Empowerment in a New Zealand Organisation : Structure and Outcomes

A Thesis submitted in partial fulfilment of the requirements for the Degree of Master of Arts in Psychology

At Massey University Albany
Auckland New Zealand

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2003

Abstract

This research examined the structure and behavioural outcomes of psychological empowerment among a group of non-managerial employees, in a New Zealand workplace. Participants worked for a large, complex, multi-site manufacturing organisation, and responded to a self-report questionnaire measuring dimensions of empowerment, affective commitment, and work performance. The main aims of the study were to investigate a four factor structure of empowerment, and the associated "gestalt" of empowerment formed by the combination of these factors. The remainder of the study was devoted to investigating the extent to which the empowerment construct predicted desirable work-related outcomes, such as affective commitment and work performance.

Confirmatory factor analyses were conducted to test the four factor empowerment structure, and the contributions of the factors to the overall empowerment construct, while a structural path model was used to test the predictive value of the empowerment construct.

Results of the analyses demonstrated that the four factor structure, combining to form an overall empowerment construct, is a meaningful way to describe empowerment in the New Zealand organisation. Results of the structural path model supported the utility of empowerment in predicting the outcomes variables of affective commitment and work performance in the New Zealand organisation.

Future research directions were discussed, with suggestions that researchers could profitably explore cultural dimensions specific to New Zealand, which could be implicated as factors in New Zealand employees' experience of empowerment.

Acknowledgements

This research project is the culmination of several years of work, and would not have been possible without the support of a wonderful group of people.
Firstly, I am greatly indebted to my supervisors, Dr. Stuart Carr and Dr. Steve Atkins, who not only provided their technical expertise at sometimes great inconvenience to themselves, but who managed to keep a sense of humour about the process of producing a thesis, providing me with much-needed encouragement to keep me writing.

I am very grateful for the co-operation of the employees from the participating organisation, who took the study seriously, thus making it possible for me to embark on such a large project.

I owe a huge vote of thanks to my parents, who never lost faith that I would complete this project, and who provided practical help in the form of childcare and a writer's retreat when I badly needed time out to write.

However, the two most important people in my life have made a contribution that equals mine, enabling this project to be completed. Charles and Benjamin, I could not have done this without you. Now we can have our weekends back.

Table of Contents

List of Tables and Figures

List of Appendices

Chapter 1

Literature Review

The Changing Organisational World – from Local to Global

In New Zealand, as in many other Western countries during the decade of the 1980s, structural changes to economies (precipitated as a result of declining national and corporate success), were applying severe pressure to organisations for fundamental changes in the way they functioned. *Local* changes, such as deregulation of the New Zealand economy throughout this decade, as part of the labour government's economic policies, placed large New Zealand organisations under extreme pressure to institute radical changes to ensure economic survival.

Global changes, such as the increase in global competition for the consumer spend (the term used to refer to household expenditure on goods and services) and the emergence of fast-developing competitive nations, have impacted at home on how work is done, how products and services are produced, how workers are managed, styles of industrial relations, and the nature and substance of organisational work (Perry, Davidson, & Hill, 1995). These changes forced organisations to search for new ways of exploiting the talents and skills of their workers. This search seemed to culminate in "empowerment" being seen as one of the saviour's of organisations that have to function globally.

Empowerment however requires new behavioural orientations from workers to "get the job done", and this means that workers are being expected to exert greater motivational effort than in the past. Organisations face the dilemma of how to tap into this motivation, which is presumed to release the "energy" required for the new behaviours to flourish. This dilemma has already provided a new research direction, although much of it has focused on managers within American organisations. The debate has remained distant from the experience of the "shop floor worker" (generally defined as

blue-collar, or semi-skilled to skilled trades workers), who are the group of workers where these behaviour changes are expected to take place. The debate has also remained distant from the experience of the New Zealand worker. This research seeks to address that double shortfall, by examining the psychology of empowerment among non-managerial workers in a New Zealand organisation. Specifically, the structure of psychological empowerment is explored, and the behavioural consequences of empowerment are examined, in a New Zealand shop floor context.

The Development of Empowerment in the late Twentieth Century

In the last two decades of the twentieth century, the notion of empowered employees providing the impetus for business success was readily accepted by many American organisations (Bowen & Lawler, 1992; Cascio, 1995; Quinn & Spreitzer, 1997). But, as Quinn and Spreitzer point out, despite the popular views in the business world that empowerment brings benefits to organisations, these benefits have not been well described (1997). Empirical evidence substantiating positive consequences to organisations of empowered workers is difficult to find, although in one study at least, Randolph (1995) found, in reviewing ten American organisations pursuing empowerment, that many reported improved bottom lines attributed directly to the empowerment initiatives.

The concept of empowerment over the past two decades has been consistently examined as if it were a "new" phenomenon invented by management, to which all employees will automatically subscribe (Wilkinson, 1998). However, some commentators have pointed out that empowerment is but one tactic in a long line of employee involvement initiatives designed to solve the problems inherent in the traditional forms of work organisation used in the Western world (Hollway, 1991; Wilkinson, 1998). Wilkinson argues that empowerment emerged in the management literature in its "modern form" in the 1980s (p.41), and locates empowerment within the strong enterprise culture fostered in the USA and Britain during this decade. Conger and Kanungo (1988) identify empowerment at this time in the USA and Britain with what they describe as the "root constructs of power and control" (p.472). They argue that a "power and control" view of empowerment proposes that "power" is a relational

construct within organisations, whereby certain individuals within organisations enjoy greater power over others by virtue of their control of resources. Conger and Kanungo point out that these individuals enjoy legitimised power via their formal positions (managers), or by possessing some resource that is highly valued by the organisation (for example, technical expertise). According to Conger and Kanungo, then, empowerment in this context becomes a process by which these managers or technical experts share their power, over resources, with subordinates. The sharing of power throughout the organisational population is expected to release greater creativity and commitment among employees towards solving the organisation's problems, and to improve employees' capabilities to cope with constant organisational change (Cascio, 1995; Conger & Kanungo, 1988). Organisational reasons for fostering this style of empowerment revolved around the perceived need for Western organisations to become more competitive in response to chaotic domestic and offshore markets, and to arrest the declines in productivity and profitability suffered throughout the 1970s and 1980s (Cascio, 1995; Cotton, 1993).

Other analysts (Cascio, 1995; Corsun & Enz, 1999; Cotton, 1993; Randolph, 1995) strongly advocate an empowered workforce as a source of competitive advantage for organisations. These critics argue that such a workforce provides higher quality customer service, and that this is the essential component contributing to organisational profitability. Bowen and Lawler (1992; 1995) argue that empowered workers provide an engagement with their work, and with the organisation, that is necessary to produce hard business outcomes (increased productivity and financial performance, for example). Randolph (1995) discusses the need for management to relinquish its traditional role of worker control and to adopt instead an empowering approach, arguing that this is a legitimate tactic enabling more to be achieved with less resource. His unusual study, evaluating ten American organisations from the mid-1980's to 1995, showed that those who adopted an empowering approach generally achieved better bottom line results than those who avoided this tactic.

In New Zealand, Perry et al. (1995) suggested that New Zealand managers throughout the twentieth century were slow to foster the changes required in management style and organisation structure that some American critics (Bowen & Lawler, 1992,

1995; Cascio, 1995; Randolph, 1995) argued were imperative for improved organisational functioning. Perry et al. cite survey information (Corbett, 1990; in Perry et al., 1995) to argue that New Zealand organisations had the *least* participative work cultures amongst Pacific Rim nations at the end of the twentieth century. In an analysis of another survey (Vitalis & Walker, 1991; in Perry et al., 1995) Perry et al. point out that more than half of the New Zealand senior managers interviewed from the service and manufacturing industries said that *employee development* (emphasis added) would impact the most (in a positive direction) on their organisations' productivity and quality over the coming decade. These respondents also identified "workplace reorganisation" as the best way to motivate employees to increase productivity. This limited New Zealand information available makes the point that despite managerial agreement that increased employee involvement in decision-making is a pre-requisite to increased quality and productivity, there is still a gap between what managers *said* and *how they actually managed* in practice in New Zealand organisations.

Perry et al. (1995) cite further evidence from a New Zealand 1990 manufacturing survey (Corbett, 1990; in Perry et al., 1995), that of two-thirds of manufacturing organisations surveyed, employees below middle management level neither knew about, or shared, the organisation's goals and objectives. Finally, anecdotal information from the organisation case studies discussed in Perry et al. suggests that the workplace reorganisation experience in the New Zealand context, throughout the early 1990s, had varying impacts upon the quality of working life for employees (some actual areas of improvement were better access to more skilled work for employees, a loosening of inflexible manufacturing practices towards more employee participation, and limited distribution of managerial power and decision-making authority "downwards"). However, as Perry et al. (1995) point out, these gains have been made within tightly prescribed parameters and reflect a limited version of genuine "participative management", which, based on the American experience, was used as the platform for employee empowerment.

However, the organisational psychology literature throughout the late twentieth century regards the notion of empowerment differently from the management idea that it is an external entity, concerned with the "redistribution of power and control" throughout the organisation. The psychological research focuses on the *internal motivational process* that empowerment represents within the individual. The focus of this research is based on finding ways to promote individual empowerment so that organisations and individual employees can theoretically enjoy the benefits of working in empowered ways.

The basis for the psychological approach can be found in the early work of the democratic humanists who, in the middle decades of the twentieth century, rejected scientific management and the associated problems of worker alienation (Wilkinson, 1998). These democratic humanists adopted instead a more positive view of human nature in the workplace. This view is found in, for example, McGregor's Theory Y versus Theory X, and Maslow's Hierarchy of Needs model (Wilkinson, 1998) pointing to earlier notions of empowerment, couched in the language of worker participation needs. Wilkinson points out that empowerment in this context was expected to deliver a process that enabled workers within organisations to satisfy their inherent human needs for self-determination and control.

Thus, the early psychological views focused strongly on the individual personal experience of empowerment. This is clearly evident in the work of Conger and Kanungo (1988), who originally preferred to describe empowerment in terms of an internal motivational state, specific to the individual. Conger and Kanungo proposed that the strength of this internal state relies upon enhanced feelings of self-efficacy. Bandura (1997), in his theory of self-efficacy, defined (perceived) self-efficacy as individual judgments of personal capability. Bandura extended this theory further, by explaining that self-efficacy beliefs influence individuals' choice of activities and their levels of motivation, by shaping their aspirations and their expected outcomes from effort.

Bandura argues that people have always striven to exercise control over their lives, as this provides personal and social benefits. He points out that uncertainty in important issues is disturbing, and therefore people strive to bring about significant

outcomes in their lives. Control over one's life requires the exercise of personal agency, which, according to Bandura, is dependent upon the activation of personal efficacy. He provided a theoretical argument backed up by empirical evidence for the central role of self-efficacy (defined as personal beliefs in one's abilities to successfully carry out tasks within particular contexts) in influencing human behaviour, adaptation to different circumstances, and change (Stajkovic & Luthans, 1998).

Conger and Kanungo (1988) linked enhanced self-efficacy among individual employees to the removal of structural factors perpetuating individual powerlessness. Conger and Kanungo predicted that enhanced feelings of self-efficacy occur in organisations once these structural aspects are changed (in positive, or "efficacy-enhancing" directions). Conger and Kanungo defined structural aspects as factors like the style of supervision, the reward system, and the nature of the individual's job. Furthermore, Conger and Kanungo proposed that employees need to receive efficacy-enhancing information from managerial strategies. Such strategies were defined as feedback systems, competence-based rewards, and managerial "modelling". And, in line with Bandura's (1997) work, Conger and Kanungo also proposed that employees need to receive four more *personal* sources of efficacy information about themselves in the workplace. These sources of efficacy information include for example, enactive mastery (that is, enabling employees to practise tasks to build up their mastery) and vicarious experience (enabling employees to see others performing successfully in similar roles). Such elements are proposed by Conger and Kanungo to combine with changed structural conditions to help provide an impetus for employees to feel empowered. The remaining two personal sources of efficacy information, that is, verbal persuasion (having significant others express confidence in one's capabilities) and secondly, the degree of emotional arousal individuals' experience, are also regarded as important triggers for empowerment (1988, p.474).

Despite the promotion of enhanced self-efficacy as one of the key stimuli for developing a sense of individual empowerment, the psychological literature of the late twentieth century did not pursue this line of inquiry rigorously. Stajkovic and Luthans

(1998) thought that the success of organisational empowerment strategies depended upon the strength of individual self-efficacy beliefs, but did not pursue this point further. Thomas and Velthouse (1990) acknowledged the central role played by self-efficacy in the development of individual empowerment, but considered this to be an insufficient explanation on its own. Thomas and Velthouse proposed that, in the organisational context, empowerment is identified with a particular *type* of motivational process, activated by individual cognitions about job tasks and work environments, and ultimately influenced by individuals' interpretive styles. This psychological process culminates in what Thomas and Velthouse refer to as "increased intrinsic task motivation" (p.667) among individual employees. The argument of Thomas and Velthouse extends the premise originally advanced by Conger and Kanungo (1988) in describing empowerment as an internal motivational state, that is, from a *general* state of individual motivation dependent upon activating self-efficacy beliefs, to a *specific type* of motivation based on cognitive evaluations of jobs and work environments.

Thus, the construct of empowerment has been developed throughout the late twentieth century into two distinct themes. The first theme proposes that empowerment is a delegated entity from management to employees lower in the hierarchy, enabling people to make better decisions, become more engaged with the organisation, and accept more responsibility and risk (Kanter, 1989a, b; cited in Fulop & Linstead, 1999; Randolph, 1995). This theme views empowerment as dependent upon high-involvement management practices "that push power down" the organisation. This approach offers the opportunity to measure key performance outcomes presumed to be related to empowering management practices (such as less absenteeism, lower turnover, higher product or service quality and output) but lacks the tools to measure any enduring changes in individual employees' behaviours and beliefs. The "push power down the organisation" approach also assumes that employees will feel empowered because they have a greater "say" over how their jobs are done and how problems are to be solved. Quinn and Spreitzer (1997) refer to this as the "mechanistic", or "top-down" (p.38) approach. Ultimately, the central goal of empowerment in this context is management defined, and is focused on improving organisational performance.

The second theme views empowerment from the personal viewpoint of the individual employee, regarding it as an internal motivational state precipitated by the strength of self-efficacy beliefs, the cognitions individuals have about their jobs and their work environments, all mediated by individual interpretative styles. These psychological processes eventually culminate in the development of a type of motivation, referred to by this literature stream as empowerment. Quinn and Spreitzer (1997) refer to this as the "organic", or "bottom-up" approach (p.38).

So, as Quinn and Spreitzer (1997) point out, the successful implementation of empowerment demands a complex integration of both perspectives. Quinn and Spreitzer argue that the main reason Western organisations have failed to gain demonstrable traction from empowerment is their inability (or unwillingness) to provide the organisational contexts enabling individual employees to psychologically empower themselves. This is a much more complex prescription than the mechanistic method of empowerment advocated by management scholars. It suggests psychological roots to feelings of empowerment, and draws in the notion of individual choice; that is, Quinn and Spreitzer contend that employees are free to *choose* to become empowered within organisations. Their "organic" perspective rests on these suppositions. This current research study pursues the "organic" line of inquiry; that is, it investigates the psychological structure of individual empowerment, and examines its behavioural consequences in a New Zealand context among a non-managerial group of employees.

New Organisations need new Worker Behaviours based on Empowerment

Patterson (2001) discusses research into new worker behaviours thought to be essential for new organisations' survival. Older notions of appropriate behaviours expected from employees originated from classical theories such as Scientific Management, developed by Taylor (1947; cited in Boxall, 1995). This focused on control of the labour process, and of the productive activities of workers. Appropriate worker behaviours for this time focused on enabling management control of the individual worker's tasks, via the compliance of the worker, in order to meet the outcome of consistent productive output (Hollway, 1991).

However, Taylorism has not been the only approach identifying desirable worker behaviours. Stajkovic and Luthans (1998) argue that the process of identifying new worker behaviours, and how to foster them, had been underway since the 1960s. Patterson (2001) points out that notions of employees as sources of ideas and creativity, rather than just pairs of hands, had been around since the late 1970s. These 1970s views of the value of employees' contributions to organisational life were used as the basis for more research into the characteristics and behaviours required from employees if organisations were to succeed in the new global environment (Patterson, 2001). Worker behaviours previously valued and rewarded (conscientiousness, loyalty and stability) proved to be negatively associated with organisational success in the new competitive situations (Schmidt & Hunter, 1998; cited in Patterson, 2001). Attention focused on how to foster different sets of behaviours already identified in earlier behavioural and social cognitive research, and predicted to be more strongly associated with organisational success and employee performance in changing environments (Stajkovic & Luthans, 1998). These key behaviours were operationalised as specific personal characteristics of employees, such as their levels of self-efficacy, feelings of empowerment and (affective) commitment (to the organisation), resiliency and adaptability to change, degree of personal self-management and the ability (and willingness) to engage in continuous learning (Bandura, 1997; Bowen & Lawler, 1992; Cascio, 1995; Randolph, 1995).

