study established the following research questions.

RQ 1: How do academics in NZ universities perceive their performance evaluation process to be focused; is this process, outcomes, behaviour, people focused or an amalgamation of these foci?

RQ 2: Does a perceived PE focus influence academics’ attitude towards compliance and/or internalisation and their performance behaviours?

RQ 3: Does an academic’s attitude taking the form of compliance or internalisation influence his/her research performance?

3.3 Research purpose

Just gathering facts and figures and then rearranging them without logical interpretation does not qualify as ‘research’ (Walliman 2011). Research is the process undertaken to explore a given phenomenon in a systematic way, which resultantly enhances the knowledge about the particular phenomenon (Saunders, Lewis & Thornhill 2015). Through such a systematic process, business and management research focuses to explore, interpret and resolve organisational issues. The key idea behind organisational research thus is to suggest practical implications stemming from its results that can resolve organisational issues (Saunders, Lewis & Thornhill 2015).

Organisational issues worthy of research can relate to a researcher’s academic interests (Gibbons et al. 1994), value system or preference of one issue over another. To do so, the need is to bring knowledge from other disciplines (Easterby-Smith, Thorpe & Jackson 2008), as new horizons cannot be explored through a unifocal lens. This research therefore utilised a multidisciplinary approach in addressing the issues in the PE of academics.

Organisational research can be placed on a continuum of basic research to applied research (Saunders, Lewis & Thornhill 2015). Basic research attempts to expand theoretical perspectives and provide fundamental knowledge about the investigated phenomenon, whereas applied research attempts to suggest practical solutions to an investigated issue (Neuman 2006). However, an extension of applied research focuses on a ‘does it work’ approach (Neuman 2006, p. 26), that is, an evaluative research.
This study is both applied and evaluative research in nature. As highlighted, this study intended to enhance the understanding of the PE of academics and PE’s influence on academics’ performance behaviours and their performance. Focusing on the RQs of this study, RQ 1 was ‘how’ in nature and explored academics perceptions about their PE. According to Neuman (2006), ‘how’ RQs intend to ‘present a picture of specific details of a situation, social setting, or relationship’ (p. 35). RQ 2 in this study focused on providing an explanation of multiple factors. RQ 2 not only focused on understanding the relationships between academics’ behaviours and perceived PE focus, but it also attempted to predict that a certain perceived PE focus could result in compliant or internalised performance behaviours. Likewise, RQ 3 was seeking a relationship between an academic’s attitude and the academic’s performance. It was believed that such an approach would facilitate the identification of patterns in academics’ behaviours across universities as well as within a university. Yip (2011) contends that pattern recognition is the basic realm of applied research, which helps managers in their decision-making processes. Yip argues that such an approach not only bridges the gap between academic and practice-based research but also attracts readers in the practical world. Although the RQs were exploratory, descriptive and explanatory, according to Neuman (2006) explanatory research is built upon exploratory and descriptive research. All RQs were thus interrelated to address the objectives of this study.

Since research is a systematic investigation (Burns, Robert Bounds 1997), an understanding of a phenomenon cannot be achieved unless a framework for the research has been crafted. Cavana, Delahaye and Sekaran (2001) contend that once the research has conceptualised its research questions, it is in need of a framework that can facilitate answering those questions. To conceptualise the framework, it is necessary to first define and operationalise study constructs that allow the study to achieve its objectives.

3.4 Study constructs

Measurement in any research may not be feasible unless the study’s abstract ideas or constructs are concisely operationalised in accordance with the studied context. According to MacKenzie (2003), constructs are the building blocks of theory, but studies often lose their credibility or get into problems due to a failure to define key constructs and their relevance to the researched context.
3.4.1 Performance

Performance cannot be defined in a universal manner (Lebas 1995; Otley 1999), but needs to be contextualised according to the objectives and purposes of an organisation. In order to identify the set of activities that are central to an academic’s performance, this study reviewed PE requirements, job descriptions of academics as well as annual reports of NZ universities. For instance, the requirements for the performance review of a senior lecturer\(^{25}\) at the University of Otago are following:

- Achievements in teaching in the review period
- Research accomplishments during the review period
- Service activities in the review period
- All standard student evaluations of teaching for the review period
- A schedule of teaching responsibilities for the review period

The analyses of university documents revealed that the performance of academics, for the most part, comprises research and teaching activities. These categories were consistent among all the NZ universities. Although the element of service and administrative activities is also considered as a part of their responsibilities, PE, in particular, seemingly gives more emphasis to research and teaching performance. Additionally, the PBRF, as a funding mechanism, measures a university’s performance on the basis of various research factors (TEC 2014b). The analysis of NZ universities’ annual reports and strategic documents also highlighted that emphasis is rendered to research and teaching activities rather than academics’ service activities. Service responsibilities in this study were therefore conceptualised as ancillary in nature, which allowed it to focus on the two main elements of teaching and research performance.

The performance of an academic in this study is therefore conceptualised as the composite of teaching and research activities. Employees in the NZ universities responsible for teaching and research activities are most likely to be lecturers, senior lecturers, associate and full professors, head of the department (HOD) and teaching and research fellows. These designations in NZ universities were therefore categorised as academics in the context of this study. Such operationalisation was done on the basis of PE requirements; that is, their evaluation should be based on their research and teaching contributions. Although personnel in administrative positions (e.g., dean of a division at the University of Otago) are also

\(^{25}\) http://www.otago.ac.nz/humanresources/otago089857.pdf
considered as academics because of their involvement in research activities, due to a different set of job responsibilities and performance KPIs, those did not meet the criteria for an academic in this study.

### 3.4.2 Performance evaluation

The concept of PE has received attention in the literature from an organisational, divisional, departmental as well as from individual employee’s perspective. To achieve the objectives of this study, PE is conceived as the process of evaluation of an individual academic within various university departments who is involved in teaching and research activities. The term PE in this study is synonymous with Performance Appraisal, Performance Review, Performance and Developmental Planning Process or any other such term which designates the process where an academic in a university is evaluated for his/her achievements after a prescribed period of time.

### 3.4.3 PE focus

PE processes can be categorised on the basis of their objectives and definitions described by an organisation. It is recalled that PE foci can be categorised on the basis of the paths of the exhibited behaviours resulting in performance (process focused) or the produced outcomes (outcome focused) (De Langhe, Van Osselaer & Wierenga 2011; Siegel-Jacobs & Yates 1996). The notion of process focused evaluation is also categorised by Langhe, Osselaer and Wierenga as procedural accountability, and outcome focused evaluation as outcome accountability. In essence, ‘process focused’ evaluation exclusively emphasises the quality of ‘how the job is done’ (Ferris et al. 2008, p. 157, emphasis added). This study conceptualises process focused evaluation as the process, which ‘focuses on justification of the procedure used to perform an action or a behaviour’ (De Langhe, Van Osselaer & Wierenga 2011; Siegel-Jacobs & Yates 1996). Such justification to perform a behaviour is inferred as adhering to the prescribed guidelines and procedures, and thus an academic’s performance is evaluated on the basis of adherence to those guidelines. Such conceptualisation is also coherent with the idea of bureaucratic control, that is, evaluation that is dependent upon routines, directions and task completion procedures (Ouchi 1980).

Outcomes focused evaluation emphasises on ‘do whatever you have to do to get the job done’ (Ferris et al. 2008, p. 157, emphasis added). Outcome focused evaluation therefore is

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26 Process focused and procedurally focused are used interchangeably in this study.
conceptualised as the process ‘based on the measurement of outputs’ (Ouchi & Maguire 1975, p. 559) or outcome accountability (Siegel-Jacobs & Yates 1996, p. 1)\textsuperscript{27}. Although Chapter 2 utilised the terms output and outcome based evaluation interchangeably, Aucoin and Heintzman (2000b) view performance as the combination of outputs and outcomes. Outcomes are a societal perspective; that is, how outputs produced by an individual, functional unit or an organisation are translated into the socio-economic benefits for the society. It is believed that the outputs produced by NZ academics not only benefit NZ universities but also the wider society. Moreover, the disciplines used in this study also utilise outputs and outcomes interchangeably, for example, HRM, accountability and judgement literature use outcomes, while accounting and management control literature use the term outputs. Despite the literal and theoretical variation between the two terms, in the context of this study, the term ‘outcomes’ will be used in the following sections to refer to the results produced or the performance achievement of an NZ academic.

Control mechanisms, according to Ouchi and Maguire (1975), also utilise surveillance and supervision mechanisms to evaluate performance. In accordance with Ouchi and Maguire’s taxonomy, to understand the behavioural focus of PE, this study conceptualises the behavioural focus of PE as the process that monitors academics’ performance behaviours\textsuperscript{28} through supervisory, observation and/or surveillance mechanisms. In addition to the aforementioned PE foci, Eisenhardt (1985, p. 135) contends that Thompson’s (2010) and Ouchi’s (1980) management control frameworks suggest a ‘people’ based or ‘social’ evaluation strategy. Ouchi and colleagues (Ouchi & Jaeger 1978; Ouchi & Johnson 1978) found that employees’ complete immersion in organisational benefit can only be achieved through social mechanisms, values, norms and organisational traditions, which would also mould newer employees towards the existing performance norms in the organisation. Such a sense of adherence to the group’s shared traditions as a community is conceptualised as a people focused\textsuperscript{29} PE in the context of this study.

The aforementioned operationalisation of perceived PE focus was utilised to understand the perceptions of academics about their PE and to achieve the objective of RQ 1, that is:

\textsuperscript{27}Siegel-Jacobs and Yates (1996) labelled process based evaluation as procedural accountability and outcome focused evaluation as outcome accountability. Anderson and Oliver (1987, p. 76) phrased evaluation measures that focus on outputs produced as ‘outcome-based control systems’.

\textsuperscript{28}Actions or behaviours that contribute to or can contribute to performance.

\textsuperscript{29}‘People’, as a term, is borrowed from Eisenhardt’s (1985) interpretation of Thompson and Ouchi’s clan control or organic solidarity by Durkheim.
How do academics in NZ universities perceive their performance evaluation process to be focused; is this process, outcomes, behaviour, people focused or an amalgamation of these foci?

Based on their perceptions of PE focus, PE can influence academics’ attitudes and subsequent performance behaviours. The RQ 2 therefore intended to understand:

Does a perceived PE focus influence academics’ attitude towards compliance and/or internalisation and their performance behaviours?

As mentioned in Chapter 2, there is an interplay between perceived PE focus and academics’ attitude and subsequent performance behaviours. Prior to proceeding to the second objective, therefore, it is necessary to first provide conceptualisations of performance behaviours and particularly academics’ performance behaviours and the processes of influence.

### 3.4.4 Performance behaviours

The set of employee behaviours that leads an organisation in achieving its strategic objectives and are required by the organisation are conceived of as performance behaviours (Griffin & Moorhead 2012). Nonetheless, the definition of such performance behaviours depends upon an organisation, where they may have been defined qualitatively or with easiness in measurement or on the basis of an amalgamated approach. In analysing performance behaviours, such contextual factors become crucial because of the ‘features embedded in certain types of role relationships’ (Eagly & Chaiken 1993, p. 683). Performance behaviours are the antecedents of job performance, and these can be role specific or extra-role in nature (Katz & Kahn 1978). While both patterns of productive behaviour may exist in an organisation, an employee going beyond role specifications, proactively seeking problem resolution, cooperating with peers or caring self-development for the benefit of the organisation (Katz & Kahn 1978) is said to be demonstrating organisational citizenship (Organ 1988) or pro-social organisational behaviours (Brief & Motowidlo 1986).

There is however, variance in themes about what constitutes performance behaviours. Campbell (1990) views such behaviours to be composed of task proficiency (role specific behaviours) and extra role behaviours. Borman and Motowidlo (1993) divide performance behaviours into task performance and contextual performance. According to Motowidlo and Van Scotter (1994), task performance in an organisation comprises two sets of behaviours. Firstly, the set of activities that produce a finished product (an output), and secondly, the
activities that provide technical and planning support for the efficient and effective functioning of the organisation. Contextual performance behaviours do not provide such technical support; these provide holistic support in the social and psychological environment of an organisation for effective technical functioning.

NZ universities as well as the Tertiary Education Commission (TEC 2006) highlight the performance of an academic as the combination of research performance and teaching performance. Thus, the activities performed to produce teaching or research were implied as teaching performance behaviours and research performance behaviours. According to the TEC, research is the ‘original investigation undertaken in order to contribute to knowledge and understanding and, in the case of some disciplines, cultural innovation or aesthetic refinement’ (2006, p. 21). Behaviours that contribute to knowledge by aesthetically refining or innovating disciplines through published periodicals are employed in this study as research performance behaviours, and teaching performance behaviours are designated as a set of behaviours, required by a university, which through formal university activities result in students’ (pupils) development and their success.

3.4.5 Social influence

PE as a control mechanism in an organisation persuades employees to achieve required organisational performance objectives through rewards and censure systems. PE therefore acts as an influencing agent, which results in academics’ induced behaviours. Induced behaviours are the result of power mechanisms (see footnote 14, section 2.3.6.2) to exhibit prescribed behaviours to attain rewards (Kelman 1958); employee’s conscious attempt to imitate a person’s or a group’s actions for self-endorsement (Kelman 1958; Ryan & Deci 2000) or the value congruence between the employee’s and the desired behaviours (Kelman 1974b). Kelman (1958) termed these motivational bases of induced behaviours as the processes of ‘social influence’ in a continuum of compliance to internalisation. Based on their perceptions of PE focus, PE can influence academics’ attitudes and subsequent performance behaviours.

As mentioned earlier, social influence occurs when an individual’s behaviour is the result of an intervention by an influencing agent (Kelman 1958, 1961, 1974a, 1974b), which may have been the same in the absence of the influencing agent. The intervention by the influencing agent thus directs the individual to change his/her behaviour from point A (individual’s original behaviour without intervention) to point B (influencing agent’s desired behaviour).
Kelman (1958) contends that an induced pattern of behaviours can take three forms. If an individual performs the new set of behaviours because he/she perceives the influencing agent as the controller of resources, which limit individual’s choices, the individual is argued to be under the influence of ‘compliance’. It is the individual’s consent to accept influence to achieve a favourable reaction from the influencing agent to win rewards or to avoid disapproval and denunciation.

Secondly, if the acceptance of the offered set of behaviours is based on an individual’s attraction towards them while seeking a continued relationship, the influence has taken the form of ‘identification’. It is the individual’s conscious attempt to adopt the behaviours of another person or a group. Under identification, the individual attempts to imitate another’s characteristics because such attempt is self-satisfying and self-defining for the individual.

Finally, if an individual perceives the influencing agent as credible, expert and trustworthy while the set of behaviours offered match with the value system of the individual, the influence has taken the form of ‘internalisation’. An internalised individual becomes influenced by the new set of behaviours because those are coherent with his/her value system.

Kelman’s (1961) differentiation of the three processes, that is, compliance, identification and internalisation, is described in Table 3.1. The following description of the three processes also serves as the basis of their operational definitions in the context of this study.
According to Kelman (1974a, p. 315), an analysis of a person’s reasons for engaging in a behaviour can reveal meaningful relationships between the person’s attitude and exhibited behaviours. Moreover, the reasons for behaviour under certain conditions can be differentiated and identified along a continuum of social influence (Kelman 1958). At the one end, behaviours are exhibited due to external reasons of rewards, punishment and surveillance (observation), while on the other end, behaviours are exhibited due to internal factors of value congruence, pleasure or problem resolution. Studies argue that behaviours are performed by individuals due to external or internal reasons, and thus can be identified on an external to internal continuum. Ryan and Connell (1989) contend that there is no middle point in reasons to act; it can be either because of external reasons or internal reasons. Since the concept of identification, in Kelman’s theory, has received various interpretations as an extrinsic motivation (Ryan & Deci 2000),

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30 According to Kelman, the basis for the importance of an intervention is the extent to which the induced behaviours presented by the influencing agent relate to the goals important for the individual. The probability of positive induction is dependent upon the agent’s power.

31 Source of power of influencing agent is the extent to which the individual perceives the agent as instrumental in the achievement of his/her goals.

32 Manner to achieve the pre-potency refers to a distinctive path relative to any alternatives. Under limitations, the induced behaviour will become pre-potent because that may be the only response permitted. Furthermore, the required behaviour is the result of the agent’s capacity to control conditions that may be necessary for an individual’s goal achievement.
acquired cognitive response (Brown 1969, p. 304), imitation learning\textsuperscript{33} (Kagan 1958; Miller & Dollard 1941), affiliation (O'Reilly & Chatman 1986) or as the notion of membership in a group due to the group’s attractiveness (Brown 1969). All such identification interpretations are based on external factors; that is, behaviours possess an external locus of causality. This study therefore focuses on the extremes of the continuum, that is, on external and internal factors.

The measurement of such behavioural variance along a continuum is a complex task because this cannot be observed and measured by a third person; it is rather an individual’s perception that certain factors give impetus to his/her behaviour (Ryan & Connell 1989). An individual’s perception about the cause of his/her behaviour can be external or internal in origin, which is described as the perceived locus of causality (PLOC) (De Charms 1983; Heider 1958). Ryan and Connell (1989) contend that perceived locus of behaviour can be differentiated in an external to internal continuum. Coherent with the idea of a continuum of social influence from compliance to internalisation (Kelman 1958), Ryan and Connell (1989) deduce that behaviours due to an external locus of causality are exhibited to comply with significant others to attain rewards or avoid disapproval in the social setup (compliance), whereas behaviours with an internal locus of causality are performed for enjoyment and pleasure (internalisation). This operational description of constructs of compliance (external PLOC) and internalisation (internal PLOC) has been described by Ryan and Connell (1989, p. 750) as coherent with Kelman’s (1958) theory of social influence. Based on the aforementioned descriptors and Table 3.1, this study conceptualises compliance and internalisation based behavioural dimensions.

**3.4.5.1 Compliance behavioural dimensions**

Based on Kelman’s social influence theory, and related literature in the social psychology and organisational behaviour, compliance is conceptualised as an index of role-specific performance behaviours (Motowildo, Borman & Schmit 1997) that are exhibited due to perceptions of PE being a resource control mechanism: to seek approval (appreciation) from peers, HOD, superiors or university authorities; to attain rewards as increase in salary and benefits, promotion; to avoid disapproval from peers, HOD, superiors or university authorities; to meet university’s performance benchmarks or PBRF standards; to attain research grants; due to observation by supervisor or PE or another university process; because

\textsuperscript{33} Synonymous to compliance or following a model.
it is perceived as a norm among academics and have to be done; and to adhere to departmental or university rules. Behaviours under the influence of compliance therefore, are:

- To win rewards (Kelman 1958)
- Due to external demands (pressures) (Kelman 1958)
- Due to adherence to rules (Kelman 1958; Ryan & Connell 1989)
- Perceived norm (Ryan & Connell 1989)
- Due to perceptions of surveillance or observation (Kelman 1958)
- To seek approval (peers, supervisor, authorities) (Kelman 1958; Ryan & Connell 1989)
- To avoid disapproval (peers, supervisor, authorities) (Kelman 1958; Ryan & Connell 1989)

3.4.5.2 Internalisation behavioural dimensions

Academics’ performance behaviours under the influence of internalisation in this study are conceptualised as an index of behaviours that have internal value congruence; are inherently pleasing for academics; and are exhibited due to perception of PE’s credibility, trustworthiness or expertness because meeting PE objectives can solve a vitally important issue; because of inherent pleasure associated with research and teaching activities; because academics are passionate about research and teaching activities; without any consideration to promotion or salary increase; and concern about departmental/university objectives. Behaviours under the influence of internalisation on the other hand, are:

- Due to coherence with personal values (Kelman 1958; Ryan & Connell 1989)
- To be inherently pleasing and delighting (Kelman 1958; Ryan & Connell 1989)
- Regardless of rewards (Kelman 1958)
- To solve a problem (Kelman 1958)
- Pleasure from challenge (Kelman 1958; Ryan & Connell 1989)

As highlighted, perceptions of PE focus can influence an academic’s attitude towards compliance. To achieve the objective of RQ 2, this study postulated 10 hypotheses.

Ferris et al. (2008) and other studies mentioned earlier have highlighted the process focused evaluation’s emphasis on ‘how the job is done’, which further emphasises adherence to rules and guidelines. According to the aforementioned conceptualisations, such adherence
to rules is a characteristic of a compliance based attitude. This study therefore hypothesises the following:

H1: When an academic perceives PE as procedurally focused, the academic’s attitude will take the form of compliance.

Ouchi (1979; 1980) and others have argued that in instances where control mechanisms emphasise shared traditions and values and enhanced cohesiveness, performance evasion is less likely to happen. In such instances, employees are willing to perform beyond the radius of job descriptions (Erdogan et al. 2004). Due to such value congruence between employees’ and organisational objectives, this study postulates the following:

H2: When an academic perceives PE as people focused, the academic’s attitude will take the form of internalisation.

PE of academics is criticised for being outcome focused. Teelken (2012) stated that the existing performance evaluation approaches are turning academics towards compliance. Ferris et al. (2008) argued that outcomes focused evaluation approaches emphasise ‘do whatever you have to do to get the job done’. Assuming an outcome focus, universities will thus be only concerned about the outcomes an academic has produced, and the universities may have put some mechanisms in place to ensure those outcomes. This study therefore contends that academics may be willing to achieve these outcomes because of external pressures, to avoid disapproval or to receive rewards. These assertions highlight a compliance based attitude according to the aforementioned conceptualisations. The following is therefore hypothesised:

H3: When an academic perceives PE as outcome focused, the academic’s attitude will take the form of compliance.

According to Weber’s and Taylor’s approaches, employees will perform better in the presence of supervision and surveillance mechanisms. Moreover, when behaviours are observed, there is an element of desirability, organisational expectations or any existing norms (Nishii, Lepak & Schneider 2008), which highlights an external element of meeting behavioural standards. According to the conceptualisations based on the relevant literature, this highlights an element that ensures academics will perform according to the specified direction. This study thus hypothesises the following:

H4: When an academic perceives PE as behaviourally focused, the academic’s attitude will take the form of compliance.
According to Kelman (1958), the extent to which the power of the influencing agent is based on resource control, the influence will tend to take the form of compliance; and the extent to which the power of the influencing agent is based on credibility, the influence will take the form of internalisation (see Table 3.1). Resource control is an individual’s perception about the power of the influencing agent as the controller of resources that can be vital for the individual to achieve his/her objectives. In the context of this study, the perceptions of an academic about PE to be controller of his/her rewards, salary increase, research funding or promotion – as these can be crucial for the academic to achieve his/her personal or organisational objectives. On the other hand, an academic may perceive PE as a credible process. Credibility, according to Kelman (1974b, p. 219), is an individual’s perceiving the ‘statements by the influencing agent to be truthful, valid and worthy of serious consideration’. Hovland, Janis and Kelley (1953) describe credibility to be composed of expertness and trustworthiness. Kelman (1974b, p. 219) therefore contends that the influencing agent is perceived to be credible because the agent is ‘likely to know the truth, or is likely to tell the truth’, while trustworthiness is related to ‘overall respect, like-mindedness and lack of vested interests’.

Social influence framework is characterised by three antecedents and consequents (see Table 3.1) for each of the processes of compliance and internalisation. While these antecedents and consequents may vary among contexts, Kelman, in his empirical investigation, however, only tested the ‘source of power of the influencing agent’ (antecedent) and ‘conditions of performance of induced behaviour’ (consequent) (Kelman 1974b, p. 145). Kelman hypothesised if the source of power of the influencing agent is based on the perceptions of resource control (antecedent) and an individual is under surveillance (consequent), the exhibited behaviour by the individual will be underpinned by the process of compliance. One the other hand, if the source of power of the influenced agent is based on the perception of credibility (antecedent) and the condition to perform the behaviour is the value relevance (consequent), the exhibited behaviour by the individual will be underpinned by the process of internalisation. Based on Kelman’s framework, this study further postulated that an academic will exhibit a compliance based attitude if he/she perceives PE to be a resource control mechanism, whereas an academic’s attitude will be based on internalisation if the academic perceives PE to be a credible process. This study therefore hypothesised the following:

H5: When an academic perceives PE as a resource control mechanism, the academic’s attitude will take the form of compliance.
H6: When an academic perceives PE as a credible process, the academic’s attitude will take the form of internalisation.

For a positive influence, another key factor in social influence model is the ‘manner of achieving prepotency of induced behaviour’, that is, ‘the extent to which the behaviour emerges as the most clearly relevant’ or ‘relatively stronger than the various alternatives’ available to the individual (Kelman 1974b, p. 139). The power of the influencing agent and prepotency of induced behaviour can be two separate independent variables; however, there can be situations where a single condition influences both power and prepotency to cause a positive influence (Kelman 1974b, p. 140).

This study conceives that PE is an influencing agent and thus causes induced behaviours among academics. Academics’ perceptions about PE being a resource control mechanism or a credible process is ‘source of power of the influencing agent’ (antecedent) to cause a positive influence. Moreover, the ‘conditions of performance of induced behaviour’ (consequent) (Kelman 1974b, p. 145) is one of the perceived PE foci of an academic. Thus, behaviours exhibited by academics will be underpinned by two motivational processes, that is, compliance and internalisation. However, ‘the extent to which the behaviour emerges as the most clearly relevant’ or a catalytic factor to induce compliant behaviours will be academics’ perceptions of PE being a resource control mechanism. The catalytic factor that makes internalised behaviours relatively stronger than the various alternatives will be academics’ perception of PE being a credible process. In line with social influence theory, this study conceives that behaviours towards compliance will become potentiated if an academic perceives PE as a resource control mechanism, whereas behaviours towards internalisation will be catalysed by the perceptions of PE’s credibility. In other words, it can be stated that perceptions of ‘resource control’ and ‘credibility’ will have a moderating effect on academics’ behaviours under the condition of perceived PE focus. This study therefore hypothesises the following:

H7: When an academic perceives PE as procedurally focused and as a resource control mechanism, the academic’s attitude taking the form of compliance will be moderated by the perceptions of PE as a resource control mechanism.

H8: When an academic perceives PE as people focused and as a credible process, the academic’s attitude taking the form of internalisation will be moderated by the perceptions of PE as a credible process.
H9: When an academic perceives PE as outcome focused and as a resource control mechanism, the academic’s attitude taking the form of compliance will be moderated by the perceptions of PE as a resource control mechanism.

H10: When an academic perceives PE as behaviourally focused and as a resource control mechanism, the academic’s attitude taking the form of compliance will be moderated by the perceptions of PE as a resource control mechanism.

It is recalled from Chapter 2 that employees going an extra mile for the benefit of the organisation exhibit autonomous or spontaneous performance behaviours (Katz & Kahn 1978). Based on that notion, studies have continually argued that such type of employee attitude result in productive behaviours and therefore result in higher performance (Bowen, Schneider & Kim 2000; Morrison 1997). This study therefore intended to explore a relationship between an academic’s attitude and the academic’s research performance through its final RQ, that is:

RQ 3: Does an academic’s attitude taking the form of compliance or internalisation influence his/her research performance?

Based on the aforementioned conceptualisations and explanations of this study’s objectives, the conceptual framework for this study is illustrated in Figure 3.1.

Figure 3.1: Conceptual framework
In applying Kelman’s framework to achieve the objectives of this study, the emphasis is not on identification of traditional approaches that there has been a change in an individual’s attitude while ignoring other factors in the context. Kelman (1958) asserts that identifying a measurable change in attitude is not enough for an understanding and prediction of behaviours; the key factor is to know, is the attitudinal change permanent or transient in nature and what are the conditions or underpinning factors when the same attitude will be exhibited and thus can be predicted. Among the theories on internalisation, as highlighted earlier, there may be some theoretical similarities, these however, emphasise different factors that instigate conformity, for instance, personality traits, motivational factors, communication or power of the influencing agent, to name a few. Kelman’s social influence framework is quite unique in a sense that it was developed upon the factors of communication, friction between social factors/actors and perceptions about the influencing agent. Kelman’s framework focused on elements/conditions (PE foci) that build perceptions about the influencing agent (PE) and thus cause attitudinal change of permanent or transient in nature (compliance/internalisation). While other motivational frameworks may provide information about an internal/external forces driving an individual’s behaviours, these may not provide understanding about the role of an influencing agent in influencing the individual’s attitude. As noted earlier, the focus of this study is on the areas of friction in PE, influenced by social and strategic factors (Bouckaert & Peters 2002; Ferris et al. 2008; Simons 1995); likewise communication for performance expectations in an organisation is also a factor to build positive or negative perceptions about PE. It is believed that the implementation of Kelman’s social influence framework will enable to unearth perceptions about PE and factors influencing academics’ attitudes towards compliance or internalisation.

The operationalisation of a study’s constructs and the research framework are influenced by the research paradigm, which provides a broad outline within which a researcher will conduct the investigation (Deshpande 1983; Martens 2005; Perry, Riege & Brown 1998).

3.5 Research paradigm

A paradigm is a ‘basic belief system’ (Guba & Lincoln 1994, p. 105), a ‘system of thinking’ (Neuman 2006, p. 81) that paves the way to identify research issues worthy of investigation and mechanisms available to answer the research questions (McMurray 2005). A research paradigm is an underpinning factor for the theory in a given research (Kuhn 2012) and will influence the way the research is conducted (Neuman 2006). Philosophers and
methodologists have, however, debated and advocated for almost two centuries for an ideal paradigm.

Based on the positivist proposition that social issues should be dealt with in the same way as the pure sciences (Durkheim 2014), social research should be bias, emotional attachment and value free (Onwuegbuzie 2002) and should seek causal relationships through empirical observations (Neuman 2006). The interpretivists’ camp, however, views social research to be hermeneutical and that it can only be studied reliably by understanding ‘what is singular to the universal’ (Makkreel 2016). Particularly in human sciences, human traits cannot be attributed to be purely inherent as is a chemical substance (Dilthey 1990); it is the combination of internal and external factors (Makkreel 2016), thus necessitating the need for analytics and inferences. Among social sciences, there is an inter-relatedness between a researcher and the researched subject and both cannot be separated (Smith 1983); it thus relates to a researcher’s conceptualisations (objectification) of some observable phenomenon such as behaviours (Dilthey 1990).

Indeed, interpretations are bounded within a researcher’s frame of reference and the relevant context. Any meanings and inferences are relevant to a particular context, which will become distorted in the absence of the context (Weber 2015). The realism\(^{34}\) school of thought argues that an independent reality exists; thus, attempts to investigate the constituents of that reality and how such reality state can be achieved (Sayer 2000). A scientific phenomenon is discursive in nature (Bhaskar 2013) from a realist position, is dependent upon a particular viewpoint (Maxwell 2012) and is not a ‘God’s eye view’ (Putnam 1998, p. 50).

Realists’ studies thus emphasise the importance of the studied context rather than a general explanation of certain conditions (Maxwell & Mittapalli 2007). In such explanatory studies investigating behaviours, the context where behaviours take place becomes a key element of understanding (Smith 1983). This type of study will investigate processes which underpin events rather than a mere descriptive association of variables (Maxwell & Mittapalli 2007).

\(^{34}\) Various terms have been used for realism such as ‘critical realism’ (Bhaskar 2011; Cook & Campbell 1979), ‘constructive realism’ (Howard 1991), ‘subtle realism’ (Hammersley 1992), ‘innocent realism’ (Haack 2007) ‘natural realism’ (Putnam 2000) and ‘emergent realism’ (Mark, Henry & Julnes 2000); the focus of this study is not to indulge in a philosophical discussion about realism or its true interpretation; for the purposes of this study, the word ‘realism’ is employed to avoid any philosophical confusion.
Accounting research, despite the growth in the interpretivist orientation (e.g., Hopwood 1972; Parker et al. 2008; Previts, Parker & Coffman 1990), has been overwhelmed by the empiricism or positivism paradigm (Bisman 2010; Modell 2010). Higher emphasis on quantitative training in North American universities has also been attributed to such an inclination towards positivist approaches in accounting studies (Lee 1995; Panozzo 1997). Nonetheless, some accounting studies have kept away from quantitative- or economics-based models (e.g., Guthrie & Parker 2004; Milne, Guthrie & Parker 2008), used sociological theories (e.g., Roslender & Dillard 2003) or employed a multi-paradigm approach (Locke & Lowe 2008). Others, interested in explanation rather than interpretation, have criticised accounting research as being subjective and interpretive in nature (e.g., Chua 1986; Dillard 1991; Hines 1992; Laughlin 1987; Quattrone 2000). Accounting researchers’ viewpoints on paradigm appropriateness are therefore divisive and fragmented (Ahrens 2008).

