DOCTORAL THESIS

Aston University
Birmingham

Individual spirit at work and its relationship with employee work attitudes and organisational outcomes

An empirical examination in corporate Thailand

Passagorn Tevichapong

INDIVIDUAL SPIRIT AT WORK AND ITS RELATIONSHIP WITH EMPLOYEE WORK ATTITUDES AND ORGANISATIONAL OUTCOMES: AN EMPIRICAL EXAMINATION IN CORPORATE THAILAND

PASSAGORN TEVICHAPONG

Doctor of Philosophy

ASTON UNIVERSITY

April 2012

THESIS SUMMARY

ASTON UNIVERSITY

Title: Individual Spirit at Work and Its Relationship with Employee Work Attitudes and Organisational Outcomes: An Empirical Examination in Corporate Thailand

Submitted by: Passagorn Tevichapong

Degree: Doctor of Philosophy

Date of Submission: April, 2012

The purpose of this thesis is to conduct empirical research in corporate Thailand in order to (1) validate the Spirit at Work Scale (2) investigate the relationships between individual spirit at work and three employee work attitudinal variables (job satisfaction, organisational identification and psychological well-being) and three organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions) (3) further examine causal relations among these organisational behaviour variables with a longitudinal design (4) examine three employee work attitudes as mediator variables between individual spirit at work and three organisational outcomes and (5) explore the potential antecedents of organisational conditions that foster employee experienced individual spirit at work.

The two pilot studies with 155 UK and 175, 715 Thai samples were conducted for validation testing of the main measure used in this study: Spirit at Work Scale (Kinjerski & Skrypnek, 2006a). The results of the two studies including discriminant validity analyses strongly provided supportive evidence that Spirit at Work Scale (*SAWS*) is a sound psychometric measure and also a distinct construct from the three work attitude constructs. The final model of *SAWS* contains a total of twelve items; a three factor structure (meaning in work, sense of community, and spiritual connection) in which the sub-factors loaded on higher order factors and also had very acceptable reliability. In line with these results it was decided to use the second-order of *SAWS* model for Thai samples in the main study and subsequent analysis.

The 715 completed questionnaires were received from the first wave of data collection during July - August 2008 and the second wave was conducted again within the same organisations and 501 completed questionnaires were received during March - April 2009. Data were obtained through 49 organisations which were from three types of organisations within Thailand: public organisations, for-profit organisations, and not-for-profit organisations. Confirmatory factor analysis of all measures used in the study and hypothesised model were tested with structural equation modelling techniques. The results were greatly supportive for the direct structural model and partially supportive for the fully mediated model. Moreover, there were different findings across self report and supervisor rating on performance and OCB models. Additionally, the antecedent conditions that fostered employees experienced individual spirit at work and the implications of these findings for research and practice are discussed.

Keywords: Individual spirit at work, work attitudes, organisational outcomes, antecedent conditions of individual spirit at work, Thailand

AWARD AND PRESENTATIONS FROM THIS THESIS

Award:

The conceptual paper of this research has been received the Academy of Management's 2008 Most Promising Doctoral Dissertation Award in Management, Spirituality, and Religion at the 68th Annual Conference of Academy of Management, Anaheim, California, USA (August 8-13, 2008). Also, the researcher has been chosen to receive a cash prize stipend of $100 for conducting this research (see Appendix 22).

Academy of Management Refereed Conference Papers:

Tevichapong, P., Davis, A., & Guillaume, Y. (2010). Individual Spirit at Work and Its Outcomes. Paper presented at the 70th Annual Conference of Academy of Management, Montréal, Canada (August 6-10, 2010).

Tevichapong, P. (2009). The Relationships between Spirit at Work and Employee Work Attitudes and Organisational Outcomes. Paper presented at the 69th Annual Conference of Academy of Management, Chicago, Illinois, USA (August 7-11, 2009).

Doctoral Conference Papers:

Tevichapong, P. (2009). Is Corporate Thailand Ready for a New Management Tool: Workplace Spirituality? Evidence of the Relationships between Individual Spirit at Work and Its Outcomes. Paper presented at the 2nd Samaggi Academic Conference 2009, University of Cambridge, UK (February 8-9, 2009) and also received an Outstanding Presentation Award (see Appendix 23).

Tevichapong, P. (2009). Individual Spirit at Work and Its Outcome (Preliminary results). Paper presented at the Midlands Doctoral Colloquium, Birmingham Business School, University of Birmingham, Birmingham, UK (June 16, 2009).

Tevichapong, P. (2010). Individual Spirit at Work and Its Outcome. Paper presented at the 3rd Samaggi Academic Conference, Imperial Collage London, UK (January 31, 2010, see Appendix 24).

Tevichapong, P. (2011). Individual Spirit at Work and Its Outcome. Paper presented at the 1st Samaggi Networking Academic Conference, London School of Economics and Political Sciences, UK (November 26, 2011, see Appendix 25).

Tevichapong, P. (2012). Individual Spirit at Work and Its Outcome. Paper presented at the 5th Samaggi Academic Conference, University of Oxford, UK (February 4, 2012, see Appendix 26).

DEDICATIONS

To my wisdom and strength, my Lord and Saviour, Jesus Christ

To my inspiration and motive, my beloved parents, Sri-ún and Pongsak

To my support, my dear sisters and brother, Nittaya, Kritika, and Pongsatorn

To Dr. Michael Riketta who gave good advice for this thesis during my first year PhD

"I can do everything through him who gives me strength." Philippians 4:13

"ข้าพเจ้าผจญทุกสิ่งได้ โดยพระองค์ผู้ทรงเสริมกำลังข้าพเจ้า" พระธรรมฟีลิปปี ๔: ๑๓

ACKNOWLEDGEMENTS

LIST OF CONTENTS

CHAPTER 4: RESEARCH METHODOLOGY

CHAPTER 6: PRELIMINARY ANALYSIS AND RESULTS

CHAPTER 7: HYPOTHESES ANALYSES AND RESULTS

CHAPTER 8: DISCUSSION AND CONCLUSION

LIST OF APPENDICES

LIST OF TABLES

Page

CHAPTER 1

THESIS OVERVIEW

"Without work, all life goes rotten. But when work is soulless, life stifles and dies."

Albert Camus (1913-1960)

1.1 THE SPIRIT AT WORK PHENOMENON

It is difficult to pin down the beginning of interest in workplace spirituality. However, the books and press articles in popular media and academic journals devoted to the subject have been going extensively since in the early 1990s, especially in North America. During the 1990s, Garcia-Zamor (2003) stated more than 300 books were published focusing on spirituality in the workplace. Some examples of such books are *Business People: the Spirituality of Work* (Droel, 1990); *The Soul of Business: Managing for Profit and the Common Good* (Chappell, 1993); *Spirit at Work: Discovering the Spirituality in Leadership* (Conger, 1994); *The Stirring of Soul in the Workplace* (Briskin, 1996). In addition, *The Handbook of Workplace Spirituality and Organizational Performance* with a 32-chapter volume edited by Giacalone & Jurkiewicz (2003) established a new paradigm for the field of workplace spirituality in the social sciences (Giacalone, Jurkiewicz, & Fry, 2005). Workplace spirituality today is no longer seen as a passing fad: in December 1999, a new special interest group on Management, Spirituality & Religion (MSR) was formed by the Academy of Management (AOM), a leading professional association for scholars dedicated to

creating and disseminating knowledge about management and organisations (MSRAOM, 2011).

Feature articles about spirituality at work in popular business magazines have appeared in *Newsweek*, *Fortune*, *Business Week*, *Forbs*, *Industry Week*, *HR Magazine*, *Workforce*, *Training* and the *Wall Street Journal* (e.g. Milliman, Czaplewski, & Ferguson, 2003). This among practitioners is mirrored in the academic arena. Brown (2003) identifies many mainstream academic journals which have devoted entire issues or special issues to spirituality, including the *Journal of Managerial Psychology*, *Journal of Management Inquiry*, *Journal of Management Education*, *Organization*, *Journal of Organization and Change Management*, *Leadership Quarterly*, and *the American Behavioural Scientist*. Articles have also appeared in such esteemed titles as the *Academy of Management Executive*, *Human Relations*, *Organization Science*, *Sloan Management Review*, *Human Resource Development*, *International Strategic Management Review*, *Business Ethics, and Organization Studies*.

The *Journal of Management, Spirituality and Religion* (JMSR), launched in 2004 stated that "The remarkable explosion of scholarship in the field of management, business, organisations and work provides the opportunity for more specialised interest areas. One area whose time has come is that of Spirituality and Religion - and their role in shaping organisations: structures, decision making, management style, mission and strategy, organisational culture, human resource management, finance and accounting, marketing and sales... - in short: all aspects of organising and managing resources and people." (JMSR, 2011, p.1)

We can see therefore that workplace spirituality has been receiving increased attention in organisational sciences and is one of the fastest growing areas of new research and inquiry by scholars and practitioners alike (e.g., Barrett, 1998; Mitroff & Denton, 1999a, b; Cash & Gray, 2000; Ashmos & Duchon, 2000; Giacalone & Jurkiewicz, 2003; Benefiel, 2003a, b; Fry, 2003; Neal & Biberman, 2003; Giacalone, Jurkiewicz, & Fry, 2005; Kinjerski & Skrypnek, 2004, 2006a,b,c, 2008a,b; Zaidman, Goldstein-Gidoni, & Nehemya, 2009). This thesis seeks to develop on the work of these pioneers and to move the field forward in order to comprehend the meaning of workplace spirituality at an individual level and its relationship to work-related outcomes. Due to there being little evidence of empirical studies in examining individual spirit at work and its relationship to employees' attitudes and organisational outcomes, the empirical findings of this research accordingly will help both scholars and managers to understand how and to what extent individuals experience spirit at work and its impact to their attitudes and effectiveness in the organisation. Subsequently, the researcher will develop guidelines for employers and leaders on how to improve their management strategy and ultimately enhance employees' morale and performance.

1.2 THE RESEARCH GAP

In the past two decades, work environments have become more changeable and uncertain rather than stable and predictable because of global economic, environmental and business changes (Giacalone & Jurkiewicz, 2003; Cash & Gray, 2000; Saïd, Louarn, & Tremblay, 2007). Cameron and Associates reported that there were three main areas of work environments changes: (1) workforce reduction; (2) organisational redesign;

and (3) a systematic strategy focused on changing the attitudes, values, and culture of the organisation (Cappelli, Bassi, Katz, Knoke, Osterman, & Useem, 1997). More specifically, recent trends toward organisational downsizing, consolidation, reengineering, restructuring, and dehumanising technology have negatively impacted employees' morale and loyalty (Makawatsakul & Kleiner, 2003; Burke, Graham, & Smith, 2005; Bowman & West, 2006). Consequences include many employees feeling insecure at work, being less committed to their employer leading to decrease in performance (Shah, 2000; Mone, 1997; Saïd, Louarn, & Tremblay, 2007). In the meantime, employees are increasingly yearning for meaningfulness and fulfilment at work (Dutton, 1997; Mitroff & Denton, 1999a, b; Cash & Gray, 2000; Cacioppe, 2000a, b; Mitroff, 2003; Ashar & Lane-Maher, 2004; Gull & Doh, 2004) and are longing for a sense of connection in the workplace as they have experienced in the traditional family, the extended family, and community ties (Gockel, 2004; Ashmos & Duchon, 2000).

To respond effectively to this phenomenon, organisations are increasingly realising and looking for new ways to foster employees' commitment and morale, to help them feel passionate about their work and to create an environment where in each person can realise his/her potential while fulfilling the requirements of their work. The promotion of spirituality in the workplace is believed to be associated with increased honesty, humility, and service to others (Beazley, 1997), increased morale (Leigh, 1997), an enhanced sense of personal fulfilment of employees (Krishnakumar & Neck, 2002), increased job involvement, organisational openness, satisfaction and organisational commitment (Trott, 1996; Milliman, Czaplewski, & Ferguson, 2003; Rego & Cunha, 2008; Pawar, 2009a), and enhanced organisational performance (Milliman, Feguson, Trickett, & Condemi, 1999; Garcia-Zamor, 2003; Duchon &

Plowman, 2005; Rego, Cunha, & Souto, 2007). Therefore, it is argued that increasing our understanding of spirituality in the workplace could have benefits both for the unfulfilled employee and the underperforming organisation. While these positive outcomes hold much promise, rigorous empirical evidence demonstrating these relationships in the burgeoning new field of spirituality in organisations is limited. Especially, the relationship between individual spirit at work used in the present study (engaging work, sense of community, spiritual connection and mystical experience, Kinjerski & Skrypnek, 2004, 2006a, c) which will be discussed in chapter two, employee work attitudes (organisational identification, psychological well-being, job satisfaction) and organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), turnover intentions), all have remained unexamined. Moreover, no research to date has examined these relationships with a longitudinal design, using a large sample from various industries/sectors, and employing the performance and OCB data from the immediate supervisor rating.

1.3 PURPOSE OF THE RESEARCH

My contention is that the topic of spirituality in the workplace is of vital significance to professionals in the organisational sciences as spirituality addresses unique and positive aspects of both individual and organisational outcomes. The purposes of the present study are therefore to conduct empirical research in order to fill the gap identified in the earlier section. The five objectives of this study are:

1.) To validate the main measure in this study: the Spirit at Work Scale (*SAWS*, Kinjerski & Skrypnek, 2006a) which is a new measure and has not been widely tested.

In brief, this objective is to answer the first research question "What is individual spirit at work?" As a result, the validation testing of this new elusive measure will take a few steps towards resolving the definitional issue of spirit at work at an individual level and advancing the measurement development for the field of workplace spirituality. In addition to the validation testing of the *SAWS* measure which was originally developed in Canada with both UK and Thai samples; it will give us more understanding whether the individual spirit at work construct will be similar or different across cultural contexts. Specifically, to the best available knowledge, this is the first application and testing of the *SAWS* measure outside of North America and with a non-Western context such as in Thailand.

2.) To investigate the relationships between individual spirit at work used in the present study (engaging work, sense of community, spiritual connection and mystical experience) and three employee work attitudinal variables (organisational identification, job satisfaction and psychological well-being) and three organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). The results of the correlation testing with the method of Structure Equation Modelling (SEM) between individual spirit at work and other work-related outcomes which are mostly under-researched, specifically organisational identification, psychological well-being, in-role performance and OCB by immediate supervisors rating will contribute to the literature in the field both theoretically and practically.

3.) To further examine causal relations among these organisational behaviour variables with a longitudinal design. In this research, there are two waves of data collection with a large sample from a real organisation setting, various industries and

sectors which has never been done before in the field of workplace spirituality. The research findings will give us a deep understanding in term of the causal relations and the impact direction between individual spirit at work and other work-related outcomes. In short, the objectives 2 and 3 are to answer the second research question "How and to what extent individual spirit at work impacts to work-related outcomes?"