These ideas of fostering new worker behaviours underpinned by a sense of empowerment, thus ensuring organisational success, are liberally sprinkled throughout the management and organisational psychology literatures of the late twentieth century (Cascio, 1995; Hall, Batley, Elkin, Geare, Johnston, Jones, Selsky & Sibbald, 1999; Meyer & Allen, 1997; Patterson, 2001; Perry et al., 1995; Spreitzer & Quinn, 1996; Stajkovic & Luthans, 1998). There is a clear sense that employees are to bear the brunt of the behavioural changes required, to enable the "new organisations" to succeed. Scholars have since continued to focus on identifying *specific* behaviours (emphasis added) that are required of *individual* workers in order for organisations to become (and remain) competitive. So, according to Cascio (1995), workers in our new organisations must learn to do more with less, continuously improve their interpersonal skills, be

prepared for constant change, and demonstrate an ability to work with a diverse range of people (p.931). These new skills call for precipitating new behaviours that, according to Aronson, Bunker and Delisle (1991; in Curtis & Stricker, 1991) require substantial individual *internal* change (emphasis added) that is stimulated by the internal motivational processes of individuals. It is this internal motivational process, they suggest, that hints at the need for individual psychological empowerment within the organisational context. Thus, individual empowerment appears in the literature again as the driver of "new" worker behaviours thought to be critical for organisational success in the global business environment.

Quinn and Spreitzer's (1997) research on the characteristics of empowered American middle managers concluded that people who believed, and felt themselves to be empowered, were significantly different from disempowered people. In their study of a large American manufacturing organisation undergoing significant change (Quinn & Spreitzer, 1997), empowered managers saw themselves as more effective in their work, and were evaluated as more effective by their colleagues. These managers were also able to provide innovative solutions to problems, and engage in transformational leadership and change. Quinn and Spreitzer argue that if organisations want people who are more effective and innovative, then psychological empowerment is worth the effort.

Measuring Empowerment

Empowerment has traditionally been measured in the management literature by examining the outcomes of participative management programs. Satisfactory outcomes for the organisation, such as perceived better customer service, faster service error "recovery" (quicker mistake fixing) and employees indicating that they feel better about their jobs, have been attributed to employee empowerment. For example, Bowen and Lawler (1992; 1995) and Randolph (1995) cite examples of American organisations who have embarked on the "journey to empowerment" (Randolph, 1995; p.19) using a mechanistic approach. Their examples provide anecdotal evidence that structural changes made by the organisations surveyed (such as increased sharing of sensitive information, and breaking down hierarchical barriers by using self-managing teams) eventually resulted in greater performance effort by employees, regarded as "evidence"

that empowerment has taken root in the organisation (Randolph, 1995). Randolph (1995) also cites a few examples demonstrating the success of empowerment in fostering continuous improvement (for example, one organisation achieved a 30 percent reduction in equipment installation time in six months), but neglects to provide evidence that *individual employees* adopted different "mind-sets" towards themselves and their roles in the organisation (Quinn & Spreitzer, 1997).

Developing further the work completed in the management literature, organisational scholars focused on building theoretical models to explain the empowerment process within *individual* workers. These models aimed to provide a way of measuring changes within individuals "mind-sets", attempting to provide an explanation of the psychological experience of empowerment. Organisational scholars commented that it was necessary to understand this aspect of the empowerment process if durable (desirable) behaviour change was to be fostered in organisations (Spreitzer, 1995; Spreitzer & Quinn, 1996; Thomas & Velthouse, 1990). To this end, Thomas and Velthouse (1990) provided the first and most comprehensive *cognitive* model of empowerment, seeking to define the construct in terms that relate it more directly to the individual's experience. Thomas and Velthouse proposed that changes in specific cognitive variables occur for individuals in the workplace, and that these variables determine the motivational state of the individual worker. Thomas and Velthouse (1990) labelled this motivational state *"intrinsic task motivation"* (p.668), using this in their model as the preferred operational definition of empowerment (see Figure 1.1 Appendix A for a depiction of the Cognitive Model of Empowerment).

Intrinsic Task Motivation – the "Engine" of Empowerment

Thomas and Velthouse (1990) used the cognitive model to explain that intrinsic task motivation (empowerment) relies heavily upon the activation of individual self-efficacy, via a set of four "task" assessments made by individuals in relation to their actual work tasks. Thomas and Velthouse operationalised these four task assessments as *impact* (the degree to which one's behaviour will produce intended effects in one's environment); and *self-efficacy*, relabelled as *competence* (the extent to which an

individual feels they can perform their task activities proficiently when they try). The remaining variables, *meaningfulness* (the value an individual ascribes to the work task), and *choice* (an individual's perception of self as the locus of causality for their own behaviour) completed this part of the model. Thus, Thomas and Velthouse proposed that *individual* empowerment is contingent upon (positive) changes in four key work task assessments.

Ultimately, the model offered by Thomas and Velthouse (1990) as an explanation of the process of individual empowerment added a new dimension to the literature describing the empowerment process. Their cognitive model provided a platform for later scholars to formulate empirical measures designed to specifically measure the strength of the four task assessments as indicators of (individual) empowerment.

Developing a Measure of Empowerment

A leading figure in the development of an empirical measure of individual psychological empowerment in the workplace was Spreitzer (1995). She undertook the task of developing a theoretically derived measure of empowerment, basing this work upon the cognitive model proposed by Thomas and Velthouse (1990), but also referring to earlier work completed by Conger and Kanungo (1988).

Spreitzer (1995) focused first on developing and validating a measure of individual psychological empowerment in the workplace. To achieve this, she proposed that the four task assessments (drawn from Thomas & Velthouse's (1990) Cognitive Model of Empowerment) be relabelled as "dimensions" of empowerment (p.1444). Spreitzer argued that the *strength* of these task assessments (or cognitions) is the manifestation of increased intrinsic motivation, and, further, that the four dimensions combine additively to form an overall "gestalt" of psychological empowerment.

A key premise advanced by Spreitzer is that the four dimensions reflect an employee's active, rather than passive, orientation to their work role. Also, by maintaining a focus on individual cognitions, Spreitzer set a firm direction for the study of empowerment from a "non-management practice" perspective, attempting to understand the psychological

processes that lead to individual feelings of empowerment. This approach has merit as it aims to help managers understand that empowerment is a phenomenon that people *choose*, rather than one imposed upon them "because managers ask them to be empowered". Various scholars have fallen into this trap, advocating "empowerment by management decree" (Bowen & Lawler, 1995). Finally, Spreitzer pointed out that an understanding of, and an ability to measure psychological empowerment at the individual employee level, would provide another perspective on how to foster empowerment within organisations.

To ground her work in the "real business world", Spreitzer (1995) formulated a 12-item Empowerment scale, with questions designed to assess the perceived strength of each of the four individual work task assessments (re-labelled by Spreitzer as "dimensions" of empowerment). This empowerment scale used a seven-point Likert format, ranging from Strongly Agree to Strongly Disagree, typically asking questions like "The work I do is very important to me" (assessing the dimension of "meaning"), and "My impact on what happens in my department is large" (assessing the dimension of "impact"; see Appendix B for the full text of each item used in the scale). Spreitzer used two samples; the first, managerial participants drawn from a large American industrial organisation, and the second, managerial and non-managerial participants drawn from an American insurance organisation. The total usable data set across both organisations consisted of 514 participant responses.

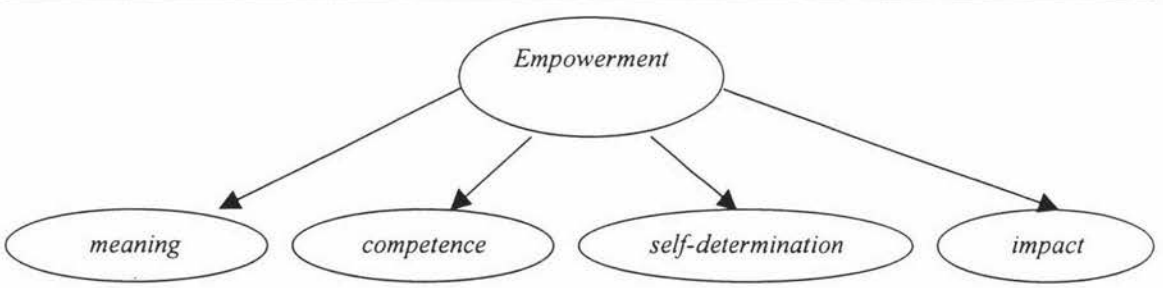
A Four-Factor Model of Empowerment

The overall goal of Spreitzer's (1995) study was to test two hypotheses; first, that empowerment consisted of four "factors" (or dimensions; previously identified as four cognitions or task assessments in Thomas and Velthouse's (1990) Cognitive Model of Empowerment; see Figure 1.1, Appendix B) and second, that these four factors provide an additive effect, combining to form an overall "gestalt" of individual psychological empowerment. In concert with these two goals, Spreitzer also sought to establish the reliability and validity of her 12-item empowerment scale.

As part of the four-factor research, Spreitzer (1995) extended her analysis to include an investigation of a cluster of predicted antecedents to, and consequences of, empowerment. Previous research (Spreitzer, 1995) suggested that two specific personality traits (self-esteem and locus of control) are related to individuals' perceptions of empowerment because they shape how people see themselves in their work environments. Additionally, Spreitzer included aspects of the work context as antecedents to empowerment. These included factors such as information about the mission of the organisation, and access to information about the performance of the work unit.

Finally, Spreitzer's study made provision for collecting data from the participating organisations at two points in time, in order to assess the stability of the proposed four-factor structure. Using a combination of exploratory and confirmatory factor analyses, she then tested the degree to which each of the four empowerment dimensions were independent factors, and the degree to which these dimensions contributed to an overall empowerment "gestalt" (see Figure 2.1 for a depiction of the proposed Four-Factor Model of Empowerment).

Figure 2.1
The Four-Factor Model of Empowerment



Source: Spreitzer (1995)

The culmination of Spreitzer's research was the use of structural equations modelling to examine the predicted antecedents and consequences of the four-factor model of psychological empowerment.

The Empowerment Model in the New Zealand Context

One of the concerns of this investigation of empowerment is the lack of New Zealand research and applications. Despite the sweeping changes to New Zealand organisations as a result of the global upheaval in Western business over the past two decades, employee empowerment in New Zealand organisations has received little research attention. A possible reason for the omission of empowerment studies in New Zealand organisations could be due to the fact that empowerment has been perceived (by New Zealand managers) as an "American" concept that has been slow to permeate the consciousness of non-American nations (Hofstede, 2001). Hofstede comments that there has been an over-reliance on "American-made" (p.12) management theories that are expected to apply to *all* countries, despite differences from America in societal conditions and the mind-set of the local populations. He advocates "locally valid" (p.12) theories of management and organisation, in which various elements, but in particular culturally specific elements, are recognised.

Hofstede's (2001) comments have implications for the study of empowerment in the New Zealand context. That is, there may be specific *cultural factors* also influencing New Zealand employees' perceptions of "how empowered" they feel within their organisations, compared to their American counterparts. These cultural factors are significant influencers on peoples' behaviour, as Javidan and House (2001) outline in the Project GLOBE study (Javidan & House, 2001; p.1). This study, consisting of one hundred and fifty researchers who have been collecting data from eighteen thousand "middle managers" across sixty-two countries over the past few years, found differences between (specifically) New Zealand and American managers' perceptions of assertiveness within the two cultures. That is, the data supplied by the New Zealand managers showed that they believe New Zealand society is characterised by "warm and cooperative relations and harmony", and, further, that New Zealand society has sympathy for the weak, emphasising loyalty and solidarity (p.6). On the other hand, American data showed nearly the opposite; that is, American managers believe that their society has a "can-do" attitude, and a high value is placed on competition.

The American results also showed that American managers have sympathy for the strong and "winner" (Javidan & House, 2001; pgs. 5-6). Thus, Javidan and House argue that these cultural differences in perceptions between nations' managers, have implications for how managers and employees behave in organisations, and Smith (2001) notes that whilst many human resource innovations have originated from America, it has an individualist culture, thus raising questions about the success of these innovations in cultures other than America.

The difference in managerial perceptions between American and New Zealand cultures arguably extends to concepts such as "power distance" (which is defined as the degree to which members of a society expect power to be unequally shared) (Javidan & House, 2001). Power distance represents the extent to which a community maintains inequality among its members by ranking people in terms of their power, prestige, wealth, material possessions and so forth (Javidan & House, 2001). While New Zealand and American managers' perceptions were not compared directly on the power distance dimension, a sample of the American management and organisational psychology literature, reviewed as part of this New Zealand study, shows an interesting trend in terms of the "power" language used. For example, Bowen & Lawler (1992, 1995); Cascio, (1995); Quinn & Spreitzer, (1997); Spreitzer, Kizilos & Nason, (1997), and Spreitzer, (1995), show a common thread in referring to employees as "subordinates", and managers as "superiors". This literature language implies that the power distance gap in American (probably large) organisations tends to be wide, whereas within the little New Zealand literature available, this type of language is not found (for example, Perry et al., 1995). Instead, the New Zealand example (Perry et al., 1995) tends to refer to organisation employees as "managers" and "workers", and "people", thus implying a more egalitarian view of the workplace.

It could be a reasonable proposition, then, that the differences in the literatures' language reflect different perceptions of power distance between America and New Zealand.

Cultural differences between nations, then, may have a much greater impact upon workers' experience of empowerment than the management and psychological literature has so far acknowledged. This study, therefore, seeks to understand empowerment in a New Zealand organisation, by investigating two hypotheses; first, that the four factor structure of empowerment proposed by Spreitzer (1995), holds in a New Zealand organisational context, and, second, that each of these four factors contribute to an overall construct, or "gestalt" of psychological empowerment.

Empowerment Outcomes

Both the management and psychology literatures predict behavioural and organisational outcomes from empowered behaviour (Bowen & Lawler, 1992, 1995; Cascio, 1995; Quinn & Spreitzer, 1997; Spreitzer & Quinn, 1996) These writers all discuss the value of empowerment's outcomes to the organisation and to the individual employee. Cascio (1995) ties organisational success strongly into fostering empowered employees, and Quinn and Spreitzer's (1997) American research shows that empowered managers, overall, perform more effectively in their work and in their interpersonal relationships within their organisations than unempowered people. Quinn and Spreitzer also argued that their results demonstrate that empowered people feel personally connected to their organisations, and feel capable of exerting an impact upon their organisational environment. These findings suggest that there are two key factors of interest to organisations, which are impacted by the process of empowerment. The factors can be summarised as task (or work performance), and relations; that is, interpersonal relationships, including a personal connection to the organisation. This latter outcome can be better described as organisational commitment.

Organisational Commitment

Originally included as a subset construct under the umbrella of "work commitment" (Morrow, 1993), organisational commitment has been the focus of attention in the organisational psychology literature for more than a decade. Early scholarly work investigating organisational commitment linked the *absence* of commitment to a myriad of negative outcomes, such as higher employee absenteeism and turnover, reduced work performance, theft, and job dissatisfaction (Morrow, 1993). Organisational commitment has been initially described as "employee dedication to an organisation", and, in very early research aimed at instrument development (Mowday, Steers, & Porter, 1979) was more concisely defined as "the relative *strength* of an (employee's) identification with and involvement in a particular organisation" (p.226). Mowday et al. (1979) outlined two trends in the early research into the commitment construct. According to Mowday et al., the first trend examines commitment as a behavioural construct, focusing on the manifestations of commitment. This approach viewed employees becoming committed to particular *courses* of action (for example, maintaining their employment) rather than becoming committed to an *entity* such as an organisation. The behavioural construct approach to commitment proposed that an attitude or mind-set develops as a *consequence* of an individual's action (Meyer & Allen, 1997).

The second trend in early commitment research identified by Mowday et al. (1979), views commitment as an attitude or mind-set that employees have about an *entity* such as an organisation. This attitude *leads to* behavioural consequences. Meyer and Allen (1997) point out that this approach focuses on examining antecedents and consequences of this type of commitment. The central goal of this approach is to establish causal connections between commitment and desirable organisational outcomes, such as higher employee productivity, and lower turnover and absenteeism. Much of the research, however, has focused on measuring organisational commitment.

Morrow (1993) notes that organisational commitment has received more research attention than the other forms of work commitment (that is, career and professional commitment, job involvement, and "work ethic endorsement" p.xix), and she attributes

this bias to the interest that "corporate America" (p.xvii) has had in the perceived decline of employee loyalty to their organisations. Morrow points out that American research into organisational commitment has resulted in the formation of three perspectives describing the underlying nature of the construct, and these perspectives have been labelled calculative, normative, and affective involvement with an organisation.

Affective Commitment

Meyer (1997) discusses the findings of a meta-analysis conducted by Mathieu and Zajac (1990; in Meyer, 1997) looking at the antecedents to organisational commitment. Meyer, like Morrow (1993), also defines organisational commitment in its broadest sense, that is, commitment "is a psychological state that characterises an employee's relationship with the organisation, and has implications for the decision to continue membership in the organisation" (Meyer, 1997; p.181).