This fragmentation has resulted in a suggestion for a common ground which can facilitate empirical studies in accounting (Laughlin 1987; Modell 2010). A paradigm that provides such benefits is realism (Bisman 2010; Modell 2010) and has been successfully employed in accounting as well as other organisational issues (Healy & Perry 2000; Hunt 1991). Indeed, research questions steer methodological perspectives and influence a researcher’s philosophical position to answer those questions (Bisman 2010). The research questions in this study were related to the PE of NZ academics, and necessitated the need to understand context specific elements (Smith 1983) for exploratory and explanatory purposes of the study. The research questions were also seeking factors underpinning academics’ behaviours for causal purposes of the study. To achieve the objectives of this study and to answer the research questions, a realism paradigm, therefore, was deemed appropriate for this study.
3.6 Theoretical approach

A social theory is inferred as a ‘system of interconnected ideas, which converges and arranges knowledge about the social world’ (Neuman 2006, p. 50). This interconnectedness requires ideas to provide answers about ‘what’, ‘how’, ‘why’, and ‘who, where and when’ (Whetten 1989). Whetten describes ideas with these characteristics as ‘theory’. Researchers, therefore, can elect to answer Whetten’s questions from two directions. Either they can relate the ideas to create evidence and then calibrate those ideas with evidence, or from the evidence, they can generalise and generate more abstract ideas, that is, deductive reasoning (Neuman 2006). Inductive reasoning conversely starts from observing the empirical evidence, which leads to theorising abstract ideas, concepts and propositions (Zikmund 2003).

Smith (2011) argues that the traditional positivist deductive approach in accounting research does not take into account the presence of human factors. The emphasis in accounting research, therefore, should be to get away from traditional models, recognise human relationships through inductive reasoning and exploit subjective factors to strengthen empirical findings. Saunders, Lewis and Thornhill (2015) suggest an abductive (hybrid) approach is best adopted when holistic information is available about the researched area only but the studied context lacks information richness; such an approach can provide new insights into the research context but also enables revisiting existing theories.

PE is widely researched in the disciplines of management accounting, HRM as well as organisational psychology; however, the area of academics’ PE, particularly in the context of NZ, lacks such information richness as well as empirical evidence. It is therefore believed that adopting an abductive orientation can facilitate not only the exploration of factors underpinning academics’ performance behaviours but also behaviours’ relation to PE focus and perceptions of resource control and PE credibility. Any chosen approach indeed highlights researchers’ preferences, style, needs and interests (Buchanan, Boddy & McCalman 2014; Hakim 2000), which according to Buchanan are often overlooked when examining research. To do so, the researcher is required to have a research plan; the next section will, therefore, discuss the research design of this study.

3.7 Research design

A research design is a layout that guides a researcher for decisions related to data collection and subsequent analysis, which enables the researcher to effectively answer the research questions (Cooper & Schindler 2003). The design process leads the researcher to
clarify objectives, specify sources of data collection, related sampling procedures, analysis of the obtained data and any ethical considerations to access the required data (Emory & Cooper 1991). In deciding the research layout, the primary element is to decide whether the research will adopt a mono-method or a mixed methods approach (Saunders, Lewis & Thornhill 2015).

3.7.1 Justification of research method

Identification of an appropriate research method relates to the nature of the research questions. Studies in social sciences can mainly employ two design approaches or a combination, that is, quantitative, qualitative and the combined or mixed methods approach. Quantitative approaches focus more on design, measurement and detailed planning for data collection due to a deductive approach in theory generation, whereas qualitative approaches seek information richness due to its inductive reasoning approach (Neuman 2006). Such preferences are because quantitative researchers tend to be positivists in their philosophical perspectives, whereas qualitative researchers to be interpretivists.

Management accounting researchers focus more on organisational issues (Parker et al. 2008) such as performance management. The emphasis of studies in performance management is to provide decision makers avenues which can help them to tap opportunities to improve future performance. Following a traditional quantitative or functionalist approach in accounting research (Bisman 2010) may not enable the capture of the whole story, especially when context specific elements are involved. Modell (2010) argues that employing a mixed methods approach in management accounting research can help to bridge the inter-paradigmatic divide and provide a better understanding of the researched issues. According to Johnson, Onwuegbuzie and Turner (2007), mixed methods research is an approach where qualitative and quantitative methods are incorporated in a single investigation. Tashakkori and Creswell (2007) view mixed methods research:

‘... in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study’ (p. 4).

Although such an integrative approach of research has established its foundations in social sciences (Creswell 2009) and management studies (Tashakkori & Creswell 2007), discussion and contribution of mixed methods research in accounting is still relatively new (Grafton, Lillis & Mahama 2011). Management accounting researchers are therefore called to employ complementary approaches (Ferreira & Merchant 1992; Ittner & Larcker 1998; Modell
Management accounting studies require a middle ground to empirically validate observations with analytical procedures; employing a mixed methods approach makes a better case under the realism paradigm (Modell 2010).

Studies investigating attitudes and behavioural changes in organisational contexts should apply a mixed methods approach (Kelman 1974b). According to Johnson and Turner (2003), mixed methods research in behavioural and social sciences can collect and mix data in various ways. A researcher can either adopt an inter-method approach where a pure qualitative and a pure quantitative data collection procedures are sequentially or concurrently executed, or a researcher can choose an intra-method mixing process where both quantitative and qualitative data collection is done through a single mechanism. An intra-method approach, according to Johnson and Turner, utilises closed and open ended questions in a single data collection instrument. Adding a qualitative approach not only keeps openness to alternative theoretical standpoints in a study (Modell 2010), but also takes into account the subjective experiences of the study respondents (Neuman 2006). Moreover, having qualitative data can facilitate stretching to possible theories that may help to attain an in-depth understanding of the studied phenomenon. Employing such an approach also justifies the fundamental principle of mixed methods research; that is, methods should complement each other rather than overlap each other (Tashakkori & Teddlie 1998).

Keeping in view the objectives of the study, employing a mixed methods approach was deemed appropriate for this research because this facilitated the achievement of ‘complementarity’ to extend results’ elaboration and corroborate the results and findings, thus serving the purpose of triangulation. Moreover, a mixed methods approach helped to achieve the generalisability (Saunders, Lewis & Thornhill 2015) to further establish the credibility of the study (Denzin 2009).

A study cannot achieve its objectives unless it details the mechanisms through which it will answer its research questions. Saunders et al. (2015) label such a process a research strategy. The next section, therefore, describes the research strategy of this study.

### 3.7.2 Research strategy

Strategy is an action plan to achieve the required objectives. In order to achieve its objectives by employing a mixed methods approach, this research required to collect data that could be translated into information. Although research strategies are tied to a particular method, a strategy can be associated with one or more methodological and philosophical
perspectives (Neuman 2006). The emphasis, however, should be on choosing a strategy that can answer the research questions (Saunders, Lewis & Thornhill 2015). It should also take into account the vital elements of time, resources and access to the study participants. The most popular and commonly applied strategy in management accounting, management, psychology as well as other disciplines is the survey strategy.

3.7.2.1 Survey

The survey strategy is traditionally associated with the positivist (Denzin 1989) and deductive theoretical approach. A survey can potentially ask targeted members of a study population (respondents) about their opinion, beliefs, attitudes, probable actions in situations or about their past actions (Neuman 2006). To answer ‘what, who, where, how much and how many’ types of research questions (Saunders, Lewis & Thornhill, p. 176), a survey is the mechanism of ‘gathering primary data based on communication with a representative sample of individuals’ (Zikmund 2003, p. 175). Among survey strategies, a questionnaire is the most widely employed mechanism.

According to Neuman (2006), when a study seeks to understand individuals’ self-reported beliefs, perceptions or behaviours, employing a self-reported questionnaire is the logical choice. One of the strengths of a questionnaire is its ability to capture the beliefs, intentions and attitudes of study respondents.

**Justification of online survey approach**

Perceptual studies in accounting have traditionally relied on mail surveys (Lowe & Locke 2005), which triggered a call in the literature to utilise innovative mechanisms that can provide a body of knowledge at the level of other disciplines (Smith 2011). Despite the advantages highlighted by internet-based questionnaires, online research mechanisms are less utilised in accounting (Northcott & Linacre 2010), whereas other disciplines have significantly taken the advantage (Ray, Griggs & Tabor 2001) of the public’s growing online access.

This research employed an online questionnaire approach for certain reasons. Firstly, while many organisational employees have access to online resources, university employees in particular are likely to have this access (Fricker & Schonlau 2002; Schaefer & Dillman 1998). Schaefer and Dillman contend that organisational employees due to their continuous access to online facilities justify being surveyed through online mechanisms. In employing an online approach, studies did not find any differences between the paper-based and online survey methods’ response rates (Mehta & Sivadas 1995; Schnake & Dumler 1993). Likewise, Sills
and Song (2002, p. 28) state that ‘connected and technologically savvy’ populations, lower costs, faster responses and dynamic data access and cleansing provide sufficient justification to employ internet based survey research. An additional justification for this research employing an internet-based approach was that it enabled the researcher to target more respondents (Fricker 2012) in NZ universities. This would not have been possible through the use of conventional survey mediums (Neuman 2006). Further, information relating to PE is sensitive and confidential, and many employees may not be willing to share such information in face-to-face interviews or through other mechanisms. Thus, the purpose of employing the online survey approach was also to safeguard the anonymity of respective respondents (Van Selm & Jankowski 2006).

Schaefer and Dillman (1998) found that online mechanisms provide faster results and a complete answer to open ended questions. Such an approach also provided the flexibility to use a different set of questions to academics with a different set of responsibilities, e.g. academics with ‘teaching only’ or ‘research only’ positions. This approach was chosen because academics with different responsibilities will have different KPIs for their PE, which created the need to present only relevant questions. Real-time interaction (Lowe & Locke 2005) and customisation of survey items was not possible through traditional survey means. Since this study intended to explore the PE focus of a university and the influence of such a focus on academics’ performance behaviours, employing an online survey facilitated reaching out to a larger number of respondents. Employing a traditional approach in eight geographically spread universities would not have been logistically or economically viable within the time and resource boundaries of a PhD project.

3.7.2.2 Sampling approach of the study

An ideal survey assures that every member of the population has an equal opportunity to be selected in the sample (Dillman 1991). According to Thompson (2012), providing an equal opportunity to every member of the population eliminates the researcher’s temptation to include or exclude units that are related or unrelated to variables of interest. A major logic for choosing respondents within the entire population is to have a group possessing homogeneous characteristics (Zikmund 2003), which thus can be assumed as representative of the entire population (Sills & Song 2002). Representation, according to Fricker (2012, p. 197), is not that the sample’s observable characteristics match with the population, rather it is the ‘results of data collected from the sample are consistent with the results that might have been collected
from the entire population’. Such conditions are too ‘ideal’ and are rarely achieved regardless of an online or a traditional survey mechanism (Sills & Song 2002).

Surveys are vulnerable to errors (Fricker 2012; Schaefer & Dillman 1998). However, by providing an equal opportunity to every member of the targeted group to participate, the process minimises sampling errors, which is a feature of the ideal survey approach (Dillman 1991; Fricker 2012). According to Sills and Song (2002), an online survey approach of including all the members of the targeted population can only be practical when a finite list of members can be determined. Employing such an approach also permits a researcher to curtail the effects of sampling errors. In an attempt to minimise sampling error and generalisability to the population (Saunders, Lewis & Thornhill 2015), this study targeted respondents in NZ universities who met the criteria for being an academic.

**Sample size**

The preliminary step of the sampling process is to define a target population (Zikmund 2003); that is, it has a finite number (Thompson 2012). This resultantly defines a working population or a sampling frame (Zikmund 2003). As mentioned earlier in Chapter 2, the target population of this study was academics who are responsible for teaching and research activities. In order to obtain a finite number of the population of this study, a sampling frame was constructed by gathering a complete list of academics through publicly available university web pages and subsequently their respective contact details. The sampling frame served two purposes; first, it quantified the target population and second, it provided the contact list through which study respondents could be invited for participation. Fricker (2012, p. 211) labels such an approach as ‘list-based sampling frames’ or ‘de-facto sampling frame’. Table 3.2 details the total sampling frame for eight universities.

In order to target the aforementioned academics, this research utilised the web-based survey portal Qualtrics, which is subscribed by the University of Otago for use by its students and staff. Eight identical surveys were designed on Qualtrics for each of the universities. This
Performance evaluation, social influence and academics’ performance behaviours

approach enabled the assembly of separate data sets for each of the universities. The researcher emailed invitations to all the academics to participate in the research. The email invitations contained a survey hyperlink, which took them to the respective Qualtrics survey page. The survey was compatible with PCs, Macs as well as smart devices. Rather than sending an email to ‘all users’ group addresses, this study adopted a customised approach by sending a personal (by name) email message to each academic in the contact list seeking their participation in this research. This personal and individualised approach was adopted because studies suggest that a personal invitation helps to increase the response rate in a study (Neuman 2006; Saunders, Lewis & Thornhill 2015). All the email invitations (see Appendix G) were customised according to an academic’s division, school or college. All emails were sent along with the attachments of a pdf version of the online survey and a copy of the information sheet (see Appendix F) for the study. All 7,637 email invitations were sent from the researcher’s University of Otago email address. In response to the invitations, some academics opted out of the study, some email addresses were undeliverable, while some academics were away from their office and the invitation email was replied to with an automated ‘out of office’ response. Opted-out respondents and undeliverable addresses were categorised as ‘unreachable’ (Saunders, Lewis & Thornhill 2015), and thus were excluded from the mailing list for subsequent reminders. After two weeks of the survey roll out, a customised message was emailed, as the first reminder, to the remaining academics. Academics who indicated their unwillingness to participate were subsequently excluded. After three more weeks, a final (second) reminder was sent. In this phase, academics who opted out and those with an ‘out of office’ reply were excluded from the sample of the study. Such an approach of ‘unreachable’ was taken because there was no possible way of knowing that the particular academic had received the message or completed the survey. After all the exclusions, the sample of the study was reduced to 7,121. Table 3.3 details the study sample.
According to the ‘law of large numbers’, the larger the sample, the higher the likelihood that the mean calculated from the sample will be equal to the mean of the population and vice versa. Contrastingly, a smaller sample proportion of the population resulting in a smaller sample size is vulnerable to a greater margin of error and a lower confidence level (Saunders, Lewis & Thornhill 2015). A confidence level of 95% indicates that the chosen sample has a certainty of 95% of being representative of the population. Based on the aforementioned recommendations, this study exceeded the criteria of the sample size of 4,899 for the population of 10,000 with the 1% margin error where everyone in the sample was contacted.

**Errors and response management**

A small variance, however, between population values and sample value creates a ‘random sampling error’. Having a large sample significantly reduces the random sampling error (Zikmund 2003) while noting that sampling error does not lead to bias (Berg 2005). This study avoided sampling error by including a large sample as suggested by the existing literature.

Respondents may choose not to respond – resulting in a nonresponse error\(^\text{35}\); a study’s response rate therefore remains a ‘generally accepted indicator of nonresponse error’ (Dillman 1991, p. 228). Dillman deduces that a lower response rate ‘does not necessarily entail

\(^{35}\) Nonresponse error is the difference between the observed respondents and the total population of the study (Sills & Song 2002). Nonresponse bias however, ‘refers to the mistake one expects to make in estimating a population characteristic based on a sample of survey data in which, due to non-response, certain types of survey respondents are under-represented’ (Berg 2005, p.3).
nonresponse error’ in spite of a reduction in sample size and limited information. Neuman (2006) details that nonresponse (unit nonresponse) can happen due to:

- Refusal to respond (respondent opted out or unwilling to participate)
- Ineligibility to respond (respondent does not match study criteria)
- Noncontact (respondent does not respond)
- Non location (respondent cannot be located)
- Incomplete response (respondent did not complete the questionnaire)

According to Neuman, each type of nonresponse needs to be addressed if the response rate is to be improved. In this study, ineligibility to respond was not the case; all the respondents were carefully selected and only sent the invitation if they met the criterion of being an academic. Moreover, this study, provided a pdf copy of the online survey to all the participants because Schaefer and Dillman (1998) suggest that in instances where respondents can actually see all the questions in the survey helps to increase the response rate. This approach also served the purposes of avoiding surprises in the survey, resulting in participants’ leaving the survey. This also gave the opportunity to potential respondents to fill the paper-based survey who would otherwise be sceptical about the online survey. As mentioned earlier that each of the academics in eight universities was invited to participate in this study, the descriptive statistics detailed in Appendix B are consistent with the academics’ official characteristics published by these universities, which provides confidence that no group in the sample was underrepresented and may have resulted in a nonresponse bias.

**Response rate:** To calculate the response rate, this study employed a mechanism advised by (Neuman 2006, p. 205). Neuman (cited in Saunders, Lewis & Thornhill 2015) advises computing the ‘active response rate’ by excluding respondents who are unreachable or have opted out of the study. Although the response rates varied between 15% and 25% among universities, for all the universities combined, the active response rate for this study was 16.4%. Complete response calculations can be viewed in Appendix H.

\[
Active\ response\ rate = \frac{Total\ number\ of\ responses}{Total\ number\ in\ sample\ -\ Unreachable}
\]

Source: (Saunders, Lewis & Thornhill 2015, p. 268).

\[
Response\ rate\ (all\ universities) = \frac{1,083}{7,121 - (367 + 149)} = \frac{1,083}{6,605} = 16.4\%
\]
for email or online mechanisms, however, are declining (Sheehan 2001) due to survey fatigue among respondents (Saunders, Lewis & Thornhill 2015). Particularly in academic institutions, ‘a stranger wanting to do academic research is sometimes seen as an unwelcome arbitrary intrusion’ (Mann & Stewart 2000, p. 73). Such perceptions of participants can also significantly influence response rates. This may be the reason that among universities, online survey response rates have been found to be lower as compared with other sectors.

Krosnick (1999) contends that representativeness of a study sample does not lock itself with the response rates and a 100% response rate does not imply it is representative of the population. Visser et al. (1996) found 20% response rates to be more accurate than 60% response rates. Lower response rates, therefore, do not indicate a study possesses high nonresponse error (Krosnick 1999). Krosnick is of the view that the more a study strives towards higher response rates, the less representative it becomes; so unless there is a mechanism available to tell that higher response rates would have been more accurate, it should not be asserted that lower response rates are less than accurate. In essence, ‘response rate no longer matters’ (Dillman 2013, p. 5).

Reminders: Studies suggest that more reminders (Neuman 2006; Saunders, Lewis & Thornhill 2015; Schaefer & Dillman 1998) as well as extending the duration of the availability of an online survey can improve the response rate (Quinn 2002, cited in Nulty 2008). Heeding this advice, this study gave two reminders and kept the survey available for two months. While the number of responses increased significantly from the roll out phase, the percentage value may seem smaller due to the large sample. It was, however, believed that having more than a thousand responses provides the study with enough responses to execute statistical analyses and consequently achieve the objectives of the study.

3.7.3 The instrument

When a study is seeking respondents’ self-reported behaviours, attitudes or beliefs, a self-completed survey approach becomes the most appropriate (Neuman 2006); such approach facilitates identifying and explaining diversity in the investigated phenomenon (Saunders, Lewis & Thornhill 2015). Since there was no such instrument available that could provide an understanding of perceived PE focus and its influence on academics behaviours, this study developed an instrument to achieve its objectives. The intention of developing the instrument was to have contextual relevance with academic activities in an NZ university. Neuman (2006, p. 277) suggests that a good instrument is an ‘integrated whole’; that is, all the items in the
The instrument are weaved together for a smooth flow. For a seamless flow, the instrument created new items as well as adapted items from other studies. The design process of the instrument was driven by the guidelines to avoid statements that were confusing, leading, double-barrelled, beyond respondents’ academic activities and biased (Veal & Ticehurst 2005). In an effort to avoid sensitive questions as suggested by Breadburn and Sudman (1979, p. 68) and Neuman (2006, p. 283), this study either avoided statements that could reveal the confidential PE information of an academic or gave respondents the option of ‘prefer not to say’. For instance, this study avoided such questions as asking an academic’s department, title, name or their contact details. The contact list prepared for sending email invitations was in no way connected to the response data sets. It is stated that the objectives of this study were not interested in the micro level designation or departmental comparisons but rather on broader levels such as divisions, schools or PBRF defined subject panels.

The instrument development process spanned two stages. In the first stage, the researcher collected the secondary data related to the PE of academics from the publicly available web pages and documents of all participating universities. This secondary data not only enabled identifying academics’ activities and behaviours that translate into performance and relevant KPIs, but also helped to operationalise study constructs and variables. Since KPIs can vary from one university to the other, the emphasis in instrument development was therefore on the commonality among the KPIs that can have a common understanding across all academics in NZ universities. In order to have an in-depth understanding of the intended variables, the researcher also attended various seminars at the University of Otago. These activities resulted in an instrument of 105 items, which can measure the perceived PE focus by an academic in a university as well as the influence of those perceptions on the academics’ performance behaviours and subsequent performance.

In the second stage, the developed instrument was presented for comments and feedback to the experts in the discipline from NZ, Australia, Ireland and the US. The researcher also consulted with various PhD scholars for the common interpretation of the items in the instrument. The extensive comments and feedback resulted in significant changes in the instrument. After consistent back-and-forth feedback over eight months, the final 65 item

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instrument was constructed. The instrument also included one filter item for ‘research only’ or ‘teaching only’ academics to direct them towards a specific set of items. In employing the filter question, the unrelated items (e.g. research items for teaching only position and vice versa) were skipped and never appeared on the online screen. The following section details the characteristics of the instrument.

**Instrument structure**

This study contends that a particular perceived PE focus will influence academics’ behaviours towards compliance or internalisation; this study, therefore, faced two challenges. Firstly, the measurement of a perceived PE focus and secondly, the measurement of academics’ behaviours, which according to Ryan and Connell (1989), will have either external or internal underpinning reasons. This instrument, therefore, had two main sections, that is, perceived PE focus and performance behaviours related to compliance and internalisation. The development of the instrument also required having a contextual relevance to NZ universities. According to De Leeuw et al. (2015), any behavioural instrument developed in a different context for people with a different paradigm may not represent the beliefs shared by the target sample. Behavioural instruments developed in other contexts, therefore, did not seem to be a viable option to employ in the context of NZ universities.

**PE Focus section**

The development of the PE focus section in the instrument related to academic activities, which can be based on the conceptualisations of the four types of foci (sub-section 3.4.3). This resulted in the PE focus being divided into four subsets. Each of the PE foci was defined by a set of measurable indicators. These indicators, as highlighted in Figure 3.2, were related to academics’ research and teaching behaviours upon which an academic can be evaluated in his/her PE. Initially, 38 context relevant items were included defining each of the foci.
After all the necessary reviews and a pilot, the final instrument included at least three items for each of the research and teaching performance behaviours. This also required items across the four foci to be different but related to academics’ activities upon which their performance can be evaluated. For instance, in the subsection of outcome focused PE, the instrument used an item related to teaching, ‘My Performance Evaluation strongly focuses on: the score I receive on teaching evaluations from my students’ while research was employed as, ‘My Performance Evaluation strongly focuses on: my number of publications’. The PE focus section of the instrument included 29 items pertaining to procedural focus (7), people focus (10), outcome focus (6) and behavioural focus (6) (see Appendix E for complete instrument). Although randomisation is desired in an instrument’s items, it is not a perfect solution; to be an effective instrument some of the items need to be asked in a particular order (Vannette 2015). Vannette suggests to group items related to similar constructs together to avoid an
ordering bias. Moreover, each of the item in the instrument was an academic’s independent activity that was not influenced by another item (activity); the structure of the instrument therefore did not pose any ordering bias.

**PE influence on performance behaviours section**

The idea of the variance in individual perceptions along a continuum is commonly shared by the theories of internalisation (e.g., English & English 1958; Kelman 1958; Meissner 1981). According to Ryan and Connell (1989), such variance in individuals and behaviours can be empirically understood by exploring ‘self-perceptions of causes’ (Ryan & Connell 1989, p. 749) or ‘reasons for behaviour’ that may have been internally or externally triggered. Since reasons are accessible (Ryan & Connell 1989) and an individual precisely knows why he/she is behaving in a certain manner (Bridgman 1959), such an approach was deemed appropriate to achieve the objectives of this study. Behavioural indicators are illustrated in Figure 3.3.

Figure 3.3: Behavioural indicators

In this continuum of external to internal reasons, Ryan and Connell (1989) developed a ‘Self Regulation Questionnaire’ (SRQ) in their study of elementary students, which employed a set of ‘why’ reasons. For instance, Ryan and Connell asked the ‘reasons for doing homework’, which was further related to four sets of statements related to ‘rule following’, ‘self-approval’, ‘avoidance of disapproval’, ‘personal importance’, ‘enjoyment’ and ‘fun’ (see

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37 Peters (1958 cited in Ryan & Connell 1989) clarifies that reason is that ‘one is willing or able to endorse regarding one’s actions’ and the actual causes or real ‘motives’ behind one’s behaviour.
Ryan and Connell 1989, p. 752). Kelman (1974b) also suggested implementing a structured index of an overt behaviour to understand an individual’s reason to act. Consistent with previously employed approaches, the emphasis in this study thus remained on academics’ self-reported reasons for indulging in particular performance behaviours.

The approach by Ryan and Connell (1989) has been widely employed in studies among various disciplines and has resulted in various adaptations of a ‘self regulation scale’. Besides the implementation of the SRQ in the context of young students (Grolnick & Ryan 1987), approach taken by the SRQ is used in college students (Hayamizu 1997), physical education38 (Goudas, Biddle & Fox 1994), internalisation in medical students (Williams & Deci 1996), treatment programmes (Ryan, Plant & O’Malley 1995), religious behaviours (Ryan, Rigby & King 1993), couple happiness (Blais et al. 1990), health behaviours (Williams et al. 1996), job search behaviour39 (Vansteenkiste et al. 2005) and athletes behaviours40 (Lonsdale, Hodge & Rose 2008). Reeve, Nix and Hamm (2003) view such an approach to be highly reliable, valid and educationally useful, which is theoretically rich and psychometrically sound. Due to its high validity and reliability, the approach of why a statement coupled with reasons has been widely adapted in instruments such as ‘Treatment Self Regulation Questionnaire’41 (Williams et al. 1996), ‘Treatment Motivation Questionnaire’ (Ryan, Plant & O’Malley 1995), ‘Learning Self Regulation Questionnaire’ (Williams & Deci 1996), SRQ job searching (Vansteenkiste et al. 2005) and ‘Behavioural Regulation in Sport Questionnaire’ (Lonsdale, Hodge & Rose 2008).

Although the concepts in the SRQ emerge from Kelman’s framework of social influence (Adler & Chen 2011), this study, in external to internal continuum of compliance to internalisation, adapted the SRQ approach of why statements and included contextual elements (Goudas, Biddle & Fox 1994). This was done by creating an index of behaviours that are central to academics’ performance and could reasonably be differentiated along a continuum of compliance and internalisation. Each of these constructs were defined by an index of

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38 Goudas, Biddle and Fox (1994, p. 456) employed the statements: ‘I take part in football lessons because I’ll get in trouble if I don’t’; ‘I take part in gymnastics lessons because I enjoy learning new skills’.
39 Vansteenkiste et al. (2005, p. 275) employed questions such as ‘I am looking for a job because I find it enjoyable to explore the job market opportunities’.
40 Lonsdale, Hodge & Rose (2008) employed internal reasons in statements such as: ‘because I like it’, ‘because it’s fun’, ‘because I find it pleasurable’ or ‘because I feel pressure from other people to play’ ‘because I play in order to satisfy people who want me to play’.
41 The TSRQ asked questions such as ‘I am staying in the weight loss program because ...’; ‘I want others to see that I am really trying to lose weight’, ‘it’s important to me personally to succeed in losing weight’; these reasons to lose weight were stemmed to the investigated constructs in the study (see Williams et al. 1996, p. 118).
behavioural dimensions (see Figure 3.2). In this development process, items were adapted from various studies (see Appendix D for new, adapted or contextualised items for this study, the original items as well as their sources). In some instances, however, contextual relevance required creating a new item. This item development process was consistent with the guidelines suggested by Bourque and Clark (1992).

The instrument additionally included demographic items for age, gender, academic experience and their PBRF score in the previous PBRF round. While there can be alternative avenues to measure an academic’s research performance, it was believed that those will include some elements of confidentiality. In pursuit to gather such information, the emphasis was to avoid items seeking confidential data. Since PBRF rank is accepted by university and departmental decision makers to be an acceptable indicator of research performance, an academic’s PBRF grade or rank therefore seemed to be a viable option that academics will be willing to share with this research team. Ethnicity was also included because such background factors influence individuals’ beliefs (Fishbein & Ajzen 2010) and perceptions, thereby influencing subsequent behaviours.

**Instrument layout**

The instrument, for the most part, employed matrix questions to gather the required variables, since the instrument was lengthy. Although some believe that matrix questions create confusion for respondents (Dillman, Smyth & Christian 2008), it was believed that academics, possessing advanced knowledge in surveys as well as the understanding of their own PE, would not face any confusion in answering matrix questions. To ensure a smooth transition between instrument sections, the instrument employed the arrangement illustrated in Figure 3.4. The complete instrument can be viewed in Appendix E.
3.7.4 Measurement model

A measurement framework for a study cannot eventuate unless the nature or characteristics of indicators are defined. An indicator is a measurable or an observable factor that determines a latent or unobservable variable (Bollen & Lennox 1991). An indicator thus can be the cause of the latent variable or can be the effect of the latent variable. Bollen and Lennox differentiate them as ‘causal indicators’ and ‘effect indicators’. Causal indicators are explanatory factors that define a latent variable, whereas effect indicators are dependent variables of the latent variable.

Studies, therefore, suggest two types of measurement relationships or models – the causal indicators model and effect indicators model (Bagozzi & Fornell 1982; Blalock 1964; Bollen & Lennox 1991; Bollen, Lennox & Dahly 2009; Jarvis, MacKenzie & Podsakoff 2003; MacKenzie 2003).

In summary, a construct is causal in nature if ‘(a) the indicators are viewed as defining characteristics of the construct rather than manifestations of it, (b) changes in the indicators are expected to cause changes in the construct, (c) changes in the construct are not expected to
cause changes in the indicators, (d) the indicators do not necessarily share a common theme, (e) eliminating an indicator may alter the conceptual domain of the construct, (f) a change in the value of one of the indicators is not necessarily expected to be associated with a change in all of the other indicators, and (g) the indicators are not expected to have the same antecedents and consequences. If the opposite tends to be true, the construct should be modelled as having effect indicators’ (MacKenzie 2003, p. 326).

As mentioned earlier, to measure perceptions about PE with a particular focus, these were defined by indexes of research and teaching activities or indicators for the particular latent variable. For instance, in the case of ‘perceived outcome focus’ (see Figure 3.2), the indicators included teaching evaluation scores, class pass rates, number of postgraduate students supervised, number of publications, external grant funding amount and citation index. All the indicators highlight the emphasis on quantification in the PE process of an academic. It is worth mentioning that all these outcome indicators define the perceived outcome focus of PE. Each of the indicators in the index of research or teaching activities addresses a unique PE KPI, and each of the KPIs is different. An increase or decrease in any indicator cannot influence another indicator, but can influence the outcome focus as a whole; however, a high level of outcome focused PE does not imply that there will be more emphasis on number of publications or class pass rates. This research, therefore, conceived each of the indicators in a subset to be a ‘causal’ (Blalock 1964; Bollen & Lennox 1991; Bollen, Lennox & Dahly 2009) or formative indicator (Diamantopoulos 1999; MacKenzie 2003).

3.7.4.1 Measurement strategy
The set of causal indicators is an index rather than a scale (Bollen & Lennox 1991). Such an approach is consistent with measurement approaches for the quality of life, depression, anxiety or Apgar, to name a few, which utilise heterogeneous indicators to measure these complex constructs. The index approach does not share the common belief embedded in classical measurement theory, with the main difference between the two measurement approaches being that one is seeking homogenous items for the same attribute as compared with having heterogeneous items with numerous attributes (Rust & Golombok 2014). The Apgar score is an ideal example of an index with heterogeneous items (Apgar 1952). According to Wright and Feinstein (1992), the index approach, therefore, can emphasise including only

42 For a detailed discussion and criteria for a construct to be causal (formative) or effect (reflective), see Jarvis, MacKenzie and Podsakoff (2003).
43 Developed by Virginia Apgar to evaluate the health of a newborn, the Apgar index comprises Appearance, Pulse, Grimace, Activity and Respiration.
one item for each of the most relevant and important attributes. Figure 3.5 illustrates the measurement framework of the study.
Figure 3.5: Study’s measurement framework

‘Paper’ is the context specific term for a subject employed in NZ similar to ‘unit’ in Australia.
According to Zikmund (2003), to gauge the magnitude or intensity of an indicator in an index or a scale, the cognitive component needs to be measured along a continuum, such as a rating scale. The Likert style rating mechanism is ubiquitously employed in data collection mechanisms because of its simplicity in administration (Neuman 2006; Saunders, Lewis & Thornhill 2015). To capture academics’ perceptions about their PE focus, this study therefore employed a 7-point Likert scale from ‘strongly disagree to strongly agree’. It was believed that such an approach, due to its simplicity, would facilitate concluding the PE focus in a particular subject category or a university. Perceived PE focus, in this study, is postulated to influence academics’ attitude, subsequent attitude and performance.

Attitude is an evaluable dimension of a concept (Fishbein 1963) and cannot be measured in a straightforward manner (Zikmund 2003). Its measurement thus requires an indirect approach (Zikmund 2003). Studies attempt to capture individuals’ attitude through a self-reported set of statements related to intentions, reasons, beliefs or opinions. The statements can measure the strength of an intention towards an object or these can attempt to identify an individual’s likelihood to adopt a course of action (Zikmund 2003). In such self-reported statements, Buss (1978) contends that participants are stating reasons for their actions or probable action and provide the purpose for choosing those actions. To measure and understand their reasons, rating scales such as Guttman, Thurstone, Likert, Semantic differential scales or choice technique can be employed. All these methods provide a score for a person’s location on the evaluative dimension (Fishbein & Ajzen 1975), through these mechanisms, participants are asked to rank their preferences (ranking), rate their estimated magnitude of choosing an action (rating), sort the offered options (sorting) or choose the best option from two or more options (choice technique).