4.) To investigate three employee work attitudes (job satisfaction, organisational identification, and psychological well-being) as mediator variables between individual spirit at work and three organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). These theoretical and practical contributions will significantly add value to the literature in this field. To sum up, this objective is to answer the third research question "How and to what extent the mediator variables mediate individual spirit at work and employees' effectiveness relationships?"

5.) To explore the potential antecedents that foster employee experienced individual spirit at work from organisational conditions, organisational types, demographical data, and religious/spiritual practices. The extra findings about the antecedent variables of individual spirit at work would be very useful for the managers and employers to know how to foster their employees' individual spirit at work ultimately in order to enhance their morale, loyalty, and performance.

1.4 SIGNIFICANCE OF THE RESEARCH

As organisations move into the 21st century, Mitroff conducted an interview with high-level managers and executives and found that "spirituality was perceived as

the only true and lasting competitive advantage and the vast majority of those he interviewed felt strongly that if organisations wanted to be successful, then they had no choice but to become spiritual" (Mitroff , 2003, p.377). In a similar vein, Ashar & Lane-Maher (2004) stated that to be successful in the new business paradigm one needs to embrace spirituality at work as well. Their research findings found that to respond to the spiritual needs of employees and allow them to feel successful, leaders and managers must embrace the principles of the new business paradigm such as "creating a climate conducive to self-examination and growth or encouraging the employees through the exuberant and the dark parts of the journey so each can become a whole person able to manifest mind, heart, and spirit at work" (Ashar & Lane-Maher, 2004, p.259).

In response to fulfil this quest, the present research has been conducted in a rigorous empirical manner in order to further our understanding of what individual spirit at work is all about, how and to what extent individual spirit at work impacts on work-related outcomes, how and to what extent the mediator variables (job satisfaction, organisational identification, and psychological well-being) mediate individual spirit at work and employees' effectiveness relationships, and what the potential antecedences of individual spirit at work are. To achieve these objectives, firstly the two pilot studies were conducted with 155 UK and 175, 715 Thai samples to confirm the validity of the Spirit at Work Scale (*SAWS*, Kinjerski & Skrypnek, 2006a) used Exploratory Factor Analysis (EFA) and confirmatory Factor Analysis (CFA). EFA was used to detect unknown factor structures and is able to examine the pattern of correlations (or covariances) between the factors, while CFA is used to test the fit of the hypothesised factor structure to the observed data (Thompson, 2004). Moreover, it is vital to establish

for the new measure, discriminant validity is used to examine a construct is theoretically distinct from other related constructs (Campbell & Fiske, 1959). Thus after testing the construct validity with EFA and CFA, discriminant validity is also employed to investigate whether or not the *SAWS* measure is distinct from work-attitude variables used in this study. Secondly, Structural Equation Modelling (SEM) is used to test all the hypotheses in this study. SEM is a statistical technique for testing and estimating causal relations i.e. hypothesis-testing, analysis of a structural theory bearing on some phenomenon (Byrne, 2001). Byrne also notes that the term SEM expresses two important aspects of the procedure: (1) the causal processes under study are presented by a series of structural (i.e. regression) equations and (2) these structural relations can be modelled pictorially to enable a clearer conceptualisation of the theory under study. After that the hypothesised model can be examined statistically in simultaneous analysis of the entire system of variables to determine the extent to which it is consistent with data. If the goodness of fit is adequate, the model argues for the plausibility of postulated relations among variables; if it is inadequate, the tenability of such relations is rejected (2001, p. 3). Therefore it is argued that SEM is most appropriate method to test such the complicated hypothesised models in this study rather than using normal regression which cannot examine statistically in simultaneous analysis of the entire system of variables. Thirdly, the multiple sources of performance and OCB rating and the longitudinal design are used in this study in order to reduce the threat of common method variance bias and enhance causal inference (Podsakoff & Organ 1986; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In summary, the strength of methodological design in this research will comprehensively help us assure of the findings and confidently can offer the promising tools or practices in order to inform people who are interested in developing spirituality in the workplace.

1.5 ORGANISATION OF THE THESIS

The thesis is divided into eight chapters organised in the following manner.

Chapter 1 provides an introduction to the topic and the research background. The spirit at work phenomenon, research gap, purpose of the research, significance of the research, and the organisation of the thesis are identified.

Chapter 2 explores the concept of spirituality examining existing definitions of spirituality in the workplace and arriving at the formulation "spirit at work" at an individual level used in this thesis. It reviews the literature centred on the issue of workplace spirituality, and defines and describes the concept of individual spirit at work and its component dimensions. Further, clarification about the spirit at work and employee engagement concepts, including examination the conceptualising constructs of spirit at work whether they are state-like or trait-like individual differences are demonstrated. Importantly, integration of literatures on spirit at work and the Thailand context are manifested. Finally, justification of using Spirit at Work Scale (*SAWS*, Kinjerski & Skrypnek, 2006a) in this research is described.

Chapter 3 focuses on the relationships between individual spirit at work and three employee work attitudes (job satisfaction, organisational identification, and psychological well-being) and three organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). First, it provides a review of the theoretical framework among these interest variables and develops a

conceptual framework used in this study. Second, it presents the research hypotheses from these relationships.

Chapter 4 comprises two main sections (1) research paradigm and (2) research design. The former discusses the rationale for the methodology adopted in the central of this research while the latter provides a detailed description of study design, data collection procedures, characteristics of the sample, measures, and related translation and ethical issues.

Chapter 5 reports the validation testing of the main measure used in this study: the Spirit at Work Scale (*SAWS*, Kinjerski & Skrypnek, 2006a). The overview of the scale and the concept of validation testing are provided. The two pilot studies with 155 British and 175, 715 Thai samples conducted for scale validation are described.

Chapter 6 presents the statistic analyses performed on the data collected from the samples of Thai respondents described in chapter 4, both at Time 1 and Time 2. Firstly, the results of confirmatory factor analysis (CFA) and discrminant validity of all the measurement models are reported. Next, the scale reliability tests and correlational results are introduced. Additionally, measurement equivalence tests using CFA comparing 155 UK with 175 Thai samples are presented as evidence of the potential for generalisability of findings. Lastly, the manipulation check between high and low spirit at work groups are investigated. This chapter concludes with a discussion of these preliminary results.

Chapter 7 presents the statistical analyses performed on the data in the form of Structural Equation Modelling (SEM) models and in longitudinal study design. All the main 15 Hypotheses are analysed and reported. It explores what the antecedents of individual spirit at work are. All the possible variables are analysed and reported in the extra findings. The chapter concludes with a summary of these findings.

Chapter 8 summarises the major findings and discusses the theoretical and practical implications. Finally, the limitations of the study are outlined, and following on from this, a number of suggestions for future research are presented.

CHAPTER 2

THE CONCEPT OF SPIRIT AT WORK

2.1 CHAPTER OVERVIEW

The purpose of this chapter is to present what the concept of spirituality is in general, and particularly to develop the definition of spirituality in the workplace or spirit at work that will be used in this study. After reviewing the literature on workplace spirituality, the concept of individual spirit at work is defined and details of each dimensions identified. Further, clarification about the spirit at work and employee engagement concepts, including examination the conceptualising constructs of spirit at work whether they are state-like or trait-like individual differences are demonstrated. Importantly, integration of literatures on spirit at work and the Thailand context are manifested. Finally, the rationale for and justification of the choice of Kinjerski & Skrypnek's (2006a) Spirit at Work Scale (*SAWS*) in this research is presented.

2.2 THE CONCEPT OF SPIRITUALITY

There are a number of definitions and perspectives of spirituality appearing within the literature. The term 'spirituality' means different things to different people and it is a difficult topic to comprehend and to date, scholars have not agreed on a definition. This section will review the development of the concept of spirituality, and focus particularly on its relationship with religiosity.

Spirituality has been described as "the subjective feelings, thoughts, and behaviours that arise from a search for the sacred" where the term "search" refers to "attempts to identify, articulate, maintain, or transform" and the term "sacred" is defined broadly as referring to "a divine being, divine object, Ultimate Reality, or Ultimate Truth as perceived by the individual" (Hill, Pargament, Hood, McCullough, Swyers, Larson, & Zinnbauer, 2000, p. 68). Hill and colleagues (2000) writing from a psychology of religion perspective state that spirituality is a central and essential function of religion. They therefore assert that both spirituality and religiousness can (and often do) co-occur. To the extent that a person engages in spirituality that is prescribed by an identifiable group and whose spiritual pathways and goals receive some support and validation by that group, spirituality also occurs with religiousness. They also highlight the difficulty of separating religion from spirituality. Spirituality can and often does occur within the context of religion, but it also may not. Likewise, the practice of spirituality can lead people to become religious and to become part of an organised or emerging religion, but it also may not.

More recently, Ho and Ho (2007) concluded from their review of the psychology literatures that, spirituality and religiosity are overlapping constructs; accordingly, it is possible for a person to be religious without being spiritual or spiritual without being religious, be both, or be neither. The possibility for considerable overlap exists and attempting to define spirituality as a separate construct from religion is difficult as well as unlikely to establish the definitions of both constructs. In the psychology of religion field, thus to date, the term of spirituality has no universally accepted definition.

However, unlike the psychology of religion field, in the area of management and organisational studies most scholarships and practitioners seem to see and define spirituality as being distinctive from religion. For example the following four definitions of spirituality have been proposed in recent years by organisational thinkers and practitioners (1) A specific form of work feeling that energises action (Dehler & Welsh, 1994; p.19); (2) Deeply held values that guide our life and work practices (Butts, 1999; p. 329); (3) The particular way the human person in all its richness, the relationship of human person to the transcendent, the relationship between human persons, and the way to achieve personal growth are envisioned (Konz & Ryan, 1999; p.202) and (4) Secular or sacred values aimed at transcendence toward our ultimate values (Harlos, 2000; p. 613).

In a similar manner, the most prominent empirical study of spirituality, religion, and values in the US workplace was published in 1999 (Mitroff & Denton, 1999a, b). Mitroff and Denton conducted extensive interviews and discovered common denominators emerging in the participants' definitions of spirituality. They concluded that spirituality is the basic feeling of being connected with one's complete self, others, and the entire universe. This definition, noted in their work, supported the notion that spirituality was indeed a concept separate from religion: (1) Not formal, structured, or organised; (2) Nondenominational, above and beyond denominations; (3) Broadly inclusive, embracing everyone; (4) Universal and timeless; (5) The ultimate source and provider of meaning and purpose in life; (6) The awe we feel in the presence of the transcendent; (7) The sacredness of everything, the ordinariness of everyday life; (8) The deep feeling of the interconnectedness of everything; (9) Inner peace and calm; (10) An inexhaustible source of faith and willpower; and (11) The ultimate end in itself.

Most recently, after conducting an extensive review of contemporary definitions within the UK samples, Smith and Rayment (2007, p. 220) define spirituality in general as "a state or experience that can provide individuals with direction or meaning, or provide feelings of understanding, support, inner wholeness or connectedness. Connectedness can be to themselves, other people, nature, the universe, a god, or some other supernatural power."

It is apparent therefore that spirituality is subjective, intangible, complex, multi-dimensional, and almost indefinable. However, Mitroff & Denton (1999a, b) and Smith & Rayment (2007) found similarly in their research both in US and UK about the definition of spirituality in general. First, spirituality is an inherent component of being human. Second, spirituality is a personal search for meaning and purpose in life. Third, spirituality is interconnectedness (Mitroff & Denton, 1999a, b). Fourth, many respondents in their research had a negative perception of religion, but positive of spirituality. Last, they observed as clear differentiation between religion and spirituality.

From a review of the literature discussed above, spirituality is seen as a global concept in that it seeks to express all that is beyond the sensory experiences of human beings. Spirituality involves humans' search for meaning in life, while religion involves an organised entity with rituals and practices about a higher power or God. Therefore, the researcher propose that spirituality, without religion, is a deep connection that can transcend one's life's essence but still remain connected to it. Furthermore, true spirituality can be defined as that, which stresses on one's integrity, virtue, and the personal meaning one derives from it, rather than on institutional religious practice.

2.3 CONCEPTUALISING AND DEFINING INDIVIDUAL SPIRIT AT WORK

Having explored the relationship between spirituality and religiosity, leading to the articulation of how "spirituality" will be used here, we now need to consider spirituality in the workplace. Again there is lack of universal agreement over this and indeed this is partly why the topic is so intriguing. While the research base for this area is not huge, there are a number of key articles that illustrate the development of the concept of workplace spirituality. Within these, two issues seem to emerge; first how is spirituality/spirit in the workplace defined and second, at what level does it occur (individual or communal/organisational)? These two issues are explored in this section in which seven prominent empirical studies addressing workplace spirituality are reviewed.

Pioneering empirical work to define and measure spirituality in the context of work was carried out by Ashmos and Duchon (2000). Drawing on literature available at the time, they proposed following conceptual definition of spirituality at work: "Spirituality at work is defined as the recognition that employees have an inner life that nourishes and is nourished by meaningful work that takes place in the context of community" (p. 137). They see spirituality at work in this definition as having three components: the inner life, meaningful work, and sense of connection and community. Also, in their research they developed and validated a measurement instrument for three levels of analysis: individual, work team and organisation which their study results showed the measurement instrument was valid only at the individual level rather than work unit and organisational level. They extracted seven dimensions for individual level (conditions for community; meaning at work; inner life; blocks to spirituality;

personal responsibility; positive connections with other individuals; and contemplation), two for the work-team level (work-unit community; positive work-unit values) and two for the organisation level (organisational values; individual and organisation).

Based on Ashmos and Duchon's formulation, the study by Milliman, Czaplewski, and Ferguson (2003) placed forward three components as the central dimensions of spirituality in the workplace: (1) *meaningful work* means the degree to which people experience a deep sense of meaning and purpose at work; (2) *sense of community* represents that people see themselves as connected to each other and that there is some type of relationship between one's inner self and the inner self of other people; and (3) *alignment of values* measures whether or not individuals experiences a strong sense of alignment between their personal values and the larger organisational mission/purpose. Moreover, Milliman *et al*. (2003) examined how three workplace spirituality dimensions (meaningful work, sense of community, value alignment) explain five work attitudes: effective organisational commitment, intentions to leave, intrinsic work satisfaction, job involvement, and organisational-based self esteem. The main findings of Milliman *et al*. were the following (1) the meaningful work dimension explains affective commitment, intrinsic work satisfaction, job involvement and self-esteem; (2) the sense of community dimension explains all the fives attitudes; and (3) value alignment explains commitment and intension to quit. Milliman *et al*. (2003) specified workplace spirituality at three levels: individual level in term of meaning in work, group level in terms of sense of community, and organisational level in terms of alignment with organisational values.