The results of American correlation studies reviewed by Meyer (1997) give an overview of the development of the organisational commitment construct as a whole, and Meyer and Allen (1997) together provide a more comprehensive review of the American correlation studies investigating the development of each *dimension* of organisational commitment. Meyer and Allen's (1997) summary of the research work surrounding *affective commitment* shows that development of this dimension is influenced by three main groups of variables, which are, organisational characteristics, individual characteristics, and work experiences (p.42). However, a more important finding hinting at a role for empowerment in the development of affective commitment, is American research (Meyer & Allen, 1997) linking employees' perceptions of their own *competence* to the development of this type of commitment. Meyer and Allen (1997) report that the American research they reviewed found that affective commitment was linked to job challenge, promotion within the organisation, and the use of performance-contingent rewards (p.49). Mathieu and Zajac (1990) reported in their meta-analysis that individual perceived competence showed a large positive ($r = .630$) correlation with affective commitment across the five American studies they assessed. Meyer and Allen (1997) comment that organisations providing "competence-enhancing" (p.48) experiences for employees are more likely to be promoting affective commitment.

Meyer and Allen's (1997) research review included studies investigating the role of work experiences in the development of affective commitment. Meyer and Allen cite findings that show strong correlations between affective commitment and job challenge, degree of autonomy, and variety of skills used by employees (Colarelli, Dean & Konstans, 1987; Dunham, Grube & Castenada, 1994; Steers, 1977; in Meyer & Allen, 1997) although Mathieu and Zajac (1990) found only a small positive correlation (r = .083) between job autonomy and the development of affective commitment.

In other research discussed by Meyer and Allen (1997), they identify stronger affective commitment among employees who are "allowed" to participate in decision-making. Mathieu and Zajac (1990) refer to this as participatory leadership and report two studies that showed a moderate positive correlation (r = .386) between this leadership style and the development of affective commitment. Spreitzer's (1995) empowerment model includes a factor known as "impact", described as peoples' beliefs that they can influence their work unit, and beliefs that others listen to their ideas. This factor can be allied to the presence of participatory leadership and participation in decision-making, and the New Zealand study discusses the linkage between the "impact" factor and affective commitment. Finally, Morrow's (1993) review of the more well-established affective commitment component, examining the psychometric properties of both the Mowday et al. (1979) and Meyer and Allen (1997) affective commitment scales concluded that the affective commitment construct was independent from the other work commitment measures. Morrow recommended the use of either the Mowday et al. (1979) or Meyer and Allen (1997) instruments. The New Zealand study focuses on measuring *affective* commitment, using the Meyer and Allen (1997) scale, and proposes a third hypothesis, that empowerment predicts affective commitment.

Work Performance

More effective employee work performance is an outcome valued by organisations, because of the supposedly strong links between enhanced individual performance and improved organisation performance. However, as Benson and Lawler (2003; in Holman, Wall, Clegg, Sparrow, & Howard, 2003) point out, not enough is known yet about how *changes in individual work performance* impact on overall

organisation performance. Benson and Lawler argue that despite the large number of studies that have examined the performance effects of "employee high-involvement practices" (defined as the use of self-managing teams, problem-solving groups, profit-sharing, cross-training; p.155; arguably a beginning to the "mechanistic" approach to empowerment), there is a lack of understanding about how, and which, involvement practices affect individual attitudes and work performance.

However, Quinn and Spreitzer (1997), in a summary of results from their research into an "empowerment program" (arguably a high-involvement practice), for American middle managers in a large manufacturing organisation (Spreitzer & Quinn, 1996), conclude that their findings from this empowerment project demonstrate several benefits. For example, Quinn and Spreitzer's results showed that the managers from the program rating themselves as "empowered", were evaluated as more effective in their work by their peers, and by the people reporting to them. Also, Quinn and Spreitzer argued that their results showed that these managers were innovative and less fearful of trying new ideas, and, the managers' peers and people reporting to them shared this view. In all, Quinn and Spreitzer concluded from their (1996) results that people who rate themselves as highly empowered "provide substantial benefits to their organisations" (Quinn & Spreitzer, 1997; p.42).

Other writers have evaluated the predictors of work performance in different contexts too; for example, Becker, Billings, Eveleth and Gilbert (1996) examined the predicted link between individual work performance and "employee" commitment. Becker et al., (1996) found that employee commitment *to supervisors* was positively related to, and more strongly associated with, individual performance than was employee commitment to the organisation. Becker et al. argue that scholars undertaking work performance research need to change their focus, to investigating more direct relationships, for example, links between employee commitment to supervisors' goals and values and the impact this form of commitment has upon individual performance (p.477).

Meyer and Allen (1997) provide some support for the views of Becker et al (1996), by acknowledging that more research is required to examine which forms of commitment are related to various outcomes (such as work performance).

More clarity could be brought to this area with improved definitions of "individual work performance". Benson and Lawler (2003), and earlier, Becker et al (1996) argue that what is most important in this research is to define what *type* of work performance is under scrutiny. For example, Becker et al., (1996) focus on task-based performance, using items for supervisors to complete about employees reporting to them, such as "completed work in a timely and effective manner", and "performed high-quality work" but neglect to discuss the impact on the organisation of these behaviours. In contrast, Spreitzer and Quinn (1996) report broader impacts on the organisation of individual "empowered" behaviour. Spreitzer and Quinn contrast the differences in organisational impact of *"task-based"* performance behaviours (labelled by Spreitzer and Quinn as transactional change, that maintains the status quo), with *empowered* performance behaviours (labelled as transformational change, that reframes the status quo; these changes had the greatest impact across the organisation). Thus, Spreitzer and Quinn (1996), in generalising their results, argue that empowered work performance behaviours exert the greatest positive impact upon an organisation (Quinn & Spreitzer, 1997).

In concert with this line of reasoning, then, the New Zealand study seeks to investigate the relationship of empowerment with work performance, proposing a fourth hypothesis, that empowerment predicts work performance.

Chapter 2

Methodology

Participants

Taking part in this study was a convenience sample of non-managerial employees, drawn from a large food manufacturing organisation. These employees were taking part in an organisation survey called a "Study of Work". The participants in this study of work were the organisation's entire employee group. This group consisted of 1,800 managerial and non-managerial employees, dispersed across 21 sites nationwide. For the purposes of this study however, we were granted access to the sample of non-managerial employees only. This sub-population of the general workforce consisted of 1,669 potential respondents located across the 21 nationwide sites. From this sub-population of potential respondents, five hundred and ten usable questionnaires were returned. This return rate provided a response rate of 30.5%.

Ethical clearance for the wider study was obtained from Massey University, along with informed consent from participants. As part of this clearance, assurances of confidentiality were provided to all participants, who were also informed that all data used would be aggregated so individuals would not be identified. All respondents took part in the study under conditions of informed consent and confidentiality.

Demographically, the participant group was gender balanced, with 236 (46%) indicating they were females, and 249 (49%) indicating they were males. Twenty-five participants (5%) declined to state their gender. The participant group had a mean age of 36 years.

Participants were newer arrivals to the organisation, with modal tenure in the organisation from two to five years. This participant group accounted for 32 percent of respondents. However, the scope of participant tenure with the organisation ranged from 30 percent having worked there for less than two years, to 23 percent having worked

there for more than ten years. Overall, though, sixty-two percent of participants had worked for the organisation for five years or less.

To avoid identifying participants because of low numbers of people in some specific jobs, participants were not asked to state what their actual job was. They were asked instead to state to which organisational "job functional group" they belonged.

The job functional groups were balanced, with just under half (47%) of participants stating they came from the manufacturing function. Of these, 31 percent said they were factory production workers. Slightly more than half of the participants (53%) said they came from the clerical and service function, and, of this group, just over a third (35%) said they worked in the sales or merchandising areas. Thus, two-thirds (66%) of participants came from two distinct functional groups within the organisation; that is, factory production, and sales and merchandising.

Materials

The original "Study of Work" instrument measured a wide range of work-related constructs. These included self-management, self-efficacy, job satisfaction, perceptions of continuous learning, and perceptions of organisational culture. The present study was granted access to a subset of questions contained within the larger instrument, which measured empowerment, affective commitment, and self-reported work performance.

Empowerment

This was measured using a 12-item scale developed by Spreitzer (1995) in a study across two United States workplaces (a large industrial organisation and an insurance organisation). In her study, Spreitzer proposed a four-factor model of empowerment, which, she estimated, combined to form an overall "gestalt" of psychological empowerment. Spreitzer used a combination of exploratory and confirmatory factor analyses to test her four-factor model.

The New Zealand "Study of Work" researchers modified Spreitzer's original seven-point Likert format to a five-point scale, whilst retaining all the 12 empowerment items used in her study. The five-point Likert format was adopted to maintain consistency with all other instruments used in the New Zealand study.

Affective (Emotional) Commitment

This scale measures the emotional attachment individuals feel to their employing organisation. Employee commitment can be measured from a behavioural or an attitudinal (emotional or affective) perspective. Previous research (Meyer & Allen, 1997) established that employee commitment is a multidimensional construct, consisting of three components (affective, normative, and continuance, or calculative commitment). The three components may be measured simultaneously to provide an overall measure of employees' organisational commitment. Meyer and Allen (1997) focused upon developing scales to measure each of these three commitment components. Exploratory and confirmatory factor analyses have provided evidence that the three commitment components are distinguishable constructs, and may be measured separately.

The New Zealand study focused upon measuring the emotional, or affective, component of employee commitment. Previous research (Meyer & Allen, 1997) has suggested that employees with strong affective commitment to their organisations will be more valuable employees compared to those with weaker commitment. Also, affective commitment has been linked to work performance and motivation, constructs of interest in this study. The New Zealand study used Meyer and Allen's revised affective commitment scale, developed in the United States across a variety of organisations and occupations. The original scale consisted of eight items, measured using a seven-point Likert format. Subsequent revisions to the scale in the United States resulted in the deletion of two items, reducing the scale to six items. Three items are reverse scored in the final scale. Later reported research (Meyer & Allen, 1997) supported the reliability and validity of the six-item affective commitment scale.

The New Zealand participants in the Study of Work were asked to complete the same six-item scale using a 5-point Likert format. The same three items were reverse scored.

Work-Related Performance

The New Zealand employees' perceptions of their work performance were measured with four self-report items originally used in a larger study across the United States by Van Dyne and LePine (1998). These four self-report items were part of a seventeen-item "In-role" (required and expected employee behaviour) and "Extra-role" (positive and discretionary behaviour) global employee behaviour measure. This global measure was used by Van Dyne and LePine across several United States organisations, to assess the work performance consequences of expected, and alternatively, discretionary, employee behaviour at work. While Van Dyne and LePine's prime focus was to investigate the construct and predictive validity of the extra-role behaviour construct, they included four specific items in their original seventeen-item questionnaire targeted at measuring employee in-role work performance. Three groups of employees (supervisors, peers, and individual employees) were asked to use these four items to provide work performance ratings for themselves (self-reported), and for members of their work groups. These four items were included in the subsequent confirmatory factor analysis conducted by Van Dyne and LePine to test for construct validity. This analysis showed that in-role behaviour is empirically differentiated from extra-role behaviour, and their subsequent hierarchical regression analyses provided support for the predictive validity of extra-role behaviour in predicting variance in employee performance.

These analyses also showed that in-role behaviour, measured by the self-report performance items, provided weaker predictive validity of employee performance than ratings completed by peers and supervisors. However, in the absence of access to supervisor and peer performance ratings for the New Zealand Study of Work, the four self-report performance items were retained. These items were rewritten from the third person into the first person, and the seven-point Likert format used in the United States study was modified to a five-point format for the New Zealand study. This was done to maintain consistency with the remainder of the measures used in the New Zealand Study of Work.

Demographic Information

Four questions were used to collect demographic information on age, gender, length of tenure with the organisation, and employee functional group. The employee functional group question was more complex than the other demographic questions, with employees having the opportunity to select one out of a total of fourteen functional groups, split into two broad categories. These categories were the manufacturing function (that is, factory production, distribution and stores, and maintenance engineering), and the clerical and service function. This latter category incorporated administration, purchasing, finance and technology activities, along with human resources (including health and safety). This category also accounted for the sales, marketing and merchandising activities, and research and quality assurance.

Procedure

The survey method was chosen for data collection. This choice was made because it enabled the organisation's large number of employees to be surveyed for less time and expense than conducting individual interviews. Data were collected by means of a structured customised questionnaire, presented in two parts. The first part of the questionnaire contained a total of seventy-nine items measuring work-related constructs, and the second part contained twenty-nine questions measuring employee perceptions of the organisation's culture (see Appendix A for a sample of the questionnaire). A total of 1,800 questionnaires with accompanying information sheets explaining the rationale for the study were despatched to all the organisation's employees (managerial and non-managerial) via the organisation's internal courier system. The organisation asked participants to complete their questionnaires in company time. A stamped addressed envelope was provided to each participant so that they could return their questionnaires anonymously directly to the researcher.

The information sheets despatched to participants with the questionnaires provided written assurance of confidentiality and anonymity of responses (see Appendix A for a sample of the information sheet) to alleviate any fears that non-participation in the study could have implications for participants' future career development. Participants were advised that completion and return of the questionnaire implied that

their informed consent had been given. The study supervisor's telephone contact number was made available to participants so they
could obtain further information about the study in an anonymous manner. The organisation's human resources team was also available to answer participants' questions about the organisation's proposed use of the aggregated data collected for the Study of Work.

At the close of the study, two reports were provided to the organisation (Report One, Managerial Discussion, and Report Two, Employee Discussion) that explained and summarised the main findings from the entire Study of Work, including recommendations. These focused upon identifying site-specific issues where the organisation's human resources team could provide follow-up actions. For example, employees at three manufacturing sites consistently reported low levels of satisfaction across a range of job satisfaction facets, and one site in particular stood out for the high level of employee *dissatisfaction* with communications between employees and managers, and the low level of employee affective commitment. In another example, separate findings from the managerial data showed marked differences in perceptions between two particular regions of managerial satisfaction across a range of facets, including opportunities for continuous learning. Both reports were made available to the 21 sites nationwide, with the organisation's human resources team ensuring that all participants had access to the reports.

Data Analysis

Principal Axis Factoring (PAF) with Direct Oblimin Rotation was used to confirm the factor structures underlying all scales used in the study, and to compare results with those obtained in previous studies.

An analytical objective of the New Zealand study was to test, in the New Zealand organisational context, Spreitzer's (1995) four-factor structure of empowerment. To achieve this, Confirmatory Factor Analysis (CFA) using AMOS (a visual modelling tool) was undertaken. This analysis tested the four-factor structure of empowerment among the New Zealand dataset.

Finally, in order to investigate the consequences of empowerment in the New Zealand organisational context using the data from the present study, SEM-based path analysis was used to test the relationships among empowerment and outcomes; that is, affective commitment and work performance.

Chapter 3

Results

Data Entry and Quality Control

The raw data, collected by means of a questionnaire from 510 participants, was coded and entered first into a Microsoft Access Database table. This was done to minimise the possibility of data entry errors, due to the large number of questionnaire items (112) requiring entry (the Microsoft Access Database format is structured to enable quick identification and resolution of data entry errors). The database was then imported into a Microsoft Excel spreadsheet. Data quality was high, with every individual entry checked for missing values upon importation. Six cases were deleted, as they were afflicted with a large number (more than 10%) of missing values. After preliminary screening, the data set contained 510 participant responses that were deemed of sufficient quality to proceed with further analysis.

Exploratory Factor Analysis – Empowerment Items

Before testing Hypothesis 1 (that there are four distinct dimensions, or factors, of psychological empowerment) we undertook an exploratory factor analysis using Principal Axis Factoring (PAF) with Direct Oblimin rotation because the four empowerment factors were expected to be moderately correlated (previous research; Spreitzer, 1995). The KMO and Bartlett's test statistics were satisfactory (.765 for the KMO and significant for Bartlett's test at .000), and the resulting scree plot diagram and eigenvalues suggested four reasonably clear factors were present (3.608, 1.729, 1.624 and 1.035 for Factors 1 through 4, respectively). These four factors were estimated to account for 67 percent of the item variance. The four factors appear moderately correlated (see over for this data in Table 3.1).

Table 3.1 *Factor Score Intercorrelation Matrix*

Factor	1	2	3	4
1	1.000	-.234	.245	.365
2	-.234	1.000	-.248	-.481
3	.245	-.248	1.000	.146
4	.365	-.481	.146	1.000

Extraction method: Principal Axis factoring
Rotation Method: Oblimin with Kaiser Normalisation

The pattern matrix (see Table 3.2 for this data) following Direct Oblimin Rotation showed minimal item overlap between factors, although for Factors 2 and 3, (self-determination and competence, respectively) the weakest items showed rather disappointing readings, sharing only 19 and 23 percent of the variance (respectively) with their associated factors. Despite this, the factor solution and statistics obtained in the exploratory analysis suggested that it was reasonable to proceed to confirmatory factor analysis.