Regardless of the response format employed, attitude measurement requires a process where a respondent can decide his/her position on a bipolar scale (hot – cold) or a unipolar scale (not at all cold – cold) (Fishbein & Ajzen 1975). This study measured attitude on two extremes of a continuum, that is, compliance and internalisation; moreover, each of these extremes was measured with seven items satisfying Fishbein and Ajzen criteria: that attitude should not be measured on a single response and the greater the number of items in a behavioural dimension, the more accurate reflection it provides in attitude measurement.

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45 A response category can be a qualitative judgement, multiple choices or a quantitative estimate; see Fishbein and Ajzen (1975, chapter 3) for detailed attitude measurement approaches.
The purpose of the psychological analysis is to assign respondents to an appropriate
category (Cronbach & Gleser 1965). In cases where a scaling approach is attempting to capture
both the content and the intensity\(^{46}\) of a behaviour, intention or reason to act, a Likert style
approach seems to be preferable, but a probability scale of 0 to 1 can be applied (Fishbein &
Ajzen 1975) where the target is only the content and reasons are hypothesized to be mutually
exclusive. Since the emphasis of this study was on the content of compliance or internalisation
rather than their intensity, a paired forced choice approach was employed. This approach to
cluster academics in compliance and internalisation also enabled meeting the aforementioned
Cronbach and Gleser’s (1965) criteria. Employing a forced choice approach, the final
instrument, therefore, used 40 statements arranged in 20 pairs for attitudinal investigation in
this study.

Due to its simplicity, ease of administration and understanding, the forced choice\(^{47}\) (FC
hereafter) approach has been employed in the discipline of performance management as well
as in medical sciences, leadership, supervision, empathy, sexual infidelity and auditory
thresholds, to name a few. According to Rambo (1959), researchers shy away from employing
paired comparisons because of the amount of time needed to construct balanced pairs or even
partially balanced pairs. However, Bartram (2007) contends that in spite of challenges
associated with items construction and complex analysis, studies should not shy away from
employing FC in cases where it can add value to analysis.

One of the objectives of attitudinal research is to avoid the effect of bias in responses
(Neuman 2006). Studies find that the FC approach is more resistant to respondents’ bias than
other mechanisms (Miller & Gekoski 1959; Zavaleta 1965), convenient to administer and saves
respondents’ time (Pankratz, Fausti & Peed 1975). Bias in attitude measurement, according to
Bartlett, Quay and Wrightsman (1960), is the deliberate faking of the response. Even with two
options, Corah et al. (1958) found that respondents are predetermined to select an option that
seems more desirable. The FC approach reduces such respondents’ approach towards social

\(^{46}\) According to Fishbein & Ajzen (1975, p. 59), content is when respondents are asked to indicate whether they
will perform a single behaviour or not; intensity is the probabilistic rating of the strength to perform a behaviour.
\(^{47}\) While the other rating scale methods have advanced significantly, it seems, however, that forced choice or
choice techniques is left behind and used, to some extent, only in medical sciences or evolutionary psychology
(Greve, Bianchini & Ameduri 2003; Lishner et al. 2008). Surprisingly, the literature related to the choice
techniques is quite dated and even search engines are unable to locate studies that have employed the choice
technique in business-related disciplines. The case is the same in methodology books that are limited to the
definition of the choice technique only. It is, however, worth mentioning that a complex forced choice pairwise
approach has been successfully utilised by 1000minds.com for decision making and other purposes.
desirability bias and attracts honest responses because both statements in the pair will have an equal amount of social desirability bias (Saltz, Reece & Ager 1962). As evidence suggests, FC will help to curb such responses and attract honest option selection from the academics. Moreover, when the FC approach is compared with other scales, the results have been in favour of FC (Zavala 1965).

Having said that, Krug and Northrup (1959) found that FC respondents are hesitant in choosing statements that have a negative connotation, as they associate those statements with others rather than themselves. This may have been the case in the statements related to compliance, and respondents may have chosen the internalisation statements or skipped the question (as the next chapter will highlight). Moreover, the respondents may have seen both of the statements to be equally relevant or irrelevant (Waters & Wherry 1961); however, Lishner et al. (2008) find that when respondents are presented with those two options within other multiple options, they randomly choose an option. Waters and Wherry (1961) deduce that even if there is a third option available that says ‘both options applicable or inapplicable’, this third option only works as a placebo and cannot be utilised in the analysis or to classify respondents into a group. Although such unavailability of another option may be seen as a problem by a few in the paired approach, according to Bair (1951), it does not pose a serious problem.

The emphasis here is not to prove the best or least-best method for a rating scale, the emphasis is instead on the appropriateness and analytical approach that can enable answering the RQ and addressing the objectives of the study (Saunders, Lewis & Thornhill 2015). The applicability and appropriateness of any scaling approach closely relates to the research objectives because resistance to FC is basically because it forces respondents to make a choice (Zavala 1965). Robson (1993, p. 291) suggests that researchers should not ‘be the prisoner of a particular research method or technique’. Despite the challenge of items construction, for this study’s objectives, the FC approach was deemed most appropriate to categorise academics attitudinal changes due to the perceived PE focus.

### 3.7.4.2 Pilot test of the instrument

The purpose of a pilot test is to identify and address any blemishes in an instrument that may hinder achieving a study’s objectives. As mentioned earlier (sub-section 3.7.3), the instrument was first pretested with various experts in the discipline and the feedback and review process resulted in the instrument comprising 65 items. According to Bell (2010, p. 151), ‘do your best to give the questionnaire a trial run, as, without a trial run, you have no way of knowing whether your questionnaire will succeed’. For larger samples and censuses,
Dillman, Smyth and Christian (2008) view this size to be between 100 and 200. According to Fink (2009), in surveys for educational purposes, the minimum number in the pilot should be 10.

After the development and design of the survey on Qualtrics and necessary online checks and verifications of data storage, the instrument was piloted with 25 academics. All the pilot participants were provided with the same environment, which was programmed to be implemented for the actual roll out of the survey. All the academics were sent email invitations for the pilot process, which included an email link to direct them to the Qualtrics survey page. Pilot participants were asked to provide comments and fill out the survey in a single sitting in order to record the duration of completion. Prior to the pilot, it was estimated that the survey completion would take 15–18 minutes. Comments from pilot completion resulted in minor changes in the phrasing of a few items. It was observed that the completion time of the survey varied between 6 and 12 minutes. The final invitation to the study participants thus included an estimated time of 10-12 minutes. Appendix C details the variables of the study, their relation to the RQs and the scales for each of the variables.

3.7.4.3 Research quality

In a survey approach, an instrument becomes valid and reliable if it provides the data for which it was constructed (Zikmund 2003). In essence, this establishes the credibility of the research (Veal & Ticehurst 2005).

Reliability is the dependability of a research (Neuman 2006), indicating that the research is free from errors and is expected to produce consistent results under similar conditions (Peter 1979) at different points in time. It is stated that the instrument developed and employed in this study holds stable reliability as long as the PE mechanism does not change in the NZ university sector because it has been developed on the basis of existing PE practices for academics.

Validity is the truthfulness of a research and gauges its closeness to actual reality by answering the question how much the constructed reality in a research matches with the constructs employed in the discipline to understand the researched phenomena (Neuman 2006). This research assured face validity of the instrument items through a pre-test with various experts in the discipline. Content validity in this study was addressed through inculcating theories in defining constructs and developing instrument items. Construct validity ensures that there is consistency in operational measures employed in the research (Neuman 2006). The operationalisation of the study constructs was based on the relevant literature as well as existing
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PE practices in the university sector. Internal validity or measurement validity was assured by employing various error management strategies as highlighted in sub-section 3.7.2.2. Reliability is closely associated with validity; an instrument has to be valid in order to be reliable; both of the quality elements augment each other (Bell & Bryman 2007) and are central to the idea of construct measurement (Neuman 2006).

3.8 Data analysis

The process of analysis begins after the data have been collected (Perry 1998), which focuses on providing information (Zikmund 2003) related to the investigated phenomenon and the context. The data gathered, however, are in raw form and need to be arranged in a meaningful manner to be interpreted in information. When data are collected in a quantitative or a numerical manner, the use of statistical and spreadsheet packages make it quite easy to analyse such data. However, prior to throwing data into software, the data need to be prepared for analysis (Saunders, Lewis & Thornhill 2015), that is, to ensure that the data set is error free, properly edited and coded and decision on missing values for items (Zikmund 2003).

Prior to embarking on data analysis, all the variable categories were properly coded and ensured that the coded categories are mutually exclusive, that there is no overlap between study variables and that a case only falls into only one defined category. Most of the coding was done prior to the roll out of the survey on the Qualtrics survey platform, which facilitated the process, and each of the variables was ensured to have the correct coding during the pilot stage.

3.8.1 Statistical analysis

Data collected through a survey-based approach can be analysed with computer-aided programmes. This study utilised IBM SPSS statistics 23 for its analytical purposes. Moreover, utilising Qualtrics smoothed the transition into SPSS, as Qualtrics provided a readily available SPSS file, which avoided any potential keyboard entry errors. In order to address the hypothesised RQs, this study conducted multiple statistical analyses.

3.8.1.1 Descriptive statistics

Descriptive statistics transform the collected data into meaningful and interpretable information (Manning & Munro 2007; Zikmund 2003). This study utilised descriptive statistics measures of tabulation and graphical illustrations of averages, frequencies, distributions, dispersion, magnitude and standard deviations, which enabled the revelation of distinct characteristics (Cooper & Schindler 2003).
3.8.1.2 Inferential statistics

Research would normally be interested in answering whether the assumptions made in the study of the sample hold true for the population; for this purpose, a study will test its hypotheses and identify if there are some causal relationships (Neuman 2006). Such a process details inferential statistics for a study, which relate to the type of data format, number of constructs and the extent of measurement (Sekaran & Bougie 2010). In order to analyse RQs, this study employed a first-generation technique\(^{48}\), which according to Haenlein and Kaplan (2004), comprise discriminant analyses, multiple and logistic regressions, variance analyses and cluster analyses.

Logistic regression has an advantage over discriminant analysis due to its flexibility to include variables with diverse measurement attributes (e.g. categorical, continuous, polychotomous, etc.) (Keith 2015). Field (2009) classifies logistic regression as an approach similar to a traditional (OLS) multiple regression, but logistic regression can conduct analyses when the independent variables (IV) are continuous or categorical. Logistic regression is employed, commonly in health sciences, to predict a categorical (dichotomous) dependent variable (DV) from the given set of IVs (Wuensch 2016). According to Burn and Burns (2008), in studies where variables are a mix of categorical and continuous, employing logistic regression becomes a logical choice. Instead of usual least squares deviations, logistic regression conducts binomial probability that the DV will be either 0 or 1 (Burn & Burns 2008); that is, ‘the predicted DV is a function of the probability that a subject will be in one of the categories of the DV’ (Wuensch 2016, p. 1). The objective of such an analysis is to predict the odds ratios of the occurrence of an event or identification of a person with particular category. Moreover, logistic regression makes no assumption that the variables in the analysis are normally distributed (Field 2009; Wuensch 2016); however, the categories of the DV must be mutually exclusive, and a case can only be in one category of the DV (Burn & Burns 2008). Regarding the RQ 2, the objective of this study was to identify and predict that under a particular perceived PE focus, an academic can either exhibit a compliance or an internalisation based attitude. Likewise, RQ 3 was seeking to predict academic’s performance with a particular attitude. Both of these research objectives necessitated the need to employ statistical analysis such as logistic regression. The logistic regressions results were further triangulated with multilayer perceptron (MLP) method, which is a simple network of neurons called perceptron.

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\(^{48}\) Haenlein and Kaplan classify structural equation modelling as a second-generation technique.
Introduced by Rosenblatt (1958), the MLP model computes a single output from multiple inputs thus generating a linear combination between inputs and output (Drakos & Moore 2001).

### 3.8.1.3 Qualitative analysis

Studies conventionally employ the words or phrase ‘qualitative data analysis’, which, according to Bernard and Ryan (2010), is misleading because it does not provide a distinction between the ‘analysis of qualitative data’ or ‘qualitative analysis of the data’. Regarding the qualitative comments received through open-ended items, this study qualitatively analysed the qualitative data collected during the survey process. Qualitative analytical techniques have progressed significantly (Miles & Huberman 1994; Ragin 1989), and there are no standards or recommended processes to achieve the objectives of a study (Neuman 2011). Eisenhardt (1989) suggests to employ techniques that can facilitate cross-case pattern matching and identify why relationships. This research therefore employed data coding and clustering procedures to generate themes from the studied institutions. Such an analysis focused on commonalities and contrasts (Ragin & Amoroso 2010), homogeneity and heterogeneity (Perry 1998) across the studied universities to achieve inferential objectives. In addition to description of the lived experiences of the respondents, Perry (1998) recommends that researchers utilise visual aids and graphs to facilitate the interpretation of such an analysis.

### 3.9 Ethics compliance of the study

This research complied with all the necessary ethics requirements. The research was approved by the ethics committee of the Department of Accountancy and Finance, University of Otago (D16/248), Massey University ethics committee and Auckland University of Technology (16/356), which required formal ethics clearances. The research also satisfied the ethics concerns raised by the Victoria University of Wellington. In other instances where issues were raised, the researcher corresponded with concerned ethics officials and satisfied the officials by providing required details. The researcher also provided personal assurance to academics where individual emails were received regarding the accessibility of data and anonymity of the responses.
3.10 Conclusion

This chapter detailed the methodological perspectives for this study and provided justification for choosing particular approaches, from paradigm justification to data analysis appropriateness. Accounting researchers’ viewpoint on paradigms may have been fragmented; the emphasis should be on a common ground, which can provide practical benefits. In order to have practical implications, the need for the understanding of contextual elements becomes crucial. Through a hybrid inductive and deductive theory building approach, this research employed a concurrent mixed methods approach to identify and explore factors that underpin the perceived PE focus of an academic as well as how such perception can influence an academic’s research and teaching behaviours and performance. Invitations to participate in this study resulted in 1,083 quantitative responses as well as 900 qualitative responses. The next chapter will detail the analytical processes employed to derive inferences from the collected data.
Performance evaluation, social influence and academics’ performance behaviours

Chapter IV: Results and Findings

To become different from what we are, we must have some awareness of what we are (Bruce Lee 2001).
4.1. Introduction

All I can do is reply on my own behalf, realizing that what I say is relative. Accepting the absurdity of everything around us is one step, a necessary experience: it should not become a dead end. It arouses a revolt that can become fruitful. An analysis of the idea of revolt could help us to discover ideas capable of restoring a relative meaning to existence, although a meaning that would always be in danger (Albert Camus).

4.1.1. Chapter objectives

The goal of any research is to converge the collected data and translate it into palatable information; this chapter therefore intends to detail the processes implemented during the data analysis as well as the results of the analysis. This chapter will analyse the data in separate streams for teaching and research respondents. The analysis will first focus on the identification of a particular PE focus perceived by an academic at a university, which is followed by the identification of avenues where the academic might be exhibiting internalised or compliant behaviours under the perceived PE focus. Through various quantitative and qualitative analyses of behavioural reasons to perform, the chapter will converge its results and findings to address the study’s RQs and hypothesised relationships. It is, however, mentioned that the implications related to the results and findings will be discussed through the lens of the literature in Chapter 5.

4.1.2. Chapter outline

The previous chapter discussed the methodological perspectives and their rationales employed in this study. This chapter provides the details and the analyses conducted through processes mentioned in Chapter 3. This chapter comprises eight sections. Followed by an introduction, section 4.2 details the study’s sample and respondents’ characteristics. Section 4.3 discusses the study’s approaches in data processing, such as dealing with missing values, assumption testing and data preparation for analyses. RQ 1 of the study (section 4.4) is then analysed, with the analysis of RQ 2 detailed in section 4.5 alongside the logistic regression analyses, which were conducted for the teaching and research data. Section 4.6 analyses the RQ 3 dealing with influence of academics’ behaviours on their research performance. Prior to the conclusion (section 4.8), section 4.7 presents the qualitative analysis of the qualitative data related to RQ 1, RQ 2 and academics’ perceptions in general about their PE and performance measurement in academia.
4.1.3. Research objective and questions

The previous chapters and sections built the rationale to achieve the objective of this study in finding an approach between compliance and internalisation that can possibly result in the best performance behaviours by academics in NZ universities. To achieve this aim, the study established three research questions.

RQ 1: How do academics in NZ universities perceive their performance evaluation process to be focused; is this process, outcomes, behaviour, people focused or an amalgamation of these foci?

RQ 2: Does a perceived PE focus influence academics’ attitude towards compliance and/or internalisation and their performance behaviours? To address RQ 2, the study postulated the following 10 hypotheses:

H1: When an academic perceives PE as procedurally focused, the academic’s attitude will take the form of compliance.

H2: When an academic perceives PE as people focused, the academic’s attitude will take the form of internalisation.

H3: When an academic perceives PE as outcome focused, the academic’s attitude will take the form of compliance.

H4: When an academic perceives PE as behaviourally focused, the academic’s attitude will take the form of compliance.

H5: When an academic perceives PE as a resource control mechanism, the academic’s attitude will take the form of compliance.

H6: When an academic perceives PE as a credible process, the academic’s attitude will take the form of internalisation.

H7: When an academic perceives PE as procedurally focused and as a resource control mechanism, the academic’s attitude taking the form of compliance will be moderated by the perceptions of PE as a resource control mechanism.
H8: When an academic perceives PE as people focused and as a credible process, the academic’s attitude taking the form of internalisation will be moderated by the perceptions of PE as a credible process.

H9: When an academic perceives PE as outcome focused and as a resource control mechanism, the academic’s attitude taking the form of compliance will be moderated by the perceptions of PE as a resource control mechanism.

H10: When an academic perceives PE as behaviourally focused and as a resource control mechanism, the academic’s attitude taking the form of compliance will be moderated by the perceptions of PE as a resource control mechanism.

RQ 3: Does an academic’s attitude taking the form of compliance or internalisation influence his/her research performance?

4.2. Study sample

Chapter 3 stipulated that the targeted population of this study was 7,637 participants. All the members in the compiled contact lists were invited to participate. Since there was no mechanism of identification of a respondent after he/she had taken the online survey, the information about the titles of the academics was only available prior to their completion of the survey. Figure 4.1 highlights the number of academics in the population and their designations.
Among the study population, academics who opted against participation and academics considered as unreachable were excluded from the targeted study sample. The remaining reachable population (sampling frame) therefore comprised 6,605 academics situated in various divisions, schools, colleges or departments of eight NZ universities. The data collection process returned 1,083 responses. Figure 4.2 illustrates that universities with a larger number of academics constituted a major share in the responses of the study. Hence, the 1,083 cases were the starting point for data cleansing and preparation for further analyses.

![Figure 4.2: Response rate proportion of universities](image)

Saunders, Lewis and Thornhill (2015) suggest that in a population of 10,000, a sample of 964 indicates that the sample is 97% representative of the population. Based on this suggestion, the sample of this study is deduced to be representative of the academic population of eight NZ universities.

As highlighted in the preceding section, universities with a larger number of academics contributed mainly to the total responses. To safeguard the anonymity of the respondents, subject panels were classified according to the PBRF definitions; the academics were therefore asked to associate themselves with an appropriate subject category rather than their department.

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49 Although it is referred to as a population, it is, however, acknowledged that during the list generation process (sampling frame), some academics’ names or contact details may not be available at the respective university pages; such academics might have been missed in this study’s contact lists. The exact number of total academics although not known, it is, however, assumed not to significantly vary from this study’s numbers. In the context of this study, therefore, the sampling frame is referred to as the sample.

50 University size in this study is conceptualised on the basis of number of academics.
school, college or a division. Figure 4.3 details the subject category association of the respondents who revealed such information.

![Figure 4.3: Responses by subject categories](image)

Among the 11 defined subject categories, responses in this study were dominated by academics in health sciences, business and economics, humanities and law, psychology and social sciences and biological sciences. These five categories comprised almost 70% of the responses. The participants’ profiles also highlighted that male responses were overtaken by female academics, as there was almost a 10% difference between the proportions of the two genders. Such difference is consistent with academics’ gender proportions at the NZ universities. Figure 4.4 illustrates the respondents’ gender information. Appendix B provides

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51 Women representation since 1970s have dramatically increased in English speaking nations (Auriol 2007; OECD 2008) and more women academics have joined universities (Baker 2009). Baker (2012) finds a considerable decrease in ‘academic gender-gap’ (p.12), that is, difference between male and female academics’ proportion. According to Neale and White (2004), ‘In 2001, seven NZ universities employed 17,282 full-time and part-time staff of whom 53% were women. Academic staff represented 6,963 of this total and 38% of these were women. Neale and White also note that the percentage of women academics increased by 8% over the previous five years (prior to 2004) while the percentage of women executive staff doubled during the same period. Doyle et al. (2004) noted 44 percent female academics at the Massey University. At the AUT, among 2,500 total staff, the gender proportion is 41% females vs 59% males while the proportion of academic vs professional staff is 50:50 (AUT 2018). According to the AUT Annual report 2014, the number of senior female academic staff increased from 45 in 2013 to 56 in 2014. Likewise, at the University of Otago (2018), there are 1190 research and academic staff comprising 522 (44%) females and 668 (56%) males. The proportion of women academics has increased significantly from 35% females and 65% males since 2002 (Otago Statement of Resources 2002). However, in the University of Auckland (2018), among 5,250 staff (2,209 academic, 3,041 professional), there are 2,898 women, although a gender breakdown for academic staff is not mentioned. As highlighted in the descriptive statistics, the proportion of women academics in this study is comparable to the previous studies’ and women statistics at NZ universities, which has significantly increased during the previous years. The gender split in the study’s sample therefore is considered consistent with the male and female academics’ proportion in NZ universities.
description of study participants’ ethnicity, age, academics’ service period in academia and present universities.

Figure 4.4: Respondents by gender

![Pie chart showing gender distribution](image)

According to Tabachnick and Fidell (2013), nominal variables with less than 10% proportion of the sample can produce misleading results in a study and should be excluded. As highlighted in Figure 4.4, about 2% of the respondents preferred not to state their gender and the gender diverse proportion was about 0%; these two categories were therefore treated as missing values in the subsequent analyses.

While the performance of all of the academics is not evaluated for both research and teaching responsibilities, the data collection process employed a filter question to keep the respondents in respective analytical groups. Through the filter, the data highlighted that there were 163 academics with the ‘only’ position (85 teaching only, 78 research only) and 789 academics with both responsibilities. Since teaching only academics did not answer research only items and vice versa, this therefore created many missing values, which would have implications in further analyses if data were analysed in a single dataset. The data were therefore split into two groups, that is, teaching data and research data. Teaching only academics were added to the teaching group, while the same was done for research only academics in the research dataset. Within each group, any statistical analysis between academics with both responsibilities and academics with ‘only’ responsibilities were avoided. For instance, statistical analyses between 789 teaching respondents (with both research and teaching responsibilities) and 85 teaching only responsibilities were not conducted due to large difference between numbers. Similar was the case with research respondents.
4.3. Data processing

Advancement in technology has helped researchers avoid the painstaking process of data entry into a computer system, especially when the number of respondents is large. As highlighted, this study employed an online survey portal, Qualtrics, to collect data from its targeted population. The data needed to be checked for consistency and errors in all eight separate datasets for each of the eight universities.

4.3.1. Missing values

Missing values in a dataset can create distortions in the statistical analyses. Although there are no specific directions in this matter (Manning & Munro 2007), listwise and pairwise approaches are the most widely employed approaches to deal with missing data (Marsh 1998). The listwise approach is considered desirable, and this can lead to consistent estimation and maximum likelihood (Bollen 1989) because it provides ‘purer’ results in large sample sizes with a small % miss, which according to Marsh (1998), is not often the case in most of the applied research studies. Tabachnick and Fidell (2013) advise employing measures that are appropriate for analytical purposes of the study. Since the survey instrument was apportioned into distinct sections, that is, research and teaching, and within them there were four foci and two behaviours sections, employing a single approach across the board did not seem to be the viable option. This study adopted the approach suggested by Saunders and colleagues (2015) who describe nonresponses to be of four categories.

- Respondent’s complete refusal (no item in the questionnaire answered)
- Break-off (less than 50% items answered)
- Partial response (50–80% items answered)
- Complete response (>80% items answered).

Treatment of missing responses therefore adhered to an 80% approach in preparing the data for analyses. If a respondent had answered 80% of the items (23 out of 29) in the foci section, the response was taken as a complete response. There were also instances where a respondent did not answer all of the four foci; in such cases if a respondent did not answer three of the four foci, the case was excluded from further analysis. In summary, for respective datasets, a respondent was only included in further analysis if he/she had answered 11 items in the research section and 12 items in the teaching section of the four foci. This approach was applied because the subsequent behaviour section was underpinned by the responses in the foci section; if a respondent did not answer any of the foci, the inclusion of such respondents in
further analyses did not make any sense for the objectives of the study and hence they were excluded. In adhering to a greater than 80% approach and the exclusion of partial responses, the teaching dataset comprised 794 cases, while the research dataset comprised 776 cases.

Some respondents despite responding to more than 80% of the items omitted to answer some of the items. In those cases, Enders (2010) and Downey and King (1998) advise to employ ‘person mean imputation’, which is replacing missing values with the mean of the respondent’s completed items. According to Wuensch (2017), if all the items are measuring the same underlying construct, person mean imputation provides a decent estimate for the items that respondents may have missed. As highlighted earlier, for instance, in the case of perceived procedural focus (teaching), a person mean was only imputed if a respondent answered three out of the four items, otherwise it was treated as a missing response.

**4.3.2. Composite variables and grouping of academics**

This study conceived that PE can have at least four possible foci; that is, it can be process focused, outcome focused, people focused or behaviour focused, and a fifth can be an amalgamation of these foci. Each of these foci was defined with an index of academics’ teaching and research activities (see sub-section 3.7.4). The indicators employed for each of the foci were defining factors of the particular focus rather than the consequences of the PE focus. These factors defining the constructs were therefore causal indicators rather than reflective indicators (Bollen & Lennox 1991; Jarvis, MacKenzie & Podsakoff 2003). The following sections explain the management processes of the composite variables of this study.

**4.3.2.1. Perceived PE focus**

Perceived PE foci items were measured on a Likert scale of 1 to 7. For a single item therefore, an academic can have a minimum score of 1 or a maximum score of 7. The foci for research were defined by 14 items and for teaching by 15 items. As a guide to the study hypotheses analysis (Field 2009) and to validate the theoretical underpinning of the measured constructs, the foci items were subjected to the most frequently employed mechanism for investigation of psychometric properties (Osborne 2015), that is, exploratory factor analysis (EFA) by using the Principal Axis Factoring (PAF) method. The objective of EFA in this study was to explore the observed variables bonding together as conceptualised (DeCoster 1998).
Since unrotated EFA results are difficult to interpret, to facilitate the clarification and interpretation of loading patterns, axes of factors are rotated\(^{52}\) – so that the items can be clustered together as close as possible (Osborne 2015). For choosing a rotation method in an EFA, Tabachnick and Fidell (2007, p. 646) advise first employing an oblique rotation and then looking for the factor correlation matrix; if the factor correlation matrix is not an identity matrix, then the justification for employing an orthogonal rotation becomes void. In psychological, perceptual or behavioural measurement studies such as this, it is an unlikely scenario that any construct is said to be neatly packed, independent, uncorrelated or uninfluenced by other variables (DiStefano, Zhu & Mindrila 2009; Field 2009; Osborne 2015). In such instances, orthogonal rotations are not considered to be the best choice and oblique rotation provides the best results (Osborne 2015). Osborne contends that if the factors are uncorrelated and items are truly unidimensional, oblique rotation will nevertheless provide orthogonal results, but not vice versa. The eventual objective of rotation in EFA is to get a simple structure, and rotation of any sort may not make much difference among the loadings (Brown 2009). Gorsuch (1983, p. 205) recommends that, if the simple structure is clear, employing any of the popular methods is expected to lead to the same interpretation. Although in this study, the PAF identified same factors with the same salient items with both Varimax and Promax rotations with almost comparable loadings, the factor correlation matrix, however, showed correlations among the identified factors. This made a case to employ an oblique rotation. There is no preferable method among oblique rotational methods (Fabrigar et al. 1999; Gorsuch 1983), however, recommends employing Promax among oblique rotations. According to Kim and Mueller (1978, p. 50), the identification of variables that are theoretically meaningful is the primary concern of any researcher as well as the objective of EFA.

For teaching items, a PAF was conducted on 15 items with Promax rotation. The results of the teaching items’ EFA verified the Kaiser-Meyer-Olkin measure of the sampling adequacy, KMO = .834, which according to Hutcheson and Sofroniou (1999) are ‘great’, and for individual items, the KMO values were between .691 and .922, well above the acceptable limit of .5 (Field 2009). According to Costello and Osborne (2005), larger samples provide factor analysis solutions that are more accurate and reliable. Costello and Osborne recommend that a 20:1 subject-item ratio will have a correct factor structure. In the sample of 794, the

\(^{52}\) According to Osborne (2015, p. 3), the process of rotation does not alter the basic variance extracted from the items; eigenvalues, however, change as factor loadings are adjusted by rotation.
subject-item ratio was in excess of the prescribed criterion. For EFA, Comrey and Lee (1992, cited in Tabachnick & Fidell 2001, p. 588) consider the sample size of 500 to be ‘good’ and 1,000 to be ‘excellent’. The PAF process identified four factors as conceptualised during the formation of items. All four factors had eigenvalues above Kaiser’s criterion of 1 and in combination explained 71.50% of the variance. The scree plot also illustrated four factors before the point of inflexion. Two of the items showed a cross-loading of .3 on procedural focus and people focus items; these were therefore removed from the analysis. None of the other items showed a cross-loading in excess of Tabachnick and Fidell’s (2001) rule of thumb of .32. Items, for the most part, exceeded Tabachnick and Fidell’s loading criteria of .5 on their own factors. Appendix J details the scree plot and rotated factor loadings for all of the teaching items.

A similar process of PAF was conducted on 14 research items. One of the items did not cluster together with any of the factors and showed a low level of loading; this item was therefore removed. The results of PAF verified the Kaiser-Meyer-Olkin measure of the sampling adequacy, KMO = .793, which according to Hutcheson and Sofroniou (1999) are ‘good’, and for individual items, the KMO values were between .676 and .866, well above the acceptable limit of .5 (Field 2009). According to Costello and Osborne’s (2005) criteria, the subject-item ratio was well above the criteria of 20:1 with the sample of 776. The PAF identified four factors as conceptualised during the formation of items. All four factors had eigenvalues above Kaiser’s criterion of 1 and in combination explained 66.19% of the variance. The scree plot also illustrated four factors before the point of inflexion. None of the items showed a cross-loading in excess of Tabachnick and Fidell’s (2001) rule of thumb of .32. Items, for the most part, exceeded Tabachnick and Fidell’s loading criteria of .5 on their own factors. Appendix K details the scree plot and rotated factor loadings for all of the research items. The process of PAF for both teaching and research items provided evidence to proceed with confidence for further analyses.

Studies in psychological constructs traditionally employ coarse factor scores (Grice 2001) or non-refined methods by summing the salient item scores (DiStefano, Zhu & Mindrilă 2009). DiStefano and colleagues contend that these methods do not depend on the particular sample and do not achieve mean or standard deviation for each of the factor scores; these are rather reliant on item characteristics. According to Grice (2001), factor scores’ computation and the method of computation can influence the quality of a research. Grice suggests factor
scores should be used that meet the criteria of validity, univocality and correlational accuracy. These conditions can be met by employing ‘refined factor scores’ or ‘exact factor scores’ computation methods such as Thurstone’s (1935) least squares regression, Anderson-Rubin’s (1956) orthogonal scores or Bartlett’s (1973) sum of squares for unique factors. Grice contends that refined factors have higher levels of validity as compared with traditional coarse or non-refined methods; moreover, refined scores facilitate employing particular constraints on scores, such as orthogonality. These conditions or constraints, according to Grice (2001), are the choice of a researcher to achieve the objectives of a study. Since this study contends that a particular focus can influence academics’ behaviours towards compliance or internalisation, in order to analyse an independent effect of a particular focus Anderson-Rubin factor scores were used as independent variables in the subsequent regression analyses.

4.3.2.2. Perceptions of PE as a resource control or a credible mechanism

According to Kelman’s (1958) social influence framework, an individual’s behaviours are underpinned by motivational bases of compliance if the individual perceives the intervening influencing agent as a controller of resources; if, however, the individual perceives the influencing agent as credible, the exhibited behaviours are underpinned by internalisation. These two types of perceptions were measured by three items each for PE perceived as a resource control mechanism or a credible process. Each respondent’s score on these two perceptions was obtained by summing the individual items’ scores. Table 4.1 highlights an example of this process.