In contrast, based on their inductive reading of workplace spirituality literature, Giacalone and Jurkiewicz (2003) defined workplace spirituality as "a framework of organisational values evidenced in the culture that promotes employees' experience of transcendence through the work process, facilitating their sense of being connected to others in a way that provides feelings of completeness and joy" (p. 13). Workplace spirituality as constructed by Giacalone and Jurkiewicz (2003) therefore is conceptualised at both individual and organisational levels of analysis. They view spirituality at work on three levels: (1) individual level as the incorporation of one's own spiritual values in the work setting; (2) organisational level as the organisation's spiritual climate or culture which reflecting an individual's perception of the spiritual values within an organisational setting; and (3) interactive level as the interaction between an individual's personal values and the organisation's values.

Based on a review of the literature, Sheep (2004) argues that a conceptual convergence of Workplace Spirituality Person – Organisation Fit (WSP-OF) occurs in four recurring themes: a self-workplace integration; meaning in work; transcendence of self; and personal growth/development of one's inner self at work. He viewed workplace spirituality through the lens of the concept of person-organisation fit (P-O fit) which is different perspective in emphasis of other scholars.

Kinjerski and Skrypnek (2004) conducted a qualitative study of 14 professionals who not only experienced workplace spirituality, but whose work also involved researching or promoting spirituality in the workplace. The study consisted of in-depth interviews and written surveys in order to ask the participants to describe a personal experience of spirit at work. As a result of this work, rather than focus on workplace

spirituality, Kinjerski and Skrypnek repositioned the construct into what they term "spirit at work". This formulation is distinct workplace spirituality in that it focuses on the individual's experience at work, in contrast to other investigators (e.g., Mitroff & Denton, 1999a, b; Ashmos & Duchon, 2000; Milliman *et al.*, 2003; Giacalone & Jurkiewicz, 2003), who have tended to focus on attitudinal aspects such as desires to express their being and to be engaged in meaningful work versus experience-based aspects. Their definition of spirit at work characterises it as a distinct state that is characterised by physical, affective, cognitive, interpersonal, spiritual, and mystical dimensions. Most individuals describe the experience as including: a physical sensation characterised by a positive state of arousal or energy; positive affect characterised by a profound feeling of well-being and joy; cognitive features involving a sense of being authentic, an awareness of alignment between one's values and beliefs and one's work, and a belief that one is engaged in meaningful work that has a higher purpose; an interpersonal dimension characterised by a feeling of connectedness to others and common purpose; a spiritual presence characterised by a sense of connection to something larger than self, such a high power, the Universe, nature and humanity; and a mystical dimension characterised by a sense of perfection, transcendence, living in the moment, and experiences that were awe-inspiring, mysterious, or sacred" (p. 37).

After conducting an extensive review of contemporary definitions, Smith & Rayment (2007) identify the pragmatic definition of spirituality in the workplace as "individuals and organisations seeing work as a spiritual path, as an opportunity to grow and to contribute to society in a meaningful way. It is about care, compassion and support of others; about integrity and people being true to themselves and others. It means individuals and organisations attempting to live their values more fully in the

work they do." (p. 221). This definition highlights that nurturing spirituality in the workplace has both an individual and organisational focus. At the individual level, they observe how leaders support and make it safe for individuals in the workplace to express their spirituality. For organisational focus they suggest leaders also need to consider how the organisation itself operates in order to build up the spiritual climate/culture in the workplace.

More recently, based on the findings of Marques, Dhiman, & King's phenomenological study (2007), they assert the definition of spirituality in the workplace as "an experience of interconnectedness among those involved in a work process, initiated by authenticity, reciprocity, and personal goodwill; engendered by a deep sense of meaning that is inherent in the organisation's work; and resulting in greater motivation and organisational excellence." (p. 12). They seem to emphasise that workplace spirituality focus on at an individual level.

According to the literature reviews above, scholars have provided definitions or identified components of workplace spirituality, and while there are differences in emphasis, there is also considerable overlap. As mentioned earlier, there are many possible levels of analysis for workplace spirituality such as individual, group, work unit, organisational level, or interactive perspectives. In spite of the obvious overlap in conceptualisations, the field still does not have a clear definition. To date, scholars have not yet agreed on a definition of spirituality in the workplace.

Drawing on Kinjerski & Skrypnek's (2006a) revised definition of spirit at work in Figure 2.1, the present study conceptualises workplace spirituality at the individual

level. Based on Kinjerski & Skrypnek's (2004) empirical-grounded work, they recently offer a refined definition as follow:

> Spirit at work is a distinct state that is characterised by cognitive, interpersonal, spiritual, and mystical dimensions. Spirit at work involves: (1) *engaging work* characterised by a profound feeling of well-being, a belief that one is engaged in meaningful work that has a higher purpose, an awareness of alignment between one's values and beliefs and one's work, and a sense of being authentic; (2) a *spiritual connection* characterised by a sense of connection to something larger than self; (3) a *sense of community* characterised by a feeling of connectedness to others and common purpose; and (4) a *mystical or unitive experience* characterised by a positive state of energy or vitality, a sense of perfection, transcendence, and experiences of joy and bliss (Kinjerski & Skrypnek, 2006a; p. 12)

k

Aston University

Illustration removed for copyright restrictions

Figure 2.1: The Four Dimensions of Spirit at Work (Kinjerski & Skrypnek, 2006a)

The present study adopts this concept applied as the definition of individual spirit at work because this definition includes all dimensions discussed by previous researchers and also is consistent with the conceptual definitions of others (Ashmos & Duchon, 2000; Milliman *et al*, 2003; Mitroff & Denton, 1999a, b; Sheep, 2004; Smith & Rayment, 2007; Marques, Dhiman, & King's study, 2007). Moreover, individual spirit at work refers to the desire of employees to express all aspects of their being at work, to be engaged in meaningful work (Ashmos & Duchon, 2000; Mitroff & Denton, 1999a, b) and to archive their personal fulfilment through work (Krishnakumar & Neck, 2002; Mitroff & Denton, 1999a, b; Neck & Milliman, 1994). Specifically, this concept addresses the spiritual dimension of work and more clearly describes the nature of the individual experience of spirit at work. Some researchers have restricted themselves to only attitudinal aspects of work and totally ignored or neglected the dimensions falling under the realm of spirituality (Milliman *et al*., 2003; Sheep, 2004). This often leads to question regarding the uniqueness of the concept of spirituality at work in comparison to already existing concepts in the organisational behaviour literature. The researcher therefore has chosen this definition in the present study in order to have further empirical investigation of the new concept of spirit at work and ultimately contribute back to the knowledge of workplace spirituality as a whole.

2.4 DIMENSIONS OF INDIVIDUAL SPIRIT AT WORK

The terms spirit at work, workplace spirituality, spirituality in the workplace, spirituality at work, spirituality in organisations, and organisational spirituality seem to be used interchangeably in order to capture similar concepts. Particularly, as in this thesis the term spirit at work is used to describe the experience of individuals and other

terms tend to reflect the organisational construct. Thus, spirit at work refers to employee experiences of spirituality in the workplace, these experiences includes aspects such as sense of meaning in work, community, and transcendence (e.g., Ashmos & Duchon, 2000; .Giacalone & Jurkiewicz, 2003; Kinjerski & Skrypnek, 2004).

According to the revised definition of spirit at work (Kinjerski & Skrypnek, 2004, 2006a, b, c, 2008a, b) and the conceptualisation of spirit at work in the empirically grounded human ecological model (Kinjerski & Skrypnek, 2006c), spirit at work is a distinct experience characterised by cognitive features, interpersonal dimensions, spiritual presence, and mystical components. Of which this definition, it is composed of four dimensions: engaging work, sense of community, spiritual connection, and mystical experience.

2.4.1 Engaging work

A fundamental aspect of individual spirit at work involves having a deep sense of meaning and purpose in one's work. This dimension of individual spirit at work represents how employees interact with day-to-day work at the individual level. The expression of individual spirit at work involves the assumptions that each person has his/her own inner motivations and truths and desires to be involved in activities that give greater meaning to his/her life and the lives of others (Ashmos & Duchon, 2000; Milliman *et al*., 2003; Kinjerski & Skrypnek's, 2006a). Likewise, Moore (1992) observes that work is a vocation and a calling as a way to create greater meaning and identity in the workplace. In short, the meaningful/engaging work dimension of spirit at work implies work that provides employees a sense of joy and connects employees to the larger good (Duchon & Plowman, 2005).

2.4.2 A Sense of Community

A critical dimension of individual spirit at work involves having a deep connection to, or relationship with, others, which has been articulated as a sense of community (Ashmos & Duchon, 2000; Milliman *et al*., 2003; Kinjerski & Skrypnek's, 2006a). This dimension of individual spirit at work concerns interactions between employees and their co-workers. Community at work is based on the belief that people see themselves as connected to each other and that there is some type of relationship between one's inner self and the inner self of other people (Maynard, 1992; Miller, 1992). The essence of community is that it involves a deeper sense of connection among people, including support, freedom of expression, and genuine caring.

According to Kelley and Thibaut's interdependence theory (Kelley & Thibaut, 1959; Kelley & Thibaut, 1978), it is defined via patterns of interdependence in interpersonal interactions, identifying the extent to which one partner can affect and/or control the other's outcomes in a given interaction. Similar to a sense of community dimension of spirit at work, interdependence theory focuses on the interaction, in this sense the between person relationship is just as important as the people themselves (Rusbult & Van Lange, 2003). Moreover, when individuals experience a sense of community, they report a sense of connection to others and common purpose. Thus, the experience of spirit at work, particularly a sense of community dimension, has much overlap with interdependence. However, interdependence theory emphasises that there are rewards and costs to any relationship and that people try to maximise the rewards while minimising the costs, whereas interpersonal experience of a sense of community involves trust and respect and sometimes, even intimacy and love (Kinjerski & Skrypnek, 2004) rather than focusing on rewards and costs. Further, similar to one

dimension of the social characteristics of extending the Job Characteristics Model, interdependence is the extent to which a job is contingent on others' work and other jobs are dependent on the work of the focal job. This dimension has alternatively been labeled dealing with others (Hackman & Lawler, 1971, cited in Humprhrey, Nahrang, & Morgeson, 2007). However, their focus was solely on task interdependence, rather than the broader set of interdependencies people may share. Therefore, it is interdependence at work along with a deep sense of connection to others and common purpose where all participants work with cooperation, understanding and harmony that differentiate a sense of community dimension of spirit at work from interdependence.

2.4.3 A Spiritual Connection

The spiritual dimension of individual spirit at work has much in common with broader conceptions of spirituality, but reflects spirituality experienced in the context of work. The expression of individual spirit at work involves the assumptions that each person experiences a connection with something larger than self (e.g., a Higher Power, a Greater Source, or a God-within presence) and/or a deep connection to humankind or nature that has a positive effect on his/her work (Kinjerski & Skrypnek, 2006a). It is this context that distinguishes individual spirit at work from spirituality. Chalofsky (2010) observes that the integration of an individual's life and spiritual life might help their work become more joyful, balanced, meaningful, and spiritually nourishing. These more fulfilled individuals might then return to other people, refreshed and ready to contribute. Because of this integration, one might expect these people to be more ethical and more productive workers which would benefit their employers. In contrast to spiritual intelligence, Emmon's (2000) concept focuses on the ability or capacity to

have spiritual experiences, individual spirit at work focuses on the actual spiritual during work endeavours.

2.4.4 A Mystical Experience

A mystical experience dimension of individual spirit at work reflects a positive state of arousal in which individual experience a natural high at work in which everything flows effortlessly, where they have no sense of time and space, and which involves feelings of bliss, joy, and ecstasy (Kinjerski & Skrypnek, 2006a). The combination of these experiences is indicative of a changed state of consciousness similar to the concept of flow (Csikszentmihalyi, 1988). According to Csikszentmihalyi (1988), the main dimensions of flow are "intense involvement, deep concentration, clarity of goals and feedback, loss of a sense of time, lack of self-consciousness, and transcendence of a sense of self, leading to an auto-telic, that is, intrinsically rewarding experience" (p. 365). Similar to spirit at work, when individuals experience flow they report a profound sense of well-being and sense of inner harmony. Hence, the experience of spirit at work, particularly the mystical dimension, has much overlap with flow. It is flow at work along with a sense of purpose or belief that one is engaged in meaningful work that contributes to the common good that differentiates spirit at work from flow.

2.5 SPIRIT AT WORK AND EMPLOYEE ENGAGEMENT

As indicated in the previous section, there are four dimensions of spirit at work. It seems that meaning in work/engaging work dimension of spirit at work overlaps from employee engagement concept. Although there is related between meaning in

work/engaging work dimension of spirit at work and employee engagement, it does not mean spirit at work and employee engagement are the same concepts. Rather, employee engagement is only a part of spirit at work constructs. According to Kahn (1990), engagement refers to "the harnessing of organisation members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). It is the "simultaneous employment and expression of a person's 'preferred self' in task behaviours that promote connections to work and to others, personal presence (physical, cognitive, and emotional), and active, full role performance" (p. 700). Kahn (1990) observed that people were more engaged in work situations that were characterised by more psychological meaningfulness, psychological safety, and in which they were more psychologically available. May and colleagues (2004) investigated Kahn's (1990) three psychological conditions and found that meaningfulness was the strongest predictor of engagement. According to Kahn (1990), psychological meaningfulness refers to "a feeling that one is receiving a return on investments of one's self in a currency of physical, cognitive, or emotional energy. People experienced such meaningfulness when they felt worthwhile, useful, and valuable – as though they made a difference and were not taken for granted. They felt able to give to others and to the work itself in their roles and also able to receive" (p. 703–704). Moreover, psychological meaningfulness can be achieved from task characteristics that provide challenging work, variety, allow the use of different skills, personal discretion, and the opportunity to make important contributions (Kahn 1990, 1992). Jobs that are high on the core job characteristics (i.e. skill variety, task identity, task significance, autonomy, and feedback) provide employees with motivation to be more engaged (Kahn 1992).

Additionally, Hackman and Oldham (1976, cited in Humprhrey, Nahrang, & Morgeson, 2007) suggested that motivational work characteristics impact behavioral and attitudinal outcomes through their influence on three critical psychological states: experienced meaningfulness (i.e., the degree to which an employee feels the job has value and importance), experienced responsibility (i.e., the degree to which an employee feels liable and accountable for job results), and knowledge of results (i.e., the degree to which the employee is aware of his or her level of performance). Specifically, skill variety, task identity, and task significance are thought to impact experienced meaningfulness, autonomy is thought to impact experienced responsibility, and feedback from the job is thought to impact knowledge of results. Thus, as can be seen that meaning in work/engaging work dimension of spirit at work has some similarities to psychological meaningfulness.