Table 3.2 *Pattern Matrix: Empowerment Exploratory Factor Analysis*

Factor	Meaning	Self determination	Competence	Impact
	1	2	3	4
Mean2	.863			
Mean1	.751			
Mean3	.671			
Self2		-.748		
Self3		-.732		
Self1		-.369		
Comp1			.747	
Comp2			.736	
Comp3			.444	
Impact3				.729
Impact1				.683
Impact2				.580

Extraction Method: Principal Axis Factoring. Rotation Method: Direct Oblimin with Kaiser Normalisation.
Note: Factor loadings below .3 have been suppressed.

Overall, respondents reported a fairly strong sense of empowerment, with the total empowerment scores showing a slightly negatively skewed distribution. The distribution of the individual subscale scores varied with "impact" showing a normal distribution, to a slight negative skew for "self-determination" and "meaning". However, a strong negative skew was apparent in the distribution of scores for "competence". This latter result raises two possibilities; the first possibility is that the competence item is actually tapping into perceptions of *self-efficacy*, with respondents reporting high levels of self-efficacy, although this has been labelled as "competence" in the subscale (Spreitzer, 1995). The second possibility is that respondents probably had difficulty in objectively evaluating their "competence" in their work situation, resulting in a default to the "agree/strongly agree" options when thinking about their levels of confidence in their skills and abilities to do their jobs. For instance, the "competence" items (for example, item 1 reads "I am confident about my ability to do my job") are close to items used to measure the strength of self-efficacy beliefs in the work domain (Stajkovic & Luthans, 1998). This latter possibility may have had the effect of inflating the overall "competence" scores, thus skewing the distribution.

Confirmatory Factor Analysis – Empowerment is a Four-Factor Structure

First order confirmatory factor analysis (CFA) was performed to test the first hypothesis, that there are four factors of empowerment. This analysis showed that each of the scale items loaded moderately or strongly onto the appropriate factor. The fit statistics for the four-factor model of empowerment show a reasonable fit with the New Zealand data (PNFI = .610, PCFI = .611, and RMSEA = .071)[a]. Thus, the results provide initial support for hypothesis one.

[a] the range of acceptable fit for the PNFI and PCFI fit statistics is .55 to .85 (Byrne, 2001). For full statistical text output refer to Table 3.3 Appendix B.

Second-Order Confirmatory Factor Analysis

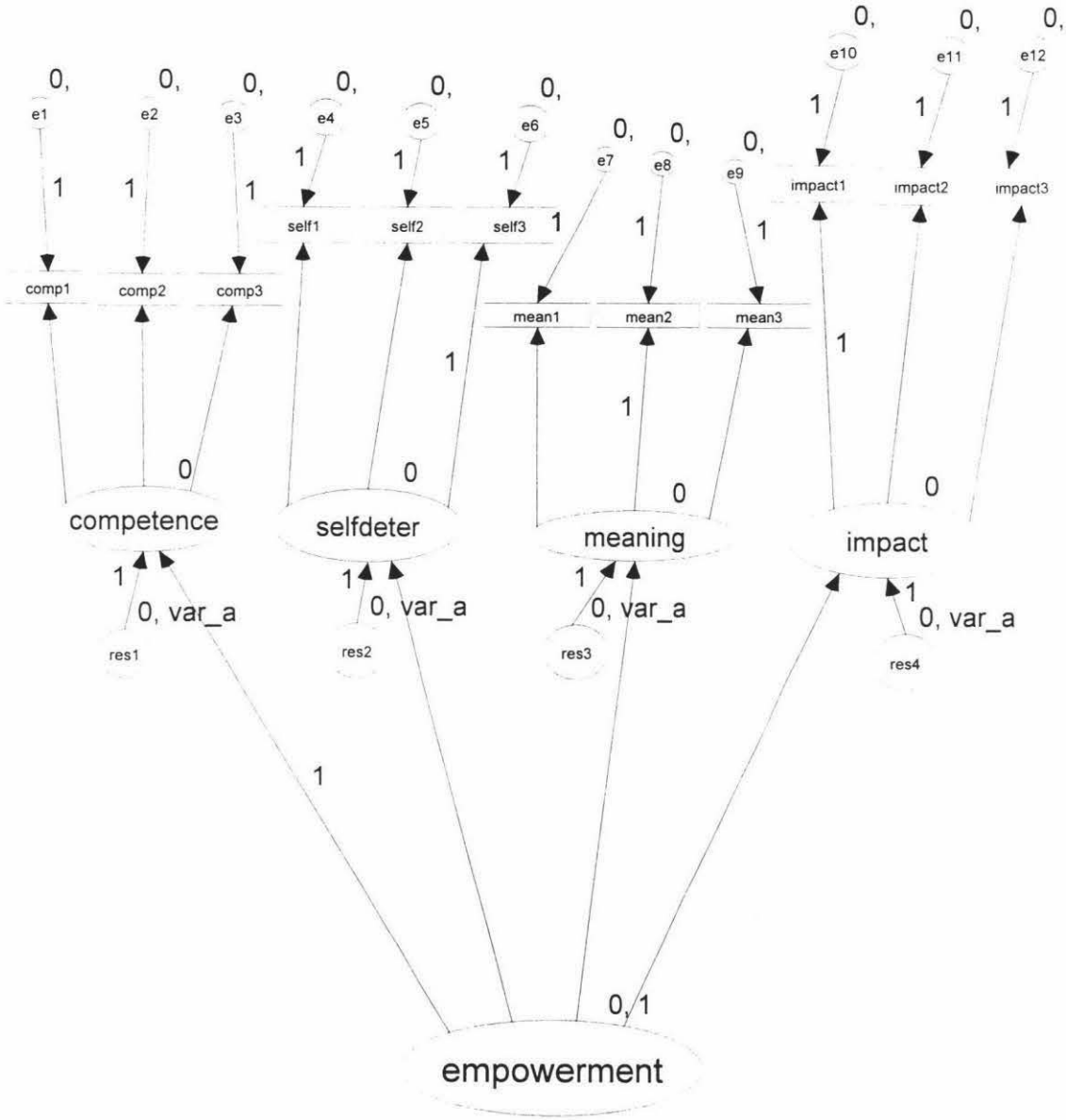
This analysis was performed to test Hypothesis 2, that the four empowerment factors combine to form an overall "gestalt" of empowerment. Initial analysis showed that the factors loaded moderately strongly onto the empowerment construct. The second-order confirmatory analysis results (PNFI = .669, PCFI = .671, RMSEA = .092)[a] shows an adequate fit for this model with the New Zealand data, although the RMSEA fit statistic is higher than expected *. Despite this, the analysis results moderately support hypothesis two. The lesser degree of support for this hypothesis could be because, in the New Zealand context, there is a second, (as yet unidentified) higher order factor that may also be accounting for some of the variance. Or, there could be additional first-order factors, presently unidentified, that, when combined with the original four factors, contribute to the "gestalt" of empowerment. Spreitzer (1995) briefly mentions the possibility that the empowerment "gestalt" may be more than a simple linear combination of just the four factors (p.1460). Alternatively, there may be one or two (presently unidentified) intermediate order factors (between the higher order and lower order factors) that better describe the New Zealand data. These issues are discussed in the next chapter.

The full CFA path diagram for the empowerment "gestalt" is presented in Figure 3.1 (over).

a *the range of acceptable fit for the PNFI and PCFI fit statistics is .55 to .85 (Byrne, 2001).*

* *the generally accepted cut-off for the RMSEA statistic for adequate model fit is <0 .10 (Byrne, 2001).*

Figure 3.1 *Empowerment Second-Order Confirmatory Factor Analysis* [b]

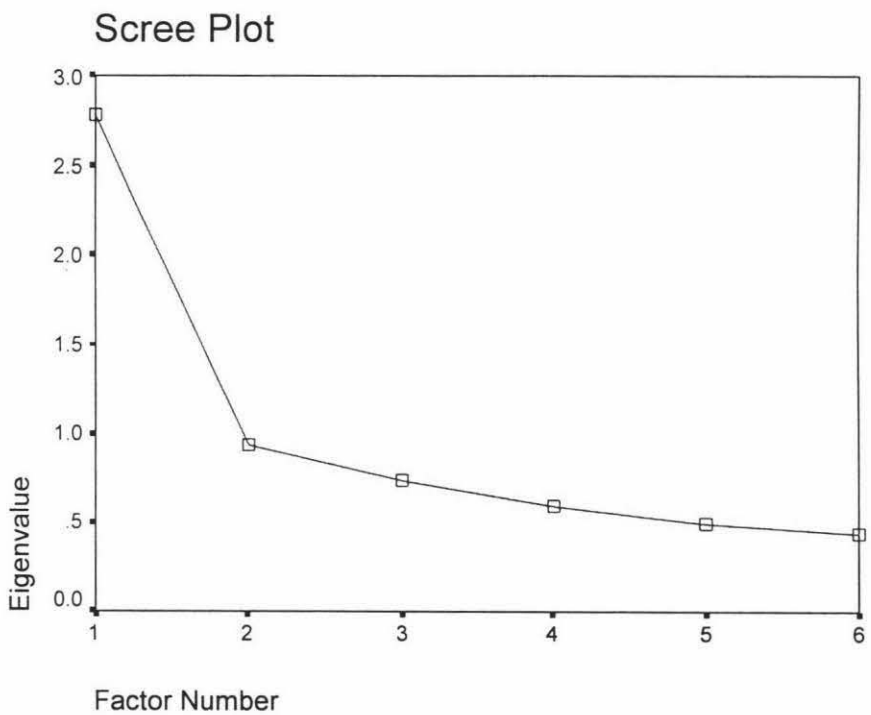


b for full statistical text output, refer to Table 3.4 Appendix B.

Exploratory Factor Analysis – Affective Commitment

Before testing Hypothesis 3, that the empowerment construct will predict affective commitment, we conducted an exploratory factor analysis using Principal Axis Factoring (PAF). The solution was not rotated. The KMO and Bartlett's test statistics were satisfactory (.806 for the KMO and significant for Bartlett's test at .000), and the resulting scree plot diagram (see Figure 3.2) with the first eigenvalue clearly standing alone (above the scree) suggesting that one clear factor was present. This factor accounted for 46 percent of the variance.

Figure 3.2 *Affective Commitment Scree Plot Diagram*



This finding is in concert with Morrow's (1993) comment in her research reviewing the affective commitment scale, that factor analysis of the attitudinal (affective) measure usually yields a single factor solution (p.88); see Table 3.5 (over) for the New Zealand Factor Matrix data.

Table 3. 5 *Factor Matrix: Affective Commitment Exploratory Factor Analysis*

Factor	**Affective commitment**
	1
Affective1	.398
Affective2	.733
Affective3	.469
Affective4	.660
Affective5	.656
Affective6	.635

Extraction Method: Principal Axis Factoring.
No rotation as only one factor extracted. Note: Factor loadings below .3 have been suppressed.

Overall, participants reported a moderate sense of commitment, with the total commitment scores showing a relatively normal distribution. In the exploratory factor analysis, all variables have moderate or high loadings on the affective commitment factor, although the result for affective 1 is rather disappointing. Meyer and Allen (1997) note that the affective commitment scale has correlated strongly with the normative commitment scale in some validation studies (p.122), suggesting that employee feelings of affective attachment to an organisation *and* their sense of obligation to the organisation (defined as normative commitment) may be quite closely aligned. Thus, these two constructs may not be as fully independent as previously reported (Meyer & Allen, 1997). Consequently, the lower result for item "affective 1" (worded as "I really feel as if this organisation's problems are my own") suggests that this particular item may have some association with the normative commitment construct.

Exploratory Factor Analysis – Work-Related Performance

Hypothesis 4 stated that the empowerment construct would predict work-related performance. Before testing this, we used PAF to conduct an exploratory factor analysis to outline the factor structure of the work performance construct. The solution was not rotated. The KMO and Bartlett's test statistics were satisfactory (.744 and significant for Bartlett's test at .000). The resulting scree plot diagram with an eigenvalue above one (2.156) suggested that a single factor was present.

This factor accounted for 54 percent of the variance. As this scale was customised for the New Zealand study, and consisted of four items only, this was deemed an adequate result to proceed to confirmatory factor analysis.

Table 3. 6 *Factor Matrix: Work Performance Exploratory Factor Analysis*

Factor	**Work Performance**
	1
Perform 1	.461
Perform 2	.717
Perform 3	.616
Perform 4	.687

Extraction Method: Principal Axis Factoring.
No rotation as only one factor extracted. Note: Factor loadings below .3 have been suppressed.

However, despite the generally high loadings for this factor, for future research, further work is needed on this scale. The distribution of performance data was negatively skewed, likely due to the self-report nature of the scale (respondents seem to have reported their perceived performance above results that would have been obtained on an objective measure, thus resulting in inflated scores). Also, the variability of the performance scores around the mean was extremely restricted, at less than one standard deviation from the mean for each item. While the statistical analyses used in this study were anticipated to be sufficiently robust in the face of this skewed data, the reader is cautioned that normality assumptions have not been fully satisfied.

Structural Path Model

Empowerment predicts affective commitment and work performance.

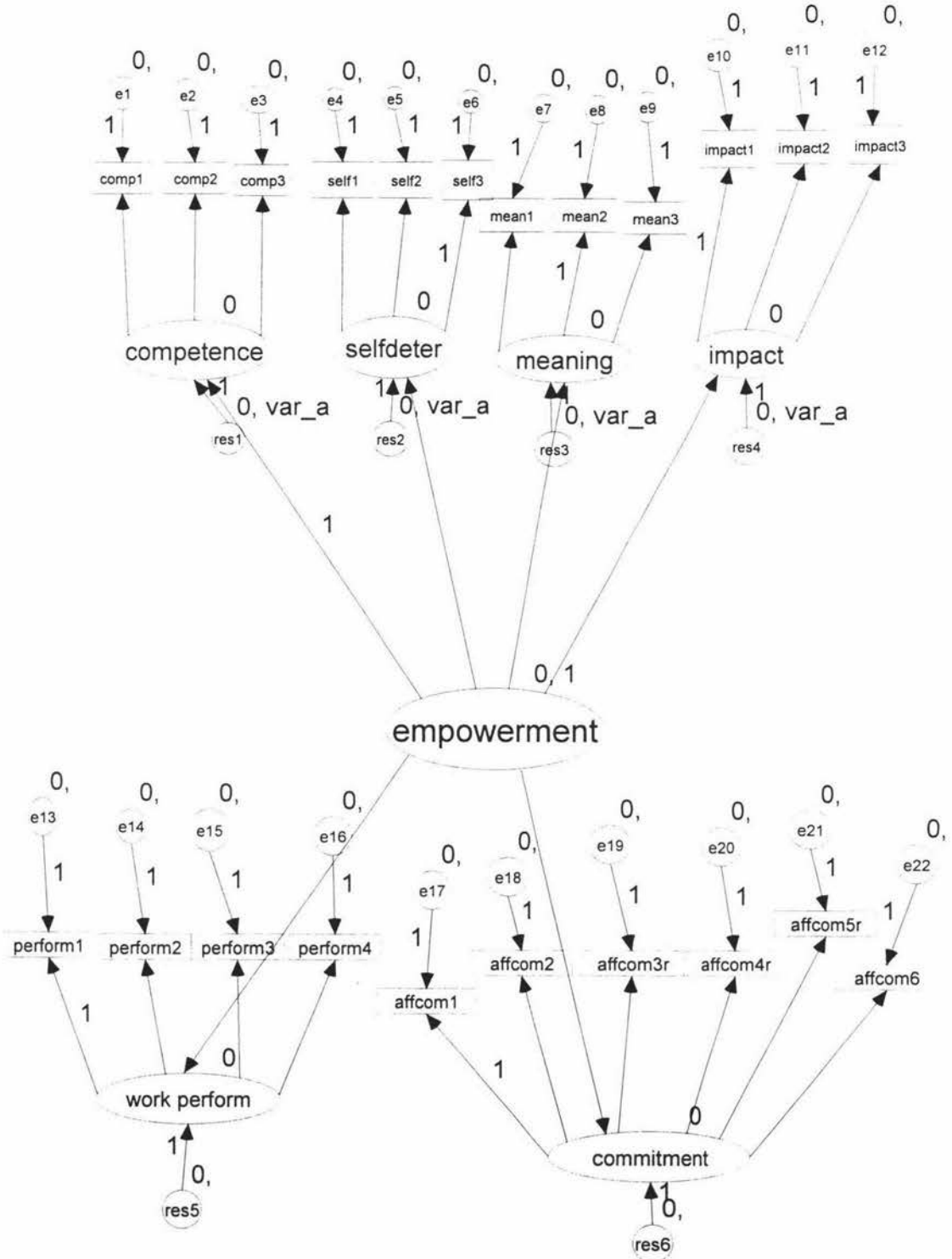
Hypotheses 3 and 4 stated that empowerment would predict affective commitment (hypothesis 3) and work performance (hypothesis 4). We formulated a structural path model to test these hypotheses. See Figure 3.3 (next page) for the full path model. The structural path model results (PNFI = 0.795, PCFI = 0.800, RMSEA = .075)[a.b] show an adequate fit to the New Zealand data, and therefore this result provides support for the plausibility of the causal paths specified among the latent variables empowerment, affective commitment and work performance.