Table 4.1: Perceptions of PE as a resource control or credible mechanism scores

<table>
<thead>
<tr>
<th>ID</th>
<th>PE_Trust</th>
<th>PE_Honest</th>
<th>PE_Expert</th>
<th>Credibl</th>
<th>ResorCntrl1</th>
<th>ResorCntrl2</th>
<th>ResorCntrl3</th>
<th>ResorCntrl</th>
</tr>
</thead>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
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<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
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<td>0</td>
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<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

55 As highlighted in Appendix E, each of the resource control and credibility constructs were measured by three pairs where 1 denoted to an agreement by a respondent for PE as a resource control/credible process whereas the disagreement denoted 0.
4.3.2.3. Compliance and internalisation

As mentioned earlier, PE is an influencing agent that can cause a change in academics’ attitudes, resulting in induced behaviours. The said change in attitude is conceived to be underpinned by compliance or internalisation. These attitudinal changes are argued to be the extreme ends of a single continuum of reasons to perform a behaviour. These reasons to behave can be externally triggered or volitional in nature (Deci, Olafsen & Ryan 2017). The other key composite variables in this study to be computed were compliance and internalisation. Both of these constructs were defined by seven causal indicators. Survey items related to this section employed a pairwise approach to measure academics’ reasons to be involved in teaching and research behaviours. Each of these questions contained a statement related to compliance and an opposing statement for internalisation. For instance, in response to a question ‘You publish research papers’ the available options were ‘Because publishing research is part of my job’ (compliance) and ‘Because it's fulfilling’ (internalisation). According to Fishbein and Ajzen (1975, p. 56), attitude measurement requires a process where a respondent ‘assigns some concept to a position on a bipolar evaluative dimension’, for example, a scale like hot to cold or good to bad or clean to dirty. Since compliance and internalisation are the ends of a bipolar continuum, a respondent can therefore have a maximum score of 7 on these paired statements. The higher the score, the higher the respondent is deemed to be internalised. The number of items with 1 can be taken as an index of internalisation (Fishbein & Ajzen 1975). Following the approach of Guttman (1944, cited in Fishbein & Ajzen 1975, p. 65), the response pattern of an ideal cumulative internalisation facilitated the construction of a bipolar internalisation scale through which a respondent can be measured for his/her extent of internalisation. In order to place a respondent on this scale, each of the respondents’ scores was computed by summing the scores of the seven items. This process was completed separately for both teaching and research respondents. Table 4.2 provides an example of the computation of internalisation scores for research respondents.
Table 4.2: Hypothetical response pattern on internalisation scale

<table>
<thead>
<tr>
<th>Response pattern</th>
<th>Rule</th>
<th>Norm</th>
<th>Rewd</th>
<th>ExtDemd</th>
<th>Aprov</th>
<th>AvdDispr</th>
<th>Survi</th>
<th>Intern. score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<td>0</td>
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<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>F</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>G</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>H</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

(Adapted from Fishbein & Ajzen 1975, p. 65)

According to Fishbein and Ajzen, in such an ordered relation, no assumption is made that the distance between items is of equal intensity or magnitude. Such ordering provided valuable information about internalisation scores and their relationship to item responses. The emphasis of this pattern was to identify respondents with high and low scores on the internalisation scale. To achieve the causal objectives of the study, the need was the identification of two groups of individuals with high (internalisation) and low (compliance) scores on the scale. Respondents scoring below 4 were considered as ‘low’ on the internalisation scale, that is, exhibiting compliance based behaviours; whereas respondents scoring greater than 4 were considered as ‘high’ on the internalisation scale, that is, exhibiting internalised performance behaviours. As illustrated in the infographics (Figure 4.5) of the internalisation scores for both research and teaching, respondents clustered towards the high end of the scale, which made it clear how to classify internalised respondents. However, in doing such classification, the challenge was also to have at least comparable groups by size. In both datasets, respondents with a score of 7 on the scale were classified in the internalisation group. On the lower end, respondents with a score of three and below were classified in the compliance group. Since differentiation or comparison of the intensity of internalisation is not the objective of this study, in employing such an approach this study does not make any assumption that respondents with a score of 5 or 6 are not internalised; furthermore, respondents scoring in the middle of the scale may have to make a trade-off in relation to their service related responsibilities.
4.3.3. Assumption verification

Statistical tests employed to analyse the data have underlying assumptions. According to Manning and Munro (2007), a key assumption underlying parametric statistical analyses is that the scores are normally distributed in the given dataset. To meet the normality assumption, it is considered that data should be bell shaped when plotted in a histogram (Manning & Munro 2007). This was examined for teaching and research separately for each of the perceived PE foci. Values for means, standard deviations, kurtosis and skewness were computed through descriptive statistics, as highlighted later in Table 4.3. According to Field (2009, p. 139), in samples of 200 or more respondents, skewness and kurtosis are ‘likely to be significant even
when not different from normal’. Significance tests for skewness and kurtosis, therefore, should not be employed in such instances because large samples inflate small errors, giving rise to even smaller deviations from normality.

Additionally, standard z scores were computed for the four foci for each of the respondents. Meier, Brudney and Bohte (2015) explain that if 68% of the standard scores fall within one standard deviation from the mean or 95% within two standard deviations or 99.7% within three standard deviations from the mean, the data can said to be normally distributed. The computed standard scores also confirmed such condition of normality. This process also facilitated identifying cases that showed standard scores with an absolute value in excess of 3.29 ($p < .001$), which can be classified as potential outliers. Davies and Gather (1993) suggest employing a single-step process of outlier identification as opposed to sequential elimination.

For the identification of univariate outliers, each case with an unusual score was carefully examined. In the teaching data, only one case was identified with the z score in excess of 3.29; in the research data, however, 13 cases were identified with the absolute values more than 3.29. Moreover, a test for multivariate outliers was also conducted across variables related to perceived PE foci using the procedures advised by Tabachnick and Fidell (2013). Using data from four variables, the Mahalanobis distance was computed for each of the cases in teaching and research. According to the guidelines, the Mahalanobis distance should be interpreted as $\chi^2$ statistic with degrees of freedom equal to the number of independent variables. The criterion of $p < .001$ is also advised to evaluate whether any case can said to be a multivariate outlier; so a critical value of $\chi^4 = 18.467$ was used. Five cases in teaching and 10 cases in research were identified with the Mahalanobis distance in excess of 18.467. In the research data, identified multivariate outliers were the same cases already identified as univariate outliers. All of the univariate and multivariate outliers were excluded from further analyses.

For the dichotomous variables related to academics’ behaviours under compliance and internalisation, PE perceived as resource control or credible mechanism and contextual performance behaviours, this study followed the approach advised by Tabachnick and Fidell (2013), who suggest analysing the frequency of occurrence for such variables. Tabachnick and Fidell advise that dichotomous variables with a frequency below 10% should be excluded from analysis; a close examination revealed that none of the dichotomous variables had a frequency below the suggested point of 10%.
Data processing detailed in the previous sections allowed the preparation of the data for further statistical analyses; the following section details the analysis pertaining to RQ 1 of this study.

4.4. Academics’ perceptions about PE focus

RQ 1 explored:

*How do academics in NZ universities perceive their performance evaluation process to be focused; is it process, outcomes, behaviour, people focused or an amalgamation of these foci?*

For such analysis, mean scores for research and teaching were computed for each of the universities in relation to each of the foci. Table 4.3 details the descriptive statistics for the research and teaching foci.

<table>
<thead>
<tr>
<th></th>
<th>ProcedT</th>
<th>PeopIT</th>
<th>OutcomT</th>
<th>BehT</th>
<th>ProcedR</th>
<th>PeoplR</th>
<th>OutcomR</th>
<th>BehR</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>794</td>
<td>792</td>
<td>792</td>
<td>780</td>
<td>774</td>
<td>776</td>
<td>776</td>
<td>765</td>
</tr>
<tr>
<td>Mean</td>
<td>4.74</td>
<td>4.58</td>
<td>4.45</td>
<td>2.76</td>
<td>5.24</td>
<td>4.38</td>
<td>5.50</td>
<td>2.82</td>
</tr>
<tr>
<td>Median</td>
<td>5.00</td>
<td>4.67</td>
<td>4.67</td>
<td>2.67</td>
<td>5.29</td>
<td>4.50</td>
<td>5.67</td>
<td>2.67</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.63</td>
<td>1.53</td>
<td>1.45</td>
<td>1.63</td>
<td>1.11</td>
<td>1.40</td>
<td>1.09</td>
<td>1.36</td>
</tr>
<tr>
<td>Variance</td>
<td>2.65</td>
<td>2.35</td>
<td>1.45</td>
<td>1.63</td>
<td>1.23</td>
<td>1.95</td>
<td>1.19</td>
<td>1.84</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.61</td>
<td>-0.53</td>
<td>-0.35</td>
<td>0.59</td>
<td>-0.67</td>
<td>-0.39</td>
<td>-0.74</td>
<td>0.38</td>
</tr>
<tr>
<td>Std. Error of Skewness</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.56</td>
<td>-0.40</td>
<td>-0.02</td>
<td>-0.14</td>
<td>0.37</td>
<td>-0.29</td>
<td>0.36</td>
<td>-0.72</td>
</tr>
<tr>
<td>Std. Error of Kurtosis</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.18</td>
<td>0.18</td>
<td>0.18</td>
</tr>
</tbody>
</table>

Note: T with the variables relates to the teaching and R for the research variables.

Measured on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7), the foci means highlight that respondents in both the research and teaching groups overwhelmingly disagreed with the notion that their PE is behaviourally focused or evaluated through watching, supervision or surveillance mechanisms. Means for the other foci, however, highlight that respondents’ perceptions can be considered mixed among the three foci, as the means are close to 6 (agree) in research and 5 (somewhat agree) in teaching on the point of measurement scale. Generally, in relation to evaluation of research performance, respondents perceived there is more outcome and procedural focus, while collegiality, collaboration and team-based evaluation appeared to be viewed as neutral. The teaching means observed a slight agreement equally for procedural, people and outcome focus.
The analysis of perceived procedural focus highlights that academics in all the universities, to varying degrees, perceive their PE to be procedurally focused (see Figure 4.6). The comparison of mean scores for teaching and research highlight that respondents perceive that their PE puts a higher emphasis on processes when evaluating their research performance rather than their teaching performance.

Figure 4.6: Perceived procedural focus by NZ academics

Regarding the perceived people focus of PE, the scores plotted in Figure 4.7 highlight that academics, for the most part, perceive the extent of their PE to be people focused equally between teaching and research. However, respondents at UoE do not perceive their research PE to be focused on the idea of ‘organic solidarity’. In spite of the differences in the extent among universities, academics slightly agreed in responding that their PE is focused on the idea of clan control. Respondents at UoB and UoA viewed their PE to inculcate the elements of collegiality, teamwork and collaboration.
Critical studies on PE of academics, for the most part, have claimed the deployment of outcome based approaches. To validate this notion, this study found solid evidence that academics perceive their PE to be outcome focused (Figure 4.8), particularly when it comes to research performance. The perception of outcome focus does not vanish in relation to teaching performance as respondents from all universities, with the exception of UoC, highlight an agreement for an outcome based evaluation of their teaching performance.

When the study sought academics’ perceptions related to emphasis in their PE through surveillance and observation mechanisms, it was found that academics disagreed with this notion at all the universities. As highlighted in Figure 4.9, the mean scores were even lower.
than the neutral point of four; however, the extent of disagreement varied among the studied cases. For instance, respondents at UoF and UoD disagreed to a lesser extent than their counterparts at other universities.

Figure 4.9: Perceived behavioural focus by NZ academics

Responses in this study were dominated by five subject categories and the PE of academics can differ among these due to varying performance requirements, for instance, from business faculties to life sciences. Perceived PE foci responses were largely contributed by health sciences and related respondents (24% in research and 21% in teaching). Consistent with previously mentioned results, health faculties’ respondents also perceived a combination of procedural and outcomes focus in both teaching and research (Figure 4.10); while both foci seemed to vary in the extent across the studied cases, at UoG, respondents perceived a significant procedural as well as outcome focus in both teaching and research performance behaviours.
As mentioned earlier, PE focus was measured on a 7-point scale where 4 was the neutral point. From the above mentioned graphs related to the foci, in summary, it is observed that respondents score 5 (slightly agree) and above in procedural research and below 5 in procedural teaching. Regarding people focus, respondents just edge above 4 in both teaching and research except UoA and UoB; while the outcome clearly receives scores 5 and above in research and almost 4.5 in teaching. The behavioural focus scored less than 4, that is, respondents disagree on its presence at all universities though in varying extent. These results facilitate deducing that PE is perceived by NZ academics as a combination of the three foci, that is, procedural, people and outcomes. The next section details the analysis of RQ 2.

4.5. Perceived PE focus’ influence on academics’ attitude

The RQ 2 investigated:

Does a perceived PE focus influence academics’ attitude towards compliance and/or internalisation and their performance behaviours?

As mentioned earlier, academics’ behaviours in this study were defined by a set of seven indicators for teaching and research activities. Employing seven dichotomous items facilitated obtaining scores for internalisation. It is also recalled from section 4.3.2 that an academic’s internalisation score was computed by summing the related behavioural items scores. In the analysis whether academics’ research behaviours are compliant or internalised in nature, academics, for the most part, reasoned that they enjoy publication challenges or cared to change the status-quo in the existing practices in their discipline. Figure 4.11 highlights academics’ compliant and internalised reasons to indulge in publication and research activities.
From the above reported, the main reason academics are involved in research and publication behaviours is because of an internal sense of fulfilment and achievement. Despite variance among universities, almost 35–50% of the respondents highlighted such activities to be a norm or part of their job responsibilities and to some extent due to external pressures, whereas the perception of being penalised for not doing so ranged between 20% and 35%. The
internalised reasons, however, remained above 50% in all of the seven behaviours. It can be seen that academics at UoB reported the highest proportion of internalised behaviours, followed by UoD, UoE and UoG.

Figure 4.12: Proportion of internalised and compliant academics (Teaching)

Figure 4.12 illustrates a similar case in teaching behaviours, as academics, for the most part, reported internalised reasons to perform teaching behaviours. In comparison to their counterparts, academics at UoE did not shy away from expressing their intensity of compliance.
to perform teaching activities. There was more variation in compliance based teaching reasons, as these ranged between 5% and almost 50%. Similar to research behaviours, 20–48% of the respondents’ highlighted teaching to be part of the job or as a norm for the profession, which are compliance based reasons to exhibit a behaviour.

It is recalled from Chapter 2 that behaviours through compliance are underpinned by perceptions of resource control and behaviours through internalisation are underpinned by perceptions of credibility of the influencing agent. These two constructs were separately measured by three items each (see Appendix E for complete instrument). Figure 4.13 illustrates responses that categorised PE as either a credible process or a resource control mechanism. The results highlight that respondents at UoE clearly perceive their PE to be an honest, trustworthy and expert process. For other studied cases, respondents for the most part perceived their PE to be a process to control their rewards or funding, that is, a resource control mechanism. At UoC and UoG, however, the extent of credibility and resource control almost remain comparable.

![Figure 4.13: Proportion of academics perceiving PE as a resource control/credible process](image)

This study contends that perceptions related to the focus of PE can influence an academic’s performance behaviours. The exhibited behaviours under such perceptions can either be compliant or internalised in nature. There is a hypothesised association of perceived PE focus and the exhibited behaviours. Such an association can also facilitate a probable prediction of behaviours under a certain perceived PE focus. For such predictive analysis, this study laid out 10 hypotheses. Figure 4.14 illustrates the framework to support or refute these hypotheses. Logistic regressions were employed to analyse these data. According to Keith
(2015), through a logistic regression a study is basically seeking to test the natural logarithm of the odds of the outcome variable, that is, internalisation/compliance in this study.

Prior to the logistic regression, all the variables of interest were checked to meet the assumptions for a logistic regression. Although logistic regression is cited as having no assumptions (Wuensch 2016), the regression assumes a linear relationship between continuous IVs and the DV (Field 2013). This assumption can be tested through a Box-Tidwell test, which, according to Wuensch (2016), can be performed by creating a natural log (Ln) of the predictors and then adding the interaction of the natural log and the predictors in the test model. If the interactional variables show significance, then the assumption of linearity has been violated (Hosmer & Lemeshow 1989). The Box-Tidwell test was therefore performed for both teaching and research data.

Figure 4.14: Measurement model

Prior to the logistic regression, all the variables of interest were checked to meet the assumptions for a logistic regression. Although logistic regression is cited as having no assumptions (Wuensch 2016), the regression assumes a linear relationship between continuous IVs and the DV (Field 2013). This assumption can be tested through a Box-Tidwell test, which, according to Wuensch (2016), can be performed by creating a natural log (Ln) of the predictors and then adding the interaction of the natural log and the predictors in the test model. If the interactional variables show significance, then the assumption of linearity has been violated (Hosmer & Lemeshow 1989). The Box-Tidwell test was therefore performed for both teaching and research data.

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56 As mentioned earlier (section 4.3.2.1), for all subsequent analyses this study utilised orthogonal Anderson-Rubin factor scores.
All the IVs along with the interaction between IVs and their logged transformations were subjected to Box-Tidwell test. As per guidelines, all the variables showed insignificance in the research data, except ProcedR. According to Wuensch (2016)\textsuperscript{57}, such an issue can be dealt with by introducing a quadratic component in the model. After the introduction of squared ProcedR, all the variables as well as their logged interactions showed insignificance. Wuensch (2016) cautions that sample size plays a significant factor in the interactional model of Box-Tidwell test, so researchers should not to be too much concerned about the linearity assumption if their sample size is large. A similar process was employed for teaching data and all the IVs and their interaction with their logged transformations were found to be insignificant. The assumption of a linear relationship between the study’s IVs and the DV was therefore sustained.

According to Allison (2012), multicollinearity is a common issue in regression models because it may lead to unreliable estimates of regression coefficients. For multicollinearity, variance inflation factor (VIF) is the most widely used diagnostic (Allison 2012). In addition to correlations, a VIF analysis was also conducted for all the IVs. The collinearity statistics highlighted the VIF values of 1; that is, no collinearity was observed between the IVs for both research and teaching variables. The VIF values were also below the point of concern of 3, when interactional (moderating) variables were introduced in the teaching model. Moreover, the maximum VIF value observed was 2.92 and the condition index for teaching variables was reported 4.03. According to Midi, Sarkar and Rana (2010), the rule of thumb is, if the condition index is 15 then multicollinearity is a concern, while >30 can be a serious issue. Likewise, in the research data, the maximum VIF value observed was 2.19 and the condition index of 3.76. This provided the study with confidence about the absence of multicollinearity. Table 4.4 details the VIF values for research IVs and their moderating variables.

\textsuperscript{57} http://core.ecu.edu/psyc/wuenschk/MV/multReg/T-Test_vs_Binary-Logistic.zip
According to Manning and Munro (2007, p. 206), the objective of the logistic regression is to find the best combination of predictors that have the maximum likelihood of providing the observed outcome frequencies.

### 4.5.1. Teaching

A logistic regression was performed to model the relationship between perceived PE foci and academics’ teaching performance behaviours. The traditional significance criterion of .05 was employed. As compared with the null or intercept only model, the regression results highlighted that the addition of predictors to the model will significantly improve the fit between model and the data, $\chi^2 (4, N = 441) = 9.650$, Nagelkerke R square $= .030$, Cox and Snell R square $= .022$, McFadden R square $= .017$, $p = .046)$. Computing the effect size of the model (Field 2015), the Nagelkerke pseudo R square value highlighted a modest 3% variation in the dependent variable, while the Cox and Snell value suggested a 2.2% variation in the dependent variable. Wuensch (2016) contends that Cox and Snell R squares can be interpreted

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58 Pseudo R-squares cannot be interpreted as one would interpret in an OLS R-squared and different pseudo R-squareds can arrive at very different values. These are assumed to look like R-squares in the sense that they are on a similar scale, ranging from 0 to 1 (though some pseudo R-squares never achieve 0 or 1) with higher values indicating better model fit. (https://stats.idre.ucla.edu/other/mult-pkg/faq/general/faq-what-are-pseudo-r-squareds/).
similar to $R^2$ in multiple regression but this cannot reach the value of 1, whereas the Nagelkerke R square can reach the value of 1. According to Hosmer and Lemeshow (2000), the values of pseudo R squares can be small even when the model is adequate for the data. Goodness of fit explains whether the model is correctly specified (Allison 2014) or whether predicted model values differ significantly from the observed values (Field 2015). A goodness of fit test was conducted through the Hosmer and Lemeshow method. The insignificance of the test ($p = .069$) showed the model to be a good fit for the data. Field (2015) contends that the overall model fit is highlighted by the significance of $-2$ log-likelihood statistic (564.609) and associated chi-square statistic. The chi-square statistic for the model was found statistically significant ($p = .047$). Table 4.5 details the contributions by each of the predictors to the regression model.

Table 4.5: Unique contributions by the predictors in the Logistic regression (N = 441)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$X^2$</th>
<th>Df</th>
<th>$p$.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcedT</td>
<td>.317</td>
<td>1</td>
<td>.573</td>
</tr>
<tr>
<td>PeopIT</td>
<td>7.759</td>
<td>1</td>
<td>.005</td>
</tr>
<tr>
<td>OutcomT</td>
<td>.931</td>
<td>1</td>
<td>.335</td>
</tr>
<tr>
<td>BehT</td>
<td>.611</td>
<td>1</td>
<td>.435</td>
</tr>
</tbody>
</table>

Note: ProcedT perceived procedural focus teaching; PeopIT Perceived people focus teaching; BehT Perceived behavioural focus teaching; OutcomT Perceived outcome focus teaching; $X^2 = amount by which -2$ log-likelihoods increases when predictor is removed from the full model.

For the assurance of goodness of the model, Field suggests examining reasons that can be making the model to poorly fit and having an undue influence of the model. To isolate points for a poor fit, studentised residuals, standardised residuals and deviance statistics were employed, while the influence on the model was explored through Cook’s distance, DFBeta and leverage statistics. All these statistics were saved as variables during the regression execution. Cook’s distance (>1) and leverage statistic (between 0 and 1) were found to be within the recommended values (Field 2015). Moreover, DFBeta for the constant as well as for all the IVs were reported to be less than the recommended value of 1. None of the studentised, standardised residuals and deviance statistics were above the ideal absolute value of 1.96. The examination of all these statistics further showed the model to be a good fit, as there was no evidence suggesting an unnecessary influence or poor fit of the model.
The logistic regression model predicted the logits, that is, the natural log of the odds of being in the category of internalisation. Table 4.6 details the parameter estimates of the regression model highlighting the odds ratios for each of the teaching predictors\(^\text{59}\).

Table 4.6: Parameter estimates\(^\text{60}\) logistic regression (Teaching) (N = 441)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B (SE)</th>
<th>p.</th>
<th>Lower</th>
<th>Odds ratio (e(^B))</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.588 (.101)</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProcedT</td>
<td>.044 (.078)</td>
<td>.573</td>
<td>.896</td>
<td>1.045</td>
<td>1.218</td>
</tr>
<tr>
<td>PeoplT</td>
<td>.243 (.087)</td>
<td>.005</td>
<td>1.075</td>
<td>1.275</td>
<td>1.513</td>
</tr>
<tr>
<td>OutcomT</td>
<td>-.081 (.083)</td>
<td>.335</td>
<td>.783</td>
<td>.923</td>
<td>1.087</td>
</tr>
<tr>
<td>BehT</td>
<td>.068 (.087)</td>
<td>.435</td>
<td>.902</td>
<td>1.071</td>
<td>1.271</td>
</tr>
</tbody>
</table>

Odds ratio = Exp(B).

Employing a .05 criterion of statistical significance, procedural (ProcedT), people (PeoplT), outcome (OutcomT) and behavioural (BehT) were examined for their effect on the internalised attitude of a respondent. Only PeoplT showed a statistical significance in the model with the coefficient estimate of .243, which indicated that if PeoplT increases by 1, the log odds will increase by Exp(B), that is, the odds ratio of 1.275. In other words, with an each score increase on a 7-point scale of perceived people focus, the odds for an academic are 1.275 times greater to exhibit internalised teaching behaviours. Both upper and lower confidence intervals with values greater than 1 also validate that as PeoplT increases so does the odds of exhibiting internalised teaching behaviours. According to Field (2015), greater than 1 values of both upper and lower confidence intervals also indicate that the observed relationship is likely to be true in the population.

Since logistic regression is a nonlinear iterative algorithm, the interpretation of parameter estimates is more challenging than conventional OLS models (Williams 2015). To make the

\(^{59}\) It was highlighted in section 4.2 that the data were divided into two groups of research and teaching; sub-group logistic regression analyses were also conducted for teaching respondents with both responsibilities (teaching and research) and respondents with teaching only responsibilities. Regression results for academics with both responsibilities (N = 397) were consistent with the results mentioned in section 4.5.1. However, in regression for teaching only academics (N = 44), all the predictors failed to meet statistical significance.

\(^{60}\) Unlike OLS, where the slope coefficients (B) are interpreted as the rate of change in Y (the dependent variable) as X changes; in logistic regression, the slope coefficient is interpreted as the rate of change in the ‘log odds’ as X changes (http://www.appstate.edu/~whiteheadjc/service/logit/intro.htm).

\(^{61}\) The odds ratio is the probability of the event divided by the probability of the non-event (http://www.appstate.edu/~whiteheadjc/service/logit/intro.htm).
aforementioned logistic regression interpretation more digestible, particularly to calculate the odds, a logistic regression was run for the DV (InternT) with a dichotomous PeoplT (respondents with a positive people focus as 1 and negative as 0). This analysis assumes that all the respondents have identical ProcedT, OutcomT and BehT scores except PeoplT. Table 4.7 highlights the parameter estimates.

Table 4.7: Parameter estimates PeoplT and InternT

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B (SE)</th>
<th>p.</th>
<th>Lower</th>
<th>Odds ratio (e^b)</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.347 (.144)</td>
<td>.016</td>
<td>1.415</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PeoplT</td>
<td>.460 (.200)</td>
<td>.022</td>
<td>1.069</td>
<td>1.583</td>
<td>2.345</td>
</tr>
</tbody>
</table>

From the given estimates, the odds can be computed for a given respondent to be in the category 1 (internalisation) of the DV.

\[ \text{ODDS} = e^{a+bx} \]

\[ \text{ODDS} = e^{.347+.460(0)} \] (when a respondent does not perceive a positive PeoplT)

\[ \text{ODDS} = e^{.347} = 1.415 \], which is also reported by the regression output in the odds ratio column for the constant. The reported odds can be converted into probabilities for the respondent who does not perceive a people focus in teaching through the equation.

\[ \hat{Y} = \frac{\text{ODDS}}{1 + \text{ODDS}} = \frac{1.415}{1+1.415} = .58 \]

Based on the aforementioned solution of the two equations, this model explains that respondents who do not perceive PE to be people focused are 1.415 times likely to be in the category 1 (internalisation) of the dependent variable, and there is 58% probability that these respondents will exhibit internalised behaviours. On the other hand, respondents who perceive a positive PeoplT, that is, 1, the ODDS are \( e^{347+.460} = e^{.807} = 2.241 \). The probability of being 1 on the InternT (exhibiting internalised behaviours) with a positive PeoplT is:

\[ \hat{Y} = \frac{2.241}{1+2.241} = .69 \]

Equations and explanations in this analysis borrow ideas from Karl Wuensch (2016) and Richard Williams (2015).
Likewise, respondents who perceive PE to be people focused are 2.241 times more likely to fall into the internalisation category, and there is a 69% probability that these respondents will perform internalised teaching behaviours.

This logic allows a reflection back to the study’s full logistic regression model mentioned in Table 4.8. A regression equation can be suggested to compute the log odds, the odds or \( \text{Exp(log odds)} \), which will allow computing the probability for an each foci score for its association with 1 in the DV. The equation can be written as:

\[
\ln \text{Odds} = 0.588 + 0.044 \times \text{ProcedT} + 0.243 \times \text{PeoplT} - 0.081 \times \text{OutcomT} + 0.068 \times \text{BehT}
\]

Assuming that all the other foci are at zero except PeoplT, the effect of each score increase and decrease in PeoplT on the probability of internalisation computed from the above equation is highlighted in Table 4.8.

Table 4.8: Log odds PeoplT logistic regression

<table>
<thead>
<tr>
<th>PeoplT Score</th>
<th>Ln Odds</th>
<th>Odds</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>0.588 + 0.243 (-2) = 0.102</td>
<td>1.107</td>
<td>0.52</td>
</tr>
<tr>
<td>-1</td>
<td>0.588 + 0.243 (-1) = 0.345</td>
<td>1.411</td>
<td>0.58</td>
</tr>
<tr>
<td>0</td>
<td>0.588</td>
<td>1.800</td>
<td>0.64</td>
</tr>
<tr>
<td>+1</td>
<td>0.588 + 0.243 (1) = 0.831</td>
<td>2.295</td>
<td>0.69</td>
</tr>
<tr>
<td>+2</td>
<td>0.588 + 0.243 (2) = 1.074</td>
<td>2.927</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Although the probability for being in the internalisation category increases with a single score increase, such a trend, according to Williams (2015), is limited to a certain point. The maximum probability change can be observed in the middle scores rather than in the highest or lowest. This is also verified through an ideal logistic regression S-shaped curve between PeoplT and its predicted probability in Figure 4.15, which illustrates such ascending trend in the probability and stagnancy at a certain point in the PeoplT scores.
The earlier analysis deduced the probabilities for a respondent to be in the 1 category of the DV with an each score increase in the PeoplT, while the foci were assumed to be zero. However, the need was to explore the probability of internalisation under the existing PE practices at NZ universities. For such analysis, the mean scores (Table 4.3, section 4.4) for all the four foci were utilised. As highlighted earlier, the first need was to compute the log odds, which were computed from the aforementioned regression equation:

\[ \ln \text{Odds} = 0.588 + 0.044 \times \text{ProcedT} + 0.243 \times \text{PeoplT} - 0.081 \times \text{OutcomT} + 0.068 \times \text{BehT} \]

\[ \ln \text{Odds} = 0.588 + 0.044 \times 4.74 + 0.243 \times 4.58 - 0.081 \times 4.45 + 0.068 \times 2.76 \]

\[ \ln \text{Odds} = 0.588 + 0.2085 + 1.1129 - 0.3604 + 0.1876 = 1.7366 \]

\[ \text{Odds} = e^{1.7366} = 5.6780 \]

\[ \hat{y} = \frac{\text{Odds}}{1 + \text{Odds}} = \frac{5.6780}{1 + 5.6780} = .85 \]

The analysis highlighted that with the reported mean scores of the foci, there is an 85% probability that a respondent can be categorised as 1 of the DV; that is, he/she will exhibit internalised teaching behaviours.
Although the aforementioned model provided statistically significant results for the perceived people focus, these results were based on a dichotomised dependent variable. To further triangulate these results, a multinomial logistic regression between the teaching predictors and the internalisation scale was performed. It is recalled that a 0 score on the internalisation scale denoted to higher compliance and 7 to higher internalisation. In addition to triangulating the previous results, the multinomial regression focused on the increase/decrease in the odds ratio of the predictors, with an each score increase/decrease on the internalisation scale. The analysis thus compared four predictors on each point of the internalisation scale. In this multinomial regression, 0 was used as a reference category; that is, under a particular focus a respondent is likely to be in the compared category of 1 to 7 rather than 0. The multinomial regression results highlighted that the addition of predictors to the model will significantly improve the fit between model and the data $\chi^2 (28, N =739) = 51.226, p = .005$. The pseudo R squares highlighted statistically significant effect size variation in the dependent variable (Nagelkerke R square = .069, Cox and Snell R square = .067, McFadden R square = .020, $p = .005$). Pearson and Deviance goodness of fit highlighted insignificant values of .573 and 1.000, respectively, which validated the model to be a good fit for the data. Table 4.9 details the parameter estimates of the model.