However, the manner in which meaningfulness has been described in the engagement literature is limited and incomplete. In this respect, Pratt and Ashforth (2003) make an important distinction about meaningfulness in terms of meaningfulness in work and meaningfulness at work. Meaningfulness in work comes from the type of work that one is doing rather than from where the work is done. Hence, creating meaningfulness in work involves making work and one's tasks intrinsically motivating. Meaningfulness at work comes from one's membership in an organisation rather than from the work that one does. Therefore, meaningfulness at work has more to do with "whom one surrounds oneself with as part of organisational membership, and/or in the goals, values, and beliefs that the organisation espouses" (Pratt & Ashforth 2003, p. 314). This distinction is especially important for engagement because the

meaningfulness that Kahn (1990) describes has more to do with meaningfulness in work than meaningfulness at work.

According to the definition of spirit at work, it is composed of four dimensions: meaning in work/engaging work, sense of community, spiritual connection, and mystical experience. As mentioned earlier that the meaningfulness has been described in the engagement literature is limited and the meaningfulness that Kahn (1990) focused meaningfulness in work more than meaningfulness at work. Further, there are no any relationships between psychological meaningfulness and the other three dimensions of spirit at work (sense of community, spiritual connection, and mystical experience). More importantly, spiritual connection and sense of community are the potential for employees to experience meaningfulness at work that goes beyond the meaning that one might experience in work. That is, when employees are involved in and part of something greater that serves a purpose beyond self-interest, they will experience meaningfulness at work. Also, the experience of meaningfulness at work will be more likely when employees feel that they are part of and connected to a caring and supportive community. Consequently, these reasons made two concepts (spirit at work and employee engagement) are distinctive from each other.

2.6 SPIRIT AT WORK AND TRAIT-LIKE/ STATE-LIKE INDIVIDUAL DIFFERENCES

Research on individual differences has distinguished between trait-like and state-like constructs (Ackerman & Humphreys, 1990). Trait-like individual differences such as cognitive ability and personality characteristics are not specific to a certain task

or situation and are stable over time (e.g. Ackerman & Humphreys, 1990; Hough & Schneider, 1996). In contrast, state-like individual differences such as self-efficacy and state anxiety are specific to certain situations or tasks and tend to be more malleable over time (e.g., Bandura, 1997; Gist & Mitchell, 1992). As the constructs of spirit at work stated in the previous section (meaningful/ engaging work, sense of community, spiritual connection, and mystical experience), it is important to understand in more depth the conceptualising constructs whether they are trait-like or state-like individual differences. For the meaningful/ engaging work and mystical experience constructs, the researcher has already described that these concepts are overlapped with psychological meaningfulness and flow. While psychological meaningfulness (Kahn, 1990) and flow (Csikszentmihalyi, 1988) are obviously identified as state-like, in which they tend to be more malleable over time and specific to certain situations or tasks, therefore the meaningful/ engaging work and mystical experience constructs are characterised as state-like individual differences.

Furthermore, a sense of community is also overlapped with interdependence concept (Kelley & Thibaut, 1959) which is categorised as trait-like because it is defined via patterns of interdependence in interpersonal interactions which should be stable over time and not specific to a certain task or situation, thus a sense of community seems to go as a trait-like individual difference. Last, a spiritual connection is introduced by Kinjerski and Skrypnek (2006c) that individual differences may foster individuals experience spirit at work. They suggest that the creation of spirit at work may be influenced by integrated personality traits (inner harmony, positive energy, conscientiousness, self-transcendent, open to possibilities, and spiritually inclination). Further, they argued that 'personality is important in the creation of spirit at work and

that the spiritual inclination dimension is the key personality dimension responsible for fostering spirit at work' (Kinjerski & Skrypnek, 2006c, p.2). Moreover, they were struck by the parallel of the integrated spirit at work personality profile with the Five Factor Model of personality (McCrae & Costa, 1999) with one important exception. What is left unexplained by the Five Factor Model of personality is the tendency of individuals with high spirit at work towards a spiritual inclination. According to Kinjerski (2004), spirituality seems to be the personality dimension that makes people's experience of spirit at work unique, suggesting that the inclination towards spirituality is what fosters individual transformation and spirit at work. A strong connection with something larger than self, that quest for meaning, the sense of purpose beyond self, and the self-transcendent nature of those with a disposition towards spirit at work seems to make the difference. Unsurprisingly, these traits are consistent with Piedmont's (1999; 2001) concept of spirituality as a sixth facet of the Five Factor Model of personality. Thus, a spiritual connection dimension of spirit at work constructs is characterised as a trait-like individual difference in this aspect. In sum, as can be seen spirit at work constructs comprise both elements of trait-like and state-like individual differences, which this is very useful for further explanation of the spirit at work effects towards employee attitudes and organisational outcomes in this study.

2.7 SPIRIT AT WORK AND THE THAILAND CONTEXT

Due to situating Thailand as the context for this study and gaining a better understanding of how Thai cultural/religious context as an enabler of a particular form of spirituality, and how spirituality might be evidenced in Thai attitudes/behaviour, the researcher will offer a perspective from Thailand context on the issue of spirituality in

the workplace/spirit at work. More specifically, the researcher will offer how Thai culture such matters and is different from Western country cultures where most researches in this field were conducted. The aim is to offer a brief overview of Thailand and Thai culture intended to contribute to the discussion on how best to go about this issue.

Overview of Thailand:

Thailand is a country located in the heart of Southeast Asia. The country is a constitutional monarchy, headed by King Rama IX, the ninth king of the House of Chakri, who, having reigned since 1946, is the world's longest-serving head of state and the longest-reigning monarch in Thai history. The king of Thailand is titled Head of State, Head of the Armed Forces, the Upholder of the Buddhist religion, and the Defender of all Faiths. Thailand is the world's 51st largest country in terms of total area, with an area of approximately 513,000 km^2 (198,000 mi^2), and is the 20th-most-populous country, with around 66 million people (The National Statistical Office, 2011). The capital and largest city is Bangkok, which is Thailand's political, commercial, industrial and cultural hub.

About 75% of the population is ethnically Thai, 14% is of Chinese origin, and 3% is ethnically Malay; the rest belong to minority groups including Mons, Khmers and various hill tribes. The country's official language is Thai. The primary religion is Buddhism, which is practiced by around 95% of the population. Muslims are the second largest religious group in Thailand at 4.2%. Christians represent 0.7% of the population and the remaining around 0.1% includes Sikhs, Hindus, and Jewish (The National Statistical Office, 2011). Thailand experienced rapid economic growth between 1985 and 1995, and is presently a newly industrialised country and a major

exporter. Tourism also contributes significantly to the Thai economy, as the country is home to a number of well-known tourist destinations, including Phuket, Krabi, Chiang Mai, Bangkok, Pattaya, Hua Hin and Ko Samui. There are approximately 5.2 million legal and illegal migrants in Thailand, and the country has also attracted a number of expatriates from developed countries (The National Statistical Office, 2011).

Thai Culture and Spirit at Work:

In general, our understanding of culture is referred to the accepted norms among a group of people that affects how they behave, how they present themselves, how they communicate, how they express feelings and emotions, what they value, how they solve problems, how they see themselves and how they see the world. Within the literature, culture has been difined in many ways, a well-known anthropologist Clyde Kluckhohn defined as a consensus of anthropological definitions "Culture consists of patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts" (Kluckhohn, 1962, p.73). However, the most famous and most commonly cited definition of culture especially in cross-cultural study of work-related values is the one carried out by the work of Geert Hofstede. According to Hofstede (1997), he defines culture as "the collective programming of the mind which distinguishes the members of one group or category of people from another" (p.5).

As a result of his extensive study, Hofstede (1980) identifies four dimensions to classify the way people in different countries (over 50 countries and 3 regions) interpret their cultural environment. The four dimensions are: power distance, individualism versus collectivism, masculinity versus femininity, and uncertainty avoidance.

Apparently, the Hofstede's (1980) findings demonstrated that comparing to Western cultures, Thais are likely to have high power distance, high uncertainty avoidance, femininity, and collectivism whereas Americans and British have low power distance, low uncertainty avoidance, masculine, and individualism. Since this thesis conducted solely in Thailand, one should be aware of the results in term of generalisability to other cultural contexts. The following discussions of the four dimensions are a summarisation of Hofstede's work about Thai culture and how each dimension may influence on spirit at work construct.

Power distance is defined as "the extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally" (Hofstede, 1991, p.28). We can simply say that power distance refers to the perceived level of dominance of one group over another, for example teacher over student. A society has high power distance when it emphasises the gap between junior and superior. If this gap is de-emphasised, then the society has low power distance and tends to be less hierarchic. Hofstede (1991) suggested that Thai society has high power distance, suggesting that Thais accept wide differences in power in their organisations. In Thai society there are a myriad of relationships that centre on relative seniority. Superior-inferior relationships are clearly defined by acceptance and implicit recognition of age, birth, title, rank, status, position or achievement. Thai culture accepts that power relations are implicitly constructed in all organisations and at levels of Thai society. It is often said that the way to succeed in business in Thailand is to observe the rules of hierarchy. Understanding the social status of people and the vertical structure of a company is essential for doing business with Thais.

According to Holmes and Tangtongtavy (1995), every Thai understands that he/she has a particular place in the cultural hierarchy and generally accepts that they should be content with that place. Thai people have a very high sense of hierarchy; they are very submissive and respectful. Thai people will show great respect towards those who have gained a high level in society. Consequently, Thai organisational participants, of whatever rank, both respect and even prefer there to be significant hierarchical gaps between the various levels of management. Thai workers show great respect for their managers, work hard and often sacrifice their days to satisfy the needs of the boss, accepting his/her power without questioning it. From high power distance perspective, leaders in Thai organisation undoubtedly can play a key role to foster spirit at work. Leaders can promote or stifle spirit at work by their behaviour since employees tend to view them as role models.

Collectivism versus Individualism: collectivism pertains to "societies in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty" (Hofstede, 1991, p. 51). In contrast, nations such as the United States, England, and Australia are highly individualistic; "the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family" (Hofstede, 1991, p. 51). Thailand is a highly collectivist culture.

Thai people have a long history of being members of extended families. As an agricultural culture, collective work is common and expected. Consequently, Thais work hard to build and maintain relationships among a wide and complex network of people (Holmes & Tangtongtavy, 1995). Thai culture encourages interdependence

instead of independence and a "We" consciousness prevails rather than an "I" consciousness. As can be seen, a sense of community in spirit at work constructs is naturally presented in Thai culture. Therefore, collectivism dimension of culture and spirit at work are correlated to some extent.

Masculinity versus Femininity: Hofstede (1991) defines this dimension as follows: "masculinity pertains to societies in which social gender roles are clearly distinct (i.e., men are supposed to be assertive, tough, and focused on material success whereas women are supposed to be more modest, tender, and concerned with the quality of life); femininity pertains to societies in which social gender roles overlap (i.e., both men and women are supposed be modest, tender, and concerned with the quality of life)" (p. 82-83).

Hofstede (1991) suggested that Thailand is a society with less assertiveness and competitiveness, as compared to one where these values are considered more important and significant. This situation also reinforces more traditional male and female roles within the population. This dimension also highlights the value people place on social relations versus productivity. Within a highly masculine culture, performance outcomes and productivity represent the top priorities. As a more feminine culture, Thais place great value on maintaining harmonious social relations, even at the expense of accountability and productivity in the workplace. From this point of view, Thai people exhibit many feminine qualities – politeness, quietness, caring for others, to name but a few. Moreover, most Thais (95% of the population) are Buddihists and followers of this religion are fundamentally encouraged to progress from becoming more compassionate, generous, focused mentally on spiritual wisdom and purity. So, these qualities are

highly related to spiritual inclination characteristics. According to Kinjerski and Skrypnek (2006c), they assert that spiritual inclination is the key personality dimension responsible for fostering people experience spirit at work.

Uncertainty avoidance, last dimension, indicates the "extent to which a society feels threatened by uncertain and ambiguous situations and tries to avoid these situations by providing greater career stability, establishing more formal rules, not tolerating deviant ideas and behaviours, and believing in absolute truths and the attainment of expertise" (Hofstede, 1980, p. 45). Thailand ranks high on uncertainty avoidance. Hofstede (1991) suggested that in order to minimise or reduce this level of uncertainty, strict rules, laws, policies, and regulations are adopted and implemented. The ultimate goal of this population is to control everything in order to eliminate or avoid the unexpected. As a result of this high uncertainty avoidance characteristic, the society does not readily accept change and is very risk adverse. Change has to be seen for the greater good of the in-group. For organisational level of a society with high uncertainty avoidance, employees believe that company rules should not be broken even when it is shown to be in the company's best interest and look forward to continue working with the firm until they retire. In this respect, people high uncertainty avoidance characteristic may be less experience spirit at work because they tend not to feel passionate about their job. Furthermore, they may be difficult to get in touch with the deeper meaning/purpose underlying their work, and learn how to appreciate him/her-self and others at work.

2.8 RESEARCH ON MEASUREMENT OF SPIRIT AT WORK

According to Braud's (2009) suggestions to increase our understanding of spirituality in the workplace, the new transpersonal inquiry approaches were proposed to be used to supplement more established quantitative and qualitative research approaches in exploring workplace spirituality. Like qualitative research, the researcher in transpersonal inquiry approaches plays an extremely important role as the chief instrument of the investigation. Moreover, in the various transpersonal inquiries, the researcher is involved even more extensively and deeply. The researcher tends to explore topics that she or he already has experienced and that have great personal meaning and importance (Braud, 2009, p.67). Nevertheless, in this article, Braud has introduced the existing standardised assessments that can be used to measure spirituality in general or in the workplace as the following:

1. Egocentric Grasping Orientation Inventory (EGO; Knoblauch & Falconer 1986): a 20-item self-report scale of the tendency toward ego-grasping, ego-striving, attempting to make things more positive while striving to eliminate the negative aspects of human experience. High scores indicate a tendency opposite that of a Taoistic way of being in the world. The scale could be used as a measure of a more accepting, going-with-the-flow conception of Eastern spirituality.

2. Expressions of Spirituality Inventory (ESI; MacDonald 2000): a 98-item test developed to assess five dimensions of spirituality. The dimensions (subscales) consist of the following: (a) Cognitive Orientation Towards Spirituality (spiritual beliefs and perceptions), (b) Experiential/Phenomenological

Dimension (spiritual experience), (c) Existential Well-being, (d) Paranormal Beliefs, and (e) Religiousness.

3. Index of Core Spiritual Experience (INSPIRIT; Kass *et al*. 1991): a 19-item self-report scale of the degree to which one has beliefs and experiences of a higher power and one's relation to that power, and indications of transpersonal experiences; in a 4-point Likert scale format.

4. Spiritual Assessment Inventory (SAI; Hall & Edwards 1996): a 43-item assessment in 5-point rating scale format, developed for pastoral counselors and others with religious clients; it is based on a relational theology and emphasizes awareness and quality dimensions of one's relationship with the divine and with others.

5. Spiritual Orientation Inventory (SOI; Elkins *et al*. 1988): an 85-item assessment of "humanistic spirituality" containing nine subscales: transcendent dimension, meaning and purpose, mission in life, sacredness of life, material values, altruism, idealism, awareness of the tragic, and fruits of spirituality; 5-point Likert scale format.