Overall, this model showed that empowerment has a strong effect, in the New Zealand organisation, on affective commitment (standardised path estimate 0.673, 45% of variance shared; C.R*. significant) and work performance (standardised path estimate 0.565, 32% of variance shared; C.R.* significant). Thus, the model provides support for hypotheses three and four.

*(critical ratio, > ± 1.96)

a *the range of acceptable fit for the PNFI and PCFI fit statistics is .55 to .85 (Byrne, 2001).* b *for full statistical text output, refer to Table 3.7 Appendix B.*

Figure 3.3 *Structural Model of Empowerment, Affective Commitment and Work Performance*



Internal Consistency – all Scales

Prior to conducting the exploratory, confirmatory, and structural path analyses, we computed the coefficient alpha results (Cronbach Alpha) for each scale used in the study, with results presented below.

Empowerment scale and subscales.

Coefficient alpha (Cronbach Alpha) results were computed for the three-item empowerment subscales. Reliability results for the four subscales were deemed acceptable. The Cronbach Alpha result for the total 12-item empowerment scale was .78. This compares with Cronbach Alpha results of .72 and .62 obtained by Spreitzer (1995) for an industrial sample and an insurance sample in the United States. These data are presented in Table 3.8.

Table 3.8 *Coefficient Alpha (Cronbach Alpha) Analysis for Empowerment Subscales*

Subscale	**Reliability Coefficients**	
	New Zealand	**United States**
Impact	.73	N/a
Competence	.66	N/a
Self-Determination	.68	N/a
Meaning	.81*	N/a
Total Scale	.78	$.72^{a}$; $.62^{b}$

*N = 510 for all analyses except * where N = 509*
Reliability coefficient : Cronbach alpha
a industrial sample USA; b insurance sample USA

Affective Commitment scale.

The coefficient alpha (Cronbach Alpha) results for the affective commitment scale were computed, and compared with the results obtained in the United States studies conducted by Meyer and Allen (1997). These results are presented in Table 3.9 (over).

Table 3.9 *Coefficient Alpha (Cronbach Alpha) Analysis for Affective Commitment scale.*

Scale	Reliability Coefficient	
	United States	**New Zealand**
Affective Commitment	.85*	.75

N = 510 for all New Zealand analyses
** Median reliability; N not reported*
Reliability coefficient : Cronbach alpha

Work Performance scale.

Coefficient alpha results were computed for this scale (Cronbach alpha; .70). Comparison results with the United States were not available. Overall, the New Zealand Cronbach Alpha results for all scales were deemed satisfactory for their inclusion in this study.

Summary of Results

All analyses were conducted using large sample sizes (*N = 509; N = 510*). Acceptable internal consistency reliabilities (Cronbach Alpha) were established for each scale used in this study. Participants in this study reported a fairly strong sense of empowerment, and a moderate sense of affective commitment (to the organisation). Participants also signified their strong agreement with positive self-reported work performance statements (that is, they reported adequately completing job responsibilities, and meeting performance expectations) resulting in negatively skewed data for the work performance dimension.

Exploratory factor analysis (EFA), for affective commitment and work performance, supported the results from the literature surveyed. Both constructs were found to consist of one clear factor.

Exploratory and confirmatory factor analyses (EFA and CFA), of the empowerment construct supported the four factor structure of empowerment in the New Zealand data. Second-order CFA analysis found moderate support for the four empowerment factors combining to form a "gestalt" of empowerment. The structural path model depicting empowerment as a predictor of affective commitment, and work performance, supported these predictions in the New Zealand data.

Chapter 4

Discussion

The main aim of this study was to investigate the plausibility of the empowerment construct among non-managerial employees in a New Zealand organisation. American "popular" management literature has consistently focused upon empowerment as "desirable" (Quinn & Spreitzer, 1997) with writers advocating employee empowerment as the saviour of organisations that have to compete globally. Hoped-for outcomes of empowerment (for example, enhanced employee work performance, greater commitment to the organisation, and more creativity leading to improved problem solving) have been seen as vital to continuing organisational success (Cascio, 1995). However, the few rigorous empirical studies investigating empowerment have almost exclusively focused upon managerial employees, and have nearly all originated from North America (Quinn & Spreitzer, 1997; Spreitzer & Quinn, 1996). This restricted focus raises questions about the generalisability of the empowerment construct to employees who are not managers, and the "mono-cultural" focus raises questions about the applicability of the empowerment construct outside North American organisations.

Thus, two areas of investigative interest formed the basis of this New Zealand research. First, the structure of empowerment in a New Zealand organisation, among non-managerial employees, was investigated. The empirical work completed by Spreitzer (1995), in which she proposed that empowerment consists of four factors, that combine to form an overall "gestalt" of empowerment, was used as the main reference point. Second, this New Zealand study sought to rectify the mono-cultural (American) focus surrounding the somewhat limited empirical work investigating empowerment, by examining the structure and outcomes of empowerment in a New Zealand organisation.

Empowerment : Structure and Generalisability across Cultures

This New Zealand study provides evidence supporting two hypotheses regarding the structure of empowerment. First, in concert with the original empowerment research completed in America by Spreitzer (1995), the New Zealand study has also identified a four factor structure of empowerment. Confirmatory factor analysis confirms a good fit, in the New Zealand data, for a four factor model of empowerment.

Second, this study investigated the hypothesis that the four empowerment factors (or dimensions) combine to form an overall "gestalt" of empowerment. The New Zealand study provides evidence for this overarching concept of empowerment, with a second-order confirmatory factor analysis indicating a passable fit with the New Zealand data.

The just adequate fit for this part of the empowerment model is not unexpected, however. Spreitzer (1995) refers to the possibility that an empowerment gestalt may be more than a simple linear combination of just the original four factors.

The New Zealand model's just adequate fit suggests that there could be another, as yet, unidentified and untested higher order factor alongside the empowerment factor that is sharing some of the variance. The GLOBE project (Javidan & House, 2001) categorised New Zealand society (measured by middle managerial perceptions) as low on assertiveness, and implied that New Zealanders share low expectations of power distance. It is possible that these cultural factors could be combining to form another higher order factor, perhaps appropriately labelled as "egalitarian" that could better describe the New Zealand data. Alternatively, the cultural factors of power distance may themselves be acting as intermediate order factors between the lower order and higher order factors, thus diluting the overall effect of the empowerment "gestalt".

Or, a third, and intuitively appealing possibility could be that there is a *fifth* first order factor, presently unidentified, that could combine with the original four empowerment factors to provide a better fit to the New Zealand data for an overall empowerment gestalt. Such a fifth factor could be specific to the New Zealand organisational context, and this raises the possibility that such a factor may measure some type of "New Zealand cultural variable". All these possibilities could form useful directions for future research.

Despite these reservations about the just adequate fit of the empowerment gestalt model to the New Zealand data, the results provide reasonable evidence that four first order factors, combined to form an empowerment gestalt, is a meaningful way of describing empowerment in the New Zealand organisation. Thus, Spreitzer's (1995) original proposition of the structure of empowerment, tested across two American organisations, also holds in a New Zealand organisation.

Another underlying motivation for this study was to provide original New Zealand empowerment research. As Hofstede (2001) points out, American generated management theories (and, by implication, organisational psychology theories) have not been as subject to extensive empirical investigations outside American organisations that are needed to establish their "cultural generalisability". Of the literature examined in this study, the work of Gagne, Senecal and Koestner (1997) in Canada, provides some evidence of the generalisability of the four factor empowerment structure to non-managerial populations outside the United States. The New Zealand study makes a further contribution to this area, with a comparison of the empowerment experience of New Zealand (non-managerial) employees with their American counterparts. Study findings indicate that the New Zealand respondents reported overall a fairly strong sense of empowerment, in concert with the strong sense of empowerment reported by Spreitzer's (1995) managerial and non-managerial respondents from the two American organisations she surveyed. Gagne et al (1997) also reported a fairly strong sense of empowerment among their respondents. However, similarities were few between the one New Zealand, and two American organisations surveyed, apart from their large sizes (employees numbered in the thousands across all three organisations). For example, the American organisation's non-managerial employees were female dominated (84 percent), and older (mean age of forty), compared to the New Zealand respondents who were gender balanced, (46 percent female and 49 percent male) and younger (mean age of 36 years). Even with these differences in respondents' characteristics, the empowerment measure proved itself sufficiently robust across both samples, which provides some further evidence for the generalisability of the empowerment *measure* across the two cultures.

Finally, the internal consistency result for the New Zealand study (.78, Cronbach Alpha; for the full empowerment scale) helped reflect the scale's robustness in a non-American organisational setting. Thus, it is reasonable to conclude that the 12-item empowerment scale is able to accurately measure empowerment across at least three different cultures (that is, within large, complex organisations in America, Canada, and New Zealand).

Empowerment : Outcomes

This New Zealand study also tested the extent to which two important behavioural outcomes are predicted by empowerment (Bowen & Lawler, 1992, 1995; Cascio, 1995; Quinn & Spreitzer, 1997). These outcomes, affective commitment, and work performance, are regarded as essential employee attributes contributing to organisational success (Cascio, 1995).

Affective Commitment

A summary of commitment research conducted by Meyer and Allen (1997) showed that development of affective commitment is influenced by three groups of variables, one of which is individual employee characteristics. Meyer and Allen found that individuals' perceptions of their own "competence" (self-efficacy, or beliefs in one's capabilities to perform activities skilfully) were strongly linked to the development of affective commitment. Competence has long been identified in the literature as one of the factors implicated in fostering feelings of empowerment (Conger & Kanungo, 1988; Thomas & Velthouse, 1990). Meyer and Allen found that organisations that provide "competence-enhancing" experiences for employees are regarded as more likely to be promoting affective commitment (Meyer & Allen, 1997). Of the remaining three factors of empowerment, the literature points to links between two factors and enhanced affective commitment; these are "impact" (the degree to which an individual can influence operating outcomes at work), and "autonomy" (self-determination; the degree to which an individual has a sense of choice in initiating and regulating work behaviours, for example making decisions about effort and pace) (Meyer and Allen, 1997).

This New Zealand study took these theoretical links one step further, hypothesising that empowerment predicts affective commitment. Good support was found for this causal relationship in the New Zealand data. The New Zealand model indicates that around 45 percent of the variance between affective commitment and empowerment is shared, demonstrating that changes in empowerment trigger changes in affective commitment. This suggests that there is indeed a relationship between empowerment and affective commitment that is beyond "impression management" and self-deception (respondents' tendency to agree and/or strongly agree that they are "committed"). This is a significantly stronger relationship than that reported in any of the commitment research reviewed for this study (Cohen, 1992; Mathieu & Zajac, 1990; Meyer & Allen, 1997).

These results could be quite specific to the New Zealand employees surveyed, indicating that there may be some other (as yet unidentified) organisational cultural factor operating as a higher order factor in concert with empowerment, in this particular organisation, which is strengthening the empowerment-affective commitment relationship. Or, there could be other, external factors influencing the strength of this relationship, that are perceived by employees as "global factors", such as the overall jobs climate. That is, employees could be strongly trying to maintain their job security, and this could be translating into greater "effort" within this organisation (even though the effort may be "intangible"), which could be playing out in behavioural aspects such as perceived empowerment and commitment.

Work Performance

This study investigated the ability of empowerment to predict work performance. Previous research (Spreitzer & Quinn, 1996) found that empowered middle managers' colleagues evaluated them as more effective in their work, and those reporting to them shared this view.

However, the work performance construct is generally poorly defined in the literature, with writers referring to "performance" variously as task-based, interpersonal skills-based, or change-based behaviours (Becker et al., 1996; Spreitzer & Quinn, 1996). Another problem with defining work performance is the lack of understanding about

which individual performance behaviours impact most significantly upon overall organisation performance (Benson & Lawler, 2003; in Holman et al., 2003).
Despite these misgivings, this New Zealand study found good support for the ability of empowerment to predict work performance. The structural path model indicated that empowerment and work performance shared around 32 percent of the variance, demonstrating that changes in empowerment impact moderately strongly on work performance. This seems an unexpectedly strong relationship, although the theme of it is not completely at variance with the (non-quantified) findings of Quinn and Spreitzer (1996) who argued that, in their research, empowered people "provide substantial benefits" to their organisations (p.42).

Also, a moderately strong relationship between empowerment and work performance makes intuitive sense, given that the basis of empowerment, as conceptualised by Thomas and Velthouse (1990), and refined by Spreitzer (1995), is increased intrinsic motivation. Provided that employees possess a moderately strong sense of empowerment (and the New Zealand results suggest that these employees do) it seems logical that empowerment should share a reasonable portion of the variance in subsequent work performance. The basis of the original model formulated by Thomas and Velthouse (1990) suggests that enhanced task performance should be one of the outcomes of empowerment. In the New Zealand study, this result is considered significant, given that the New Zealand employees work in a highly complex and fast-moving environment, and there are many other organisational and personal factors impacting upon their ability (and willingness) to perform their jobs, apart from their feelings of empowerment. This extra "noise" in the empowerment-work performance relationship would be expected to account for the remaining variance in individual work performance.

Limitations of this Research

There are several limitations to this study, although they are not insurmountable for future research in the empowerment area in New Zealand. Firstly, the generalisability of these research findings to smaller organisations in New Zealand must be treated with caution. This study examined the empowerment phenomenon in a very large (1,800

employees) organisation, and, while New Zealand has several companies of this size or larger, the majority of New Zealand organisations are categorised as small or medium businesses, employing less than fifty people.

If empowerment and it's predicted outcomes are to be meaningful constructs in the New Zealand organisational world, then smaller organisations also need to be encouraged to be part of such a study.

The reliance on self-report measures in this study is also viewed as a weakness (Robson, 1993). As Somers and Birnbaum (1998) point out, this has been a noticeable problem in particular with self-report measures of job performance. The New Zealand study was no exception to this, with the work performance measure (self-report) providing strongly negatively skewed data in a departure from normality. To improve this situation, work performance data provided in the form of supervisor's ratings of task proficiency would be preferable (Somers & Birnbaum, 1998). Additionally, an improved operationalisation of "work performance" should be undertaken for future research. The distinction should be made between task-based performance, and interpersonal skills-based performance. Also, it would be more useful if work performance measures were identified that impacted more directly upon organisational performance. Thus, researchers would be able to measure more reliable impacts of individual performance changes upon the overall organisation.

The text of the empowerment scale was adjusted slightly for a better perceived cultural fit to New Zealand. However, more attention could be paid to this area to ensure that the item statements reflect New Zealand business culture language with less of an "American flavour".

Conclusions and Future Research Directions

This research has made a promising start to investigating the empowerment phenomenon in the context of a New Zealand organisation. Overall, support was found for a four factor structure of empowerment, with support also found for an overall gestalt of empowerment, consisting of a combination of the four individual factors. Additionally, support was found for the ability of empowerment to predict affective commitment and work performance, in the New Zealand organisation.

The research findings, then, while providing support for the plausibility of the empowerment construct in a non-American organisation, have also raised further questions about contextual influences upon empowerment and its predicted outcomes. For instance, cultural factors, hitherto unidentified and unmeasured, could play a greater role in the empowerment experience within New Zealand organisations than was acknowledged at the start of this study. More specifically, future research needs to pay attention to measuring the impact upon employee perceptions of empowerment, of the *cultural perceptions* of employees, and the extent to which these national cultural dimensions change the perceived experience of empowerment for the individual.

This study also found stronger than expected relationships (compared to the literature reviewed) among empowerment and its predicted outcomes (affective commitment and work performance). While this may be an idiosyncrasy of the New Zealand data, future research could profitably investigate the strength of these predicted relationships in other New Zealand organisational settings. It seems logical that cultural influences could play their part in these outcomes too, and this could be a promising area for future investigation.

References

Aronson, E. (1991). How to change behaviour. In R.C. Curtis & G. Stricker (Eds.), *How People Change – Inside and Outside Therapy* (pp.101-112). New York: Plenum Press.

Bandura, A. (1997). *Self-Efficacy: the Exercise of Control.* New York: W. H. Freeman & Company.

Bunker, B. D., & DeLisle J. J. (1991). Individual change in organisational settings. In R.C Curtis & G.Stricker (Eds.). *How People Change – Inside and Outside Therapy* (pp. 129-155). New York: Plenum Press.

Becker, T. E., Billings, R. S., Eveleth, D. M., & Gilbert, N. L. (1996). Foci and bases of employee commitment: implications for job performance. *Academy of Management Journal, 39,* 464-482.

Benson, G. S., & Lawler, E. E. (2003). Employee involvement: utilisation, impacts, and future prospects. In Holman, D., Wall, T. D., Clegg, C. W., Sparrow, P., & Howard, A. (Eds.). *The New Workplace: A Guide to the Human Impact of Modern Working Practices* (pp. 155-173). United Kingdom: John Wiley & Sons.

Bowen, D. E., & Lawler, E. E. (1992). The empowerment of service workers: what, why, how, and when. *Sloan Management Review, Spring,* 31-39.

Bowen, D. E., & Lawler, E. E. (1995). Empowering service employees. *Sloan Management Review, Summer,* 73-83.

Byrne, B. M. (2001). *Structural Equation Modelling with AMOS: Basic Concepts, Applications, and Programming*. New Jersey: Lawrence Erlbaum.