Table 4.9: Parameter estimates of foci and internalisation score (multinomial logistic regression) (N = 739)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B (SE)</th>
<th>p</th>
<th>Lower</th>
<th>Odds ratio</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 vs 0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProcedT</td>
<td>.146 (.216)</td>
<td>.498</td>
<td>.758</td>
<td>1.157</td>
<td>1.767</td>
</tr>
<tr>
<td>PeoplT</td>
<td>.363 (.223)</td>
<td>.104</td>
<td>.929</td>
<td>1.438</td>
<td>2.226</td>
</tr>
<tr>
<td>OutcomT</td>
<td>-.352 (.232)</td>
<td>.130</td>
<td>.446</td>
<td>.703</td>
<td>1.109</td>
</tr>
<tr>
<td>BehT</td>
<td>-.037 (.217)</td>
<td>.864</td>
<td>.630</td>
<td>.964</td>
<td>1.474</td>
</tr>
<tr>
<td><strong>2 vs 0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProcedT</td>
<td>-.140 (.175)</td>
<td>.423</td>
<td>.618</td>
<td>.870</td>
<td>1.224</td>
</tr>
<tr>
<td>PeoplT</td>
<td>.160 (.187)</td>
<td>.395</td>
<td>.812</td>
<td>1.173</td>
<td>1.694</td>
</tr>
<tr>
<td>OutcomT</td>
<td>-.237 (.198)</td>
<td>.232</td>
<td>.535</td>
<td>.789</td>
<td>1.164</td>
</tr>
<tr>
<td>BehT</td>
<td>-.205 (.199)</td>
<td>.304</td>
<td>.552</td>
<td>.815</td>
<td>1.204</td>
</tr>
<tr>
<td><strong>3 vs 0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProcedT</td>
<td>-.112 (.179)</td>
<td>.531</td>
<td>.629</td>
<td>.894</td>
<td>1.270</td>
</tr>
<tr>
<td>PeoplT</td>
<td>.596 (.195)</td>
<td>.002</td>
<td>1.237</td>
<td>1.814</td>
<td>2.660</td>
</tr>
<tr>
<td>OutcomT</td>
<td>-.169 (.203)</td>
<td>.403</td>
<td>.567</td>
<td>.844</td>
<td>1.256</td>
</tr>
<tr>
<td>BehT</td>
<td>-.101 (.191)</td>
<td>.597</td>
<td>.622</td>
<td>.904</td>
<td>1.314</td>
</tr>
</tbody>
</table>
Performance evaluation, social influence and academics’ performance behaviours

All the predictors failed to meet statistical significance for the scores of 1 and 2, which explains that for teaching behaviours, any of the foci cannot predict the respondents to fall in the score category of 1 or 2 of the internalisation scale. However, the emphasis of this triangulation is on the internalised scores of 5, 6 and 7. It is clear that as the scores on the internalisation scale increase, the PeoplT highlights more significance and the odds to be in the score category of 5, 6 or 7 sequentially increase. Such a trend implies that with an each point increase on the 7-point perceived people focus scale, the odds for a respondent’s scoring 5, 6 or 7 on the internalisation scale also increase. Simply put, respondents are more likely to exhibit internalised behaviours under a perceived people focus of their PE. These findings reaffirm the aforementioned binary logistic regression results.

Taking into account the observed frequencies of compliance and internalisation group membership, ideally the results would predict for every respondent of the study. Employing this logistic regression model of teaching performance behaviours, with the threshold of .5, 64.2% \( \left( \frac{276 + 7}{150 + 276} \right) \) of the overall behaviours can be correctly predicted. As highlighted in Table 4.10, the model was successful in correctly predicting 97.2% \( \left( \frac{276}{8 + 276} \right) \) of the internalised behaviours as compared with only 4.5% \( \left( \frac{7}{7 + 150} \right) \) of the compliance based behaviours.
Table 4.10: Predicted classification category (Teaching) N = 441

<table>
<thead>
<tr>
<th>Predicted</th>
<th>Compl</th>
<th>Intern</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed</td>
<td>Compl</td>
<td>7</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>Intern</td>
<td>8</td>
<td>276</td>
</tr>
<tr>
<td>Overall percentage</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The cut value is .500.

The aforementioned classification was also validated through a multilayer perceptron classification process. Regression results were supported, as the process was successful in correctly predicting 65% of overall behaviours in the training sample as compared with 63% in the testing sample. The area under the receiver operating characteristic (ROC) curve for internalised teaching behaviours was reported to be .612. Figure 4.16 illustrates the area under the ROC curve, which is commonly employed in health sciences to make clinical predictions about events such as disease to occur. ROC is the plot of sensitivity between true negative decisions and false negative decisions (Park, Goo & Jo 2004). The area measures the ability or ability of the model to correctly predict the internalised teaching behaviours of an academic. Although the value of .612 highlights a moderate predicting effect, it is above the no effect point of .5 or below.

63 http://gim.unmc.edu/dxtests/roc3.htm
64 http://www.medicalbiostatistics.com/ROCCurve.pdf
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Figure 4.16: ROC curve (Teaching)

![ROC curve (Teaching)](image)

Note: ‘Sensitivity’ of prediction is the measure where the model predicted that the internalisation would occur and it did occur whereas ‘specificity’ of prediction denotes to the nonoccurrences correctly predicted (Wuensch 2016).

In addition to the four foci predictors, perception of resource control (ResorCntrl) and credibility (Credibl) were introduced in the model to address H5 and H6. The model failed to meet the statistical significance criterion of \( \chi^2 (10, N = 255) = 9.866 \), Nagelkerke R square = .053, Cox and Snell R square = .038, \( p = .452 \), both interactional variables highlighted statistical insignificance (ResorCntrl \( p = .497 \), Credibl \( p = .537 \)).

4.5.2. Research

A logistic regression was also performed to model the relationship between perceived PE foci and academics’ research performance behaviours. As compared with the null or intercept model, the regression results highlighted that the addition of predictors to the model will significantly improve the fit between model and the data, \( \chi^2 (4, N = 385) = 10.381 \), NagelkerkeR square = .035, Cox and Snell R square = .027, McFadden R square = .019, \( p = .037 \). The pseudo R squares highlighted the effect size of the variation in the dependent variable as 3.5% (Nagelkerke pseudo R square), and 2.7% (Cox and Snell R square) (Field 2015). Goodness of fit was explored by the Hosmer and Lemeshow method. The insignificance of the test (\( p = .851 \)) highlighted the model to be a good fit for the data. The overall model fit
highlighted by the significance of \(-2 \log\)-likelihood and associated chi-square statistic is illustrated in Table 4.11.

Table 4.11: Unique contributions by the predictors in the logistic regression (N = 385)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>(\chi^2)</th>
<th>Df</th>
<th>p,</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcedR</td>
<td>1.938</td>
<td>1</td>
<td>.164</td>
</tr>
<tr>
<td>PeoplR</td>
<td>1.181</td>
<td>1</td>
<td>.277</td>
</tr>
<tr>
<td>OutcomR</td>
<td>4.555</td>
<td>1</td>
<td>.033</td>
</tr>
<tr>
<td>BehR</td>
<td>2.798</td>
<td>1</td>
<td>.094</td>
</tr>
</tbody>
</table>

Note: ProcedR perceived procedural focus research; PeoplR Perceived people focus research; BehR Perceived behavioural focus research; OutcomR Perceived outcome focus research; \(\chi^2\) = amount by which \(-2 \log\)-likelihoods increases when predictor is removed from the full model.

The logistic regression model for research predicted the logits for being in the category of internalisation. Table 4.12 details the parameter estimates of the regression model highlighting the odds ratios for each of the research predictors\(^{65}\).

Table 4.12: Parameter estimates logistic regression (Research) (N = 385)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B (SE)</th>
<th>p,</th>
<th>95% CI for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Constant</td>
<td>.046 (.107)</td>
<td>.668</td>
<td></td>
</tr>
<tr>
<td>ProcedR</td>
<td>-.155 (.112)</td>
<td>.164</td>
<td>.688</td>
</tr>
<tr>
<td>PeoplR</td>
<td>.111 (.102)</td>
<td>.277</td>
<td>.915</td>
</tr>
<tr>
<td>OutcomR</td>
<td>-.218 (.102)</td>
<td>.033</td>
<td>.658</td>
</tr>
<tr>
<td>BehR</td>
<td>.118 (.107)</td>
<td>.094</td>
<td>.980</td>
</tr>
</tbody>
</table>

Employing a .05 criterion of statistical significance, procedural (ProcedR), people (PeoplR), outcome (OutcomR) and behavioural (BehR) foci were investigated for their effect on the internalised attitude of an academic. Only OutcomR successfully met the criterion of statistical significance in the model. The odds ratio for the OutcomR indicates that the odds for predicting internalised behaviours are cut by .804. In other words, with an each score increase on a 7-point scale of perceived outcome focus, the odds ratio for an academic to be in

\(^{65}\) Sub-group logistic regression analyses were also conducted for research respondents with both responsibilities (teaching and research) and respondents with research only responsibilities. Regression results for academics with both responsibilities (N = 357) were consistent with the results mentioned in section 4.5.2. However, in regression for research only academics (N = 28), all the predictors failed to meet statistical significance.
the category of internalisation are reduced by .804 times; that is, there is a negative association between the outcome focus and the odds ratio of a respondent to exhibit an internalised attitude.

The odds mentioned in Table 4.12 facilitate computing the probability to be classified in 1 category of InternR. Based on the aforementioned full model of logistic regression, a regression equation for the research performance behaviours can be suggested to compute the log odds, the odds or Exp(log odds), which can further allow computing the probability for each score for the association with 1 in the DV. The equation can be written as:

\[
\text{Ln Odds} = .046 - .155 \times ProcedR + .111 \times PeoplR - .218 \times OutcomR + .118 \times BehR
\]

Since only one of the predictors, OutcomR, is found to be statistically significant, it is therefore assumed that the other predictors (except OutcomR) are at the score of zero. The influence of each score’s increase and decrease in OutcomR on the probability of internalisation, computed from the above equation, is highlighted in Table 4.13.

Table 4.13: Log odds OutcomR logistic regression

<table>
<thead>
<tr>
<th>OutcomR Score</th>
<th>Ln Odds</th>
<th>Odds</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>.046 -.218 (-2) = .436</td>
<td>1.546</td>
<td>.61</td>
</tr>
<tr>
<td>-1</td>
<td>.046 -.218 (-1) = .264</td>
<td>1.302</td>
<td>.56</td>
</tr>
<tr>
<td>0</td>
<td>.046 -.218 (0) = .046</td>
<td>1.047</td>
<td>.51</td>
</tr>
<tr>
<td>+1</td>
<td>.046 -.218 (1) = -.172</td>
<td>.841</td>
<td>.45</td>
</tr>
<tr>
<td>+2</td>
<td>.046 -.218(2) = -.039</td>
<td>.961</td>
<td>.49</td>
</tr>
</tbody>
</table>

The trend highlighted in Table 4.15 and the predicted probabilities of internalisation for each of the OutcomR scores illustrated in Figure 4.17 highlight that as the score on the OutcomR increases, the probability for being in the internalisation category of the DV decreases.
To predict respondents’ association with category 1 of the research DV, the mean scores (Table 4.3, section 4.4) for all four foci were utilised. The log odds were computed from the aforementioned equation:

\[ \text{Ln Odds} = 0.046 - 0.155 \times \text{ProcedR} + 0.111 \times \text{PeoplR} - 0.218 \times \text{OutcomR} + 0.118 \times \text{BehR} \]

\[ \text{Ln Odds} = 0.046 - 0.8122 + 0.4861 - 1.199 + 0.3327 = -1.1464 \]

\[ \text{ODDS} = e^{-1.1464} = 0.3178 \]

\[ \hat{y} = \frac{\text{ODDS}}{1 + \text{ODDS}} = \frac{0.3178}{1 + 0.3178} = 0.24 \]

The analysis therefore highlights that if a respondent has scores that are equal to the mean scores reported by the study sample, the probability of his/her association with the 1 category of the DV (internalisation) is only 24%. In other words, the respondent has a 76% probability of exhibiting compliance based research behaviours.

Consistent with the previous approach in the teaching data, a multinomial logistic regression was also employed between the research predictors and the research internalisation scale. In the research data, the score of 0 on the internalisation scale also denoted higher compliance and 7 to higher internalisation. In this multinomial regression, 0 was also employed.
as a reference category; that is, under a particular focus a respondent is likely to be in the compared score rather than 0 (compliance). The multinomial regression results highlighted that the addition of predictors to the model will significantly improve the fit between the model and the data $\chi^2 (28, N = 731) = 44.204, p = .027$. The pseudo R squares highlighted a significant effect size variation in the dependent variable (Nagelkerke R square = .060, Cox and Snell R square = .059, McFadden R square = .016, $p = .027$). Pearson and Deviance goodness of fit highlighted the insignificant values of .333 and 1.000, respectively, which showed the model to be a good fit for the data. Table 4.14 details the parameter estimates of the model.

Table 4.14: Parameter estimates of research foci and internalisation score multinomial logistic regression (N = 739)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B (SE)</th>
<th>$p$</th>
<th>Lower</th>
<th>Odds Ratio</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 vs 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProcedR</td>
<td>-.039 (.247)</td>
<td>.876</td>
<td>.593</td>
<td>.962</td>
<td>1.561</td>
</tr>
<tr>
<td>PeoplR</td>
<td>.221 (.222)</td>
<td>.319</td>
<td>.807</td>
<td>1.248</td>
<td>1.929</td>
</tr>
<tr>
<td>OutcomR</td>
<td>-.532 (.243)</td>
<td>.029</td>
<td>.365</td>
<td>.587</td>
<td>.946</td>
</tr>
<tr>
<td>BehR</td>
<td>-.299 (.167)</td>
<td>.073</td>
<td>.535</td>
<td>.742</td>
<td>1.029</td>
</tr>
<tr>
<td>2 vs 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProcedR</td>
<td>-.220 (.248)</td>
<td>.374</td>
<td>.494</td>
<td>.802</td>
<td>1.304</td>
</tr>
<tr>
<td>PeoplR</td>
<td>.688 (.234)</td>
<td>.003</td>
<td>1.258</td>
<td>1.990</td>
<td>3.146</td>
</tr>
<tr>
<td>OutcomR</td>
<td>-.181 (.263)</td>
<td>.492</td>
<td>.498</td>
<td>.834</td>
<td>1.398</td>
</tr>
<tr>
<td>BehR</td>
<td>-.050 (.154)</td>
<td>.748</td>
<td>.704</td>
<td>.952</td>
<td>1.287</td>
</tr>
<tr>
<td>3 vs 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProcedR</td>
<td>-.301 (.217)</td>
<td>.165</td>
<td>.483</td>
<td>.740</td>
<td>1.132</td>
</tr>
<tr>
<td>PeoplR</td>
<td>.522 (.200)</td>
<td>.009</td>
<td>1.139</td>
<td>1.685</td>
<td>2.494</td>
</tr>
<tr>
<td>OutcomR</td>
<td>-.363 (.228)</td>
<td>.111</td>
<td>.445</td>
<td>.696</td>
<td>1.087</td>
</tr>
<tr>
<td>BehR</td>
<td>-.147 (.138)</td>
<td>.288</td>
<td>.658</td>
<td>.863</td>
<td>1.132</td>
</tr>
<tr>
<td>4 vs 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProcedR</td>
<td>-.170 (.207)</td>
<td>.411</td>
<td>.562</td>
<td>.843</td>
<td>1.266</td>
</tr>
<tr>
<td>PeoplR</td>
<td>.398 (.186)</td>
<td>.032</td>
<td>1.034</td>
<td>1.489</td>
<td>2.145</td>
</tr>
<tr>
<td>OutcomR</td>
<td>-.348 (.219)</td>
<td>.112</td>
<td>.460</td>
<td>.706</td>
<td>1.084</td>
</tr>
<tr>
<td>BehR</td>
<td>-.146 (.130)</td>
<td>.262</td>
<td>.670</td>
<td>.864</td>
<td>1.115</td>
</tr>
<tr>
<td>5 vs 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProcedR</td>
<td>-.449 (.204)</td>
<td>.028</td>
<td>.428</td>
<td>.639</td>
<td>.953</td>
</tr>
<tr>
<td>PeoplR</td>
<td>.503 (.187)</td>
<td>.007</td>
<td>1.146</td>
<td>1.653</td>
<td>2.386</td>
</tr>
<tr>
<td>OutcomR</td>
<td>-.492 (.215)</td>
<td>.022</td>
<td>.401</td>
<td>.611</td>
<td>.931</td>
</tr>
<tr>
<td>BehR</td>
<td>-.030 (.128)</td>
<td>.817</td>
<td>.756</td>
<td>.971</td>
<td>1.247</td>
</tr>
</tbody>
</table>
As detailed in Table 4.14, the pattern of behaviours does not seem to be singular in the scores less than 4 (compliance); whereas in the internalised scores (=> 5), the pattern of behaviours is consistent under PeoplR and OutcomR. Although the earlier binary logistic results identified the OutcomR as the only negative influencer on the internalised behaviours, the multinominal regression adds that PeoplR has a positive association, particularly for a respondent to be in the 5, 6 or 7 category of the research internalisation scale. Interestingly, the odds for scoring 7 on the internalisation scale almost decrease more than half by the multiplicative factor with each point increase of the 7-point OutcomR scale, whereas the odds for scoring 7 on the internalisation scale increase by the multiplicative factor of 1.616 with each point increase in PeoplR. In essence, with an increased outcome focus in research, there is a doubling of odds that a respondent will not score 7 on the internalisation scale. The results show that perceived people and outcome focus are the two main contributors influencing academics’ research performance behaviours towards internalisation and compliance, respectively, especially between the scores of 5 and 7 of the internalisation scale.

In an attempt to predict every respondent to be classified in compliance or internalisation group, Table 4.15 details that the research logistic regression model was successful in predicting internalisation 65% (130/260) as compared with 49% (90/190) in the compliance category. Overall, the model successfully predicted 57.1% (90+130/385) of the cases to be internalised or compliant in their attitude.
Table 4.15: Predicted classification category (Research) N = 385

<table>
<thead>
<tr>
<th></th>
<th>Compl</th>
<th>Intern</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Observed</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compl</td>
<td>90</td>
<td>95</td>
<td>48.6</td>
</tr>
<tr>
<td>Intern</td>
<td>70</td>
<td>130</td>
<td>65.0</td>
</tr>
<tr>
<td><strong>Overall percentage</strong></td>
<td></td>
<td></td>
<td>57.1</td>
</tr>
</tbody>
</table>

Note: The cut value is .500.

The classification was also triangulated with the multilayer perceptron classification process. Regression results were supported, as the MLP process was successful in correctly predicting 59% of overall behaviours in the training sample as compared with 60.5% in the testing sample. The MLP also correctly classified 75% of the respondents as internalised as compared with 39% compliant in the training sample. The testing sample results were consistent with the training sample in correctly classifying 46.8% in compliance and 77% in internalisation. The area under the ROC curve, highlighted in Figure 4.18, was also reported to be .614, which highlighted the regression model’s ability to correctly classify internalised research behaviours.

Figure 4.18: ROC curve (Research)
Note: ‘Sensitivity’ of prediction is the measure where the model predicted that the internalisation would occur and it did occur whereas ‘specificity’ of prediction denotes the nonoccurrences correctly predicted (Wuensch 2016).

In addition to the four foci predictors, perception of resource control (ResorCntrl) and credibility (Credibl) were introduced in the model to address H5 and H6. The model showed statistical insignificance $\chi^2 (10, N = 381) = 13.147$, Nagelkerke R square = .045, Cox and Snell R square = .034, $p = .216$. None of the moderating variables (ResorCntrl $p = .524$, Credibl $p = .100$) as well as their interactions with the IVs highlighted statistical significance.

The logistic regression results enabled a reflection on the study hypotheses. Regarding H1, the study hypothesised about the association between perceived procedural focus and an academic’s attitude. However, logistic regression results were unable to find a significant association between procedural focus and the classification of respondents’ behaviours. Nonetheless, the research multinomial regression results showed that under a perceived procedural focus, respondents are more likely to be in the group of score 5; that is, there is a negative likelihood for being in the score of 0 (Table 4.14). Even though the results showed that with an each point increase on the 7-point perceived procedural focus scale, the odds ratio for scoring 5 decrease by .428 times, the procedural focus failed to show a consistent pattern. In the instance of this study, the results therefore were inconclusive in determining a positive or negative association with perceived procedural focus and the underpinning attitude to exhibit teaching performance behaviours. The results did not show clear evidence that if an academic perceives PE to be procedurally focused, his/her attitudinal response will take the form of compliance or otherwise.

The H2 of the study contended that if the PE mechanism employs measures of team objectives, collaboration and a shared system of objectives (Ouchi labelled such a mechanism as clan control), academics will exhibit internalised behaviours. The regression analyses in both the teaching and research data showed a consistent pattern to support this hypothesis. The binary (Table 4.6) and multinomial logistic regression (Table 4.9) in teaching as well as the multinomial regression in the research (Table 4.14) showed that with a perceived people focus, academics are more likely to exhibit internalised teaching as well as research performance behaviours. H2 was therefore supported.

The H3 intended to explore respondents’ attitudinal patterns under the perceived outcome focus. Although regression results did not provide statistically significant evidence among teaching respondents to support the hypothesis, both binary (Table 4.6) and multinomial
regression (Table 4.9) results of the research data supported study’s postulation that academics with perceived outcome focus will exhibit compliance based behaviours. Based on these analyses among research respondents particularly, H3 therefore received an affirmative response.

The hypothesis H4 postulated that if an academic perceives that PE employs measures such as supervision, surveillance or observation, then the academic is likely to exhibit performance behaviours through compliance. Among both teaching and research respondents, behavioural focus as a predictor failed to meet statistical significance. However, teaching multinomial regression results showed that under a perceived behavioural focus, respondents are more likely to be in the group of score 4 (Table 4.9). Although the results showed that with an each point increase on the 7-point perceived behavioural focus scale, the odds ratio for scoring 4 decreased by .627 time, behavioural focus failed to show consistent pattern in the analyses, thus providing inconclusive results. H4 therefore was not supported by the results of this study.

As mentioned earlier, a respondent’s perception of PE being a resource control mechanism or a trustworthy process will incur attitudinal changes resulting in compliance or internalisation. In relation to H5 and H6, in this study, cross tabulation was conducted between internalisation teaching behaviours (InternT) and perceptions of PE as a resource control (ResorCtrl). The results highlighted that 33% of respondents exhibited compliant teaching behaviours who did not perceive PE as a resource control as compared with 31% exhibiting compliant behaviours perceiving PE as a resource control mechanism. Similar results were obtained in the research data with 47% of the respondents with and 50% without perceptions of resource control exhibiting compliance based behaviours. The results therefore did not find any clear or significant difference between both groups, and thus H5 could not be supported by the evidence in this study. For H6, similar contingency analysis was conducted, and 62% of the teaching respondents with and 68% without the perceptions of PE’s credibility exhibited internalised behaviours. Likewise, 48% of the research respondents without and 56% with perceptions of PE’s credibility performed internalised behaviours. Both the analyses failed to meet statistical significance, and thus H6 in this study could not be supported.

Hypotheses 7 to 10 in this study assumed a moderating relationship by the perceptions of resource control/credibility between the four foci and compliance/internalisation. As mentioned earlier, the logistic regression processes included the hypothesised interactions.
None of the moderating relationships succeeded in meeting statistical significance. The analyses results therefore were unable to support any of the H7 to H10 hypotheses in this study. In summary, it is acknowledged that the proposed hypothetical model of the study was not successful in supporting eight of the hypotheses developed on the basis of existing literature. This perhaps highlights the significance of context specific factor existing in the academia or university environments. After analysing the RQ 2 and addressing all the related hypotheses, this chapter now moves towards the analysis of its final RQ; that is, does academics’ attitude taking the form of compliance or internalisation influence their research performance?

### 4.6. Academics’ attitude’s influence on research performance

The RQ 3 investigated:

*Does an academic’s attitude taking the form of compliance or internalisation influence his/her research performance?*

For the analysis of academics performance and its relation to their attitude, this study requested academics’ previous PBRF scores as an indicator of research performance. Due to personalised survey invitations to each of the academics in the NZ universities, the request for such information was responded to by 722 academics. Among these, 67 declined to provide or remembered their PBRF score, while 146 academics did not have a previous PBRF score. The performance data of the academics therefore comprised 509 responses. The preliminary cross tabulation highlighted statistically significant differences between compliance and internalisation groups of academics $\chi^2 (5, n = 445) = 35.398, p = .000$. The results highlighted in Table 4.16 show more internalised A, B, C and to some extent C (NE) performers as compared with compliant R and R (NE) performers. Nonetheless, the trend (Figure 4.19) highlights that as the respondents recede in their performance scores, their attitude takes the form of compliance.

Table 4.16: PBRF scores and respondents attitudinal responses ($N = 445$)

<table>
<thead>
<tr>
<th>PBRF score</th>
<th>Compl %</th>
<th>Intern %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>9</td>
<td>91</td>
</tr>
<tr>
<td>B</td>
<td>23.4</td>
<td>76.6</td>
</tr>
<tr>
<td>C</td>
<td>38.9</td>
<td>61.1</td>
</tr>
<tr>
<td>R</td>
<td>66.7</td>
<td>33.3</td>
</tr>
<tr>
<td>C (NE)</td>
<td>41.7</td>
<td>58.3</td>
</tr>
<tr>
<td>R (NE)</td>
<td>62.5</td>
<td>37.5</td>
</tr>
</tbody>
</table>
In analysing the relation of academics’ performance behaviours to research performance, it is mentioned that the focus of this RQ is on the major performance categories, that is, PBRF scores A, B and C, since other performance categories were very small in their count. Moreover, it is worth noting that academics’ job tenure or service period can be a critical factor for their research performance to be categorised as A. Newer academics, though, may be publishing their research in higher-ranked journals that may not be ranked as A or high performers. This may be the reason that the data highlighted a higher number of academics in B as compared with A or C. As mentioned in earlier chapters, this study contends that academics’ attitude will influence their performance, which can be underpinned by their service period in academia.

To predict academics’ performance on the basis of their attitude, a multinominal logistic regression was conducted. Academics’ performance (PBRF scores) were used as the DV, while a dichotomous InternR (0 as compliance and 1 as internalisation) was used as predictor in the model. Academics’ total service period\(^{66}\) was used as a control variable in this predictive model. The regression results highlighted that the addition of InternR as a predictor to the model will significantly improve the fit between model and the data \(\chi^2(4, N = 234) = 39.147, p = .000\). The pseudo R squares highlighted a significant effect size variation in the dependent variable of research performance (Nagelkerke R square = .178, Cox and Snell R square = .154, McFadden R square = .084). Pearson and Deviance goodness of fit highlighted the insignificant

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\(^{66}\) Service period (ServLngth) was categorised as 0–10 years (0), 11–20 years (1) and >20 years (2).
$p$ values of .322 and .298, respectively, which showed the model to be a good fit for the data. The overall model fit was highlighted by the significance of a $-2$ log-likelihood statistic and associated chi-square statistic highlighted in Table 4.17.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p.$</th>
</tr>
</thead>
<tbody>
<tr>
<td>InternR</td>
<td>22.697</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>ServLngth</td>
<td>16.376</td>
<td>2</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Note:** InternR Internalisation/compliance research; ServLngth respondent’s service period; $\chi^2 =$ amount by which $-2$ log-likelihoods increases when predictor is removed from the full model.

Employing a .05 criterion of statistical significance, internalisation research (InternR) and service period (ServLngth) were investigated for their effect on academics’ research performance. Both of the predictors were found to have a statistically significant effect in predicting the dependent variable. In this multinomial regression, PBRF score C was used as a reference category; that is, on a particular internalisation score, a respondent is likely to be in the PBRF score of A or B rather than C. Table 4.18 details the parameter estimates of the model.

**Table 4.18:** Parameter estimates of research performance multinomial logistic regression (N = 234)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B (SE)</th>
<th>$p.$</th>
<th>95% CI for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower</td>
<td>Odds ratio</td>
<td>Upper</td>
</tr>
<tr>
<td>A vs C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>InternR</td>
<td>2.112 (.493)</td>
<td>.000</td>
<td>3.148</td>
</tr>
<tr>
<td>ServLngth</td>
<td>1.107 (.365)</td>
<td>.000</td>
<td>1.479</td>
</tr>
<tr>
<td>B vs C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>InternR</td>
<td>.886 (.311)</td>
<td>.004</td>
<td>1.319</td>
</tr>
<tr>
<td>ServLngth</td>
<td>-.094 (.220)</td>
<td>.670</td>
<td>.592</td>
</tr>
</tbody>
</table>

**Note:** reference category = C

While both InternR and ServLngth were statistically significant in predicting for a respondent to be in the performance category A rather than C, only InternR was found statistically significant in predicting a respondent to be a B rather than a C performer. ServLngth therefore cannot be said to predict an academic to be a B ranked performance. From the given information, a regression equation can be written for category A vs. C and B vs. C, which will allow computing the probabilities for a respondent to be an A or B performer.
A vs. C

\[ \text{Ln Odds} = -3.490 + 2.112 \times \text{Intern}R + 1.107 \times \text{ServLngth} \]

Table 4.19: Research performance A vs. C probabilities (N = 234)

<table>
<thead>
<tr>
<th>ServLngth = 0</th>
<th>Ln Odds</th>
<th>Odds</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intern = 0</td>
<td>-3.490</td>
<td>.030</td>
<td>.029</td>
</tr>
<tr>
<td>Intern = 1</td>
<td>-3.490 + 2.112 (1) = -1.378</td>
<td>.252</td>
<td>.201</td>
</tr>
<tr>
<td>ServLngth = 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intern = 0</td>
<td>-3.490 + 1.107 (1) = -2.383</td>
<td>.092</td>
<td>.084</td>
</tr>
<tr>
<td>Intern = 1</td>
<td>-3.490 + 2.112 (1) +1.107 (1) = -2.71</td>
<td>.762</td>
<td>.432</td>
</tr>
<tr>
<td>ServLngth = 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intern = 0</td>
<td>-3.490 + 1.107 (2) = -1.276</td>
<td>.279</td>
<td>.218</td>
</tr>
<tr>
<td>Intern = 1</td>
<td>-3.490 + 2.112 (1) +1.107 (2) = .836</td>
<td>2.307</td>
<td>.697</td>
</tr>
</tbody>
</table>

The calculations highlighted in Table 4.19 explain that if an academic performs under the influence of compliance, the probability of being an A performer is less than 10% until the academic reaches 20 years of service, where it increases to 22%. On the other hand, however, if an academic is internalised, the probability of being an A rather than a C performer is 20% from the start of the service to 10 years in academia. The probability of higher research performance increases to 70% as the service period goes beyond 20 years. This suggests that regardless of efforts and research initiatives in an early career, the probability of an academic being an A performer is only 20%. This predictive analysis was also verified through a cross-tabulation analysis between the groups of academics, research performance and their internalisation as detailed in Table 4.20. The results highlighted a statistically significant relationship between academics’ performance, service length and internalisation.

Table 4.20: Academics’ performance statistics and attitudinal responses (N = 234)

<table>
<thead>
<tr>
<th>PBRF score</th>
<th>Service length</th>
<th>Compl</th>
<th>Intern</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0 – 10 years</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>11 – 20 years</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>&gt;20 years</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>B</td>
<td>0 – 10 years</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>11 – 20 years</td>
<td>18</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>&gt;20 years</td>
<td>22</td>
<td>30</td>
</tr>
</tbody>
</table>
The trend of a number of academics with internalised behaviours is quite clear among the A-scoring academics, which descends towards compliance as the PBRF score descends towards score C. The overall results of the contingency analysis were also statistically significant, \( x^2 (2, N = 234) = 21.652, p = .000 \); while the statistically significant individual categories were of 11–20 years, \( x^2 (2, N = 234) = 11.100, p = .004 \), and more than 20 years \( x^2 (2, N = 234) = 13.942, p = .001 \). As highlighted in Table 4.20, the predictive probabilities when compared with actual performance (reported by respondents) corroborate predictive findings, as a small number (5%) of the A performers with internalisation had a service period of 0 to 10 years. Likewise, a higher number of (64%) the A performers with internalisation had a service period greater than 20 years.

**B vs. C**

\[
\text{Ln Odds} = .302 + .886 \times \text{Intern} - .094 \times \text{ServLength}
\]

Table 4.21: Research performance B vs C probabilities (N = 234)

<table>
<thead>
<tr>
<th>ServLength = 0</th>
<th>Ln Odds</th>
<th>Odds</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intern = 0</td>
<td>.302</td>
<td>1.352</td>
<td>.575</td>
</tr>
<tr>
<td>Intern = 1</td>
<td>.302 + .886 (1) = 1.188</td>
<td>3.280</td>
<td>.766</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ServLength = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intern = 0</td>
</tr>
<tr>
<td>Intern = 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ServLength = 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intern = 0</td>
</tr>
<tr>
<td>Intern = 1</td>
</tr>
</tbody>
</table>

The analysis highlighted in Table 4.21 explains that, for an academic with a compliant attitude, the probability of being a B performer rather than a C performer varies between 57% and 53% with service periods 0 to more than 20 years, respectively. Although the results highlight a meagre change for being a B performer with the change in the service periods, it does show a decrease in the probability with the increase in the service period. On the other
hand, the probability of an internalised academic’s being a B as compared with C performer ranges between 73% to 77%. Interestingly, the probability for becoming a B rather than a C performer decreases with the passage of time, which does not preclude a respondent’s becoming an A performer, as the previous analysis highlighted. From the aforementioned academics’ performance statistics (Table 4.20), the difference between internalised and compliant B performers in the service period of 0 to 10 years can be considered as comparable, that is, 7.2% (compliance) vs. 9.6% (Internalisation). However, a visible difference between compliance (14.4%) and internalisation (27.2%) can be observed in the service period of 11 to 20 years. Such is the case in more than 20 years as well. The results highlight that the probability for an academic to be a B performer rather than a C performer is maximum in the service period of 11 to 20 years.

The results of the aforementioned multinomial regression clearly highlight the importance and criticality of internalisation for high performance, that is, PBRF category A in this instance. The probability of being an A performer increases with the duration of service of an academic, particularly after 10 years. This further highlights that for an early career academic with less than 10 years of service, the chances for becoming an A performer is less likely to happen. The results also highlight the deterioration of performance when academics’ attitude takes the form of compliance.