6. Spiritual Perspective Scale (SPS; Reed 1987): a 10-item self-report scale of the saliency of spiritual beliefs and behaviors in many different aspects of the participant's life; 6-point Likert scale format; the scale was developed primarily for assessing the elderly, in a nursing context.

7. Spiritual Well-Being Scale (SWB; Ellison 1983): developed as a general indicator of the subjective state of well-being, the SWB provides an overall measure of the perceived spiritual quality of life in two senses: religious and existential. It consists of 20 items on a 7-point Likert scale, with two subscales.

8. Spirituality Assessment Scale (SAS; Howden 1992): a measure of spirituality that does not rely upon any religious theory or terminology. It consists of 28 items and uses a 6-point Likert scale, with 4 subscales: unifying interconnectedness, purpose and meaning in life, innerness or inner resources, and transcendence.

However, there are only five studies about workplace spirituality/spirit at work measurement which appear within the literature, not only in order to measure some aspects of sprituality as the eight standardised assessments mentioned above but also especially including the business/management context of work: Ashmos & Duchon (2000), Milliman *et al.* (2003, developed from Ashmos & Duchon's work), Sheep (2004), Fry (2005), and Kinjerski & Skrypnek (2006a). One of these five measurements, Spiritual Leadership Scale, was developed by Fry (2005) and based on Spiritual Leadership Theory which focuses on the fundamental needs of both leader and follower (vision, hope/faith, and altruistic love) that are necessary to intrinsically motivate one's self and others so they have a sense of spiritual survival through calling and membership (Fry, 2003). Since the theory is specific for Leadership concept not workplace spirituality/ spirit at work in general that the researcher is not interested to investigate in this study, it will therefore not include for the following discussion. Due to the Spirit at Work Scale (*SAWS*) developed by Kinjerski & Skrypnek (2006a), being chosen to use in this study, the following section will discuss the reasons of choosing the *SAWS* scale.

First, Ashmos and Duchon (2000) set up with the first pioneering work in the development of spirituality at work scale. The purpose of their instrument was to

observe and measure spirituality at work, which was conceptualised as having three components: (1) the inner life; (2) meaningful work; and (3) sense of community. Part 1 assesses individuals' own experience, Parts 2 and 3 were intended to assess spirituality at the work unit and organisational levels. Ashmos and Duchon reported that individual level items produced the cleanest factor structure. However, they suggested that the data addressing the work unit level were not as compelling and the organisational level items were disappointing as measures. It appeared that as the items moved further away from the individual, it was more difficult to capture and assess spirituality at work. These results support distinguishing between the emerging ideas of individual- and organisational-centred spirit at work and suggest the need for separate measures (Kinjerski & Skrypnek, 2006a). In spite of the different focus of each of the instruments, there was overlap between the *SAWS* scale (spiritual connection dimension) and some of the "individual level" items (inner life dimension, but more generally not at work) in Ashmos and Duchon's (2000) measure. Whereas Ashmos and Duchon's goal was to assess workplace spirituality at the individual, work unit and organisational levels, the focus of the *SAWS* is on individuals and, in particular, their experience of spirit at work.

Second, Milliman *et al*. (2003) developed the spirituality at work scale based on Ashmos & Duchon's (2000) work. The purpose of their measure was to examine the relationship between workplace spirituality and employee attitudes. The three core dimensions included (1) meaningful work; (2) sense of community; and (3) being in alignment with the organisations values and mission which the first two were selected from Ashmos & Duchon's work. All dimensions were assessed at the individual level of analysis. Considerable overlap was also found between the measure Milliman and colleagues (2003) designed to assess the relationship between workplace spirituality

and employee attitudes and the *SAWS*. Two constructs selected (meaningful work and sense of community) to represent workplace spirituality were consistent with the *SAWS*, but the third construct (alignment of values) was more reflective of the organisation, making it different from the *SAWS*. Moreover, the spiritual connection and mystical dimensions of the *SAWS* were not addressed in Milliman's measure.

Third, combining items that reflect individual and organisational workplace spirituality, Sheep (2004) proposed the Workplace Spirituality Person-Organisation Fit scale based on what he suggests are the four recurring themes that characterise workplace spirituality: a self-workplace integration; meaning in work; transcendence of self; and, personal growth/development of one's inner self at work. This scale measures a combination of: (1) an individual's attitudes towards the workplace as a place for personal and spiritual growth and expression and, (2) their perception of the extent to which their current workplace allows for such growth and expression. Similarities were found among the conceptualisation of the dimensions for the *SAWS* and Sheep's (2004) Workplace Spirituality Person-Organisational Fit, however the purpose of each instrument is completely different. The intention of Sheep's measure is to assess the individual's attitudes/expectations toward spirit at work and how well the organisation supplies or facilitates these expectations.

Fourth, in spite of the different intentions of each measure, similarities exist in how the construct is conceptualised. All four instruments include components that address meaningful/engaging work and sense of community. Unsurprisingly, all measures had a meaningful work component – which is included in the conception of

engaging work of the *SAWS* – because the "engaging work" factor accounts for the largest portion of variance explained by the *SAWS* measure.

Fifth, only the *SAWS* has a component that relates to the mystical component of spirituality at work. Kinjerski & Skrypnek (2006a) argue that this is a key aspect of spirit at work that previous measures have failed to capture. The *SAWS* is based on a definition of spirit at work that is grounded in individual's experience of work (Kinjerski & Skrypnek, 2004). In their research, individuals' personal reports of spirit at work commonly included vivid descriptions of mystical experiences at work.

Last and more importantly, what differentiates the measures is the purpose for which they were developed. The unit of analysis of the *SAWS* is only the individual and not the work unit or organisation. Rather than assess employee attitude, which may very well reflect workplace attitude rather than real action, the *SAWS* assesses the experience of spirit at work as a state of being (Kinjerski & Skrypnek 2006a).

2.9 SUMMARY

This chapter has presented the concept of spirituality in general from the literature review of both perspectives between psychology of religion/spirituality and management science. Particularly, the definition of spirituality in the context of work has been reviewed from the literature and how this study was conceptualised and defined the concept of individual spirit at work. Furthermore, the four dimensions of spirit at work have been illustrated in detail. Also, the spirit at work and employee engagement concepts, including examination the conceptualising constructs of spirit at

work whether they are state-like or trait-like individual differences have been clarified. Importantly, literatures on spirit at work and the Thailand context have been integrated. Additionally, the justification of adopting Kinjerski & Skrypnek's (2006a) spirit at work concept and their scale used in the present study has been described. Lastly, the theoretical framework and research hypotheses are presented in the next chapter.

CHAPTER 3

THEORITICAL FRAMEWORK AND HYPOTHESES

3.1 CHAPTER OVERVIEW

While spirit at work is in itself an interesting concept, from an applied psychology viewpoint its significance emerges from its interaction with and impact upon other relevant work-related constructs. This chapter focuses on the relationships between individual spirit at work and three employee work attitudes (job satisfaction, organisational identification, and psychological well-being) and three organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). Firstly, it constructs a theoretical framework establishing the hypothesised relationships and causal mechanisms between these variables and secondly, it articulates the specific research hypotheses emerging from this framework.

3.2 THEORETICAL FRAMEWORK

This study adopts the definition of spirit at work by Kinjerski & Skrypnek (2004, 2006a, b, c, d, 2008a, b) and conceptualises spirit at work only at the individual level. Kinjerski & Skrypnek (2006c) empirically grounded "Human Ecological Model of Spirit at Work" provides a useful framework for stimulating and guiding research in this new area. The model draws heavily on their own research specifying antecedent conditions and benefits of spirit at work which are consistent with the existing body of

spirit at work literature. Their results demonstrated that high levels of spirit at work are associated with: (a) individual well-being that overflows to other parts of life; (b) a positive effect on relationships, including a sense of community with those whom one works; (c) improved consumer service; (d) increased productivity in terms of the quality and quantity of work produced; (e) increased job satisfaction and commitment; and (f) decreased absenteeism and turnover (Kinjerski & Skrypnek, 2006c).

Interestingly, nevertheless, no formal hypotheses have been proposed in the literature relating the individual spirit at work to specific employee work attitude and organisational outcome variables which are used in the present study. Based on a literature review, the researcher formally proposes hypotheses in order to fill the theoretical gap linking Kinjerski & Skrypnek (2006a) of individual spirit at work (engaging work, sense of community, spiritual connection, and mystical experience) and three prevalent employee work attitudinal variables (job satisfaction, organisational identification, and psychological well-being) which may mediate relationship between individual spirit at work and the outcomes, and also with three important organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). Underpinned by Kinjerski & Skrypnek (2006c) Human Ecological Model of Spirit at Work and the relevant literatures which are discussed in the following sections, Figure 3.1 schematically depicts the objectives of the current study.

Figure 3.1: Conceptualising Framework of the Hypothesised Relationship between Individual Spirit at Work, Employee Work Attitudes as Mediators, and Organisational Outcomes

1.) Individual Spirit at Work	Employee Work Attitudes	Organisational Outcomes
1.1 Engaging Work	**2.) Job Satisfaction (+)**	**5.) In-role Performance (+)**
1.2 Sense of Community	**3.) Organisational Identification (+)**	**6.) Organisational Citizenship Behaviours (OCB) (+)**
1.3 Spiritual Connection		
1.4 Mystical Experience	**4.) Psychological Well-being (+)**	**7.) Turnover Intentions (-)**
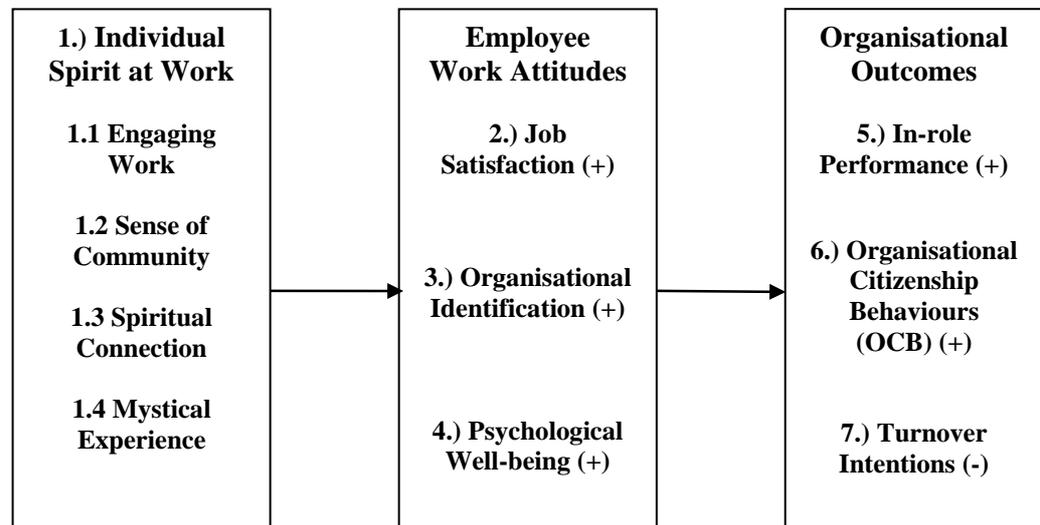
To better comprehend the relationship between the individual spirit at work, in particular spiritual connection and mystical experience dimensions, and the outcome variables proposed in this model which are limited in the relevant literature. The researcher here argues that employing self-determination theory could be the best way to understand the process and mechanisms that link individual spirit at work with other work-related variables in the current study. As well as based on the assumption that there might be similar notions between individuals experiencing intrinsic motivation/need satisfaction and individuals experiencing high levels of spirituality at work.

According to self-determination theory (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000), the opportunity to satisfy the three intrinsic needs (autonomy, competence, and

relatedness) will facilitate self-motivation and effective functioning because they facilitate internalisation of extant values and regulatory processes; they also facilitate adjustment because need satisfaction provides the necessary nutriments for human growth and development (Baard, Deci, & Ryan, 2004). At the heart of self-determination theory is the postulate that people have three inherent psychological needs: the needs for competence, relatedness, and autonomy (Deci & Ryan, 1985, 2000). These three needs are not learned but are an inherent aspect of human nature: (1) the need for competence concerns people's inherent desire to be effective in dealing with the environment; (2) the need for relatedness concerns the universal propensity to interact with, be connected to, and experience caring for other people; and (3) the need of autonomy concerns people's universal urge to be a casual agent, to experience volition, to act in accord with their integrated sense of self, and to endorse their actions at the highest level of reflective capacity (Deci & Vansteenkiste, 2004).

As individual spirit at work refers to the fact each person has his/her own inner motivations, truths and desires to be involved in the job that give greater meaning to his/her life and the lives of others, the researcher argues that people high in spirit at work, experience greater intrinsic need satisfaction on the job. Consequently, they should feel more autonomous, more competent, and more related to other people in the workplace (i.e. their supervisors and co-workers) because of their tendency toward active engagement with the social context. To date, in workplace spirituality literature there is no mention of the intrinsic need satisfaction of self-determination theory to connect with individuals experiencing high levels of spirit at work. Thus, the links between the intrinsic need satisfaction of self-determination theory and each outcome variable will be discussed further in the following sections.

3.3 RESEARCH HYPOTHESES

The present research will investigate the relationships between individual spirit at work and three employee work attitudinal variables (job satisfaction, organisational identification and psychological well-being) and three organisational outcomes (in-role performance, organisational citizenship behaviours (OCB) and turnover intentions) as proposed in the research framework model above. The following sections will provide a review of relevant literature among these interest variables and then propose the research hypotheses from these relationships.

3.3.1 THE RELATIONSHIP BETWEEN INDIVIDUAL SPIRIT AT WORK AND JOB SATISFACTION

Job satisfaction is one of the most important attitudinal issues in the workplace that managers face. Currivan (1999) stated that job satisfaction has been widely studied over the last four decades of organisational research. It has been defined and measured both as a global construct and as a concept with multiple dimensions or facets (Locke, 1969, 1970; Scarpello & Campbell, 1983). In general, overall job satisfaction has been defined as a function of the perceived relationship between what one wants from one's job and what one perceives it as offering (Locke, 1969). Spector (1997) observes that there were many studies in the past that linked job satisfaction with many employee outcomes i.e. job performance, organisational citizenship behaviour, withdrawal behaviour including absence and turnover, burnout, physical health and psychological well-being, life satisfaction, and counterproductive behaviour. Job satisfaction to date has been one of the most prevalent work attitudinal studies in management science.