Cascio, W. F. (1995). Whither industrial and organisational psychology in a changing world of work? *American Psychologist, 50,* 928-939.

Cohen, A. (1992). Antecedents of organisational commitment across occupational groups: A meta-analysis. *Journal of Organisational Behaviour, 13,* 539-558.

Conger, J.A. (1989). Leadership: The art of empowering others. *The Academy of Management Executive, 3,* 17-24.

Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review, 13,* 471-482.

Corsun, D. L., & Enz, C. A. (1999). Predicting psychological empowerment among service workers: The effect of support-based relationships. *Human Relations, 52,* 205-224.

Cotton, J.J. (1993). *Employee involvement: Methods for improving performance and work attitudes.* Newbury Park, Calif.: Sage Publications.

Gagne, M., Senecal, C.B., & Koestner, R. (1997). Proximal job characteristics, feelings of empowerment, and intrinsic motivation: A multidimensional model. *Journal of Applied Social Psychology, 27,* 1222-1240.

Hall, L., Batley, T., Elkin, G., Geare, A.J., Johnston, S., Jones, M.T., et al. (1999). *Managing New Zealand Organisations: Principles, Practices, and Issues* (2nd ed). New Zealand: Longman Paul.

Hofstede, G. (2001). Culture's recent consequences: Using dimension scores in theory and research. *International Journal of Cross Cultural Management, 1,* 11-30.

Hollway, W. (1991). *Work Psychology and Organisational Behaviour: Managing the Individual at Work.* London: Sage Publications.

Javidan, M., & House, R. J. (2001). Cultural acumen for the global manager: Lessons from Project GLOBE. *Organisational Dynamics, 29,* 289-305.

Mathieu, J.E., & Zajac, D.M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organisational commitment. *Psychological Bulletin, 108,* 171-194.

Meyer, J. P. (1997). Organisational Commitment. In Cooper, C.L. & Robertson I.T. (Eds.). *International Review of Industrial and Organisational Psychology.* United States: John Wiley & Sons.

Meyer, J.P., & Allen, N.J. (1997). *Commitment in the Workplace: Theory, Research and Application.* Calif:. Sage Publications

Morrow, P. C. (1993). The Theory and Measurement of Work Commitment. In Bacharach, S.B. (Ed.). *Monographs in Organisational Behaviour and Industrial Relations, Vol 15.* Connecticut: JAI Press.

Mowday, R.T., Steers, R.M., & Porter, L.W. (1979). The measurement of organisational commitment. *Journal of Vocational Behaviour, 14,* 224-247.

Patterson, F. (2001). Developments in work psychology: Emerging issues and future trends. *Journal of Occupational Psychology, 74,* 381-390.

Perry, M., Davidson, C., & Hill, R. (1995). *Reform at Work: Workplace Change and the New Industrial Order.* New Zealand: Longman Paul.

Quinn, J.J., & Davies, P. W. F. (1999). *Ethics and Empowerment.* United Kingdom: MacMillan Press.

Quinn, R.E., & Spreitzer, G. M. (1997). The road to empowerment: Seven questions every leader should consider. *Organisational Dynamics, Autumn,* 37-49.

Randolph, W. A. (1995). Navigating the journey to empowerment. *Organisational Dynamics, Spring,* 19-31.

Robson, C. (1993). *Real World Research: A Resource for Social Scientists and Practitioner-Researchers.* United Kingdom: Blackwell Publishers.

Somers, M.J., & Birnbaum, D. (1998). Work-related commitment and job performance: it's also the nature of the performance that counts. *Journal of Organisational Behaviour, 19,* 621-634.

Spreitzer, G.M., Kizilos, M.A., & Nason, S. W. (1997). A dimensional analysis of the relationship between psychological empowerment and effectiveness, satisfaction, and strain. *Journal of Management, 23,* 679-704.

Spreitzer, G.M., & Quinn, R. E. (1996). Empowering middle managers to be transformational leaders. *Journal of Applied Behavioural Science, 32,* 237-261.

Spreitzer, G.M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal, 38,* 1442-1465.

Spreitzer, G.M. (1996). Social structural characteristics of psychological empowerment. *Academy of Management Journal, 39,* 483-504.

Stajkovic, A. D., & Luthans, F. (1998). Social cognitive theory and self-efficacy: Going beyond traditional motivational and behavioural approaches. *Organisational Dynamics, Spring,* 62-74.

Thomas, K.W., & Velthouse, B.A. (1990). Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *Academy of Management Review, 15,* 666-681.

Van Dyne L., & LePine, J.A. (1998). Helping and voice extra-role behaviours: Evidence of construct and predictive validity. *Academy of Management Journal, 41,* 108-119.

Wilkinson, A. (1998). Empowerment: theory and practice. *Personnel Review, 27,* 40-56.

Appendix A

ORGANISATION CLIMATE INQUIRY
Helping Us to Understand How You Feel

Survey Form

Please answer the following questions on this survey form. There are two parts to this survey – please ensure you answer both sections.

Make your answers by circling the number on the scale provided for each question that most closely represents your response.

Use the following scale in making your answers:

1 = Strongly disagree
2 = Moderately disagree
3 = Neither agree or disagree
4 = Moderately agree
5 = Strongly agree

Do not write your name on this survey form.

Please place your completed survey in the confidential Freepost envelope provided, and then in the nearest post-box.

Thank you for your cooperation.

.....
.....

Part One

		Strongly Disagree	Moderately Disagree	Neither Agree or Disagree	Moderately Agree	Strongly Agree
1.	I enjoy discussing my organisation with people outside it…	1	2	3	4	5
2.	My manager is quite competent in doing his/her job…	1	2	3	4	5
3.	I do not feel that the work I do is appreciated…	1	2	3	4	5
4.	I have significant influence over what happens in my department…	1	2	3	4	5
5.	I really feel as if this organisation's problems are my own…	1	2	3	4	5
6.	I think I could easily become as attached to another organisation as I am to this one…	1	2	3	4	5
7.	The benefits we receive are as good as most other organisations offer..	1	2	3	4	5
8.	My manager shows too little interest in the feelings of those he/she manages…	1	2	3	4	5
9.	This organisation has a great deal of personal meaning for me…	1	2	3	4	5
10.	There is too much bickering and fighting at work…	1	2	3	4	5
11.	There is really too little chance for promotion on my job…	1	2	3	4	5
12.	I often enjoy playing with theories, or abstract ideas at work…	1	2	3	4	5

		Strongly Disagree	Moderately Disagree	Neither Agree or Disagree	Moderately Agree	Strongly Agree
13.	My manager is unfair to me…	1	2	3	4	5
14.	I seldom notice the moods or feelings that different environments at work produce…	1	2	3	4	5
15.	I am confident about my ability to do my job…	1	2	3	4	5
16.	I have mastered the skills necessary for my job…	1	2	3	4	5
17.	I am not satisfied with the benefits I receive…	1	2	3	4	5
18.	People get ahead as fast here as they do in other places…	1	2	3	4	5
19.	I can decide on my own how to go about doing my work…	1	2	3	4	5
20.	I think it's interesting to learn and develop new skills and abilities…	1	2	3	4	5
21.	I do not feel like "part of the family" at my organisation…	1	2	3	4	5
22.	Communications seem good within this organisation…	1	2	3	4	5
23.	The benefit package we have is equitable…	1	2	3	4	5
24.	There are few rewards for those who work here…	1	2	3	4	5
25.	I adequately complete responsibilities…	1	2	3	4	5
26.	I often feel that I do not know what is going on with the organisation…	1	2	3	4	5
27.	I have too much paperwork…	1	2	3	4	5
28.	It's hard for me to tell on my own how well I'm performing my job…	1	2	3	4	5
29.	I find it easy to empathise – to feel what others are feeling…	1	2	3	4	5
30.	The work I do is very important to me…	1	2	3	4	5
31.	I am self-assured about my capabilities to perform my work activities...	1	2	3	4	5
32.	I do not feel "emotionally attached" to this organisation…	1	2	3	4	5
33.	Job assignments are challenges that stretch my knowledge to the limit..	1	2	3	4	5
34.	I think that most of the people I deal with at work are honest and trustworthy…	1	2	3	4	5
35.	The organisation's most senior managers openly express their support of continuous learning…	1	2	3	4	5
36.	My efforts to do a good job are seldom blocked by red tape…	1	2	3	4	5
37.	I like doing the things I do at work…	1	2	3	4	5
38.	My impact on what happens in my division is large…	1	2	3	4	5
39.	The work I do is meaningful to me…	1	2	3	4	5
40.	I feel a sense of pride in doing my job…	1	2	3	4	5
41.	Raises are too few and far between…	1	2	3	4	5
42.	There is a performance appraisal system that ties financial rewards to technical competence…					
43.	I'm pretty set in my ways…	1	2	3	4	5
44.	My job is enjoyable…	1	2	3	4	5
45.	My job activities are personally meaningful to me…	1	2	3	4	5

		Strongly Disagree	Moderately Disagree	Neither Agree or Disagree	Moderately Agree	Strongly Agree
46.	I have considerable opportunity for independence and freedom in how I do my job…	1	2	3	4	5
47.	I meet performance expectations…	1	2	3	4	5
48.	I have too much to do at work…	1	2	3	4	5
49.	My job assignments include free time to explore new, advanced ideas and methods for improving performance…	1	2	3	4	5
50.	I feel unappreciated by the organisation when I think about what they pay me…	1	2	3	4	5
51.	I believe that company practices and policies should change to reflect the needs of a changing world…	1	2	3	4	5
52.	When I do a good job, I receive the recognition for it that I should receive…	1	2	3	4	5
53.	I find philosophical arguments boring…	1	2	3	4	5
54.	I tend to be cynical and skeptical of others' intentions at work…	1	2	3	4	5
55.	I have a great deal of control over what happens in my division…	1	2	3	4	5
56.	I don't feel my efforts are rewarded the way they should be…	1	2	3	4	5
57.	I am satisfied with the communication between my manager and me…	1	2	3	4	5
58.	I perform the tasks that are expected as part of the job…	1	2	3	4	5
59.	There are benefits we do not have which we should have…	1	2	3	4	5
60.	I have significant autonomy (independence) in determining how I do my job…	1	2	3	4	5
61.	Job assignments are made in my area of interest and are designed to promote my personal development…	1	2	3	4	5
62.	Those who do well on the job stand a fair chance of being promoted…	1	2	3	4	5
63.	I do not feel a strong sense of belonging to my organisation…	1	2	3	4	5
64.	Work assignments are not fully explained…	1	2	3	4	5
65.	I am satisfied with my chances for promotion…	1	2	3	4	5
66.	I like the people I work with…	1	2	3	4	5
67.	I sometimes feel my job is meaningless…	1	2	3	4	5
68.	Many of our rules and procedures make doing a good job difficult…	1	2	3	4	5
69.	I like my manager…	1	2	3	4	5
70.	I fulfill the responsibilities specified in my job description…	1	2	3	4	5
71.	My manager gives recognition and credit to people who apply new knowledge and skills to their work…	1	2	3	4	5
72.	The goals of this organisation are not clear to me…	1	2	3	4	5
73.	I enjoy my co-workers…	1	2	3	4	5
74.	I feel I am being paid a fair amount for the work I do…	1	2	3	4	5
75.	I feel satisfied with my chances for a salary increases…	1	2	3	4	5
76.	I really just don't know how to establish performance standards for my job…	1	2	3	4	5

		Strongly Disagree	Moderately Disagree	Neither Agree or Disagree	Moderately Agree	Strongly Agree
77.	I find I have to work harder at my job because of the incompetence of people I work with…	1	2	3	4	5
78.	I believe hearing controversial speakers is confusing and misleading…	1	2	3	4	5
79.	I would be very happy to spend the rest of my career with this organisation…	1	2	3	4	5

Please turn to the next page for Part Two of this survey…

Part Two – Organisation Culture and Climate Questions
Helping Us to Understand How You feel

Please answer the following questions on this survey form.
Make your answers by circling the number on the scale provided for each question that most closely represents your response.

Use the following scale in making your answers:

1 = Strongly disagree
2 = Moderately disagree
3 = Neither agree or disagree
4 = Moderately agree
5 = Strongly agree

Rate your organisation as it is **NOW**.

Do not write your name on this survey form.

.....

Part Two

		Strongly Disagree	Moderately Disagree	Neither Agree or Disagree	Moderately Agree	Strongly Agree	
1.	The organisation is a very personal place. It's like an extended family. People seem to share a lot of themselves	1	2	3	4	5	
2.	The organisation is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks…	1	2	3	4	5	
3.	The organisation is very results oriented. A major concern is with getting the job done. People are very competitive and achievement oriented..	1	2	3	4	5	
4.	The organisation is a very controlled and structured place. Formal procedures generally govern what people do…	1	2	3	4	5	
5.	The leadership in the organisation is generally considered to be a good example of mentoring, facilitating, or nurturing…	1	2	3	4	5	
6.	The leadership in the organisation is generally considered to be a good example of entrepreneurship, innovating, or risk-taking…	1	2	3	4	5	

		Strongly Disagree	Moderately Disagree	Neither Agree or Disagree	Moderately Agree	Strongly Agree
7.	The leadership in the organisation is generally considered to be a good example of a no-nonsense, aggressive, results-oriented focus…	1	2	3	4	5
8.	The leadership in the organisation is generally considered to be a good example of coordinating, organising, or smooth-running efficiency…	1	2	3	4	5
9.	The management style in the organisation is characterised by teamwork, consensus, and participation…	1	2	3	4	5
10.	The management style in the organisation is characterised by individual risk-taking, innovation, freedom, and uniqueness…	1	2	3	4	5
11.	The management style in the organisation is characterised by hard-driving competitiveness, high demands, and achievement…	1	2	3	4	5
12.	The management style in the organisation is characterised by security of employment, conformity, predictability, and stability in relationships…	1	2	3	4	5
13.	The glue that holds the organisation together is loyalty and mutual trust. Commitment to this organisation runs high…	1	2	3	4	5
14.	The glue that holds the organisation together is commitment to innovation and development. There is an emphasis on being on the cutting edge…	1	2	3	4	5
15.	The glue that holds the organisation together is the emphasis on achievement and goal accomplishment. Aggressiveness and winning are common themes…	1	2	3	4	5
16.	The glue that holds the organisation together is formal rules and policies. Maintaining a smooth-running organisation is important…	1	2	3	4	5
17.	The organisation emphasises human development. High trust, openness, and participation persist…	1	2	3	4	5
18.	The organisation emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued…	1	2	3	4	5
19.	The organisation emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant…	1	2	3	4	5

		Strongly Disagree	Moderately Disagree	Neither Agree or Disagree	Moderately Agree	Strongly Agree
20.	The organisation emphasises permanence and stability. Efficiency, control, and smooth operations are important…	1	2	3	4	5
21.	The organisation defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people…	1	2	3	4	5
22.	The organisation defines success on the basis of having the most unique or newest products. It is a product leader and innovator…	1	2	3	4	5
23.	The organisation defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is the key…	1	2	3	4	5
24.	The organisation defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical…	1	2	3	4	5

Please answer these questions:

		Strongly Disagree	Moderately Disagree	Neither Agree or Disagree	Moderately Agree	Strongly Agree
25.	I think the approach… is taking to Health and Safety at work is sound…	1	2	3	4	5
26.	I believe … is committed to improving Health and Safety at work	1	2	3	4	5
27.	The results of my site's Health and Safety performance have been discussed with me…	1	2	3	4	5
28.	I understand the Walk, Talk, and Care concept…	1	2	3	4	5
29.	I think there is an improvement in Health and Safety at …	1	2	3	4	5

30. **What do you think are the most important things about …(your organisation) today?**
(use as many describing words as you like - write them in the spaces below)

- _____
- _____
- _____
- _____
- _____

One last page to answer - turn to the next page to tell us which groups you belong to…

Demographic Information

Make your answers by circling the appropriate number for each question:

31. Management Function - which management group do you belong to?

Administration/Payroll	1
Finance/Business Accounts	2
Logistics	3
Human Resources/Health & Safety	4
IT	5
Research & Development	6
Engineering	7
Production Supervisors	8
Distribution/Stores/ or Maintenance Supervisors	9
Sales/Customer Service	10
Marketing	11
Purchasing/Inventory	12
Site Management	13
Plant Management	14
Manufacturing/Factory/ or Production Management	15
Quality Assurance	16
Senior Management Team	17

32. Age - which group do you belong to?

30 years & under	1
31 - 35 years	2
36 - 40 years	3
41 - 45 years	4
46 - 50 years	5
51 - 55 years	6
56 - 60 years	7
61 years & over	8

33. Gender - which one?

Female	1
Male	2

34. Number of years working for this organisation?

Less than 2 years	1
2 - 5 years	2
6 - 10 years	3
More than 10 years	4

Thank you for completing this inquiry - we value and appreciate your input.

MASSEY
UNIVERSITY

ALBANY

FACULTY OF SOCIAL SCIENCES

A STUDY OF WORK IN A CHANGING WORLD

INFORMATION SHEET

Massive changes across the world in technology, markets, the way societies organise, and the nature of work itself are transforming organisations. Responses such as downsizing, cost-cutting, and greater competitiveness means that organisations are changing the way they function. These impacts are also being felt in many New Zealand organisations, resulting in different demands placed on people as to how they carry out their work in this new environment.