4.7. Findings from the qualitative data

Qualitative data are open to various interpretations (Veal & Ticehurst 2005) and the data collected might not enable logical interpretations (Neuman 2006). To overcome such vulnerable issues, this analysis will therefore employ an evidence-based approach and focus on connecting the data with the study’s theoretical constructs. Figure 4.20 illustrates the data analysis flow of this study.
As mentioned earlier, the data were collected from NZ academics through an online survey. The instrument also provided the opportunity to the participants to record their comments on the related sections, that is, PE’s focus, and reasons for publications and teaching. This resulted in the input of almost 900 rigorous comments from the respondents. These responses therefore needed to be prepared and organised for further analyses.

**4.7.1. The coding process**

All the collected responses were organised and grouped according to the study’s constructs (Neuman 2006), that is, teaching, research, PE and behaviours. Such an organisation of the data facilitated its further processing. The grouped responses were then individually tagged to create a bridge between the response and theoretical constructs. Miles and Huberman (1994) describe such tagging as the coding of the qualititative data, which, according to Strauss and Corbin (1990), is indispensable to the analysis. The coding process focused on the fit between the study’s theoretical constructs and the respective emergent categories (Glaser 1978). Data coding for this study was done in three sequential processes, as recommended by Strauss (1987).

In the primary open coding process, each response was conceptually coupled with the main theoretical underpinning factors, that is, PE, teaching, research and behaviours. Additionally, responses were also checked for academics’ perceptions about the existing system in their universities. For relevance to each of the study pillars, a Y was recorded during the coding process. Table 4.22 provides an example of this preliminary response coding process.
Secondly, the screening of the comments according to the study’s theoretical constructs facilitated the development of a thematic list. According to Ryan and Bernard (2003), themes are repetitious and non-concrete constructs. These are more obvious and can be visually identified in data expressions (Opler 1945). Table 4.23 highlights an instance of the study’s themes codes and related responses code process.

As highlighted in the example, all the responses related to an underlying concept or theme were tagged with the same common thread. Although themes were closely related to the study constructs, the labels utilised in the coding process emerged from the concepts in the data rather than being enforced with a pre-conceived tag on a category. In addition to the identification of themes, these were also assigned a unique code, which facilitated locating a connection between these categories. Such a process, according to Strauss and Corbin (1990), is described as an axial coding process. Each comment was also assigned a unique identifier, as highlighted
in the ‘response code’ column of Table 4.23. The code for response was developed as university number and organisation; for example, 1R01 represented university 1 and R01 as response 01. Such coding process allowed safeguarding of the responses and respondents’ confidentiality. No effort was made to analyse the data on the basis of a university or subject category. Moreover, wherever the respondents used their universities’ terms for their evaluation process in their comments, in the analysis it was replaced by the letters ‘PE’. This approach was deemed necessary to safeguard confidentiality and commitment to the ethics approval process.

The responses and themes coding process resulted in the development of memos, which provided the basis for thoughts, inferences and discussion. Strauss (1987, p. 110) contends that memos are ‘running record of insights, hunches, hypotheses, discussions about the implication of codes’. Memos provided the appropriate link between the coding process, responses and theoretical constructs. Table 4.24 provides an example of a memo.

Table 4.24: Memo

<table>
<thead>
<tr>
<th>Theme code (response code)</th>
<th>Topic</th>
<th>Respondents’ comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>a8 (4R423)</td>
<td>Teaching evaluation focus</td>
<td>Teaching performance is based on student evaluations. However, good teaching means stretching students, which means lower evaluations.</td>
</tr>
<tr>
<td>b5 (3R182)</td>
<td>Outcome focus</td>
<td>Pumping out articles for PBRF purposes is the only thing that really gets discussed so long as your teaching work is satisfactory</td>
</tr>
<tr>
<td>c3 (7R848)</td>
<td>Bureaucratic process</td>
<td>The PE process is flawed and based on biased and limited information and often conducted by people who by university standards are performing well as researchers but not as teachers. It is bureaucratic nonsense. It is poorly organised, it doesn’t occur at the right time of the year and is not developmental in focus.</td>
</tr>
<tr>
<td>d1 (6R602)</td>
<td>Avoid disapproval</td>
<td>I follow appropriate assessment guidelines for that I have consultation hours. Such things are expected in my School for academic staff. Failure to do them (or to carry out periodic teaching/course evaluations would raise eyebrows and draw comment).</td>
</tr>
</tbody>
</table>
The aforementioned coding process gave the researcher a perspective like that of a story, where the codes and themes were woven together to capture the lived experiences of the study respondents.

4.7.2. Analysis related to the research questions

The RQ 1 intended to investigate the perceptions held by the academics about the focus of their PE; this study contended that the focus could be on outcomes, processes, people or observation of the academics. Prior to mentioning the findings, please note that the words appearing in *italics* are the actual words of the respondents, which are associated with their respective response codes.

4.7.2.1. Academics’ perceptions about PE focus

Teaching as well as research is perceived to be outcome focused across NZ. In order to reach such findings for the RQ 1, the analysis of the qualitative data at first analysed the frequency of themes appearing in the responses. Regarding the perceived PE focus for teaching, almost 120 responses were recorded. The frequency of themes appearing in the responses related mainly to procedural focus and outcome focus, while the proportion of the focused area of teaching related to people focus was significantly lower than the others. Focused area of teaching was related to the people focus; that is, a department has teamed towards a common teaching theme.

Figure 4.21: Perceived PE focus (teaching)
As indicated in Figure 4.21, almost 24% of respondents commenting on teaching highlighted their adherence to clear guidelines (10%) or implicit guidelines (14%); however, 33% of these respondents perceived to have unclear (31%) or poorly articulated (2%) guidelines related to teaching performance. About their adherence to teaching guidelines or guidelines for effective teaching, both early career and experienced academics commented that ‘it’s important to follow the guidelines to ensure the students get the best possible teaching’ (6R600); or ‘I have to follow the university policy even if it is not what I think is correct’ (6R597).

The case was similar with an early career respondent: ‘I do what is expected of me’ (6R592). Despite their adherence, a mid-career respondent also highlighted that ‘while I adhere to guidelines for teaching I also try to be innovative’ (4R303). Other respondents highlighted their scepticism about ambiguity or implicitness of teaching guidelines in mentioning that ‘university guidelines on teaching are somewhat ambiguous in my faculty’ (1R7); ‘there are no explicit guidelines besides teaching (contact) hours’ (2R92); or ‘I find the university guidelines on teaching are restricted to a particular paradigm which is very limiting’ (4R338).

It was found that respondents had an assumption about the presence or adherence to the guidelines as it was highlighted: ‘I assume I am within whatever the established guidelines are because no one has complained’ (3R181). Similarly, a senior academic mentioned, ‘I wasn’t aware that my university had guidelines, but if they do, I’m sure I meet them’ (7R784).

Teaching respondents also highlighted an outcome focused approach in teaching performance. As illustrated in Figure 4.22, almost 42% of the teaching responses related to the outcome based approaches, that is, 6% explicitly mentioned an outcome focus and 36% mentioned the teaching evaluation focus, which is also a quantitative metric for teaching performance measurement. Respondents were critical about such approaches in measuring teaching performance as a seasoned academic highlighted, ‘performance is evaluated on student’s response to lecturer evaluation questionnaire (popularity contest)’ (6R593); therefore, ‘the number of students that score and evaluate my course if poor (since it is online) are not a true reflection of my teaching’ (8R897). A mid-career academic also criticised such approach by saying, ‘it seems that teaching evaluations filled out by students is what determines the teaching performance. This is the cart leading the horse’ (5R499).

67 Regarding academics’ experience, the term ‘experienced/senior academic’ denotes an academic with 11 to 20 years; ‘seasoned academic’ for more than 20 years; ‘mid-career academic’ for six to 10 years; and ‘early career’ as less than five years’ experience.
The findings in the teaching responses highlight the evidence of a procedural focus to a lesser extent as compared with the outcome based approaches in measuring the teaching performance of an academic. The qualitative data findings enable deducing that the teaching performance of academics in NZ universities is measured on the basis of their procedural adherence to effective teaching guidelines and outcomes they produce predominantly in terms of teaching evaluation scores.

In relation to the focus of research performance, 141 comments were identified to capture the foci constructs. Particularly in research, the respondents perceived their university to be primarily interested in the outcome focused approach in measuring research performance.

Figure 4.22: Perceived PE focus (research)

As highlighted in Figure 4.22, only 3% of the respondents highlighted having a focused area of research in their department or faculty. It was noted that some of the departments establish team-based research projects (4R348), while others have such performance requirement as an experienced academic commented that ‘we are required to have at least half [of] our research within our department's focused areas of research’ (3R188). In another university, the research initiatives were found to be more strategically aligned as ‘we are being "encouraged" as a department to take a strategic approach to these areas and more explicit about articulating that approach’ (1R26). Such expressions highlighted the presence of a people focused evaluation in some of the studied universities, while others are attempting to
join that area or trying to strategically align individual performance with the departmental objectives.

In an overall picture of research responses, the findings suggest universities rely on the PBRF matrices and other outcome based measures implemented by the universities. Both of these categories comprised almost 84% of the total research foci responses. PBRF seemed to be such a criterion because ‘research is easy to assess quantitatively e.g. PBRF’ (2R91). Moreover, ‘writing academic articles around my field of work seems often driven by PBRF type pressure and is often not very useful for the actual practice or teaching’ (1R64).

Regarding the outcome based approaches, experienced academics highlighted that ‘performance evaluation is based on numbers of research outputs, preferably in the university's 'strategic growth areas’ (4R359). It was reasoned that ‘all of these key performance indicators are increasing for staff or at least the university is becoming less ambiguous about the expectations’ (4R365). It was further commented, ‘it’s the rate of publishing which is the problem. There is constant demand for constant outputs. This is not how an artistic practice works, i.e. no gestation time allowed for development of new bodies of work. I have been threatened with demotion to a ‘teaching-only' contract because I haven't produced outputs consistently’ (3R254).

Such an approach of continuous publications is perceived to be creating a negative impact; that is, the focus of academics is shifting away from quality of the research and publications. Almost 11% in this set of respondents shared the idea that there is a competition between quantity and quality of publications. A seasoned academic critiqued, ‘they don't seem to care what research I do, or how useful it is, just as long as it gets published somewhere’ (2R99). Similarly, it was perceived by early and a mid-career academics that ‘the focus on paper output as a metric of academic success (which seems to be a worldwide trend) is the primary driver for the explosion of literature resulting in a massive dilution of research quality’ (4R376); ‘what is frustrating is that it is all down to numbers and impact points and not about what actually helps your field in the university’ (6R733).

The findings of the research foci responses highlighted the presence of focused areas of research in some of the disciplines of a university; however, the findings revealed the prevalence of outcome based approaches across the board. Despite academics’ critical views about the existing practices of evaluation, the research performance evaluation is perceived
predominantly as focusing on outcomes or PBRF based criteria, which according to respondents is diluting the quality of publications and creating inter-academic competition. A mid-career academic was surprised when he/she ‘published one chapter in a prestigious book, I was warned that another colleague regarded the subject matter as ‘his/her territory' and that I should beware’ (2R98). PBRF is perceived to be promoting individualistic research behaviours, as ‘there is strong disincentive in PBRF to collaborate with colleagues at one's home institution, weak disincentive to collaborate nationally, and very strong incentive to collaborate internationally’ (3R297). Such research focus prompted a senior academic to suggest, universities are institutions of learning and teaching as well as research but they are not valued the same. Quality teaching needs to have greater value and status and should also be rewarded (8R918). An early-career academic, nicely summed up the current state of performance measurement at the NZ universities, saying it incentivises the production of dull, conservative scholarship, the neglect of students and generates enormous anxiety and discontent amongst workers who should otherwise feel a deep commitment to their work (3R223).

4.7.2.2. Perceived PE focus’ influence on academics’ attitude

Academics in NZ universities exhibit comparable internalisation and compliance based behaviours. Compliance, however, is exhibited due to external pressures, fear of sanctions and insecurity about the future. Similar to the quantitative analytical approach, the qualitative analysis of the qualitative data explored respondents’ behaviours and their reported reasons in light of the perceived PE focus. The aforementioned analysis of research and teaching comments highlighted outcome and procedural focus in teaching performance, while a predominant outcome focus was observed in research performance. The subsequent analysis therefore looked into the reported behaviours under those perceived foci.
Figure 4.23 illustrates the breakdown of academics’ perceptions related to teaching activities and reported reasons to indulge in teaching behaviours. While the themes show variety, 53% of the responses contained the conceptual elements of internalisation as compared with 47% in compliance (teaching responses = 182). Seasoned academics justified their compliant behaviours because ‘the university does not like to fail students, so standards have dropped a lot to maintain pass rates as a greater % of less able and committed students attend university’ (2R106). It was said, ‘pass rates are a problem, we have a long tail of students that I truly wonder how on earth they got there. However, we don't like to fail them.’ (4R368). The respondents also criticised teaching evaluation as a popularity contest rather than the true depiction of the teaching performance of a teacher. Teaching evaluations were considered ‘essentially a measure of your popularity among students, how generously you grade, and your ability to keep students entertained’ (6R649). Such approaches emphasise pleasing students as a respondent highlighted the state of helplessness by saying, ‘one thing matters in this lunatic asylum - that the students rate us highly as entertainers. This is catastrophic for the education that we are allowed to offer. But what can we do?’ (4R395); and ‘if you've been a challenging instructor it's not well received’ (4R368).

In the 200 research responses, on the other hand, the comments showed a 45% and 55% split between compliance and internalisation, respectively, which were identified through the respective conceptual themes.
Figure 4.24 illustrates that academics exhibit research behaviours because these provide them with a sense of fulfilment or identity. These types of behaviours are self-rewarding in nature and respondents perceive such activities to solve a problem, which is congruent with their value system. An internalised senior researcher highlighted the reason to involve in research, ‘because it interests and delights me’ (3R249). Likewise, a mid-career academic commented, ‘because I want to try and influence my world for the better’ (3R255). It was observed that the element of their identity seems to be a factor among the academics involved in research and teaching activities as a mid-career academic commented, ‘my research and my writing are integral to my identity as an academic and as a person seeking fulfilment’ (5R563).

Almost half of the research respondents, however, reported belonging to the other side of the coin, that is, compliance. More than half of the compliance group reported that they exhibit research behaviours because that is part of their job responsibility. The definition of research performance is also perceived to be becoming an activity that results in publications as a seasoned academic highlighted, ‘the fact that publication is rewarded gives me an additional incentive to research and publish’ (6R717). For others, even at senior levels, publications are perceived as a matter of survival because ‘those who publish are rewarded those who don’t are threatened’ (7R861); and a tool for future opportunities because ‘were I to lose my job, my extensive publication record would help me find a new position’ (7R862).
In addition to the aforementioned compliance and internalisation for research and teaching separately, the data were also analysed from a holistic behavioural perspective and academics’ reasons to do their professional activities, especially under the influence of compliance. Among the 129 responses, three elements – external pressure, threat of sanctions and insecurity – constituted 60% of the responses, while the other themes had relatively smaller contributions. It was reported by a mid-career academic that ‘we are being threatened with termination if PBRF scores are not B or higher’ (7R843). The case of a seasoned academic was similar: ‘we have effectively been told that “books don't count” which removes the value of the type of writing that I have usually preferred to develop’ (4R437). Likewise, an early-career academic also commented, ‘In general, I enjoy research and see writing for publication as an extension of pushing my thinking. However, the pressure to publish does take some of the joy out of it’ (6R727). A senior academic’s experience was not much different as ‘I have been threatened with demotion to a ‘teaching-only’ contract because I haven't produced outputs consistently’ (3R254). Figure 4.25 provides an interesting and succinct illustration of academics’ reasons to research and teach.

Figure 4.25: Reasons to teach and research

The qualitative analysis, in addition to addressing the study RQs, also captured the commonly occurring perceptions in the qualitative data. Some of the identified themes may be the implications of the existing performance management system at NZ universities.
As illustrated in Figure 4.26, in addition to the earlier mentioned research focus and outcome focus of the PE, 16% of the responses highlighted the failure to include teaching performance in the universities' performance management frameworks. Likewise, almost 4% of these respondents perceived or assumed some standard/policy related to teaching or research. Some other factors identified were PE emphasis on dollars, that is, research grants and funding, focus on teaching load rather than teaching performance.

Figure 4.26: Perceptions about PE

As illustrated in Figure 4.27, some perceptions about academia included bureaucratic processes, poor leadership, strategic alignment, strategic disconnect, incompetent strategies, vague strategy, moral neglect, unclear core values, public rhetoric, punitive, implicit observation, peer review, no promotion, workload, PBRF Salience, and better culture.

Figure 4.27: Perceptions about academia
The findings show that some of the elements highlighted by the respondents are assumptions, as they may not be clear about their institutions’ particular guidelines or core values. For instance, responses such as ‘we have no core teaching values or norms’ (3R189) or ‘we don’t really have guidelines on effective teaching’ (8R910) can be an example of a strategic disconnect between a university, its academics or its departments. As highlighted in Figure 4.26, the proportion of such instances in the data were almost 17%. Almost 16% of the responses also observed their organisational environment to be punitive, where respondents believed they cannot afford to make mistakes, any complaint can raise lot of issues and the presence of implicit or covert observation of their professional activities.

4.8. Conclusion

The chapter presented a detailed analysis of the quantitative and qualitative arms of the study. Based on various analyses, the chapter was able to identify the PE focus perceived by academics at various universities. Such an analysis utilised logistic regression models that resulted in significant prediction of academics’ internalised teaching behaviours under people focused PE. Regarding research behaviours, logistic regression results were able to predict internalised research behaviours’ negative association with outcome focused PE. The predictive results were also corroborated through various quantitative analyses. The data analysis also provided the qualitative findings pertaining to RQ 1 and 2. The findings showed a predominantly outcome focus in academics’ PE at NZ universities. The perceived focus was found to result in comparable internalised and compliant behaviours. Compliance based behaviours, however, were the result of external pressures and threat of sanctions. The next chapter will discuss this chapter’s findings under the microscope of the literature while providing implications for policy and practice.
There is little difference between one man and the other, when you go to the bottom of it. But what little there is, is very important (William James 1899).
5.1 Introduction

When cynicism becomes the default language, playfulness and invention become impossible. Cynicism scours through a culture like bleach, wiping out millions of small, seedling ideas. Cynicism means your automatic answer becomes “No”. Cynicism means you presume everything will end in disappointment...And this is, ultimately, why anyone becomes cynical. Because they are scared of disappointment. Because they are scared someone will take advantage of them. Because they are fearful their innocence will be used against them — that when they run around gleefully trying to cram the whole world in their mouth, someone will try to poison them (Caitlin Moran 2014).

5.1.1 Chapter objectives

This chapter intends to discuss the results and findings presented in Chapter 4. The aforementioned results and the findings will therefore be matched with the literature reviewed in Chapter 2 in the context of higher education and performance management at universities. The chapter will discuss the study’s results and findings in light of the various theoretical constructs discussed in earlier chapters. In looking at each research question separately, the chapter will discuss some of the implications of the results. This will allow identifying and summarising areas where this study adds or supports the existing body of knowledge. Every research has limitations and this study is not an exception. The acknowledgement of limitations will allow this chapter to identify opportunities for future research.

5.1.2 Chapter outline

The previous chapter detailed the study’s results and findings. This chapter is divided into six sections. Followed by an introduction, section 5.2 discusses the research issues related to each of the RQs. Academics’ perceptions for a particular PE focus are discussed according to the literature in sub-section 5.2.1, while the influence of these perceptions on academics’ attitude is discussed in the following sub-section 5.2.2. Attitudinal changes are conceived to influence the research performance of academics; this is discussed in sub-section 5.2.3. After validating the study’s results through literature in management accounting, psychology, SHRM and performance management, the chapter later summarises the contributions made by this research (section 5.3). The implications for policy and practice are suggested in section 5.4. Prior to the conclusion of the study (section 5.6), this chapter highlights some of the limitations of this study that open the door for future avenues of research (section 5.5).
5.1.3 Research objectives

The previous chapters and sections built the rationale to achieve the objective of this study to explore PE’s influence on NZ academics’ attitudes and performance behaviours, which may suggest improvement in academics’ PE processes. To achieve this aim, the study established three research questions.

RQ 1: How do academics in NZ universities perceive their performance evaluation process to be focused; is this process, outcomes, behaviour, people focused or an amalgamation of these foci?

RQ 2: Does a perceived PE focus influence academics’ attitude towards compliance and/or internalisation and their performance behaviours?

RQ 3: Does an academic’s attitude taking the form of compliance or internalisation influence his/her research performance?

5.2 Discussions about the researched issues

This study explored universities’ strategic plans, performance measurement and management related documents, job descriptions, promotional processes as well as the key responsibilities of an academic in an NZ university. Such process facilitated the identification of universities’ performance expectations from an academic. It was found that the key responsibilities upon which an academic’s performance can be evaluated were teaching, research and service activities. Service responsibilities in this study were considered as an auxiliary factor in responsibilities, since an academic (see sub-section 3.4.1 for academic conceptualisation) is not hired for service activities, but rather for teaching and research, while service responsibilities become a support factor within a wider frame of responsibilities. This study therefore focused on teaching and research performance. The following sections discuss the study’s results and findings in light of the existing literature.

5.2.1 Academics’ perceptions about PE focus

This study contended that the teaching and research performance evaluation of an academic in an NZ university can be focused on adherence to guidelines and procedures (procedural), outcomes produced (outcomes), supervision and surveillance (behavioural), social integration (people) or an amalgamation of these foci. RQ 1 therefore sought an academic’s perceptions about his/her own PE in relation to the aforementioned foci. Results presented in section 4.4 found that academics in NZ universities perceived their research
performance evaluation to be pronouncedly process and outcome focused. Teaching PE was also found to emphasise both of these elements, although to a lesser extent. People focus was found to be sporadic in nature, but overall PE was more people focused in teaching than research. Finally, behavioural elements of supervision and surveillance were not focused in PE for both teaching and research performance, which led this study to conclude that the PE of academics in NZ universities is not behaviourally focused. In summary, the overall results showed that the performance of academics in NZ universities is perceived to be focused on their procedural adherence and the outcomes they produce.

Perceptions of procedural focus of their PE by more than 1,000 academics in this study can be said to be a peculiar characteristic of public institutions’ accountability models, which hold employees answerable for their adherence to processes (De Langhe, Van Osselaer & Wierenga 2011). Similar bureaucratic mechanisms were also found by Teelken (2012) in Dutch, British and Swedish universities. Such an ‘accountability focus’, according to Hall et al., (2007), is employed in public institutions due to its simplicity. The perceptions of adherence to explicit or implicit guidelines and standards can have different underpinning reasons, for instance, consequences in the case of not meeting such standards and the organisational structure – since management control design is woven into organisational structure (Ouchi 1977).

Procedural models of accountability provide limited control of employee behaviours (Bovens 2005); the findings of this study contrasted with such a notion. As highlighted by the senior and experienced academics (sub-section 4.7.2), despite their internal resistance, observance of the procedures is noted to be the measure for survival or to keep their job (see Figure 4.25). The highlighted adherence may have underpinning reasons to avoid negative consequences. It has been found that individuals trust punishers more than the non-punishers (Wang & Murnighan 2017), highlighting the strength of beliefs individuals hold about the realisation of the consequences if they do not meet expectations. According to Arvey and Ivancevich (1980), adherence to rules and guidelines is grounded in the idea of punishment or behavioural consequences in an organisation. Instead of performance, the emphasis in these types of systems is adherence and performing pre-determined performance behaviours (Landau & Stout 1979). To employ such procedural approaches to control employee behaviours is rooted in principal-agent theory (Ingraham & Kneedler 2000).
The ideology of having processes and procedures, through control, is to provide directions as well as to ensure performance achievements are closer to the desired outcomes (Ouchi 1979). Outcome focused PE, on the other hand, provides simplicity, a common language among organisational units (Ouchi & Maguire 1975) and reduces complexities (Turcotte 1974). PE as a control becomes a social process when dealing with people (Drucker 1964; Hofstede 1978); outcome based cybernetic mechanisms, however, do not take social facets into account providing effects adverse for organisational objectives (Anthony 1965; Hofstede 1981). To employ cybernetic approaches, communication is indispensable (Hofstede 1978). While some of the academics highlighted their knowledge about the existence of guidelines, the others assumed their presence or their ambiguity, which points to two issues: the appropriate communications and the line of sight. It seems that academics are more focused on the expected or stated outcomes, while they might perceive adherence to procedures and guidelines as part of the teaching and research job responsibilities. Their focus thus remains on the eventual outcomes. Such importance might be due to the presence or visibility of some quantitative element, which they are expected to exceed (PBRF category) or expected to be lower than the stated benchmarks (fail rates). These outcome centric approaches eventuate when outcomes are embedded in performance management systems due to external pressures (Martin-Sardesai et al. 2016) from the funding bodies upon which universities have financial dependence (Bexley, Arkoudis & James 2013; Broadbent, Gallop & Laughlin 2010).

Despite the evidence of a significantly higher emphasis on outcomes than procedures, it is, however, unclear that these are amalgamated or follow a sequential approach. Based on Ouchi’s argument, the results of this study facilitate in asserting that PE mechanisms in NZ universities may be taking a sequential approach or might be relying on procedural instrumentation to achieve the expected outcomes. This type of sequential implementation of procedural instruments to ascertain the quality of the outputs was identified by 65% of the respondents in the investigation of German, Austrian and Swiss universities (Guenther & Schmidt 2015). Through the empirical results of a combination of procedural and outcome foci by NZ universities, this study supports the notion that organisations seek to achieve a balanced use of control (Bradach & Eccles 1989) or ‘a harmonious use of multiple forms of control’ (Cardinal, Sitkin & Long 2004) that intends to achieve a state of equilibrium between internal factors and external requirements (Thompson 2010). Parker (2013) has also reasoned that external accountability factors are embedded by universities in their internal control strategies. This is empirically supported through the findings that research is often driven by PBRF’s
Performances that further influence research performance as well as its evaluation. However, applying cybernetic approaches at public institutions is viewed by Behn (2003) as managerial intention to retain power and to control employees through PM systems. In employing two foci, however, the size of these organisations cannot be overlooked, as scholars contend that as organisations grow larger they tend to move towards outcome based performance measures due to their simplicity in application and understanding across diverse organisational units.

In addition to appropriate feedback mechanisms, cybernetic performance evaluation mechanisms assume quantitative standards as well as measurable outcomes (Hofstede 1978). The absence of any of these factors or complexity in measurement (Cavalluzzo & Ittner 2004) creates imbalance in a comparison of standards and achievements, which may cause cybernetic systems to provide undesired results. Teaching performance can be seen as a complex activity to measure (Cavalluzzo & Ittner 2004); the emphasis on procedural focus in PE seemed to contrast with the available control taxonomies. It is interesting to note that the control taxonomies suggest that in instances of unmeasurable outcomes, auxiliary definitions should be developed (Anthony & Herzlinger 1975) with mutual agreement to employ subjective or judgemental control, which essentially relies on an organisational power structure and hierarchy to subjectively evaluate performance (Hofstede 1978). Although auxiliary definitions to measure teaching are employed among the studied universities, the results and findings of this study as well as critiques in the existing literature do not suggest an agreement on these performance definitions. Instead, the results show that teaching performance is perceived to be evaluated on a procedural (Hofstede’s political control, Ouchi’s bureaucratic control, Simon’s boundary system and Siegel-Jacob & Yates’ procedural evaluation) and outcome focus (Hofstede’s routine control, Ouchi’s output control, and Siegel-Jacob & Yates’ outcome evaluation). Although ambiguity in the measurement of teaching, to some extent, fits Hofstede’s prerequisites for a political control, the application of outcome based measures in teaching does not satisfy the theoretical conditions, since outputs are complex to measure and the effects of intervention are unknown even if the objectives are considered unambiguous.

While the evidence from this study suggests a strategic focus on processes and outcomes, the qualitative findings point towards a complex issue when the universities, through these foci, attempt to measure academics’ core activities and assign a quantitative value to it. This complex issue became evident particularly related to teaching performance, which the universities attempt to measure through teaching evaluations done by students. Rather than emphasising improvement in teaching quality, the emphasis of teaching evaluations is on the
outcome scores (Teelken 2012). Among this study’s respondents, such a mechanism is perceived as a popularity contest and cart leading the horse approach rather than a performance metric – as the students want to be entertained rather than taught. The practices labelled as entertainment by academics might be an attempt for engagement, which is often confused with the myth of entertainment (Nair 2017). Nair contends that engagement essentially is driving an individual towards out-of-box thinking where the individual is voluntarily involved in such process. On the other hand, if students are not marked generously and entertained or the teacher is not self-promoting, this translates into bad evaluation scores. This evaluation focus has behavioural implications, as an academic from a US state university highlighted that some teachers may even extend pizza parties to attain positive student evaluations. Students are also aware of this evaluation system, so for challenging teachers, it is found that students will set up Facebook pages to gang up on certain academics to decide their agreed evaluation feedback. This evidence supports the notion that these types of teaching performance mechanisms are promoting teaching behaviours that are focused on student evaluation rather than teaching quality. These types of behaviours are empirically explored by Mitchell et al. (2017), who contend that when organisations demand unrealistic performance outcomes that result in increased self-interested and self-protection behaviours. Interestingly, PM systems were put in place by universities to reduce goal incongruence, but eventually these are injecting goal incongruence.

Moreover, the quantification of a teacher’s performance based on students’ opinions also points towards other issues; for example, students’ teaching evaluation as a metric includes those students who never attend classes, which makes this type of PE method subject to skewed results. Secondly, such a method does not take into account any information that the evaluating students are satisfied/dissatisfied because they have received good/bad feedback related to their assessment scores. Obviously, students with lower grades are not going to evaluate their teacher in a good manner. Consequently, this discourages teachers to grade students according to learning objectives in order to avoid poor evaluation scores. Universities also do not want to fail students, as they are the key revenue generators and prime customers. Indeed, students’ satisfaction, as customers, is considered vital in the new management paradigm, but these findings support the logic that such an evaluation metric does not provide a complete picture of a teacher’s performance. Through these evaluative measures, universities are not only compromising their core objective of disseminating learning, but also producing graduates that are ill prepared for the workforce and professional activities.
In instances with imperfect measurability of the outcomes, implementation of mechanisms of ‘organic solidarity’ of PE is suggested (Ouchi 1980) to provide better goal congruence between employees and the organisation. The existing corrective practices of censure, ‘under management’ or forced retirement, as an observation of this study, do not seem to address the performance gaps in order to achieve the eventual objective of PE, that is, to improve future performance. Practices creating performance pressure heightens the potential for an individual’s behaviours to be focused on self-protection, censure avoidance or self-serving, which, according to Mitchell et al. (2017), motivates cheating behaviours. Although such negative behaviours in academia are not yet empirically investigated, the option by some finance journals for additional dataset codes along with the manuscript may highlight a lack of trust and an attempt to circumvent cheating behaviours.

5.2.2 Perceived PE focus’ influence on academics’ attitude

This study postulated that academics’ perceptions of PE focus will cause attitudinal changes and will thus influence their performance behaviours. While some of the academics’ behaviours were highlighted in the previous section, this section focuses on academics’ behaviours that are categorised to be either compliant or internalised in nature. In order to explore such an understanding, this study proposed 10 hypotheses.

It was hypothesised that academics’ attitude of compliance or internalisation will be underpinned by their perceptions of the PE focus. The results found support in predicting that academics’ attitude will take the form of compliance and internalisation when they perceive their PE to be outcome and people focused, respectively. The study also hypothesised that attitudinal change towards compliance or internalisation will be underpinned by perceptions of PE being a resource control mechanism or a credible process. Despite an almost equal number of academics possessing both perceptions of resource control and credibility, the results were unable to support that these perceptions will induce attitudinal changes. The study further asserted that perceptions of resource control and credibility will provide a moderating effect between compliance/internalisation and perceived PE focus. Despite the evidence of exhibition of compliance and internalisation, this study, however, was unable to find evidence that perceptions of resource control or credibility influenced academics’ attitude. This study obviously differed significantly in its design as compared with Kelman’s experimental study. Unlike Kelman’s respondents, participants in this study were real professionals who responded according to their day-to-day performance activities. These contextual elements may have
influenced such factors to be insignificant in influencing academics’ attitude. These, however, also suggest that in studies conducted in real organisations, perceptions of resource control and credibility may or may not influence an individual’s attitude towards compliance or internalisations. This further highlights the importance of context specific elements in building individuals’ perceptions.

5.2.2.1 Academics’ attitude and perceptions of procedural focus

An academic’s perceptions about his/her PE based on guidelines and procedures cannot be attributed to the change in the academic’s attitude towards compliance or internalisation. Employees in any organisation are rewarded for acting or behaving in accordance with the guidelines provided by an authority (Cialdini & Goldstein 2004) or with organisational procedures developed and implemented by individuals possessing control. Although universities have set up processes which subject both research and teaching activities to management control mechanisms (Deem 2004; Mingers & Willmott 2013), these measures may suggest a compliance based behaviour under procedural conditions. Despite academics’ perceptions about their PE as procedurally focused, this, however, did not cause attitudinal change towards any direction on the internalisation scale. As highlighted earlier, this can be associated with academics’ perceptions of adherence to procedures and guidelines as a job responsibility rather than a ‘line of sight’ or an objective to be achieved. The assumption of meeting the guidelines since no one has complained or the perceptions about absence of guidelines or norms can also be attributed to these results.