For the relationship between individual spirit at work and job satisfaction, Wrzesniewski (2003) found that employees who derive the most meaning from their work, i.e., feel called to their jobs, experience higher job satisfaction. Meaningful work can also be expected to influence employee attitudes toward work. Brown (1992) observes that a sense of community leads to greater employee satisfaction with the organisation. Moreover, Milliman, Czaplewski, and Ferguson's empirical study (2003) discovered that both meaningful work and sense of community were significantly related to intrinsic work satisfaction. Most recently, Chawla and Guda (2010) found that there was a strong positive relationship between sales professionals' spirituality at work and his/her job satisfaction. They suggested that the sales professionals who aligned their self-concept to their spiritual identity (inner life) express their spiritual identity by meaningful work and by belongingness to the community. Therefore, there is an alignment between who he/she is and what he/she does, then there comes the satisfaction.

Further, self-determination theory (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000) suggests that individuals in a given social context will be self-motivated and experience greater well-being to the extent that they feel competent, self-determined, and connected to others. If an individual's job provides these nutriments then the theory would predict that the person will be more likely to evidence greater task enjoyment, greater job satisfaction, and psychological adjustment. Accordingly, Ilardi, Leone, Kasser, and Ryan (1993) found relationships between experiences of autonomy, competence, and relatedness on the job and general job satisfaction and satisfaction with the particular task. In addition, Komala and Ganesh's recent study (2007) identified the strength of the correlation between individual spirituality at work and job

satisfaction among healthcare professionals. Taken together, this research has hypothesised that:

Hypothesis 1 *The greater the experience of individual spirit at work, the greater the job satisfaction of the individual*

3.3.2 THE RELATIONSHIP BETWEEN INDIVIDUAL SPIRIT AT WORK AND ORGANISATIONAL IDENTIFICATION

Ashforth and Mael (1989) propose that, through organisational identification, organisational membership reflects on the self-concept just as social group memberships do (Dutton, Dukerich, & Harquail, 1994). Organisational identification thus reflects "the perception of oneness with or belongingness to an organisation, where the individual defines him or herself in terms of the organisation in which he or she is a member" (Mael & Ashforth, 1992, p. 104). Because of this self-defining quality, identification leads to activities that are congruent with the identity provided that membership of the group or organisation is salient (Haslam, Powell, & Turner, 2000). Organisational identification has been chosen to be studied in the present research because the previous studies showed that having high organisational identification can cause positive behaviours and actions. Those positive behaviours all benefit the organisation such as having greater in and extra-role performance and decreased turnover (Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Riketta, 2005; Van Dick, Grojean, Christ, & Wieseke, 2006; Peters, Tevichapong, Haslam, & Postmes, 2010).

Even though the research about the relationship between individual spirit at work and organisational identification is still limited, Rego and Cunha's recent

empirical research (2008) found workplace spirituality explained 48% of the unique variance of the affective organisational commitment. The dimensions of workplace spirituality they investigated were sense of community, sense of alignment with values of those of the organisations, meaningful work, sense of enjoyment at work, and opportunities for inner life. The findings suggested that when people experienced workplace spirituality, they felt more affectively attached to their organisations and experienced a sense of obligation/loyalty towards them. Furthermore, Kolodinsky, Giacalone, & Jurkiewicz's recent study (2008) showed that organisational spirituality is positively related to organisational identification. Along the same line, Milliman, Ferguson, Trickett, and Condemi (1999) also postulated that having a strong sense of community and strong purposeful organisational goals were related to greater employee commitment.

Using self-determination theory, Gagné, Chemolli, Forest, and Koestner (2008) proposed that when people want to, feel they should, or feel they have to accomplish work tasks, they will either become attached to, feel obliged toward, or feel stuck into, an organisation. Their empirical research results showed that motivation influences organisational commitment over time and autonomous motivation predicted changes in affective commitment. Specifically, their results provided preliminary evidence that motivational internalisation can explain how employees become committed to their organisation. In a similar vein, Trott (1996) discovered high correlation between spiritual well-being and affective organisational commitment. Moreover, Milliman, Czaplewski, and Ferguson's empirical study (2003) found that both meaningful work and sense of community were significantly related to affective organisational commitment. As a result, the following hypothesis is proposed:

Hypothesis 2 The greater the experience of individual spirit at work, the greater the organisational identification of the individual

3.3.3 THE RELATIONSHIP BETWEEN INDIVIDUAL SPIRIT AT WORK AND PSYCHOLOGICAL WELL-BEING

Psychological well-being is usually defined in terms of the overall effectiveness of an individual's psychological functioning (Gechman & Weiner, 1975; Sekaran, 1985). Clinical psychologists have long recognised the role of the pleasantness dimension of well-being (i.e., happiness vs. sadness or depression) in the determination of various individual outcomes. For example, depressed individuals have very low self-esteem, tend to be pessimistic, and exhibit reduced motivation and slowed thought processes (Wright & Bonett, 1997). Furthermore, unlike job satisfaction, which is centred on the work context, psychological well-being is a broader construct. Most typically, psychological well-being is considered as a primarily affect-based "context-free" or global construct. Psychological well-being is chosen to be observed in the current study because psychological well-being has been found to be related to performance at work (Cropanzano & Wright, 1999; Wright, Bonett, & Sweeney, 1993; Wright & Cropanzano, 2000; Wright & Staw, 1999). Therefore, it is worth including psychological well-being in this study in order to further investigate and understand its relationship with spirit at work as a new concept in organisational behaviour studies.

One of the clearest relationships between spirituality and work behaviour may be to do with how people handle their work stress. It would seem that people who are spiritual would be less likely to suffer from the negative psychological and physical

consequences of stress (Mohamed, Wisnieski, Askar, & Syed, 2004). In relation to self-determination theory, satisfaction of basic psychological needs (competence, relatedness, and autonomy) constitutes the central psychological process through which intrinsic motivation, the integrative tendency, and intrinsic goal pursuits are facilitated, resulting in well-being and optimal development. Supporting the theory of self-determination, Ilardi, Leone, Kasser, and Ryan (1993) discovered that factory workers who experienced greater overall satisfaction of their needs for autonomy, competence, and relatedness on the job displayed more positive work attitudes, higher self-esteem, and better well-being. Moreover, Deci *et al.*'s study (2001) found similar results that those American and Bulgarian employees who perceived autonomy support being theorised to facilitate satisfaction of the intrinsic need for competence, autonomy, and relatedness, and with those in turn being hypothesised to promote well-being.

In a similar situation, Fabricatore, Handal, and Fenzel's study (2000) demonstrated that personal spirituality is a moderator on the relationship between stressors including day-to-day hassles and satisfaction with life. Additionally, Young, Cashwell, and Shcherbakova (2000) found that spirituality had a strong moderating effect on the relationship between negative life experiences and depression and anxiety. Further, Trott (1996) also observes that those who are open to meaningful and purposeful relationships, which are key aspects of community, are more likely to grow, learn, and achieve at work and less likely to experience job burnout. In the study of intrinsic reasons for working (i.e. finding the work more meaningful) was found to be predictive of intentions to work in a sample of individuals who were suffering from a terminal illness (Westaby, Versenyi, & Hausmann, 2005). Inasmuch as having the opportunity to engage in intrinsically satisfying opportunities for employment

contributes to adjustment and quality of life, it may also reduce anxiety by providing distraction from symptoms (Westaby *et al*., 2005). Recently, Komala and Ganesh' empirical study (2007) discovered that there was a significant negative relationship between the variables of individual spirituality at work with burnout among doctors and nurses. Therefore, this research is hypothesised that:

Hypothesis 3 *The greater the experience of individual spirit at work, the greater the psychological well-being of the individual*

3.3.4 THE RELATIONSHIP BETWEEN INDIVIDUAL SPIRIT AT WORK, IN-ROLE PERFORMANCE, AND ORGANISATIONAL CITIZENSHIP BEHAVIOURS

In-role performance and organisational citizenship behaviours are both defined as employee behaviours. In-role behaviours are categorised as employees carry out their formally-prescribed job responsibilities whereas organisational citizenship behaviours involves an employee willingness to go above and beyond the call of duty (Bateman & Organ. 1983; Organ, 1988; Organ, 1997).

Research relating to individual spirit at work and in-role performance is very limited. Notwithstanding, spirituality can positively affect employee performance because spirituality can lead individuals to experience consciousness at a deeper level, thereby enhancing their intuitive abilities (Vaughan, 1989). Intuition, in turn, is considered an important leadership and management skill which is related to personal productivity (Agor, 1989). Furthermore, an explanation of self-determination theory gives us a clear understanding of the previous relationships in which people who are

high in the autonomous causality orientation tend to be more autonomously motivated in a particular situation and to show positive performance and well-being outcomes (Gagné & Deci, 2005). Baard, Deci, and Ryan's research results (2004) showed that both the autonomous orientation and autonomy support facilitated basic need satisfaction, which led to both better performance and greater well-being.

Most recently, Amabile and Kramer's (2011) research result shows that inner work life has a profound impact on workers' creativity, productivity, commitment and collegiality. Employees are far more likely to have new ideas on days when they feel happier. Moreover, workers perform better when they are happily engaged in what they do. They also observes that inner work lives are the usually hidden perceptions, emotions and motivations that employees experience as they react to and make sense of events in their workdays. Evidently, Rego, Cunha, & Souto's empirical study (2007) found that there was a significant correlation between spirituality at work and self-reported individual performance. The finding suggested that the individuals perceiving a stronger spirituality climate a higher self-report performance level. Thus, the following hypothesis is proposed:

Hypothesis 4 *The greater the experience of individual spirit at work, the greater the in-role behaviours of the individual*

Organ (1997) defined organisational citizenship behaviours (OCB) as "contributions to the maintenance and enhancement of the social and psychological context that supports task performance" (p. 91). Typically, employees who engage in OCB are those who go the extra mile for their organisations and thereby contribute to

its effective functioning. The basis of organisational citizenship behaviours usually include voluntary activities, such as obeying organisational rules, being involved in extra duties and showing initiatives (Organ, 1988).

Even though workplace spirituality and organisational citizenship behaviours have become more popular, the relationship between both variables is rarely investigated. However, Tepper (2010) proposes that spiritual employees possess greater meaning and purpose through their experiences and therefore are more grateful, sensitive to the needs of others, and tolerant for inequity, thereby leading to increased helping behaviours and more frequent acts of organisational citizenship behaviours. Moreover, Beazley (1997) has discovered a correlation between a high level of spirituality and honesty, humility, and service to others.

Drawing on self-determination theory, autonomous motivation promotes volunteering and other pro-social behaviours and thus, presumably, would also predict citizenship in organisations (Gagné & Deci, 2005). For example, Gagne´ (2003) conducted two studies examining the role of autonomy support on need satisfaction and pro-social behaviour. One showed that parental support of college students' autonomy predicted satisfaction of the students' basic needs for competence, relatedness, and autonomy, which in turn predicted the amount the students engaged in pro-social activities such as giving blood and volunteering. The other study showed that the level of perceived autonomy support in a volunteer work organisation related positively to need satisfaction of the volunteers, which in turn related positively to the amount they volunteered for the activity and negatively to their likelihood of quitting. Taken together, this research has hypothesised that:

Hypothesis 5 *The greater the experience of individual spirit at work, the greater the organisational citizenship behaviours of the individual*

3.3.5 THE RELATIONSHIP BETWEEN INDIVIDUAL SPIRIT AT WORK AND TURNOVER INTENTIONS

Turnover intentions concern whether an individual is considering leaving their current organisation and investigating alternative employment prospects (Martin, 1979; Mobley, 1982; Moore, 2000). Intentions to quit are accepted as the main antecedent or stronger cognitive precursor of actual turnover behaviour of individuals (Lee & Mowday, 1987; Tett & Meyer, 1993; Moore, 2000). Employee intentions to leave have been one of the most recent research areas in organisational turnover literature. Since employees quitting the organisation cost to the organisation regarding the subsequent hiring of replacement employees can be significant in terms of personal, department and organisational readjustments (Casio Wayne, 1991; Mobley, 1982). Consequently, turnover intentions are chosen to be studied in the present research.

Despite research about the relationship between individual spirit at work and turnover intentions are still limited, Trott (1996) proposed that spiritual wellbeing, which includes a sense of community, will be positively related to cooperation and negatively related to turnover and absenteeism. Moreover, Milliman, Czaplewski, and Ferguson's empirical study (2003) discovered that both sense of community and alignments with organisational values were significantly negatively related to intention to quit. According to self-determination theory, if people feel their intrinsic needs for autonomy, competence, and relatedness are satisfied they become intrinsically

motivated. Consequently, they tend to be more affectively attached to their organisations and experience a sense of loyalty towards them. Evidently, Rego, Cunha, & Souto's study (2007) recently discovered that from a sample of 254 Brazilian and 211 Portuguese employees from 157 organisations operating in both countries, there was a negative correlation between organisational spirituality and continuance commitment. The finding suggests that people who experience a sense of spirituality at work tend to develop higher affective and normative commitment and lower continuance commitment. More recently, Chawla and Guda (2010) also discovered that there was a strong negative relationship between sales professionals' spirituality at work and his/her intentions to leave. They suggested that when there is belongingness, i.e., the feelings of existing together in the community and when he/she is happy with the work then he/she may not intend to leave the job and the organisation. Therefore, this research suggests the following hypothesis:

Hypothesis 6 *The greater the experience of individual spirit at work, the less the intention of the individual to quit the organisation*

Although the prevalence of the three work attitudes used in this study (job satisfaction, organisational identification, and psychological well-being) have been widely investigated as mediator variables in the organisational literature, none of the previous studies in the field of workplace spirituality to date have been found. Decades of research on job satisfaction, organisational identification, and psychological well-being have resulted in a sound understanding of how both personal factors (e.g. dispositions) and environmental factors (e.g. working conditions, economic conditions) affect employees' level of job satisfaction, organisational identification, and psychological well-being and how job satisfaction, organisational identification, and

psychological well-being, in turn, influences a variety of important workplace behaviours (e.g. job performance and turnover). For the most part, job satisfaction, organisational identification, and psychological well-being are thus positioned either as determinants of workplace behaviour (e.g. an independent variables) or as desirable outcomes in their own rights (i.e. dependent variables). While the researcher recognises the intrinsic value of these two perspectives, the researcher argues in this study that the additional important roles of job satisfaction, organisational identification, and psychological well-being lie in their roles as mediators of the relationships between individual spirit at work and organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). These mediational roles are not only a logical extension of the manner in which job satisfaction, organisational identification, and psychological well-being are positioned within the nomological network, but are also consistent with various theoretical frameworks that focus on the manner in which an individual's actions toward an attitude object (e.g. organisation, co-workers, supervisors) are informed by the manner in which the attitude object is perceived to have acted toward the individual. A brief review of these following empirical literatures devoted to developing an understanding of how job satisfaction, organisational identification, and psychological well-being are translated into volitional workplace behaviours will allow us to establish a general theoretical model of how job satisfaction, organisational identification, and psychological well-being act as mediators of the relationships between individual spirit at work and organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions).