Katharine Jones, a Massey University Psychology Masters student, is researching the impact of these changes to the work world on Senior Management employees' attitudes and commitment to their New Zealand organisations. An approach was made by the researcher to your organisation's Training and Development Manager, resulting in permission being granted, for the researcher to undertake The Study of Work within your organisation. The criteria for selecting your organisation for involvement in The Study of Work focused upon the organisation's status as one of New Zealand's largest and most significant organisations undergoing work-related changes.

You are invited to participate in this research by completing a questionnaire requiring about 30 minutes of your time. The questionnaire seeks your views on different work-related issues.
The questionnaire, enclosed in a confidential envelope, will be distributed to all Senior Managers within each division, by your organisation's Human Resources personnel.
The completed questionnaire will be returned to the Researcher at Massey University in a Freepost envelope attached to the questionnaire.

You need to know that your participation in this research is completely voluntary, although it is assumed that filling in the questionnaire implies informed consent. You have the right to withdraw from the Study, and to decline to answer any particular questions, however withdrawal from the Study will not be possible after completion of the questionnaire, as all your responses will be anonymous and confidential. No identifying marks of any kind will be used on the questionnaire. Every participant will have access to the final research report, which will be made available through your organisation's Human Resources division.
Participation in the Study has no effect upon your career prospects.

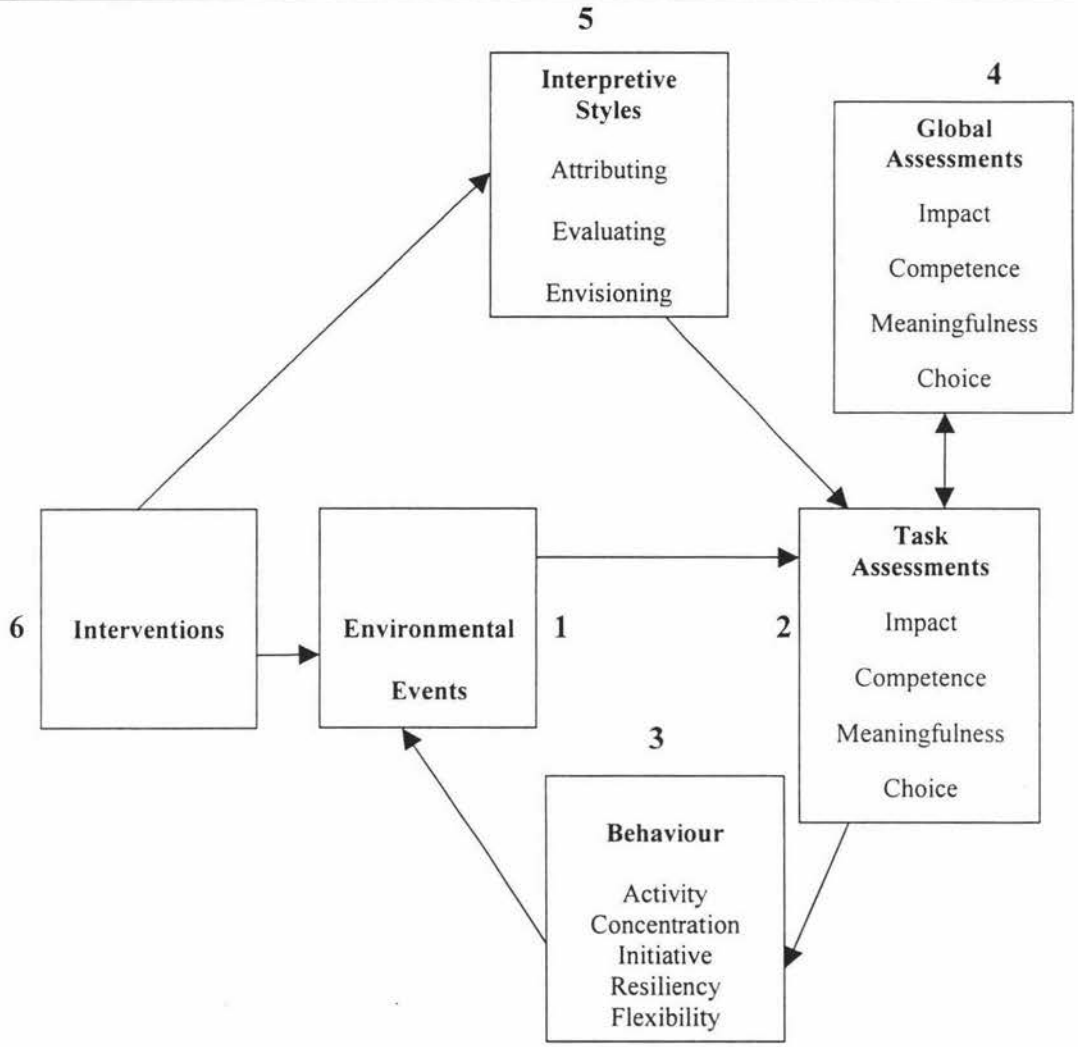
Should you have any questions about the research please feel free to contact Katharine Jones, or the Study Supervisor, Dr. Hillary Bennett: Ph.(auto-dial) (09)443-9799-9864.

Katharine Jones.

Appendix B

Figure 1.1

Cognitive Model of Empowerment



Key

Environmental Events (1) data sources about the consequences of an individual's ongoing behaviour, and about relevant conditions regarding future behaviour.
Task Assessments (2) the four cognitive components of intrinsic motivation (empowerment).
Behaviour (3) activity and concentration of energy on a task.
Global Assessments (4) the aggregated generalised beliefs about the four assessment dimensions; across tasks and over time.
Interpretive Styles (5) the various ways individuals comprehend events. Individual styles can contribute to a person's empowerment or disempowerment.
Interventions (6) deliberate attempts to facilitate empowerment via changes in environmental events or individual interpretive styles.

Source: Thomas & Velthouse (1990)

The Empowerment Scale – Texts of Items Measuring Empowerment

Meaning

The work I do is very important to me (meaning 1).

My job activities are personally meaningful to me (meaning 2).

The work I do is meaningful to me (meaning 3).

Competence

I am confident about my ability to do my job (competence 1).

I am self-assured about my capabilities to perform my work activities (competence 2).

I have mastered the skills necessary for my job (competence 3).

Self-Determination

I have significant autonomy in determining how I do my job (self-determination 1).

I can decide on my own how to go about doing my work (self-determination 2).

I have considerable opportunity for independence and freedom in how I do my job (self-determination 3).

Impact

My impact on what happens in my department is large (impact 1).

I have a great deal of control over what happens in my department (impact 2).

I have significant influence over what happens in my department (impact 3).

Source: Spreitzer (1995)

Confirmatory Factor Analysis – Empowerment as a Four Factor Model – Path Diagram

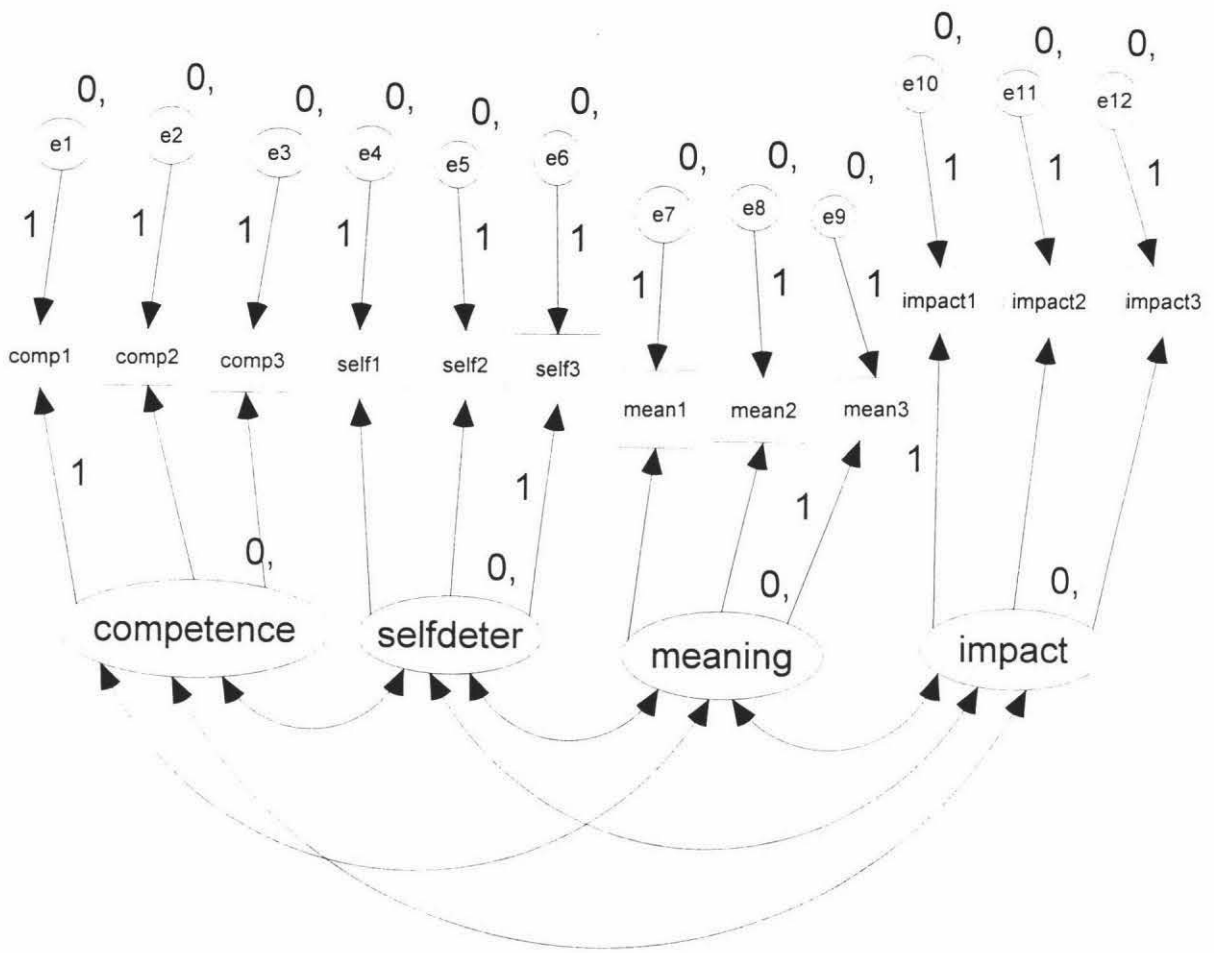

e1
e2
e3
e4
e5
e6
e7
e8
e9
e10
e11
e12
comp1
comp2
comp3
self1
self2
self3
mean1
mean2
mean3
impact1
impact2
impact3
competence
selfdeter
meaning
impact

Table 3.3 Text Output for Confirmatory Factor Analysis – Empowerment is a Four Factor Structure

Amos

by James L. Arbuckle

Version 4.01

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****

Title

efa four factor empowerment july 03: Tuesday, 8 July 2003 11:57 a.m.

Your model contains the following variables

comp1	observed	endogenous
comp2	observed	endogenous
comp3	observed	endogenous
self1	observed	endogenous
self2	observed	endogenous
self3	observed	endogenous
impact1	observed	endogenous
impact2	observed	endogenous
impact3	observed	endogenous
mean1	observed	endogenous
mean2	observed	endogenous
mean3	observed	endogenous
competence	unobserved	exogenous
e2	unobserved	exogenous
e3	unobserved	exogenous
selfdeter	unobserved	exogenous
e4	unobserved	exogenous
e5	unobserved	exogenous
e6	unobserved	exogenous
impact	unobserved	exogenous
e10	unobserved	exogenous
e11	unobserved	exogenous
e1	unobserved	exogenous
meaning	unobserved	exogenous
e7	unobserved	exogenous

e8 unobserved exogenous
e9 unobserved exogenous
e12 unobserved exogenous

Number of variables in your model: 28
Number of observed variables: 12
Number of unobserved variables: 16
Number of exogenous variables: 16
Number of endogenous variables: 12

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	16	0	0	0	0	16
Labeled:	0	0	0	0	0	0
Unlabeled:	8	6	16	0	12	42
Total:	24	6	16	0	12	58

NOTE:
The model is recursive.

Sample size: 510

Model: Default model

Computation of degrees of freedom

Number of distinct sample moments: 90
Number of distinct parameters to be estimated: 42
Degrees of freedom: 48

0e	9	0.0e+000	-2.9783e-001	1.00e+004	2.00506071745e+003	0	1.00e+004
1e	1	0.0e+000	-8.2769e-003	2.02e+000	6.19157777898e+002	20	7.11e-001
2e	0	6.8e+002	0.0000e+000	6.70e-001	2.93254555582e+002	5	8.48e-001
3e	0	9.8e+002	0.0000e+000	6.38e-001	1.95796428938e+002	2	0.00e+000
4e	0	5.8e+002	0.0000e+000	5.03e-001	1.73992793940e+002	1	9.57e-001
5e	0	9.1e+002	0.0000e+000	8.93e-002	1.71492499870e+002	1	9.79e-001
6e	0	8.7e+002	0.0000e+000	9.88e-003	1.71469228106e+002	1	1.01e+000
7e	0	8.8e+002	0.0000e+000	2.00e-004	1.71469223028e+002	1	1.00e+000

Minimum was achieved

Chi-square = 171.469
Degrees of freedom = 48
Probability level = 0.000

Maximum Likelihood Estimates

Regression Weights:

	Estimate	S.E.	C.R.	Label
comp1 <--- competence	1.000			
comp2 <--- competence	1.144	0.132	8.675	
self1 <--- selfdeter	0.507	0.061	8.354	
self2 <--- selfdeter	0.899	0.077	11.652	
self3 <--- selfdeter	1.000			
impact1 <--- impact	1.000			
impact2 <--- impact	0.818	0.071	11.519	
impact3 <--- impact	0.990	0.080	12.345	
mean1 <--- meaning	0.911	0.061	14.909	
mean2 <--- meaning	1.243	0.078	15.991	

comp3 <--------- competence	0.765	0.095	8.029	
mean3 <---------- meaning	1.000			

Intercepts:

	Estimate	S.E.	C.R.	Label
comp1	4.661	0.032	146.063	
comp2	4.467	0.036	123.615	
comp3	4.437	0.038	116.982	
self1	4.094	0.047	86.653	
self2	3.731	0.052	72.156	
self3	3.806	0.049	77.640	
impact1	3.243	0.056	57.850	
impact2	3.578	0.052	68.406	
impact3	3.129	0.056	55.767	
mean1	4.224	0.045	93.973	
mean2	3.966	0.049	80.595	
mean3	3.819	0.048	80.137	

Covariances:

	Estimate	S.E.	C.R.	Label
meaning <----------> impact	0.325	0.048	6.817	
meaning <-------> selfdeter	0.204	0.042	4.861	
competence <----> selfdeter	0.110	0.030	3.700	
selfdeter <---------> impact	0.506	0.060	8.411	
meaning <------> competence	0.086	0.025	3.488	
competence <-------> impact	0.079	0.030	2.628	

Variances:

	Estimate	S.E.	C.R.	Label
competence	0.274	0.041	6.699	
selfdeter	0.832	0.094	8.822	
impact	0.836	0.104	8.065	
meaning	0.626	0.071	8.845	
e2	0.306	0.043	7.161	
e3	0.572	0.040	14.186	
e4	0.923	0.062	14.908	
e5	0.689	0.066	10.463	
e6	0.392	0.065	6.034	
e10	0.763	0.073	10.504	
e11	0.833	0.066	12.671	
e1	0.244	0.033	7.414	
e7	0.507	0.040	12.580	
e8	0.263	0.047	5.575	
e9	0.527	0.044	11.896	
e12	0.783	0.073	10.739	

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	42	171.469	48	0.000	3.572
Saturated model	90	0.000	0		
Independence model	12	18448.389	78	0.000	236.518

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.991	0.985	0.993	0.989	0.993
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.615	0.610	0.611
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	123.469	87.253	167.276
Saturated model	0.000	0.000	0.000
Independence model	18370.389	17927.185	18819.876

Model	FMIN	F0	LO 90	HI 90
Default model	0.337	0.243	0.171	0.329
Saturated model	0.000	0.000	0.000	0.000
Independence model	36.244	36.091	35.220	36.974

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.071	0.060	0.083	0.001
Independence model	0.680	0.672	0.688	0.000

Model	AIC	BCC	BIC	CAIC
Default model	255.469	257.671		
Saturated model	180.000	184.718		
Independence model	18472.389	18473.018		

Model	ECVI	LO 90	HI 90	MECVI
Default model	0.502	0.431	0.588	0.506
Saturated model	0.354	0.354	0.354	0.363
Independence model	36.292	35.421	37.175	36.293

Model	HOELTER .05	HOELTER .01
Default model	194	219
Independence model	3	4

Execution time summary:

Minimization:	0.060
Miscellaneous:	0.270
Bootstrap:	0.000
Total:	0.330

Table 3.4 Text Output for Second-Order Confirmatory Factor Analysis – Four Factors of Empowerment combine to form an overall Gestalt of Empowerment

Amos

by James L. Arbuckle

Version 4.01

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http://www.smallwaters.com

****

Title

empowerment with residuals removed july 03: Tuesday, 8 July 2003 11:50 a.m.