The ambiguity of guidelines, absence of guidelines or the assumption about their absence/presence or norms also highlight disengagement and weak strategic communication between academics and the universities (see Figure 4.27). Employee engagement is found as a key component of PM systems with positive associations with organisational strategic objectives, productive employee behaviours and related rewards (Whittington et al. 2017), which in turn imposes responsibility on organisational strategic and line managers to appropriately and clearly communicate organisational performance expectations along with the stated guidelines. Strategic communication, according to Thomas, Zolin and Hartman (2009), not only develops trust between employees and their managers but also of employees upon their top management.
5.2.2.2 Academics’ attitude and perceptions of people focus

If PE mechanisms focus on social interactions, collaboration, values, traditions and organic solidarity, academics’ attitude can be predicted to take the form of internalisation; that is, academics are likely to exhibit internalised performance behaviours. Humans, as social animals, have a tendency to create and maintain meaningful social relationships, which persuades us to observe the norms of social exchange and mutually approve each other’s behaviours (Cialdini & Goldstein 2004). The social context through this inbuilt characteristic influences the integration of organisational values and activities as our own values (Deci et al. 1994; Deci & Ryan 2010). This study adds to the existing knowledge by providing empirical evidence that academics who undergo PE with a perceived people focus will exhibit internalised performance behaviours. The results and finding provide empirical support to Ouchi’s (1979) argument that for internalised behaviours, an organisation needs to structure its PM frameworks to emphasise social integration, collaboration and team work. In addition to other scholars, Deci, Olafsen and Ryan (2017) recently reiterated the criticality of internalised and spontaneous behaviours as vital success factors in workplaces. Internalisation of work activities is considered crucial for professionals, and to be internalised they require need fulfilment, autonomy and social connection (Rockmann & Ballinger 2017). Kehoe and Collins (2017) find that, in knowledge intensive work environments, fostering social connectedness and inter-personal exchange opportunities enhances business unit performance and employee commitment. The existing mechanisms, however, are found to do the opposite, as the current performance management regime generates enormous anxiety and disconnect among workers who should otherwise feel a deep commitment to their work. Kehoe and Collins argue that relationship oriented HR practices support organisational performance. In knowledge driven activities such as those of academics, an organisation is reliant on individuals’ capabilities, which could be indoctrinated through internalisation of organisational values, traditions and norms (Nyland & Pettersen 2004) or controls such as people focused PE. Gray and Densten (2005) likewise suggest that, to gain competitive advantage, organisations should foster a collaborative culture.

To develop a harmonised, high performing organisational culture with internalised individuals and with common understanding of organisational objectives, the emphasis is placed on the recruitment processes (Ouchi 1980) and belief systems (Simons 1994). As suggested, the high performing culture necessitates the need for two key elements: either the organisation pays a great deal of attention during recruitment or it trains the inductees
appropriately. Firstly, academics are frequently recruited or promoted on the basis of their number of publications or journal rankings (Tourish, Craig & Amernic 2017), which overshadows all the other characteristics of a candidate. Such research based recruitment is now strategically focused in NZ’s leading University of Otago, as the strategy to achieve ‘excellence in research’ is planned to be achieved through ‘appointing only research-active staff to academic positions’ (Otago Health Sciences strategic plan 2014-2020, p. 2)\(^6\). This highlights a narrow focus in the recruitment process, which further overlooks employee-culture fit (Adler 2011). If the number of publications is the criterion for an academic’s recruitment that also points towards the problem of higher attrition rates, since a higher number of publications also allows an academic to seek an institution offering higher remuneration.

Training and development is a second vital element for a high performing organisation. Adler (2011) found training and development to be a core element in organisations employing confrontational strategies. The importance of training and development at any stage of a career cannot be underemphasised. Thus, to have employees internalised with organisational values, traditions and norms, it is crucial at the induction of a new recruit. Although, it is acknowledged that the new recruited academic is already a highly educated person, this does not reduce universities’ responsibility to properly train the new recruits to weave them into the fabric of institutional values. New recruits, on the other hand, are excited about the induction training (Parkinson & Pritchard 2005) to learn information valuable for their roles (Daly et al. 2009), about the institution, its values, traditions and norms. However, university inductions are often overwhelmed with academics’ research and publications presentations. In addition to poor induction trainings (Edgar & Geare 2010), deterioration of quality of academic life, increasing workloads and unfavourable working conditions in the universities (Bradley et al. 2008; Saltmarsh & Swirski 2010) may be the reasons that academics with shorter service periods tend to change universities more often rather than experienced academics with longer service durations. In NZ, 25% of the employees are found to leave their new organisation within their first 12 months (NZ staff turnover survey 2017). It is found that providing support and learning through induction programmes can be a key factor for a teacher to stay in an institution (Parkinson & Pritchard 2005).

\(^6\) http://www.otago.ac.nz/healthsciences/otago077712.pdf
5.2.2.3 Academics’ attitude and perceptions of outcome focus

Regarding academics’ attitude with the perceptions of an outcome focus, the study observed that the requirements for outputs in teaching and research are turning academics’ attitude towards compliance due to external pressures, rewards, survival and to avoid disciplinary mechanisms. Through empirical support, this study adds to the existing literature in suggesting that if PE mechanisms are outcome focused, compliance will be an attitudinal response from the employees, that is, academics. In addition, the other key reasons for compliance based behaviours identified by this study were laid out in section 4.7.2.2 (Figure 4.25) and the salient reasons were external pressure, uncertainty and avoiding disapproval and sanctions. Evidence from diverse angles is still emerging across various academic contexts (Kallio et al. 2015; Martin-Sardesai et al. 2017). These empirical studies as well as critiques across the developed world are an attempt to unearth the problematic issues with exiting PE practices while communicating them to the relevant authorities (Anderson, G 2006). Scott (1985) considered these as the ‘weapons of the weak’.

Measurable outcomes are contended to be the key component of PM frameworks (Ferreira, A & Otley 2009); there are, however, other requirements to be met in the design of a PMS (Adler 2011; Hofstede 1978; Otley 1980; Ouchi 1980; Simons 1995). Although the study found the presence of procedural focus, PE is perceived to be more outcome focused, particularly for research. In emphasising and deploying outcome based approaches, this study found that NZ universities seem to take one factor of measurable outcomes into account, while overlooking the other key elements, such as task-results relationships and academics’ uncontrollability on some outcomes such as publications and teaching evaluation. The evidence from this study suggests a constant demand of constant outputs and too much of a rush to get work published even before research objectives are achieved. These approaches, according to Tapper and Salter (2004), ignore the fact of longer acceptance and publication durations required by highly ranked journals. The existing outcome measures are resulting in academics shifting from their core job activities (McCarthy, Song & Jayasuriya 2017) towards meeting the KPIs. Teelken’s (2012) identified that existing performance evaluation approaches are turning academics towards compliance. One of the reasons for a compliant attitude identified by McCarthy and colleagues (2016) is that guidelines for research and its quality are imposed by universities’ management through pre-determined formulas. Nonetheless, the pressure on universities’ management from political regimes and funding agencies cannot be overlooked.
The pressure from funding agencies has also changed, with participants in this study suggesting the emphasis of NZ universities has moved from the *betterment of humanity to PBRF funding*.

Another probable reason for compliance is that universities are utilising research quality information for redundancy programmes in the name of restructuring (Connell 2014). Such ‘restructuring’ has occurred at almost every NZ university in the last decade, where academics have been laid off in large numbers, and other contexts have experienced the same. These restructuring programmes allow the universities to achieve two objectives: one, get rid of low-performing or highly paid academics to achieve their efficiency objectives; second, it sends a message to the survivors of redundancy programmes to be aware of future consequences. These types of messages further create anxiety, uncertainty (Martin & Whitley 2010; Yokoyama 2006), fear and battle for survival, thus creating an organisational culture of compliance since an academic is *afraid to say no when asked*. These empirical results expand this argument, as a higher proportion of academics with a compliant attitude perceived the presence of external pressures and the threat of sanctions in NZ universities. The external pressure resulting in fear is not only present in research performance but also in teaching performance. The findings highlighted that NZ universities do not like to fail students and teachers with high fail rates can attract much attention by university superiors. For researchers, outcome based approaches through external pressure not only create publication pressure but also influence their behaviours to meet the required publication outcomes (Butler 2010; Hicks 2012); and if academics fail to meet those expectations, they can be subjected to a larger teaching and administration load (Henkel 1999) and put under management, that is, under sanctions.

In order to maintain university rankings or to attract more funding, such a culture is promoting head hunting for high profile researchers (Talib 2003), increasing attrition rates among universities because of attractive remuneration packages to ‘productive’ researchers and also lowering organisational identification and commitment among academics. Saltmarsh and Swirski (2010) highlight Australian universities struggle to retain academics in general and high quality researchers in particular. Bradley et al. (2008) find this problem not as country specific as it is being faced by many countries. Hugo (2005) deduces that international competition for highly skilled academics has never been this fierce. This also highlights a sole focused approach on ‘productive’ candidates, which narrows down the recruitment requirements to a candidate’s number of publications. While other look good attributes such as teaching philosophy are advertised in the job description, these may not receive importance in
the ‘actual recruitment’. Since it is argued that ‘the degree is not enough’ (Tomlinson 2008) and doctoral students are more trained to publish in rankled journals (Williams 2017), PhD students and academic job hunters therefore need to have a strong publication profile, which according to studies (e.g., Austin 2002; Leisyte, Enders & De Boer 2009; Parker 2012) is only one aspect to be an academic. This study extends such an argument through the findings that an awful teacher does not matter to the university, as the sole emphasis is placed on research.

Interestingly, the core activity of teaching, from which a university generates most of its revenues, is neglected in the PE processes. This neglect of teaching performance was highlighted by more than 15% of the qualitative findings across all the NZ universities (see Figure 4.26). The emphasis given to teaching performance can also be observed from the findings that it is not incorporated in PE, while the emphasis is limited to teaching load only. Rewards and promotion’s link to performance in fact determines the effectiveness of performance management frameworks (Lawler 2003; Lawler, Benson & McDermott 2012). Although promotion is an eagerly sought reward by academics (Edgar & Geare 2010), some institutions surprisingly ignore the teaching contributions made by academics. It will be obviously a bohemian idea in any business organisation in the world that an organisation recruits an employee to perform two activities and when rewarding or promoting, ignores 40% of the performance contributions made by the employee.

The outcome focused approach also seems to have penetrated through the introduction of paper based PhD theses at some NZ universities. Rather than waiting for a student to finish his/her whole research through a traditional thesis in a longer duration, the paper based thesis allows a supervisor to have multiple publications with the student in the same duration. The supervisors, being under pressure for their own publications, may transfer that pressure to the PhD students for an output. The research and other workload is also influencing work-related commitments (Saltmarsh & Swirski 2010), which may well be hindering PhD supervisors to provide constructive feedback to PhD students. Such poverty in feedback can be attributed to the high workloads highlighted by 15% of the responses in the findings (see Figure 4.27). For obvious reasons, in knowledge intensive work environments, Panagioti et al. (2017) suggest employing organisation wide mechanisms that improve the work environment. In essence, such

69 Academics, for the most part, in NZ universities are responsible for 40% teaching, 40% research and 20% service activities.
70 Paper-based thesis is where a student publishes three or more articles, which then are combined together and presented as a PhD thesis for examination.
a system is preparing new researchers who are only trained to produce publishing material and database mining rather than learning the aspects for a researcher or an academic (Williams 2017). Interestingly, such a system is preparing researchers who are trying to solve organisational, managerial or stock market issues who have never even visited or worked for an organisation or a stock market. Such an approach is taking academia in the opposite direction of the idea of bridging the gap between academia and practice. The emphasis of the outcome focus across the whole system therefore not only has existing implications but will also have future repercussions.

5.2.2.4 Academics’ attitude and perceptions of behavioural focus

Academics’ performance in NZ universities is not measured through supervision, surveillance or observation of their performance behaviours. Findings from this study did not agree with the observation in the literature about the presence of an increased level of surveillance (Gray, Guthrie & Parker 2002). Although the results from the quantitative arm suggested an absence of such observation and surveillance, the qualitative comments highlighted their presence. The results also showed that almost 20% of the academics, with a varying intensity, agreed with the presence of some kind of observation mechanism. Wiener (1961) contended that behavioural mechanisms will enhance performance. These approaches are seen as an ideology to control employees (Ouchi 1979), which consequently evaluate employees on pre-determined behaviours (Landau & Stout 1979). There was, however, no statistical evidence that behavioural mechanisms are trigger factors to influence an academic’s attitude either towards compliance or internalisation. These results can be attributed to academics’ perceptions of the absence of a behavioural focus.

5.2.2.5 Academics’ attitude with perceptions of credibility and resource control

Social influence theory (Kelman 1958) contends that an individual’s attitude will take the form of compliance if he/she perceives an influencing agent as the controller of resources such as rewards, whereas if the individual perceives influencing agent as credible, expert or trustworthy the attitude will take the form of internalisation. Although both findings and results affirmed the logic as almost half of the academics perceived their PE as a resource control mechanism while the other half perceived PE as a credible process, the results (Figure 4.13) were inconsistent and thus could not provide support for Kelman’s assertion that these two types of perceptions will cause attitudinal changes.
Studies in the context of influence, perceptions or motivational bases traditionally have focused on respondents (mostly students) that may not be aware of the underlying intentions of the questions being asked during a research process; this study differs in the sense that academics, being highly knowledgeable respondents with the ability of knowing the underlying intentions of the study, may have opted to select the options that appear publicly acceptable. While PE studies traditionally find against the credibility of the process (Ghauri & Neck 2014), the study’s results are encouraging to know that almost 50% of the academics considered PE as a credible process (see Figure 4.13). Nonetheless, such agreement was less than 5% of the responses, as the qualitative findings highlighted the PE process as a paper exercise to tick boxes and then forget about it. PE was mainly criticised for its unclear or no standards, lack of feedback, its poor link to actual performance, rewards, recognition as well as a promotion and a resource control mechanism. In light of such criticism, the qualitative findings are consistent with the existing literature and Pettijohn et al.’s (2001) argument for PE to be a mere bureaucratic necessity rather than bringing benefits for an organisation.

5.2.2.6 Academics’ attitude and moderating assumptions

This study postulated a moderating effect on an academic’s attitude by the perception of resource control/credibility and perceived PE focus. Such approach differed with the Kelman’s framework contending that the outcome behaviour will be mediated by the underlying conditions, that is, perceptions of resource control and credibility of the influencing agent. This approach also differed from Deci and Ryan’s framework highlighting a mediating motivational factor between organisational contextual factors and outcome behaviours’ quality or quantity. Since only people (H2) and outcome focus (H3), as underlying conditions, showed a positive probability to influence attitude, in such a scenario, the presence of a moderating effect for procedural (H1) and behavioural (H4) foci would likely be absent. Both H1 and H4 therefore failed to meet the moderating assertion conceived by this study. Additionally, both people and outcome foci, as underlying conditions to influence attitude, also failed to provide support for this study’s hypothetical moderating effect on attitude and subsequent behaviours.

5.2.3 Academics’ attitude’s influence on research performance

Employee performance behaviours influence their performance. Management control literature has traditionally focused on refining the taxonomies or factors that can translate into enhanced organisational performance. The emphasis was often rendered to goal incongruence between employee and the organisation (e.g. Eisenhardt 1985; Merchant & Van der Stede 2012) or changes in academia over a certain period (e.g. Chong 2013). Despite significant
progress in other sectors, empirical evidence about performance management frameworks in academia, particularly about the PE of academics, is crawling at infant stages as the evidence is starting to emerge from various contexts (e.g. Johnston 2016; Kallio & Kallio 2014; Martin-Sardesai et al. 2016; McCarthy, Song & Jayasuriya 2017; Rebora & Turri 2013). In pursuing such a path, this study adds to the empirical understanding of the influence of existing PE mechanisms on academics’ research performance. The empirical evidence of influence of behaviours on employee performance has been a challenge in other sectors as well (Baldauf & Cravens 2002), let alone academia. It is interesting to note that universities in NZ deployed PE frameworks to enhance performance. The results highlight that these mechanisms are paradoxically negatively influencing internalised performance, although there is evidence of increased compliance based performance.

Higher research performance comes with the passage of time. Interestingly, the evidence of an association between an academic’s service period and higher research performance supports the finding by Baldauf and Cravens that technical knowledge is associated with performance outcomes. Since academics amass more publishing and research knowledge and become versed with the rules of the game with the passage of time, the association of the two factors seems a logical reason for the empirical evidence in this study. However, compliance and internalisation based behaviours were also found to vary with the duration of time and experience of an academic, which can be attributed to a few reasons. While some of these seasoned academics may be at the level where there are no further promotions or other incentives, the external pressures therefore may not heavily influence these academics as compared with the other academics (early career and experienced) seeking future rewards. The presence of compliance, to some extent, in seasoned academics, however, can be attributed to their desire to retain their benefits and privileges, which cannot be underemphasised. In the case of early career and experienced academics, absorbing universities’ pressures to publish can be due to the interest in future rewards as well as a matter for survival, as highlighted in the qualitative findings.

Deployment of targets of number of publications in ranked journals or accounting-based research performance of academics are ‘budget constrained style’ of PE (Hopwood 1972. p. 160). According to Hopwood, on the one hand, these objectives assigned by the organisation become a factor for self-esteem for employees thereby resulting in rivalry, competition and tendency to blame others; while on the other hand, the constraints and targets elevate the levels of tension and stress. Under these circumstances to meet budgeted figures, employees will be
forced to increase work time duration, resulting in increased tension and worry. All of the aforementioned factors of overwork, pressures, rivalry and competition are evidenced in the qualitative findings of the study (sub-section 4.7.2). The results provide empirical support for Hopwood’s argument that budgeted and accounting PE mechanisms as a ‘source of influence and control’ (p. 175) result in the short-term view of an organisation with flawed decision making processes.

The study observes that most of the PBRF ranked B and C research performers’ attitude is underpinned by compliance as compared with their counterparts in the A category. Their exhibition of compliance based research behaviours are found to be due to external pressures or they intend to attain future rewards. The emphasis of these empirical results is not to measure or compare performance between the categories; it rather hinges to the results that as performance descends from the PBRF defined (top) category A to C, the attitudinal changes occur from one end of the internalisation scale to the other end, that is, from internalisation to compliance. Since in this analysis, there are more B performers as compared with A or C, those are presumably under more external pressure to produce more publications. In cases where there are discrepancies between the desired and achieved performance, an academic can be threatened with demotion to a teaching-only contract. The observation of this study that if I consistently did not meet PE standards, I would lose my job also provides support to results that such evaluative measures are influencing academics’ attitude towards compliance and subsequently influencing their performance. Blackman et al. (2015) contend that employees’ concerns about performance and employment has the potential to cause work-related anxiety that further affects their performance.

PE systems for academics are resulting in compliance, increased work duration, fear and depersonalisation. According to Panagioti et al. (2017), these are also the symptoms of burnout in knowledge intensive environments, which have the potential for increased work-related errors. One of the plausible reasons for the aforementioned perceptions can be due to PM frameworks’ over-emphasis on under performance (Blackman et al. 2015), which necessitates the need for a careful design of PM frameworks, particularly in knowledge intensive work environments.

Although PM is argued as a process to take corrective actions on the basis of information obtained through PE (Anthony & Govindarajan 2007), these corrective actions need to have the evidence that such actions will improve future performance. Unfortunately, organisational
managers, for the most part, will have no evidence that their corrective actions will improve employee’s future performance. Resultant pressure exerted by managers (corrective actions) will create a vicious cycle of compliance, negative perceptions and work beyond working hours, which will further cascade into lower job satisfaction, higher employee attrition rates and higher recruitment costs for the organisation. Ritchie (2000) therefore argued that people focused PM systems emphasising shared values and internalisation can lead to a sustainable organisational culture. The empirical evidence from this study also augments this notion and suggests that where there are internalised employees, there will be a higher level of employee performance and, particularly in academia, internalised academics translate into higher research performance.

The investigation of academics’ perceptions about the PE focus highlights a few significant factors that can add to the existing body of knowledge and may facilitate further investigations. In the post-NPM era, performance management studies in the higher education sector either provide anecdotal critiques on systemic changes in the universities or provide university wide-analyses to make deductions. While the empirical evidence is still emerging, academics-specific studies in performance management have received less attention because of we already know perceptions.

5.3 Summary of contributions

Accounting studies have conventionally ignored human factors influencing theoretical models, and there is a need for studies that can utilise psychological data to draw its relationship with organisational practices, and particularly management accounting practices (Smith 2011).

- This large empirical study is a humble attempt to provide a context specific evidence in eight NZ universities, thereby extending the existing understanding of PE of academics. While some of the factors in this study are context specific to NZ, through rich information this academics-specific study adds to the existing debate about the performance management of academics.

Studies in PE have conventionally focused on instruments that can appropriately measure an individual’s performance (Kloot & Martin 2000); however, the emphasis should be on factors that enhance understanding of strategic factors that influence performance behaviours and performance (Ferris et al. 2008).
Perceptual studies in performance management traditionally gather respondents’ general perceptions about PE, this study developed an index that measures the PE’s emphasis through activities that translate into performance in a given context, thereby adding a dimension in perceptual measurement practices. The emphasis of the index was the identification of factors which can facilitate reaching conclusions on the perceptions of an academic about the focus of his/her PE.

This study addresses the aforementioned gap and adds to the PE’s body of knowledge that factors emphasised by the PE focus will influence employees’, academics in this instance, performance behaviours.

The research adds to the existing body of knowledge of performance management of academics in NZ that their PE not only emphasises procedural adherence but also the outcomes they produce.

The empirical evidence supports the notion that outcome focus in PE is influenced by the strategic emphasis on funding from governmental agencies.

Business organisations may employ multiple forms of control or a balanced form of control. This study augments the existing literature through empirical understanding that such a mixed form of controls can also be employed by not-for-profit institutions such as NZ universities to suit their strategic needs.

Organisational factors can influence performance behaviours; the need is to find a compliance versus internalisation approach (Ferris et al. 2008) that can facilitate diluting the dissention between the dynamics of strategy and employee behaviours (Simons 1995). Such an understanding will enable predicting attitudinal changes underpinned by certain conditions (Kelman 1961).

The study extends the existing understanding that the design of the PE mechanisms should take into account the focus of PE; that is, what is its emphasis or focus, since that will influence academics’ future behaviours as well as their research performance.

This study adds to the existing body of knowledge that if PE processes focus on or emphasise the outcomes produced by academics, their attitude will take the form of compliance. Furthermore, outcome focused approaches such as teaching evaluations result in self-protection behaviours.
• If an institution intends its knowledge workers to exhibit internalised behaviours, this study supports the knowledge through empirical evidence that PE processes should emphasise on core values, traditions, collaboration and shared understanding.

• An academic’s perceptions about his/her PE based on guidelines and procedures cannot be attributed to the change in the academic’s attitude towards compliance or internalisation. Likewise, an academic’s perceptions about PE’s emphasis on supervision and surveillance will not influence the academic’s attitude, and therefore may not influence performance, as argued by Tayloristic theories.

• Kelman’s (1958) framework contended that perceptions of resource control and credibility will be underpinning factors in attitudinal change towards compliance or internalisations. In contrast, this study found that the presence of both factors does not trigger attitudinal change towards either compliance or internalisation. Such results opens a door to a newer understanding that an individual, despite perceiving the influencing as credible or controller of resources, may still exhibit compliance/internalisation based behaviours. This further illuminates that having perceptions of credibility and resource control may influence individuals’ attitude but not to the extent to trigger an attitudinal change.

• The empirical evidence from this study supports the stance of theories of internalisation for compliance and internalisation to be opposite ends of a continuum (Deci & Ryan 1980; 1985; 2000; Kelman 1958; 1974), although others have argued that both external and internal motivational factors exist simultaneously (Ashford, & Dekas, 2011; Staw 1977). By supporting the stance of internalisation theories, results from this study complement the idea of a continuum through the results that there is a positive association with internalisation and perceived people focus in PE; and the probability of internalisation increases with an increase in the perceptions of a people focus in PE. The opposite is true for compliance and perceived outcome focus.

• Studies in performance management have sought for relationships between employee behaviours and their performance. This study offers richer empirical evidence to the body of literature in highlighting that internalised academics are highly likely to be high performers. The association between high performance and internalised behaviours is dependent upon academic’s service period. This
association, however, is not related to a middling performance. On the other hand, the optimum level of performance under compliance based behaviours will be a middling performance even with the longer service periods.

Research, and particularly accounting research, is overwhelmed by a positivism paradigm (Bisman 2010). There is a need for empirical management accounting studies that employ complementary approaches, provide richer understanding of issues and bridge the inter-paradigmatic divide (Modell 2010). Moreover, studies investigating attitudes and behavioural changes in organisational contexts should apply a mixed methods approach (Kelman 1974).

- In contrast to the traditionally employed mono-methods positivist approaches in performance management investigations, this study explored real issues in universities by employing a realism paradigm, which facilitated employing a mixed methods approach. The results and findings support the theoretical stance that mixed methods studies provide a richer understanding of the investigated issues.

- To achieve the study’s objective of influence of PE focus on academics’ attitude, this study adds a dichotomous approach that can measure an individual’s reason to perform a certain behaviour. Based on the respondents’ personal replies to the researcher, this study supports Zavala’s (1965) argument that respondents are resistant to being forced into a choice. Nonetheless, the dichotomous approach facilitated the construction if a 7-point internalisation scale; by providing an alternative mechanism, this study adds to existing measurement approaches to the intentions or reasons to behave.

5.4 Summary of implications for policy and practice

The philosophy of research driven educational institutions is dominated by US based institutions and academics. Clarivate Analytics (2016) publishes a yearly list of highly cited academics across 22 subject categories. Statistics published for 2016 highlight that among 3,265 highly cited researchers in the last decade, there were 1,529 US-based academics and there were only 10 researchers\(^71\) from NZ (including 1 from the University of Otago), while two of these are not associated with a NZ university. NZ universities are nonetheless subjected

\(^{71}\) Among these 10 highly cited researchers, two researchers have associations with Auckland DHB and Landcare Research.
to the same performance measurement paradigm, let alone the funding and other research sponsorship limitations. NZ universities focus on government funding through the PBRF, which has consequently flipped the operating paradigm. Contrary to the aforementioned objectives of a university as a social institution and to attract more funding from the government, the focus seemed to have shifted from consensus-style management (Turk 2004) to a conventional manufacturing business-styled definition of performance (Parker 2011), which is undermining collegiality and creativity (Kligyte & Barrie 2014; Schulz 2013). This resultantly has influenced the way performance of schools, divisions, faculties, departments and academics is being evaluated.

Performance evaluation is a forward-looking tool. It provides energy to the light that shows organisational future direction, since without the PE information the organisation does not know how to move forward with the least hindrances. PE in academia likewise has been heavily criticised by vocal academics. Despite vocal opposition by many academics, the reality is that these mechanisms are not going away in the near future. It is therefore vital for universities’ leadership to contextualise and customise according to the needs of academia because the existing PE measures do not even truly follow a business organisation model, for example, teaching performance neglect in PE and promotion.

An institution is a lengthened shadow of the leadership (Emerson 1884) and leadership style has been shown to significantly influence management control design and practices (Abernethy, Bouwens & Van Lent 2010). Although with the existing model, academia might provide another K272 of publications, the question from the future generation, however, would be – what academia has contributed in the generation of knowledge. Nonetheless, every publication is published with the claims of contribution. Although academia may have produced more publications after the implementation of the NPM paradigm, the reality is that the most widely employed academic theoretical constructs in almost every discipline did not emerge after the implementation of the NPM philosophy. The existing performance paradigm therefore puts the key responsibility on university leadership to create knowledge for the future or to create a mass of publications, which have been argued to be superfluous in nature. The creation of knowledge comes from creativity and creativity thrives with internalised efforts rather than coercive evaluative mechanisms and environment. Where there is fight for survival,

72 K2 is the second highest mountain in the world considered as the most difficult to climb by mountaineers.
the emphases shift towards short-term objectives. The implementation of compliance based mechanisms may have been brought in with the intention of increasing obedience\textsuperscript{73} among academics; these, however, failed to create obedience and rather forced the academics towards compliance. Among academics, these compliance based evaluation measures are resulting in lower performance, creating cynicism and keeping them from going an extra mile.

The emphasis, therefore, should be on employing and customising measures that enhance the credibility of the performance management systems at NZ universities, since internalisation, as an attitudinal response, is directly related to an academic’s performance. The development and design of future performance management systems is reliant upon the question to the policy makers in academia and their intentions – do they intend to increase compliance rates among academics or do they intend to increase their performance. Indeed, universities seeking high performance will eventuate in PE mechanisms that foster internalisation, while other universities may follow a compliance oriented model to sustain hierarchical power through compliance.

5.5 **Limitations suggesting future research**

This study added to the knowledge of PE practices for academics in NZ universities, as highlighted by the previous sections. However, like any other business research, this research cannot said to be without limitations. As mentioned earlier, this study focused on all the universities in NZ providing generalisable results. Due to the differences and significance of the context specific factors, such as funding agencies and governmental influence, the interpretation of these results in other contexts should also take into account the respective contextual factors. While defining academics, this study did not take into account the service or administrative responsibilities of academics and also excluded those academics with administrative responsibilities. This may have limited this study by not taking into account the views of academics with managerial positions. Nonetheless, this limitation opens the door for future researchers to explore perceptions about performance management practices from the administrative and managerial perspective among universities. The future research may want to further investigate the relationship between academics’ internalised behaviours with

\textsuperscript{73} It is worth noting that compliance in this study should not be confused with the idea of obedience. Based on French and Raven’s (1959) work on social power, Koslowsky, Schwarzwald and Ashuri (2001) explain that influence measures embedded in the credibility and expertise of the influencing agent are the ‘soft tactics’ for adhering to guidelines (obedience); on the other hand, when power mechanism utilise external means of social structure such as hierarchy (position) are described as ‘harsh tactics’ (compliance).
organisational citizenship behaviours. While the study found predominantly outcome based approaches, the future research may want to explore compliance based approaches’ relation to academics’ attrition rates. Since PE is studied in various disciplines, the results of this study, like any other research, may have alternative explanations. This research also opens the door to understand the influence of PE mechanisms on PhD supervisor and student relationships; likewise it may further investigate the influence of supervisor’s PE on student’s performance.

5.6 Conclusion

The purpose of business research is to influence the status-quo among the organisational practices and suggest better ways to enhance organisational performance. However, business research among various disciplines has adhered and kept its research in confined shelves – resulting in divergence among the terminologies and concepts among the disciplines, although theories often mentioned might be referring to similar constructs and ideas. Performance management literature, spread among the disciplines of management accounting, human resource management, management as well as personnel psychology, is not an exception from divergence in ideas. It can be observed, when reading one discipline’s studies, for example, management accounting, that such studies either ignore the existence of studies outside the discipline or the authors may be unaware of such studies. This obviously has resulted in a failure of literature convergence on organisational issues and terminologies, giving divergent ideas to organisations to solve their issues; organisations, on the other hand, not concerned about the discipline originating the study, when reading contrasting studies may ignore the academic literature and employ their own methods for organisational issues rather than looking towards academia.