3.3.6 THE RELATIONSHIPS BETWEEN JOB SATISFACTION AND ORGANISATIONAL OUTCOMES (IN-ROLE PERFORMANCE, ORGANISATIONAL CITIZENSHIP BEHAVIOURS, AND TURNOVER INTENTIONS)

Job satisfaction is found to predict outcomes such as job performance (Judge, Thoresen, Bono, & Patton, 2001) and contextual performance (Organ & Ryan, 1995). It is also associated with higher incidences of organisational citizenship behaviours (Bateman & Organ, 1983; Smith, Organ, & Near, 1983; Williams & Anderson, 1991). Meta-analytic research shows that job satisfaction is a significant predictor of turnover (Hom & Griffeth, 1995). Moreover, Hom and Kinicki (2001) observe that job satisfaction is probably the most frequently investigated predicator of turnover. Griffeth, Hom, & Gaertner (2000) also discovered that there was an average correlation between satisfaction and actual turnover of $r = -0.17$. Altogether this research leads to the following three sets of hypotheses:

Hypothesis 7 *The relationship between one's individual spirit at work and in-role behaviours would be mediated by their job satisfaction.*

Hypothesis 8 *The relationship between one's individual spirit at work and organisational citizenship behaviours would be mediated by their job satisfaction.*

Hypothesis 9 *The relationship between one's individual spirit at work and turnover intentions would be mediated by their job satisfaction.*

3.3.7 THE RELATIONSHIPS BETWEEN ORGANISATIONAL IDENTIFICATION AND ORGANIZATIONAL OUTCOMES (IN-ROLE PERFORMANCE, ORGANISATIONAL CITIZENSHIP BEHAVIOURS, AND TURNOVER INTENTIONS)

A review of Riketta's (2005) meta-analysis of organisational identification showed that organisational identification correlated strongly and negatively with turnover intentions ($r = -.48$), moderately with organisational citizenship behaviours ($r = .35$), and weakly with in-role performance ($r = .17$). All correlations were significant. However, theory suggests that organisational identification is likely to result in enhanced in-role performance because people who strongly identify with their organisation are likely to exert much effort, contribute their best for the social system, cooperate, develop lower turnover intentions and actual turnover, and are expected to exhibit high performance as they feel a strong sense of belongingness (e.g. Abrams, Ando, & Hinkle, 1998; Mael & Ashforth, 1995; Tyler, 1999). Taken together, this research suggests the following three sets of hypotheses:

Hypothesis 10 *The relationship between one's individual spirit at work and in-role behaviours would be mediated by their organisational identification.*

Hypothesis 11 *The relationship between one's individual spirit at work and organisational citizenship behaviours would be mediated by their organisational identification.*

Hypothesis 12 *The relationship between one's individual spirit at work and turnover intentions would be mediated by their organisational identification.*

3.3.8 THE RELATIONSHIPS BETWEEN PSYCHOLOGICAL WELLBEING AND ORGANIZATIONAL OUTCOMES (IN-ROLE PERFORMANCE, ORGANISATIONAL CITIZENSHIP BEHAVIOURS, AND TURNOVER INTENTIONS)

In a meta-analysis of Muse, Harris, & Field's (2003) study, it was found that 24 (46%) of the 52 empirical studies examined supported a negative linear relationship between job stress and job performance. Replicated by most recently Jamal's (2007) research, he found the same results even in the cross-cultural study. Moreover, job stress was also significantly correlated with turnover intentions. Additionally, a review of Dalal's (2005) recent meta-analysis of organisational citizenship behaviours showed that positive affect was strongly correlated with organisational citizenship behaviours. As such, the following three sets of hypotheses are proposed:

Hypothesis 13 *The relationship between one's individual spirit at work and in-role behaviours would be mediated by their psychological well-being.*

Hypothesis 14 *The relationship between one's individual spirit at work and organisational citizenship behaviours would be mediated by their psychological well-being.*

Hypothesis 15 *The relationship between one's individual spirit at work and turnover intentions would be mediated by their psychological well-being.*

3.4 CONCLUSION

This chapter has reviewed the relevant literature through the relationships between individual spirit at work (engaging work, sense of community, spiritual connection, and mystical experience) and three prevalent employee work attitudinal variables (job satisfaction, organisational identification, and psychological well-being) as well as three important organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). Additionally, it has presented 15 hypotheses proposed in order to fill the theoretical gap in the workplace spirituality field. By a rigorous empirical examination of this research, the findings of these hypotheses will give us a greater understanding about individuals experiencing high spirituality at work.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 CHAPTER OVERVIEW

This chapter is organised into 2 main sections (1) research paradigm and (2) research design. The former discusses the rationale for the methodology adopted in this research while the latter provides a detailed description of study design, data collection procedures, characteristics of the sample, measures and related translation and ethical issues.

4.2 RESEARCH PARADIGM

Thomas Kuhn's the Structure of Scientific Revolutions (1962 cited in Bird, 1980) was one of the most widely read academic books of the century and had an influence far beyond the field of philosophy of science amongst scholarly communities. According to Kuhn's publication, Chen states that "the advance of science is made through scientific revolutions that dramatically change the scientific world view, or a scientific paradigm. Science can be characterised into an endlessly iterating process from normal science to crisis, revolution, and the re-establishment of new normal science under a new paradigm" (2005, p. 63). Epistemologies or a researcher's position in relation to the reality they want to describe and explain (Burrel & morgan, 1979), such as positivism, realism, and conventionalism employed by the natural scientists differ widely (Keat & Urry, 1975). On the other hand, different perspectives as

interpretivism and constructivism used to interpret events appear to be problematic for natural scientists (May, 1997; Trigg, 1985). Due to the fact that the world in which we live is far more complex to interpret socially than scientifically increasing such the problem and thus proposes a huge challenge for social scientists. Consequently, to interpret and understand the world we live in, we certainly need 'ways of viewing' and 'ways of interpreting' to grasp the surrounding facts, ideas, and events. The social world, therefore, can be interpreted and understood via many schools of thought.

Often, dominant paradigms in a particular research area can be easily found. For example, the interpretivism paradigm is dominant in workplace spirituality research to date, particularly in its early development in this field (e.g. Freshman, 1999; Wagner-Marsh & Conley, 1999; Milliman et al., 1999; Lips-Wiersma & Mills, 2002; Forray & Stork, 2002). Nonetheless, alternative approaches have emerged for the use of researching spirituality in the workplace. The positivism paradigm is one of the alternative paradigms which has been used and accepted in the field of management and organisational psychology (e.g. Ashmos & Duchon, 2000; Milliman, Czaplewski, & Ferguson, 2003; Duchon & Plowman, 2005; Kinjerski & Skrypnek, 2006a). It has received much criticism (Fornaciari & Dean, 2001; Dean, Fornaciari, & McGee, 2003), but has still been equally rigorously defended (Benefiel, 2003a). Although different in nature (Krahnke, Giacalone, & Jurkiewicz, 2003), these two paradigms dominate research in workplace spirituality.

The following sections critically evaluate these two dominant social science schools of thought, within the workplace spirituality area, as well as demonstrating the implication of adopting a positivist orientation paradigm in this research.

4.2.1 Interpretivism and Workplace Spirituality Research: The Dominant Paradigm

Since workplace spirituality is a new area within organisational studies, it needs time to build up theory and a clear construct. Management scholars have tended to work from the principle that whatever cannot be defined and measured in the terms of organisational science is irrelevant to the efficient and effective functioning of organisations and therefore should not be part of discussion about business and organisation. While the understanding of spirituality at work was at an early stage, the focus of research in the field tended to rest on conceptualising and defining the concept of workplace spirituality. As such the interpretativist paradigm dominated the exploration of the deeply personal and abstract construct of workplace spirituality.

Due to a core principle of the paradigm employed in organisational studies is that the use of quantitative methods or survey techniques may imposes researcher's views, value, and background on the objects being researched, which may not consequently lead to a perfect understanding of the reality (Robson, 1993). Hence, interpretivists believe that the reality can only be understood by the people engaged in the experience (Taylor & Callahan, 2005) and the reality, therefore, cannot be separated from the individual who is observing it. By this, reality can be seen only from the people who are being researched, not from the research.

As a result, qualitative methodologies have been used mainly for researching spirituality in organisations to date. For example, Brenda Freshman used a grounded theory process applying thematic and network analysis techniques to examine text

samples from three different sources: e-mail, survey responses, and a literature search. Throughout the investigation an emphasis was placed on maintaining the multiplicity of definitions and applications of "spirituality in the workplace" (Freshman, 1999). Fraya Wagner-Marsh and James Conley conducted research based on their review of the literature, professional observations and in-depth personal interviews with leaders of spiritually-based corporations to match the corporation's spiritually-based philosophy (Wagner-Marsh & Conley, 1999). Marjolein Lips-Wiersma and Colleen Mills were engaged a combination of narrative and collaborative inquiry methods to explore the question of why and how do individuals silence their spiritual expression in the workplace (Lips-Wiersma & Mills, 2002). Val M. Kinjerski and Berna J. Skrypnek manipulated a qualitative study with 14 professionals, who not only experienced spirit at work, but whose work also involved researching or promoting spirit at work, participated through face-to-face interviews, telephone interviews, or written surveys. Participants were asked about what is spirit at work and were then asked to describe a personal experience of spirit at work (Kinjerski & Skrypnek, 2004). Joan F. Marques employed two qualitative (phenomenological) studies to describe ways in which non-managerial workers could contribute toward establishing spirituality at work (Marques, 2006).

As can be seen, each of these qualitative researchers has done important foundational work. However, a clear conceptualisation and measure of spirituality at work and empiricist methodological model are still strongly required for this field in order to provide empirical evidence and potentially be able to generalise the findings to the larger population and thus ultimately benefit to other organisations whom are now interested in developing spirituality in their workplace.

4.2.2 Positivism and Workplace Spirituality Research: The Alternative Paradigm

Positivism is a philosophy developed by Auguste Comte in middle of the 19th century with the notion that the only authentic knowledge is scientific knowledge (Giddens, 1974). In the same token, Karl Popper proposes that the positivist world is consisting of objective and material things (Magee, 1985). According to this way of thinking, knowledge and phenomena in the social world can be sensed and explained in the same way as natural scientific phenomenon.

The positivist believes that the collection of data has to be performed in the social environment and reactions of people to it (May, 1997). Primarily, positivist research methods consist of observations, experiments and survey techniques, often involving complicated statistical analysis in order to generate the findings and to test hypotheses empirically (Schiffman & Kanuk, 1997). The main aim of the positivist researcher is to generalise the results to the larger population, the inductive approach. Nonetheless, Karl Popper (cited in Keat & Urry, 1975) argues that

"One does not first make observations, arrive at a theory by induction from these, and then seek to confirm the theory by further observations. Instead, the scientist begins by formulating a theory, or hypothesis, and proceeds to test the hypothesis by making potentially falsifying observations." (p. 16)

From his view, the process is called 'hypothetico-deductive method' (Keat & Urry, 1975). To put it more simply, the theory must be first generated and then tested by observations. If the theory is falsified, it has to be rejected and a new one formulated

to replace it. Popper also claims that observations cannot make theory, but it is a way to test the theory.

In workplace spirituality research, positivism most often implemented through a quantitative research approach has not played a key role. Moreover, there were some researchers (e.g. Fornaciari & Dean, 2001; Dean, Fornaciari, & McGee, 2003; Fornaciari & Dean, 2004) who fundamentally disagree with employing the positivism paradigm for researching spirituality in the workplace. First, they argue that the positivism paradigm employed for social scientific research, including measurement techniques, data analysis and even accepted language, is inadequate for scholarship in the emerging inquiry stream. They took lessons from the natural sciences and showed how inquiry, modelling, and knowledge made critical leaps utilising a post-positivist creativity within a discipline that struggled with many of the same issues the researchers currently face in the workplace spirituality research agenda (Fornaciari & Dean, 2001, p.335). Second, they argue that positivist methods are inappropriate and potentially dangerous to workplace spirituality study. This represents an epistemological claim that how we know, and what we know in the workplace spirituality field cannot be plumbed using traditionally accepted empiricist models (Dean, Fornaciari, & McGee, 2003, p.379). Third, they suggest that researchers in workplace spirituality field should use mixed methods by including both quantitative as well as qualitative data in their studies (Fornaciari & Dean, 2004, p.22).

Despite these objections, there has been increased attention from researchers in this area trying to achieve a quantitative demonstration of how spirituality in the workplace contributes to organisational performance since the most prominent

empirical study of spirituality and religion in the US workplace was published in 1999 (Mitroff & Denton, 1999a, b). Also, we can see it has been in progress, the pioneers blazing this trail made toward their destination has been more accepted in both practitioners and scholars.

A number of studies have taken this approach and identified a number of themes as being central to the study of workplace spirituality. For example, Ashmos and Duchon (2000) constructed a definition of spirituality in the workplace which their study found three dimensions as being central of this construct: inner life, meaning at work, and sense of connection and community. Based on Ashmos and Duchon's formulation, a study by Milliman *et al*. (2003) identified meaningful work, sense of community, and alignment of values as the central dimensions of spirituality in the workplace, where alignment of values encompassed the interaction of employees with the larger organisational purpose. First, they provided some empirical data confirming the validity of multiple dimensions of spirituality at work. Second, they found some of the first empirical support that the predictive validity of these dimensions with a number of employee work attitudes.

Duchon & Plowman (2005) investigated work unit spirituality and explored the relationship between work unit spirituality and performance in a study of six work units in a large hospital system. Using non-parametric procedures the results suggested that there is a relationship between the spiritual climate of a work unit and its overall performance. Propositions were then developed concerning the effect of work unit spirituality on work unit performance and the relationship between work unit spirituality and leadership.

Recently, Kinjerski and Skrypnek developed the Spirit at Work Scale (*SAWS*). This is a new 18 item measure assessing the experience of spirituality at work and is also a short, psychometrically sound, and easy to administer measure that holds much promise for use in research and practice (Kinjerski & Skrypnek, 2006a).

The researches outlined above all represent important work in the new field of spirituality in organisations, from a positivist approach. That is, the alternative positivism paradigm of workplace spirituality area has become more acceptable in the field of management studies. Moreover, after exploration based on the most 50 cited works in workplace spirituality field, Fornaciari and Dean (2009) observe that "we will not advocate for either a qualitative or quantitative orientation – and there is no need to be completely binary as such – but we do advocate for researchers taking serious reflection time to consider one's own philosophy of science and how to best operationalise constructs of interest" (p. 313). Thus, this gives the researcher more confidence in the direction of doing this research according to the positivism approach in this area.

4.2.3 Implication of Positivism Paradigm to the Research

Even though there has been widespread interest of spirituality in the workplace, Singhal and Chatterjee (2006) stated that most empirical work that has been done in this domain remains being more of an exception than the rule with studies based on anecdotal evidence rather than rigorous empirical work. Particularly, some researchers in the workplace spirituality field (e.g. Benefiel, 2003a; Heaton, Schmidt-Wilk, & Travis, 2004; Duchon & Plowman, 2005) have encouraged that the research

methodology used in the field can move to a quantitative approach in order to allow workplace spirituality researchers to be in dialogue with mainstream management scholars and inform management practice in ways that can address pressing management issues.