Your model contains the following variables

comp1	observed	endogenous
comp2	observed	endogenous
comp3	observed	endogenous
self1	observed	endogenous
self2	observed	endogenous
self3	observed	endogenous
impact1	observed	endogenous
impact2	observed	endogenous
impact3	observed	endogenous
mean1	observed	endogenous
mean2	observed	endogenous
mean3	observed	endogenous
competence	unobserved	endogenous
selfdeter	unobserved	endogenous
impact	unobserved	endogenous
meaning	unobserved	endogenous
e2	unobserved	exogenous
e3	unobserved	exogenous
e4	unobserved	exogenous
e5	unobserved	exogenous
e6	unobserved	exogenous
e10	unobserved	exogenous
e11	unobserved	exogenous

e1	unobserved exogenous
res1	unobserved exogenous
res2	unobserved exogenous
res4	unobserved exogenous
e7	unobserved exogenous
e8	unobserved exogenous
e9	unobserved exogenous
res3	unobserved exogenous
empowerment	unobserved exogenous
e12	unobserved exogenous

Number of variables in your model:	33
Number of observed variables:	12
Number of unobserved variables:	21
Number of exogenous variables:	17
Number of endogenous variables:	16

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	20	0	1	0	0	21
Labeled:	0	0	4	0	0	4
Unlabeled:	12	0	12	0	12	36
Total:	32	0	17	0	12	61

NOTE:
The model is recursive.

Sample size: 510

Model: Default model

Computation of degrees of freedom

Number of distinct sample moments:	90
Number of distinct parameters to be estimated:	37
Degrees of freedom:	53

0e	5	0.0e+000	-9.6573e-001	1.00e+004	1.89512398298e+003	0	1.00e+004
1e	3	0.0e+000	-1.3324e-001	8.02e-001	1.39553974877e+003	19	6.79e-001
2e*	0	6.9e+002	0.0000e+000	1.68e+000	3.92390698800e+002	5	8.05e-001
3e	0	3.3e+002	0.0000e+000	6.40e-001	2.97194945120e+002	2	0.00e+000
4e	0	4.0e+002	0.0000e+000	2.30e-001	2.79927069139e+002	1	9.71e-001
5e	0	3.8e+002	0.0000e+000	3.57e-002	2.79390895164e+002	1	1.02e+000
6e	0	3.8e+002	0.0000e+000	1.40e-003	2.79389990703e+002	1	1.00e+000
7e	0	3.8e+002	0.0000e+000	3.46e-006	2.79389990698e+002	1	1.00e+000

Minimum was achieved

Chi-square = 279.390
Degrees of freedom = 53
Probability level = 0.000

Maximum Likelihood Estimates

Regression Weights:

	Estimate	S.E.	C.R.	Label
selfdeter <------ empowerment	0.536	0.062	8.698	

impact <--- empowerment	0.598	0.067	8.901
competence <--- empowerment	1.000		
meaning <--- empowerment	0.519	0.058	9.019
comp1 <--- competence	0.396	0.028	14.144
comp2 <--- competence	0.463	0.032	14.561
self1 <--- selfdeter	0.494	0.054	9.112
self2 <--- selfdeter	0.865	0.067	12.940
self3 <--- selfdeter	1.000		
impact1 <--- impact	1.000		
impact2 <--- impact	0.757	0.059	12.821
impact3 <--- impact	0.895	0.066	13.633
mean1 <--- meaning	0.750	0.046	16.482
mean2 <--- meaning	1.000		
comp3 <--- competence	0.339	0.033	10.263
mean3 <--- meaning	0.820	0.048	16.946

Intercepts:

	Estimate	S.E.	C.R.	Label
comp1	4.661	0.033	142.756	
comp2	4.467	0.037	120.638	
comp3	4.437	0.038	115.589	
self1	4.094	0.048	86.011	
self2	3.731	0.053	70.810	
self3	3.806	0.051	74.164	
impact1	3.243	0.058	55.598	
impact2	3.578	0.053	67.500	
impact3	3.129	0.057	54.874	
mean1	4.224	0.045	93.690	
mean2	3.967	0.049	80.596	
mean3	3.819	0.048	79.881	

Variances:

	Estimate	S.E.	C.R.	Label
empowerment	1.000			
res1	0.680	0.046	14.626	var_a
res2	0.680	0.046	14.626	var_a
res4	0.680	0.046	14.626	var_a
res3	0.680	0.046	14.626	var_a
e2	0.337	0.036	9.279	
e3	0.557	0.040	13.898	
e4	0.917	0.062	14.869	
e5	0.689	0.068	10.128	
e6	0.373	0.068	5.525	
e10	0.694	0.076	9.106	
e11	0.835	0.067	12.440	
e1	0.279	0.028	9.953	
e7	0.498	0.040	12.458	
e8	0.282	0.044	6.357	
e9	0.523	0.044	11.861	
e12	0.823	0.076	10.807	

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	37	279.390	53	0.000	5.272
Saturated model	90	0.000	0		
Independence model	12	18448.389	78	0.000	236.518

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.985	0.978	0.988	0.982	0.988
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.679	0.669	0.671

Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	226.390	177.785	282.517
Saturated model	0.000	0.000	0.000
Independence model	18370.389	17927.185	18819.876

Model	FMIN	F0	LO 90	HI 90
Default model	0.549	0.445	0.349	0.555
Saturated model	0.000	0.000	0.000	0.000
Independence model	36.244	36.091	35.220	36.974

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.092	0.081	0.102	0.000
Independence model	0.680	0.672	0.688	0.000

Model	AIC	BCC	BIC	CAIC
Default model	353.390	355.330		
Saturated model	180.000	184.718		
Independence model	18472.389	18473.018		

Model	ECVI	LO 90	HI 90	MECVI
Default model	0.694	0.599	0.805	0.698
Saturated model	0.354	0.354	0.354	0.363
Independence model	36.292	35.421	37.175	36.293

Model	HOELTER .05	HOELTER .01
Default model	130	146
Independence model	3	4

Execution time summary:

Minimization:	0.060
Miscellaneous:	0.270
Bootstrap:	0.000
Total:	0.330

Table 3.7 Text Output for the Structural Path Model – Empowerment predicts Affective Commitment and Work Performance

Amos

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Version 4.01

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****

Title

full model with no residuals july 03: Tuesday, 8 July 2003 12:02 p.m.

Your model contains the following variables

comp1	observed	endogenous
comp2	observed	endogenous
comp3	observed	endogenous
self1	observed	endogenous
self2	observed	endogenous
self3	observed	endogenous
impact1	observed	endogenous
impact2	observed	endogenous
impact3	observed	endogenous
mean1	observed	endogenous
mean2	observed	endogenous
mean3	observed	endogenous
perform1	observed	endogenous
perform2	observed	endogenous
perform3	observed	endogenous
perform4	observed	endogenous
affcom1	observed	endogenous
affcom2	observed	endogenous
affcom3r	observed	endogenous
affcom4r	observed	endogenous
affcom5r	observed	endogenous
affcom6	observed	endogenous
competence	unobserved	endogenous
selfdeter	unobserved	endogenous
impact	unobserved	endogenous

meaning	unobserved endogenous
work perform	unobserved endogenous
commitment	unobserved endogenous
e2	unobserved exogenous
e3	unobserved exogenous
e4	unobserved exogenous
e5	unobserved exogenous
e6	unobserved exogenous
e10	unobserved exogenous
e11	unobserved exogenous
e1	unobserved exogenous
res1	unobserved exogenous
res2	unobserved exogenous
res4	unobserved exogenous
e7	unobserved exogenous
e8	unobserved exogenous
e9	unobserved exogenous
res3	unobserved exogenous
empowerment	unobserved exogenous
e12	unobserved exogenous
e13	unobserved exogenous
e14	unobserved exogenous
e15	unobserved exogenous
e16	unobserved exogenous
e17	unobserved exogenous
e18	unobserved exogenous
e19	unobserved exogenous
e20	unobserved exogenous
e21	unobserved exogenous
e22	unobserved exogenous
res5	unobserved exogenous
res6	unobserved exogenous

Number of variables in your model:	57
Number of observed variables:	22
Number of unobserved variables:	35
Number of exogenous variables:	29
Number of endogenous variables:	28

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	34	0	1	0	0	35
Labeled:	0	0	4	0	0	4
Unlabeled:	22	0	24	0	22	68
Total:	56	0	29	0	22	107

NOTE:
The model is recursive.

Sample size: 510

Model: Default model

Computation of degrees of freedom

Number of distinct sample moments:	275
Number of distinct parameters to be estimated:	69
Degrees of freedom:	206

0e	9	0.0e+000	-9.5438e-001	1.00e+004	3.71418811907e+003	0	1.00e+004
1e	6	0.0e+000	-1.2675e-001	1.45e+000	2.86190042735e+003	20	4.52e-001
2e	0	2.2e+003	0.0000e+000	1.67e+000	1.40803990929e+003	4	8.76e-001
3e	0	4.3e+002	0.0000e+000	7.25e-001	1.14896423585e+003	4	0.00e+000
4e	0	1.8e+003	0.0000e+000	1.49e+000	1.06466473305e+003	1	2.45e-001
5e	1	0.0e+000	-5.8132e-002	1.30e+000	9.43312756930e+002	1	5.18e-001
6e	0	2.0e+003	0.0000e+000	2.39e-001	8.43206475772e+002	5	8.67e-001
7e	0	4.5e+003	0.0000e+000	6.54e-001	8.04271809485e+002	1	9.36e-001

```
    8e  0 3.9e+003  0.0000e+000  4.45e-001   7.98766702676e+002    1 9.22e-001
    9e  0 4.9e+003  0.0000e+000  1.21e-001   7.98248171158e+002    1 1.03e+000
   10e  0 5.0e+003  0.0000e+000  1.78e-002   7.98244405578e+002    1 1.01e+000
   11e  0 5.1e+003  0.0000e+000  3.37e-004   7.98244404273e+002    1 1.00e+000


Minimum was achieved


Chi-square = 798.244
Degrees of freedom = 206
Probability level = 0.000


Maximum Likelihood Estimates
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Regression Weights:	Estimate	S.E.	C.R.	Label
impact <---------- empowerment	0.613	0.060	10.289	
commitment <------- empowerment	0.375	0.048	7.892	
work perform <----- empowerment	0.234	0.032	7.416	
selfdeter <-------- empowerment	0.498	0.054	9.212	
competence <------- empowerment	1.000			
meaning <---------- empowerment	0.704	0.054	13.157	
comp1 <------------ competence	0.402	0.028	14.381	
comp2 <------------ competence	0.453	0.032	14.317	
comp3 <------------ competence	0.362	0.033	10.837	
self1 <------------ selfdeter	0.527	0.057	9.239	
self2 <------------ selfdeter	0.947	0.070	13.543	
self3 <------------ selfdeter	1.000			
impact1 <---------- impact	1.000			
impact2 <---------- impact	0.804	0.060	13.419	
impact3 <---------- impact	0.902	0.065	13.856	
mean1 <---------- meaning	0.724	0.040	18.117	
mean2 <---------- meaning	1.000			
perform1 <-------- work perform	1.000			
perform3 <-------- work perform	1.114	0.130	8.546	
perform4 <-------- work perform	1.263	0.143	8.851	
perform2 <-------- work perform	1.257	0.140	8.954	
affcom1 <---------- commitment	1.000			
affcom6 <---------- commitment	1.614	0.190	8.506	
affcom2 <---------- commitment	1.624	0.183	8.871	
affcom3r <--------- commitment	1.117	0.154	7.273	
affcom4r <--------- commitment	1.560	0.184	8.473	
affcom5r <--------- commitment	1.413	0.168	8.407	
mean3 <---------- meaning	0.790	0.042	18.690	

Standardized Regression Weights:	Estimate
impact <---------- empowerment	0.617
commitment <------- empowerment	0.673
work perform <----- empowerment	0.565
selfdeter <-------- empowerment	0.537
competence <------- empowerment	0.788
meaning <---------- empowerment	0.669
comp1 <------------ competence	0.687
comp2 <------------ competence	0.684
comp3 <------------ competence	0.528
self1 <------------ selfdeter	0.456
self2 <------------ selfdeter	0.740
self3 <------------ selfdeter	0.812
impact1 <---------- impact	0.760
impact2 <---------- impact	0.667
impact3 <---------- impact	0.696
mean1 <---------- meaning	0.733
mean2 <---------- meaning	0.900
perform1 <-------- work perform	0.479
perform3 <-------- work perform	0.628
perform4 <-------- work perform	0.689
perform2 <-------- work perform	0.719
affcom1 <---------- commitment	0.434

affcom6 <----------	commitment	0.666
affcom2 <----------	commitment	0.757
affcom3r <----------	commitment	0.476
affcom4r <----------	commitment	0.659
affcom5r <----------	commitment	0.645
mean3 <----------	meaning	0.753

Intercepts:

	Estimate	S.E.	C.R.	Label
comp1	4.661	0.033	141.629	
comp2	4.467	0.037	119.894	
comp3	4.437	0.039	114.899	
self1	4.094	0.048	86.117	
self2	3.731	0.053	70.971	
self3	3.806	0.051	75.229	
impact1	3.243	0.058	55.997	
impact2	3.578	0.053	67.391	
impact3	3.129	0.057	54.862	
mean1	4.224	0.046	91.624	
mean2	3.967	0.052	76.490	
mean3	3.819	0.049	78.023	
perform1	4.394	0.038	114.650	
perform2	4.347	0.032	135.506	
perform3	4.555	0.033	140.112	
perform4	4.514	0.034	134.344	
affcom1	2.749	0.057	48.241	
affcom2	3.286	0.053	61.962	
affcom3r	3.261	0.058	56.272	
affcom4r	2.994	0.059	51.160	
affcom5r	3.290	0.054	60.839	
affcom6	3.426	0.060	57.167	

Variances:

	Estimate	S.E.	C.R.	Label
empowerment	1.000			
res1	0.611	0.042	14.466	var_a
res2	0.611	0.042	14.466	var_a
res4	0.611	0.042	14.466	var_a
res3	0.611	0.042	14.466	var_a
res5	0.117	0.024	4.764	
res6	0.170	0.039	4.363	
e2	0.376	0.034	10.906	
e3	0.548	0.040	13.783	
e4	0.912	0.062	14.774	
e5	0.636	0.068	9.345	
e6	0.444	0.062	7.200	
e10	0.721	0.073	9.925	
e11	0.797	0.066	12.061	
e1	0.291	0.027	10.828	
e7	0.499	0.039	12.852	
e8	0.260	0.042	6.164	
e9	0.527	0.043	12.373	
e12	0.853	0.075	11.319	
e13	0.576	0.040	14.457	
e14	0.253	0.024	10.381	
e15	0.325	0.026	12.584	
e16	0.302	0.027	11.216	
e17	1.342	0.089	15.146	
e18	0.612	0.055	11.198	
e19	1.322	0.089	14.930	
e20	0.987	0.075	13.238	
e21	0.869	0.065	13.427	
e22	1.017	0.078	13.117	

Squared Multiple Correlations:

	Estimate
commitment	0.453
work perform	0.319
meaning	0.448
impact	0.380
selfdeter	0.289
competence	0.621
affcom6	0.443

affcom5r	0.417
affcom4r	0.434
affcom3r	0.227
affcom2	0.572
affcom1	0.188
perform4	0.475
perform3	0.395
perform2	0.517
perform1	0.229
mean3	0.567
mean2	0.810
mean1	0.538
impact3	0.485
impact2	0.444
impact1	0.578
self3	0.659
self2	0.548
self1	0.208
comp3	0.279
comp2	0.468
comp1	0.472

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	69	798.244	206	0.000	3.875
Saturated model	275	0.000	0		
Independence model	22	33503.283	253	0.000	132.424

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.976	0.971	0.982	0.978	0.982
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.814	0.795	0.800
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	592.244	509.246	682.802
Saturated model	0.000	0.000	0.000
Independence model	33250.283	32652.426	33854.431

Model	FMIN	F0	LO 90	HI 90
Default model	1.568	1.164	1.000	1.341
Saturated model	0.000	0.000	0.000	0.000
Independence model	65.822	65.325	64.150	66.512

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.075	0.070	0.081	0.000
Independence model	0.508	0.504	0.513	0.000

Model	AIC	BCC	BIC	CAIC
Default model	936.244	942.775		
Saturated model	550.000	576.029		
Independence model	33547.283	33549.365		

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.839	1.676	2.017	1.852
Saturated model	1.081	1.081	1.081	1.132
Independence model	65.908	64.734	67.095	65.912

Model	HOELTER .05	HOELTER .01
Default model	154	164
Independence model	5	5

Execution time summary:

Minimization:	0.170
Miscellaneous:	0.380
Bootstrap:	0.000
Total:	0.550