Such disarray and divergence in ideas is believed to be the consequence of studies’ conscious effort to deliver and produce the ‘contribution’ of the study – so that it can become publishable material further changing the definition of performance. The idea of a ‘contribution’ in research has taken a firm hold in academia. Since the implementation of the NPM ideology, the ‘productive’ academic is considered as the one with higher ranked publications. To investigate this ‘productive’ paradigm, this study investigated perceptions of academics about their PE, and attracted responses from more than 1,000 academics among eight NZ universities. This large participation enabled the study to provide the insight that the PE of academics in NZ universities takes a multi-foci approach, that is, procedures, people and outcomes. This study further contended that perceived PE focus will influence an academic’s
performance behaviours, which was found to be the case as academics’ performance behaviours taken the form of compliance with an outcome focus and taken the form of internalisation with a people focus. The results and findings suggest that PE focus can enable an institution to foresee employee behaviours; that is, they will perform just enough to meet the performance standards under an outcome focus or go an extra mile under a people focused PE. Results of this study support the idea that high performance is the consequence of internalised performance behaviours. This study therefore suggests that policy makers in academia focus on PE measures that enhance internalised performance because existing compliance based behaviours are negatively influencing academics’ performance. In essence the focus need to be on eight purposes to measure performance (see Figure 2.2) and essentially on improving future performance.
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Appendix A: List of participating universities

1. Auckland University of Technology
2. Lincoln University
3. Massey University
4. The Auckland University
5. University of Canterbury
6. University of Otago
7. University of Waikato
8. Victoria University of Wellington

Appendix B: Study participants’ details

<table>
<thead>
<tr>
<th>Academics’ Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30 years</td>
<td>25</td>
<td>3.0</td>
</tr>
<tr>
<td>31-40 years</td>
<td>154</td>
<td>18.5</td>
</tr>
<tr>
<td>41-50 years</td>
<td>227</td>
<td>27.3</td>
</tr>
<tr>
<td>51-60 years</td>
<td>254</td>
<td>30.6</td>
</tr>
<tr>
<td>More than 60 years</td>
<td>138</td>
<td>16.6</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>33</td>
<td>4.0</td>
</tr>
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<td>Total</td>
<td>831</td>
<td>100.0</td>
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<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Frequency</th>
<th>Percent</th>
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<tr>
<td>Asian</td>
<td>37</td>
<td>4.5</td>
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<tr>
<td>Indian</td>
<td>12</td>
<td>1.5</td>
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<tr>
<td>Non-NZ European</td>
<td>154</td>
<td>18.6</td>
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<tr>
<td>NZ European</td>
<td>454</td>
<td>55.0</td>
</tr>
<tr>
<td>NZ Māori</td>
<td>24</td>
<td>2.9</td>
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<td>Other Ethnicity</td>
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<td>7.4</td>
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<tr>
<td>Pacific Islands</td>
<td>6</td>
<td>.7</td>
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<tr>
<td>Prefer not to say</td>
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<tr>
<th>Academics’ Service Length</th>
<th>Frequency</th>
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<tr>
<td>Less than 1 year</td>
<td>18</td>
<td>2.2</td>
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<tr>
<td>1-5 years</td>
<td>122</td>
<td>14.6</td>
</tr>
<tr>
<td>6-10 years</td>
<td>171</td>
<td>20.5</td>
</tr>
<tr>
<td>11-20 years</td>
<td>259</td>
<td>31.1</td>
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<tr>
<td>More than 20 years</td>
<td>264</td>
<td>31.7</td>
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<td>Total</td>
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### Academics’ Current Job Length

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<td>43</td>
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<tr>
<td>1-5 years</td>
<td>181</td>
</tr>
<tr>
<td>6-10 years</td>
<td>196</td>
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<td>11-20 years</td>
<td>247</td>
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<tr>
<td>More than 20 years</td>
<td>164</td>
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<td>Total</td>
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### Academics’ Eligible for Promotion

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<th>Frequency</th>
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<tr>
<td>No</td>
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<tr>
<td>Yes</td>
<td>783</td>
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<td>Total</td>
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### Academics in a Subject Category

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<th>Frequency</th>
<th>Percent</th>
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<tr>
<td>Biological Sciences</td>
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<tr>
<td>Business and Economics</td>
<td>143</td>
<td>15.2</td>
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<tr>
<td>Chemistry, Physics and Earth Sciences</td>
<td>55</td>
<td>5.8</td>
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<tr>
<td>Creative and Performing Arts</td>
<td>29</td>
<td>3.1</td>
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<tr>
<td>Education</td>
<td>63</td>
<td>6.7</td>
</tr>
<tr>
<td>Engineering, Technology and Architecture</td>
<td>73</td>
<td>7.7</td>
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<tr>
<td>Health Sciences</td>
<td>231</td>
<td>24.5</td>
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<tr>
<td>Humanities and Law</td>
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<td>10.0</td>
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<tr>
<td>Māori and Indigenous Development</td>
<td>7</td>
<td>.7</td>
</tr>
<tr>
<td>Mathematics, Statistics, Information and Computer Sciences</td>
<td>51</td>
<td>5.4</td>
</tr>
<tr>
<td>Psychology, Social Sciences, Cultural and Social Studies</td>
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<td>11.3</td>
</tr>
<tr>
<td>Other</td>
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<td>.4</td>
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### Academics’ turnover in the respondent’s department

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<tr>
<td>Less than 10%</td>
<td>253</td>
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<tr>
<td>10-25%</td>
<td>285</td>
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<tr>
<td>25-50%</td>
<td>121</td>
</tr>
<tr>
<td>More than 50%</td>
<td>28</td>
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<tr>
<td>Don’t know</td>
<td>144</td>
</tr>
<tr>
<td>Total</td>
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### Appendix C: Survey items’ relation to RQs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Indicator / variable</th>
<th>Research question</th>
<th>Scale</th>
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<tr>
<td><strong>Perceived procedural focus</strong></td>
<td>Guidelines for effective Teaching</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Guidelines for Course Evaluations</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Guidelines for Paper Assessment</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Guidelines for availability to students</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Adherence to Research Ethics</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Adherence to PBRF guidelines</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Perceived shared focus</strong></td>
<td>Core Values for Teaching/Research</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Norms for Teaching/Research</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Shared Objectives of Teaching/Research</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Collaboration in Teaching/Research</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Alignment with focused areas of Teaching/Research</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td><strong>Perceived outcome focus</strong></td>
<td>Teaching Evaluation Score</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Class Pass Rates</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Number of Post-Grad students</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Number of Publications</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>External Grants</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Citation Index</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Perceived behavioural focus</strong></td>
<td>Observation by Superiors</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Class Visits</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Students’ views on Teaching</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Superiors’ comments on Research</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Peers’ comments on Research</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Computer use observation</td>
<td>RQ 1; RQ 2</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>PE perceived as resource control process</strong></td>
<td>Rewards control</td>
<td>RQ 2</td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td>Funding control</td>
<td>RQ 2</td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td>Benefits control</td>
<td>RQ 2</td>
<td>Nominal</td>
</tr>
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<tr>
<td><strong>PE perceived as a credible process</strong></td>
<td>Trustworthy</td>
<td>RQ 2</td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td>Expertness</td>
<td>RQ 2</td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td>Honesty</td>
<td>RQ 2</td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compliance</strong></td>
<td>To win rewards</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td>External demands</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td>Adherence to rules</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
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<tr>
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<td>Perceived norm</td>
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<tr>
<td>Perception</td>
<td>RQ</td>
<td>Scale</td>
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<tr>
<td>-------------------------------------------------</td>
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<td>-----------</td>
<td></td>
</tr>
<tr>
<td>Perceptions of surveillance</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td>To seek approval</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td>To avoid disapproval</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td><strong>Internalisation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coherence with personal values</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td>To be inherently pleasing (self-satisfying)</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td>Regardless of rewards (Outward looking,</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td>organisational vs personal goals)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To solve a problem</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td>Excitement (given by activity)</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
<td></td>
</tr>
<tr>
<td>Pleasure from challenge (adrenaline junky)</td>
<td>RQ 2; RQ3</td>
<td>Nominal</td>
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## Appendix D: Adapted and original items

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<tr>
<th>Instrument Statement</th>
<th>Item adapted from</th>
<th>Original item</th>
</tr>
</thead>
<tbody>
<tr>
<td>I will not be rewarded if I do not meet Performance Evaluation standards.</td>
<td>Swasy 1979 (p. 344)</td>
<td>If I do not comply with A, I will not be rewarded</td>
</tr>
<tr>
<td>I will not receive university research grants if I do not meet Performance Evaluation standards.</td>
<td>Swasy 1979 (p. 344)</td>
<td>If I do not do as A suggests I will not receive good things from A</td>
</tr>
<tr>
<td>I can face consequences (e.g., demotion, reduction in salary or loss of fringe benefits) if I do not meet Performance Evaluation standards</td>
<td>Swasy 1979 (p. 344)</td>
<td>If I do not do as A suggests I will not receive good things from A</td>
</tr>
<tr>
<td>I trust my Performance Evaluation process to make decisions that improve my future performance.</td>
<td>Cook, &amp; Wall 1980 (p. 50)</td>
<td>Management can be trusted to make sensible decisions for the firm’s future.</td>
</tr>
<tr>
<td>My Performance Evaluation process is a completely honest and sincere attempt to improve my future performance.</td>
<td>Zheng, Hall, Dugan, Kidd, &amp; Levine, 2002 (p. 190); Cook, &amp; Wall 1980 (p. 50)</td>
<td>You think the people at XXX are completely honest. Management at my firm is sincere in its attempts to meet the workers’ point of view.</td>
</tr>
<tr>
<td>The people who conduct my Performance Evaluation process are experts at what they do.</td>
<td>Zheng, Hall, Dugan, Kidd, &amp; Levine, 2002 (p. 190)</td>
<td>As far as you know, the people at XXX are very good at what they do.</td>
</tr>
<tr>
<td>Because if I perform the expected research and publication activities, I shall be rewarded (e.g., salary increase or promotion).</td>
<td>Swasy 1979 (p. 344)</td>
<td>If I do not comply with A, I will not be rewarded</td>
</tr>
<tr>
<td>Because I often feel pressured by my department to produce publications even if I’m not interested.</td>
<td>Santor, Messervey &amp; Kusumakar (2000)</td>
<td>I often feel pressured to do things I wouldn’t normally do.</td>
</tr>
<tr>
<td>Because publishing research is part of my job.</td>
<td>Ryan &amp; Connell (1989)</td>
<td>Because that’s the rule</td>
</tr>
<tr>
<td>Because it is the norm for academics to publish.</td>
<td>Ryan &amp; Connell (1989)</td>
<td>Because that’s what I’m supposed to do</td>
</tr>
<tr>
<td>Because my HOD/superiors and university authorities are watchful of what I publish.</td>
<td>Hayamizu (1997)</td>
<td>Because my parents monitor me</td>
</tr>
<tr>
<td>Because I seek approval from my peers, HOD/superiors or university authorities for my research and publications.</td>
<td>Ryan &amp; Connell (1989)</td>
<td>Because I want the teacher to think I’m a good student</td>
</tr>
<tr>
<td>Because I’ll get in trouble if I don’t publish.</td>
<td>Ryan &amp; Connell (1989)</td>
<td>Because I’ll get in trouble if I don’t</td>
</tr>
<tr>
<td>Because my department’s contribution to research is important to me.</td>
<td>O’Reilly &amp; Chatman (1986)</td>
<td>What this organization stands for is important to me.</td>
</tr>
<tr>
<td>Because it’s fulfilling.</td>
<td>Ryan &amp; Connell (1989)</td>
<td>Because I enjoy it; Because it’s fun</td>
</tr>
</tbody>
</table>
Appendix E: The survey Instrument

Performance Evaluation’s Influence on Academics’ Performance Survey

Thank you for agreeing to complete this survey. **Your responses are completely anonymous.** The survey will not require any personal information such as your title, department or contact details. There will be no way for the identification of any respondent through the data they provide. The data will be securely stored and will only be accessible to the research team.

**Section 1**

**Q1. You identify your gender as:**
- Female
- Gender diverse
- Male
- Prefer not to say

**Q2. You are affiliated with the Division/School/Department of:**
- Biological Sciences
- Business and Economics
- Chemistry, Physics and Earth Sciences
- Creative and Performing Arts
- Education
- Engineering, Technology and Architecture
- Health Sciences
- Humanities and Law
- Māori and Indigenous Development
- Mathematics, Statistics, Information and Computer Sciences
- Psychology, Social Sciences, Cultural and Social Studies
- Other (Please specify) _____________________________
Please note that Q3 and Q4 require mandatory responses.

Q3. Are you employed on a Research Only OR Teaching Only position?

Please select 'No' if you are responsible for both research and teaching.

*Please note that the term 'Teaching' encompasses any and all activities involved in teaching, demonstrating and instructing students in a given academic discipline.

- Yes (go to Q3a)
- No (go to Q4)

  a. Please indicate your position (Please select one of the following if you answered 'Yes' to Q3).

     - Research Only
     - Teaching Only

If you have identified yourself on a 'Research Only' or 'Teaching Only' position then in the following sections please ignore statements, which do not apply to you.

Q4. Are you eligible for future promotions?

- Yes
- No

Section 2:

The statements in this section are related to your views about how your performance is evaluated.

Please note: The term Performance Evaluation in this questionnaire is synonymous with Performance Appraisal, Performance Review, Performance and Developmental Planning Process or any other such term which designates the process where an academic in a university is evaluated for his/her achievements after a prescribed period of time.

The following statements relate to the extent to which your individual performance evaluation measures you on your teaching and/or research performance requirements. Please indicate your level of agreement or disagreement by selecting the appropriate option.
Q5. My Performance Evaluation strongly focuses on the extent to which:

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I adhere to my university guidelines for effective teaching.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I adhere to my university guidelines for teaching and course</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>evaluations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I adhere to my university guidelines for assessment practices</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>in the papers I teach.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I adhere to my university guidelines for availability to</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>students (e.g. consultation hours).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I adhere to my university’s research ethics guidelines.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I adhere to my university’s PBRF related guidelines.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I align my research with my university’s research strategy.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q6. Would you please like to comment about your choices?
The following statements relate to the extent to which your individual performance evaluation measures you on your teaching and/or research performance requirements. Please indicate your level of agreement or disagreement by selecting the appropriate option.

Q7. My Performance Evaluation strongly focuses on the extent to which:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I display my university’s core values for effective teaching.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I display my university’s core values for research.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I demonstrate my university’s norms during my teaching activities.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I demonstrate my university’s norms in my publication activities.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My departmental colleagues and I share common objectives to enhance students’ learning experience.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My departmental colleagues and I share common research objectives.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I collaborate with my colleagues in my teaching activities.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I collaborate with my colleagues in my research activities.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I align my teaching with my department’s focused areas of teaching.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I align my research with my department’s focused areas of research.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q8. Would you please like to comment about your choices?

The following statements relate to the degree to which your individual performance evaluation measures you on your teaching and/or research performance requirements. Please indicate your level of agreement or disagreement by selecting the appropriate option.
Q9. My Performance Evaluation strongly focuses on:

<table>
<thead>
<tr>
<th>Category</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The score I receive on teaching evaluations from my students.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>The class pass rates in the papers I teach.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>The number of postgraduate students I supervise.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>My number of publications.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>External grant funding I receive.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>The number of times my published work is cited by others (citation index)</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
</tbody>
</table>

Q10. My Performance Evaluation strongly focuses on:

<table>
<thead>
<tr>
<th>Category</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation of my teaching activities by my HOD/superiors.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>Visits to classes by my HOD/superiors (or designate).</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>Student representatives’ views on my teaching.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>My HOD’s/superiors’ reading of and commenting on my research.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>My departmental colleagues reading of and commenting on my research.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>My computer use and online activity.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
</tbody>
</table>

Q11. Would you please like to comment about your choices?
The following paired statements express opinions about the credibility of performance evaluation of an academic and the relation to academic’s rewards. From the following, which one of the statements you view to be the closest OR best captures your personal opinion.

If you view statement 1 to be the closest or best captures your opinion, then please select option 1, or if you view statement 2 to be the closest, then select option 2.

Q12. How do you view your Performance Evaluation process?
   1. I trust my Performance Evaluation process to make decisions that improve my future performance.

Q13. 
   1. My Performance Evaluation process is a completely honest and sincere attempt to improve my future performance.
   2. My Performance Evaluation is a mere bureaucratic process to fill in documents.

Q14. 
   1. The people who conduct my Performance Evaluation process have no clue about academic activities.
   2. The people who conduct my Performance Evaluation process are experts at what they do.

Q15. 
   1. My rewards (e.g. salary increase, promotion) are not related to my Performance Evaluation process.
   2. I will not be rewarded if I do not meet Performance Evaluation standards.

Q16. 
   1. I will not receive university research grants if I do not meet Performance Evaluation standards.
   2. I can still receive university research grants even if I fail to achieve Performance Evaluation standards.

Q17. 
   1. I can face consequences (e.g. demotion, reduction in salary or loss of fringe benefits) if I do not meet Performance Evaluation standards,
   2. I can still enjoy all the benefits given to me by my university even if I fail to achieve Performance Evaluation standards.

Q18. Would you please like to comment about your choices?
From the following, which one of the statements you view to be the closest to your personal opinion OR best captures your reason for publishing.

Q19. You publish research papers/articles:
   - 1. Because publishing research is part of my job.
   - 2. Because it’s fulfilling.

Q20.
   - 1. Because it is the norm for academics to publish.
   - 2. Because my research interests have personal value for me.

Q21.
   - 1. Because I want to feel the excitement of my research being published.
   - 2. Because if I perform the expected research and publication activities, I shall be rewarded (e.g. salary increase or promotion).

Q22.
   - 1. Because I often feel pressured by my department to produce publications even if I’m not interested.
   - 2. Because my department’s contribution to research is important to me.

Q23.
   - 1. Because I get pleasure from difficult research situations.
   - 2. Because I seek approval from my peers, HOD/superiors or university authorities for my research and publications.

Q24.
   - 1. Because I’ll get in trouble if I don’t publish.
   - 2. Because I relish the challenge associated with doing research.

Q25.
   - 1. Because I care about the impact my research can have in changing the existing practices.
   - 2. Because my HOD/superiors and university authorities are watchful of what I publish.

Q26. Would you please like to comment about your choices?
From the following, which one of the statements you view to be the closest to your personal opinion OR best captures your reason for teaching.

Q27. **You teach papers/classes:**
- 1. Because teaching is part of my job.
- 2. Because it’s fulfilling.

Q28.
- 1. Because my teaching interests have personal value for me.
- 2. Because it is the norm for academics to teach.

Q29.
- 1. Because if I perform the expected teaching activities, I shall be rewarded (e.g. salary increase or promotion).
- 2. Because I feel excited while I am teaching.

Q30.
- 1. Because I often feel pressured by my department to teach classes even if I’m not interested.
- 2. Because my department’s contribution to teaching is important to me.

Q31.
- 1. Because I seek approval from my peers, HOD/superiors or university authorities for my teaching activities.
- 2. Because I get pleasure from difficult teaching scenarios.

Q32.
- 1. Because I relish the challenge associated with teaching.
- 2. Because I’ll get in trouble if I don’t teach.

Q33.
- 1. Because my HOD/superiors and university authorities are watchful of my teaching activities through student evaluation scores, class representative system etc.
- 2. Because I care about the impact of my teaching activities on learning of my students.

Q34. **Would you please like to comment about your choices?**

**Section 4**

Please note these responses are highly important for evaluating any potential non-response bias in this study. Please remember, your responses are completely anonymous.
Q35. Length of service as an academic.
- Less than 1 year
- 1-5 years
- 6-10 years
- 11-20 years
- More than 20 years

Q36. Length of service at current university.
- Less than 1 year
- 1-5 years
- 6-10 years
- 11-20 years
- More than 20 years

Q37. Please state the approximate academic staff turnover in your department in the last 3 years?
- Less than 10%
- 10-25%
- 25-50%
- More than 50%
- Don't know

Q38. What was your PBRF score in the previous (2012) PBRF round?
- A
- B
- C
- R
- C(NE)
- R (NE)
- Do not have a previous score
- Prefer not to say
Q39. What is your age?
- 20-30 years
- 31-40 years
- 41-50 years
- 51-60 years
- More than 60 years
- Prefer not to say

Q40. Ethnicity
- Asian
- Indian
- Non-NZ European
- NZ European
- NZ Māori
- Other Ethnicity
- Pacific Islands
- Prefer not to say

We wholeheartedly thank you for your time and effort in completing this survey. Please return this survey to: Ehtasham Ghauri, Department of Accountancy and Finance, University of Otago, 60 Clyde Street, Dunedin 9054.
Appendix F: The information sheet

Performance Evaluation’s Influence on Academics’ Performance Behaviours
INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request.

What is the aim of the project?
The purpose of this research is to explore the way performance evaluations of academics are used at New Zealand universities, and in particular the behavioural effects they engender among New Zealand academics. This research is undertaken in partial fulfilment of the requirements for the degree of PhD at the University of Otago.

What type of participants is being sought?
We seek academic staff working at a New Zealand university. Whether you are a full-time or part-time staff member or whether you have a contract that is research-only, teaching-only, or a combination of the two, we would greatly appreciate your help in completing this survey. Please note that your participation in this study is entirely voluntary and you are free to withdraw from this study at any time.

What will participants be asked to do?
Should you agree to take part in this project, you will be asked questions about your individual performance evaluation. Your responses are completely anonymous. The survey will not require any personal information such as your title, department or contact details. There will be no way for the identification of any respondent through the data they provide. All data will be securely stored and will only be accessible to the research team. Evidence from pilot tests show that the survey requires approximately 10-12 minutes of your time. Please note that no incentive or payment is offered for your participation, and please know that you can withdraw from the survey whenever you wish to do so without any disadvantage to yourself of any kind.

What data or information will be collected and what use will be made of it?
The results from this study may feature in journals that are read by academics and policy makers in New Zealand to help them better understand academics’ performance evaluation and its influence on academics’ behaviours. The results may also be verbally presented to groups of academics and practitioners at a departmental seminar or conference. If you wish to receive
a copy of the results from this study, you may contact the researcher(s) at the email addresses
given below.

The data collected will be securely stored in such a way that only the researchers involved in
this project will be able to gain access to it. Data obtained as a result of the research will be
kept in a locked cabinet, and computers used will be password protected. The data will be
retained for at least 5 years in secure storage.

You may withdraw from participation in the project at any time and without any disadvantage
to yourself of any kind.

If you have any questions about our project, either now or in the future, please feel free to
contact:

Professor Ralph Adler,
Department of Accountancy and Finance,
University Telephone Number:- +64 3 479 8453,
Email Address: ralph.adler@otago.ac.nz

Dr Carolyn Stringer,
Department of Accountancy and Finance,
University Telephone Number:- +64 3 479 5299,
Email Address: carolyn.stringer@otago.ac.nz

Ehtasham Ghauri,
PhD Candidate,
Department of Accountancy and Finance,
Email Address: ehtasham.ghauri@otago.ac.nz

The study has been approved by the Ethics Committee of Department of Accountancy and
Finance, as well as the University of Otago Ethics Committee (ref: D16/248). However, if you
have any concerns about the ethical conduct of the research you may contact the University of
Otago Human Ethics Committee through the Human Ethics Committee Administrator (ph 03
479-8256). Any issues you raise will be treated in confidence and investigated, and you will be
informed of the outcome.
Appendix G: Email invitation to the participants

Email Subject: How do you view your Performance Evaluation?

Dear Name

We are writing to invite you to share your views about your Performance Evaluation. Unlike other organisational employees, performance evaluation of academics is unique because you, as an academic, are not only expected to meet benchmarks of your institution, but you are also expected to serve the wider interests of society. This study will provide us better understanding of how your performance evaluation influences your performance. This research is undertaken in partial fulfilment of the requirements for the degree of PhD at the University of Otago.

In order to have a representative sample within the (Institution/Division/college/School name), your participation in this study is immensely appreciated. Whether you are a full-time or part-time staff member or whether you have a contract that is research-only, teaching-only, or a combination of the two, we would greatly appreciate your help in completing this survey. Should you agree to take part in this project, you will be asked questions about your performance evaluation. Your responses are completely anonymous. The survey will not require any personal information such as your title, department or contact details. There will be no way for the identification of any respondent through the data they provide. All data will be securely stored and will only be accessible to the research team. Evidence from pilot tests show that the survey requires approximately 10-12 minutes of your time. If you prefer to complete a paper-based version of the survey, a copy is also attached. The printed copy can be mailed back to the research team on the address given below. The complete contact information of the research team can also be found in the attached information sheet.

We thank you for your time in considering our request to complete this survey.

Please click here to begin "Performance Evaluation's Influence on Academics' Performance" Survey OR Copy and paste this link into your browser

https://otago.au1.qualtrics.com/SE/?SID=SV_bJJSQ4Lj6fK0fK1

If you have any questions about our project, either now or in the future, please feel free to contact the research team.

Thanking you,

Ehtasham Ghauri,

PhD candidate,

Department of Accountancy and Finance,

Commerce Building, 60 Clyde Street, University of Otago, Dunedin 9054

This study has been approved by the Department stated above. However, if you have any concerns about the ethical conduct of the research you may contact the University of Otago Human Ethics Committee through the Human Ethics Committee Administrator (ph 03 479-8256). Any issues you raise will be treated in confidence and investigated, and you will be informed of the outcome.
Appendix H: Response calculations

<table>
<thead>
<tr>
<th>Response Stats</th>
<th>UoA</th>
<th>UoB</th>
<th>UoC</th>
<th>UoD</th>
<th>UoE</th>
<th>UoF</th>
<th>UoG</th>
<th>UoH</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) No. of academics</td>
<td>737</td>
<td>220</td>
<td>1,114</td>
<td>2,061</td>
<td>635</td>
<td>1,687</td>
<td>739</td>
<td>444</td>
<td>7,637</td>
</tr>
<tr>
<td>(2) Opt out + undeliverable</td>
<td>9</td>
<td>0</td>
<td>10</td>
<td>40</td>
<td>22</td>
<td>39</td>
<td>16</td>
<td>13</td>
<td>149</td>
</tr>
<tr>
<td>(3) First round (opt out + undeliverable + out of office)</td>
<td>202</td>
<td>37</td>
<td>37</td>
<td>209</td>
<td>85</td>
<td>682</td>
<td>112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Response total after roll out</td>
<td>57</td>
<td>28</td>
<td>112</td>
<td>176</td>
<td>45</td>
<td>187</td>
<td>59</td>
<td>33</td>
<td>697</td>
</tr>
<tr>
<td>(5) Response rate after roll out [4/(1-3)]%</td>
<td>7.73</td>
<td>12.73</td>
<td>12.28</td>
<td>9.50</td>
<td>7.53</td>
<td>11.87</td>
<td>9.02</td>
<td>8.11</td>
<td>10.02</td>
</tr>
<tr>
<td>(6) First Reminder sent</td>
<td>728</td>
<td>220</td>
<td>1,104</td>
<td>2,021</td>
<td>613</td>
<td>1,648</td>
<td>723</td>
<td>431</td>
<td>7,488</td>
</tr>
<tr>
<td>(7) First Reminder opt outs</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>(8) First Reminder opt outs + out of office</td>
<td>15</td>
<td>32</td>
<td>43</td>
<td>123</td>
<td>30</td>
<td>25</td>
<td>34</td>
<td>25</td>
<td>327</td>
</tr>
<tr>
<td>(9) Response total after first reminder</td>
<td>77</td>
<td>34</td>
<td>126</td>
<td>201</td>
<td>56</td>
<td>211</td>
<td>86</td>
<td>41</td>
<td>832</td>
</tr>
<tr>
<td>(10) Response rate after first reminder [9/(6-8)]%</td>
<td>10.80</td>
<td>18.09</td>
<td>11.88</td>
<td>10.59</td>
<td>9.61</td>
<td>13.00</td>
<td>12.48</td>
<td>10.10</td>
<td>11.62</td>
</tr>
<tr>
<td>(11) Second reminder sent (6 - 7)</td>
<td>726</td>
<td>219</td>
<td>1,104</td>
<td>2,020</td>
<td>612</td>
<td>1,647</td>
<td>721</td>
<td>431</td>
<td>7,481</td>
</tr>
<tr>
<td>(12) Second Reminder opt outs</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>(13) Second Reminder opt outs + out of office</td>
<td>26</td>
<td>27</td>
<td>54</td>
<td>140</td>
<td>24</td>
<td>29</td>
<td>33</td>
<td>34</td>
<td>367</td>
</tr>
<tr>
<td>(14) Remaining sampling frame [1- (2 + 13)]</td>
<td>702</td>
<td>193</td>
<td>1,050</td>
<td>1,881</td>
<td>589</td>
<td>1,619</td>
<td>690</td>
<td>397</td>
<td>7,121</td>
</tr>
<tr>
<td>(15) Exclusions (2 + 13)</td>
<td>35</td>
<td>27</td>
<td>64</td>
<td>180</td>
<td>46</td>
<td>68</td>
<td>49</td>
<td>47</td>
<td>516</td>
</tr>
<tr>
<td>(16) Final sampling frame (14 – 15)</td>
<td>667</td>
<td>166</td>
<td>986</td>
<td>1,701</td>
<td>543</td>
<td>1,551</td>
<td>641</td>
<td>350</td>
<td>6,605</td>
</tr>
<tr>
<td>(17) Total Responses</td>
<td>91</td>
<td>41</td>
<td>166</td>
<td>253</td>
<td>79</td>
<td>279</td>
<td>117</td>
<td>51</td>
<td>1,083</td>
</tr>
<tr>
<td>(18) Response Rate (17/16 %)</td>
<td>13.64</td>
<td>24.70</td>
<td>16.84</td>
<td>14.87</td>
<td>14.55</td>
<td>17.99</td>
<td>18.25</td>
<td>14.57</td>
<td>16.40</td>
</tr>
</tbody>
</table>
## Appendix J: Principal axis factoring (Teaching)

Summary of PAF results for teaching items for perceived PE foci (N = 752)

<table>
<thead>
<tr>
<th>Item</th>
<th>Rotated Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Performance Evaluation strongly focuses on the extent to which:</td>
<td></td>
</tr>
<tr>
<td>I adhere to my university guidelines for effective teaching.</td>
<td>.876</td>
</tr>
<tr>
<td>I adhere to my university guidelines for teaching and course evaluations.</td>
<td>.838</td>
</tr>
<tr>
<td>I adhere to my university guidelines for assessment practices in the papers I teach.</td>
<td>.937</td>
</tr>
<tr>
<td>I adhere to my university guidelines for availability to students (e.g. consultation hours).</td>
<td>.788</td>
</tr>
<tr>
<td>My departmental colleagues and I share common objectives to enhance students’ learning experience.</td>
<td>-.012</td>
</tr>
<tr>
<td>I collaborate with my colleagues in my teaching activities.</td>
<td>-.020</td>
</tr>
<tr>
<td>I align my teaching with my department's focused areas of teaching.</td>
<td>.122</td>
</tr>
<tr>
<td>The score I receive on teaching evaluations from my students.</td>
<td>.055</td>
</tr>
<tr>
<td>The class pass rates in the papers I teach.</td>
<td>-.009</td>
</tr>
<tr>
<td>The number of postgraduate students I supervise.</td>
<td>-.123</td>
</tr>
<tr>
<td>Observation of my teaching activities by my HOD/superiors.</td>
<td>-.023</td>
</tr>
<tr>
<td>Visits to classes by my HOD/superiors (or designate).</td>
<td>-.002</td>
</tr>
<tr>
<td>Student representatives’ views on my teaching.</td>
<td>.068</td>
</tr>
<tr>
<td><strong>Eigenvalues</strong></td>
<td><strong>5.09</strong></td>
</tr>
<tr>
<td><strong>% of variance</strong></td>
<td><strong>39.18</strong></td>
</tr>
<tr>
<td><strong>Alpha</strong></td>
<td><strong>0.92</strong></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.
Performance evaluation, social influence and academics’ performance behaviours
## Appendix K: Principal axis factoring (Research)

Summary of PAF results for research items for perceived PE foci (N = 752)

<table>
<thead>
<tr>
<th>Item</th>
<th>Rotated Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Performance Evaluation strongly focuses on the extent to which:</td>
<td></td>
</tr>
<tr>
<td>I adhere to my university’s PBRF related guidelines.</td>
<td>Procedural Focus 0.597  People Focus 0.074  Outcome Focus 0.127  Behavioural Focus 0.058</td>
</tr>
<tr>
<td>I align my research with my university’s research strategy.</td>
<td>Procedural Focus 0.709  People Focus 0.010  Outcome Focus 0.032  Behavioural Focus 0.054</td>
</tr>
<tr>
<td>I display my university’s core values for research.</td>
<td>Procedural Focus 0.643  People Focus 0.074  Outcome Focus 0.038  Behavioural Focus 0.037</td>
</tr>
<tr>
<td>I demonstrate my university’s norms in my publication activities.</td>
<td>Procedural Focus 0.662  People Focus 0.051  Outcome Focus 0.019  Behavioural Focus 0.004</td>
</tr>
<tr>
<td>My departmental colleagues and I share common research objectives.</td>
<td>Procedural Focus 0.002  People Focus 0.797  Outcome Focus 0.014  Behavioural Focus 0.030</td>
</tr>
<tr>
<td>I collaborate with my colleagues in my research activities.</td>
<td>Procedural Focus -0.126  People Focus 0.833  Outcome Focus 0.051  Behavioural Focus 0.021</td>
</tr>
<tr>
<td>I align my research with my department’s focused areas of research.</td>
<td>Procedural Focus 0.232  People Focus 0.562  Outcome Focus 0.033  Behavioural Focus 0.083</td>
</tr>
<tr>
<td>My number of publications.</td>
<td>Procedural Focus 0.084  People Focus 0.019  Outcome Focus 0.725  Behavioural Focus 0.118</td>
</tr>
<tr>
<td>External grant funding I receive.</td>
<td>Procedural Focus -0.034  People Focus 0.055  Outcome Focus 0.841  Behavioural Focus 0.040</td>
</tr>
<tr>
<td>The number of times my published work is cited by others (citation index).</td>
<td>Procedural Focus 0.017  People Focus 0.023  Outcome Focus 0.484  Behavioural Focus 0.265</td>
</tr>
<tr>
<td>My HOD’s/superiors’ reading of and commenting on my research.</td>
<td>Procedural Focus 0.030  People Focus 0.025  Outcome Focus 0.066  Behavioural Focus 0.706</td>
</tr>
<tr>
<td>My departmental colleagues reading of and commenting on my research.</td>
<td>Procedural Focus -0.083  People Focus 0.011  Outcome Focus 0.019  Behavioural Focus 0.986</td>
</tr>
<tr>
<td>My computer use and online activity.</td>
<td>Procedural Focus 0.091  People Focus 0.003  Outcome Focus -0.130  Behavioural Focus 0.492</td>
</tr>
</tbody>
</table>
| **Eigenvalues**                                                     | 4.15  1.41  1.14  1.91 **
| **% of variance**                                                   | 31.91  10.81  8.81  14.68 **
| **Alpha**                                                           | 0.75  0.79  0.71  0.76 **

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.
Performance evaluation, social influence and academics' performance behaviours