Drawing on Edmondson and McManus's (2007) framework about methodological fit in management field research, the field of workplace spirituality research can be characterised as intermediate theory research state. They describe that "intermediate theory research draws from prior work – often from separate bodies of literature – to propose new constructs and/or provisional theoretical relationships" (p. 1165). As well as when the research question of the study which proposes relationships between new and established constructs, it is characterised as intermediate. As the main measure of spirit at work used in this research is new and has not been tested elsewhere, so that this research can fall into this category. Edmondson and McManus suggest that hybrid (both qualitative and quantitative) method is the most appropriate for this kind of research in order to help establish the external and construct validity of new measure and consequently to increase confidence that the researchers' explanations of the phenomena are more plausible than alternative interpretations. However, they further commented that integrating qualitative and quantitative data effectively can be difficult (e.g. Greene, Caracelli, Graham, 1989) and there is a risk of losing the strengths of either approach on its own (Edmondson & McManus, 2007). Moreover, they recognised that many management scholars have strong preferences for methods they feel comfortable with and to apply according to their framework is possibly flexible depends on research questions of each study. As can be seen, the seminal work of Mitroff and Denton (1999a, b) already used the hybrid method as suggested by

Edmondson and McManus (2007), yet the high demand of a quantitative orientation demonstration of how spirituality in the workplace contributes to organisational performance has remained (e.g. Ashmos & Duchon, 2000; Benefiel, 2003a; Milliman *et al*., 2003; Heaton *at el*., 2004; Duchon & Plowman, 2005; Kinjerski & Skrypnek, 2006a). Therefore, as the nature of the rigorous empirical study as well as one of the pioneering research which will pave the way toward a theory-building empirical phase, the current research merely adopts a positivist orientation paradigm (quantitative method) throughout because it is deemed most suitable as it allows (1) to test validity of the main measure (Spirit at Work Scale) with two pilot studies in 155 UK and 175, 715 Thai samples and (2) to test the theory using hypotheses, establish causal relationships, make generalisations possible, and at the same time, allow the researcher to remain independent from the research participants (Creswell, 1994). Consequently, the findings will be very useful to answer the most important research question of this study, which is to inform managers and employers about how and to what extent individual spirit at work impacts to employees' effectiveness and organisational functioning as a whole.

4.3 JUSTIFICATION OF USING LONGITUDINAL RESEARCH DESIGN AND MULTIPLE SOURCES RATING OF EMPLOYEE PERFORMANCE

Scholars of social science in recent years have become increasingly concerned about the validity of survey research, particularly in method bias (Podsakoff *et al*., 2003; Malhotra, Kim, & Patil, 2006; Rindfleisch, Malter, Ganesan, & Moorman, 2008; Burton-Jones, 2009). Moreover, Rindfleisch *et al.* (2008) assert that there are two issues that dominate these concerns: (1) common method variance (i.e. systematic method error due to the use of a single rater or single source); and (2) causal inference (i.e. the

ability to infer causation from observed empirical relations) (p. 261). Further, they argue that these two issues are elaborately associated because common method variance bias critically limits researchers' ability to draw causal inference and creates potential rival explanations. Survey researchers usually recommend three data collection strategies in order to reduce the threat of common method variance bias and enhance causal inference: (1) employing multiple respondents; (2) obtaining multiple types of data; or (3) gathering data over multiple periods (Podsakoff & Organ 1986; Podsakoff *et al*. 2003). Therefore, in order to strengthen the methodological design used in this study, the researcher tested the structural models by using data Time 1 of individual spirit at work for testing direct and indirect effects models unto data of Time 2 of three employee work attitudinal variables (job satisfaction, organisational identification, and psychological well-being) and also data of Time 2 of three organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). Moreover, in-role performance and OCB data were collected from both employees self-reporting and their immediate supervisors' rating.

4.4 RESEARCH DESIGN

4.4.1 Study Design

In spite of an increased attention and popularity in workplace spirituality, there are a limited number of academic papers providing understanding and in-depth exploration of the rigorous empirical findings about workplace spirituality and its relationship with prevalent organisational behaviour variables used in this study. More specifically, to the best available knowledge based on the literature, Thailand, the

Buddhist country where research in this topic has remained un- or under-researched. The researches of workplace spirituality have originated and been developed almost wholly in North America and western countries, within a predominantly Judeo-Christian perspective. Moreover, empirical work has been based on anecdotal evidence rather than rigorous empirical work. In response, the researcher aims to conduct research in order to find un-revealed gaps between the literature and real-world practices. Therefore, the following research design was performed.

Firstly, before using the main measurement of the Spirit at Work Scale (*SAWS*) (Kinjerski & Skrypnek, 2006a) which was developed in Canadian university employee context and not tested widely, this research conducted two pilot studies to confirm the validity (Hinkin, 1995, 1998) by testing the construct validity, discriminant validity, and internal consistency reliability with 155 UK and 175, 715 Thai samples. The validation testing of the Spirit at Work Scale (*SAWS*) and results are presented in chapter 5.

Secondly, in order to assess the causal relationships between the core concepts of individual spirit at work with other six dependent variables (job satisfaction, psychological well-being, in-role performance, organisational citizenship behaviours (OCB), and turnover intentions), a longitudinal design at two separate time points, approximately an eight to nine month interval, was conducted for the present study. Longitudinal data is particularly useful in predicting long-term or cumulative effects which are normally hard to analyse in a one-shot case study or cross-sectional study (Adams & Schvaneveldt, 1991). Thus, a causal relationship can be better established. The preliminary analysis and results of Time 1 and Time 2 are presented in chapter 6.

The Hypothesis tests and results of Structural Equation Modelling (SEM) models in longitudinal design are presented in chapter 7.

Thirdly, in order to avoid common method variance, the researcher used two sources of rating to evaluate in-role performance and extra-role performance (OCB) in this study. One was from employee self-report and the other from supervisory report. This method would be used to increase the objectivity of self-report and obtain another source of performance data. Also, it would be utilised to minimise common rater effects (Podsakoff *et al.*, 2003), in particular about performance evaluations used in this research.

Finally, apart from demographical variables and religious/spiritual practices, to explore the potential antecedent conditions of individual spirit at work from the organisational factors, the researcher conducted a survey to investigate what the necessary factors of organisation should have in order to foster employee spirit at work, at the same time the respondents were asked to assess that what extent at the current situations how much their organisations have. The analyses and results in SEM models are presented in extra findings section of chapter 7.

4.4.2 Sample Characteristics

As a longitudinal research design, data was collected at 2 time intervals: Time 1 during July - August 2008 and Time 2 during March – April 2009 and obtained through 49 organisations (Time 1) and 46 organisations (Time 2) which were from three types of organisation within Chiang Mai, Thailand's second-largest city located in the North

of the country: public, for-profit, and not-for-profit organisations. These organisations varied in industry. The characteristics of participating organisations are presented in Table 4.1. Using convenience sampling methods, a total of 1,200 questionnaires were distributed at Time 1 and 715 completed questionnaires were returned. This resulted in a response rate of 60%. Under the second wave of data collection, 715 questionnaires were distributed to the respondents who participated at the first time only 501 completed questionnaires were returned. This represented a response rate of 70%. Thus, the participants in this study were 715 (Time 1) and 501 (Time 2) employees who worked for three types of organisation within Thailand: public organisations ($N = 237$, 185), for-profit organisations ($N = 244$, 155), and not-for-profit organisations ($N = 234$, 161). Table 4.2 provides the details of the sample characteristics in this study both Time 1 and Time 2.

After matching-up the 501 participants for both Time 1 and Time 2, all full-time employees from various industries of 46 organisations and 3 types of organisation, it is clear that the sample consisted of males (32%, 32%) and females (68%, 68%). The sample reported their ages as either 26-35 (59%, 60%), 36-45 (21%, 24%), under 25 (14%, 9%) and 46-55 (6%, 7%), respectively. Most of them described their marital status as single (54%, 51%), married (37%, 39%), cohabiting (5%, 5%), and separated or divorced (4%, 5%), respectively. They reported their tenure years within the organisation as either between 1-3 (35%, 37%), 4-9 (27%, 31%), 10-20 (19%, 22%), under 1 (14%, 5%), and over 20 (5%, 5%), respectively. Lastly, the respondents described their current positions as either service (32% 31%), professional (27%, 25%), administrative/clerical (19%, 21%), management (12%, 13%), technical (8%, 8%), and maintenance (2%, 2%), respectively.

Table 4.1: The Characteristics of Participating Organisations

Sector	Industry	Number of Organisations		Number of Participants	
		Time 1	Time 2	Time 1	Time 2
1.) Public	-Education	10	10	169	129
	-Health Service	1	1	31	22
	-Social Work	2	2	22	19
	-Social Security	1	1	15	15
	Sub-total	**14 (28.57%)**	**14 (30.44%)**	**237 (33.15%)**	**185 (36.92%)**
2.) For-Profit or Private	-Hotel	2	2	61	26
	-Wholesale	1	1	50	36
	-Real Estate Development	1	1	49	36
	-Retailing	7	6	29	21
	-Education	2	2	24	18
	-Telecommunications	2	2	15	12
	-Graphic Design	1	-	6	-
	-Interior Design	1	1	5	1
	-Maintenance	1	1	5	5
	Sub-total	**18 (36.73%)**	**16 (34.78%)**	**244 (34.12%)**	**155 (30.94%)**
3.) Not-for-Profit or Charity	-Religious Charity	5	5	100	58
	-Community and Personal Services	9	8	64	41
	-Health Service	2	2	40	37
	-Education	1	1	30	25
	Sub-total	**17 (34.70%)**	**16 (34.78%)**	**234 (32.73%)**	**161 (32.14%)**
	Total	**49 (100%)**	**46 (100%)**	**715 (100%)**	**501 (100%)**

Table 4.2: The Demographic Composition of the Sample

Sample Characteristics	Time 1		Time 2	
	Number (715)	Percent (%)	Number (501)	Percent (%)
1.) Gender				
-Female	474	66.3	340	67.9
-Male	241	33.7	161	32.1
2.) Age				
-Under 25	109	15.2	43	8.6
-26-35	424	59.4	301	60.1
-36-45	139	19.4	121	24.2
-46-55	37	5.2	30	5.9
-Over 55	6	0.8	6	1.2
3.) Job tenure (year)				
-Under 1	137	19.2	24	4.8
-1-3	241	33.7	186	37.1
-4-9	181	25.3	156	31.1
-10-20	126	17.6	108	21.6
-Over 20	30	4.2	27	5.4
4.) Marital status				
-Single	396	55.3	256	51.1
-Married	245	34.3	195	38.9
-Cohabitating	42	5.9	26	5.2
-Separated or divorced	24	3.4	19	3.8
-Widowed	8	1.1	5	1.0
5.) Current position				
-Administrative/clerical	110	15.4	102	20.3
-Service	249	34.8	156	31.1
-Maintenance	15	2.1	9	1.8
-Technical	55	7.7	42	8.4
-Management	98	13.7	67	13.4
-Professional	188	26.3	125	25.0

4.4.3 Data Collection Procedures

Prior to approaching organisations for participation, access to the sample was negotiated with the gatekeeper: owners, directors or managers who could make a final decision depending on the types of organisations between May and June 2008. The researcher confirmed to the organisations their role as a doctoral student provided an overview of the research and its objectives and requested permission to access and distribute questionnaires in their organisations (see full questionnaires in English and Thai in Appendix 1 and 2).

Ethical approval was sought and obtained from Aston Business School's Research Ethics Committee (see Appendix 3). Issues of confidentiality and anonymity were assured on the cover letter of the questionnaire. The participants were told that their answers would be kept confidential and analysed at a group level, to ensure that participation had no adverse consequences for them or their organisations. Moreover, it was made clear in the cover letter that, by completing the questionnaire, consent to participate in the research was assumed. Further information about the nature of the study, as well as about ethical aspects of the research were provided if requested.

Both questionnaires, for employees and their supervisors, had running numbers from 0001 - 1200. The researcher managed the questionnaires and recorded which numbers were distributed in which organisation. At two different points of time, the participants were given a questionnaire to complete. The nine sets of questions of the first questionnaire were focused on different organisational attitudes and behaviours. The questionnaire included items relating to seven core measures and one survey about

antecedents of spirit at work: (1) individual spirit at work; (2) job satisfaction; (3) identification with the organisation; (4) psychological well-being; (5) in-role behaviours; (6) organisational citizenship behaviours; (7) intentions to leave; and (8) antecedent of individual spirit at work from organisational factors. Demographic questions (9) were included at the end of the questionnaire (see full questionnaires in English and Thai in Appendix 4 and 5). At the same time, the immediate supervisors were given a questionnaire to complete. The two sets of questions of the second questionnaire were focused on the subordinates' behaviours at work. The questionnaire included items relating to two core measures: (1) in-role behaviours and (2) organisational citizenship behaviours. Demographic questions for immediate supervisors were included at the end of the questionnaire (see full questionnaires in English and Thai in Appendix 6 and 7).

Access to the sample's immediate supervisors was facilitated and assisted via HR managers or persons who were in charge of personnel work in the organisations. They knew the supervisors and helped to distribute the questionnaires to employees whom fully agreed to participate. Separate in-role performance and OCB questionnaires were also distributed to the immediate supervisors at the same time. This process included both waves of data collection. All the questionnaires were completed in the organisational settings. Once the participants completed the questionnaires, they were requested to fold and put it in envelope provided. The completed questionnaires were collected by the researcher after completion on the same day or a few days later depending on the situations but overall not more than three working days.

As this research was longitudinal, it was necessary to ensure that responses from Time 2 could be matched to those from Time 1. Therefore, in order to protect the

participants' anonymity and help the researcher to match up the questionnaire Time 1 and Time 2, respondents were asked to put the 4-digit number of their date of birth (day and month) on the cover sheet (i.e. the 4th of July should be filled 0407). In case of the participants did not include this password or if they had the same date of birth in the same organisation, a log of the distribution number of the questionnaires was kept by the researcher, and failing that demographic information was cross checked to seek to maximise paired responses.

4.4.4 Translation Issues

Following procedures suggested by Brislin (1980), both questionnaires, for employees and supervisors, were originally developed in English and then translated into Thai by the researcher who is a native speaker and back-translated by an English-Thai expert. The original English and back-translated versions of Spirit at Work Scale (*SAWS*) were then compared by the scale developers, and discrepancies were corrected. Also, the original English and back-translated versions of the other measures were compared by an English native speaker and expert in Work & Organisational Psychology field. This process was applied until the back-translated version matched very closely the original English version (see Brislin, 1970, 1986). Very minor translation discrepancies arose only in Spirit at Work Scale (*SAWS*) and these were usually associated with slight differences in the wording rather than in the meaning of statements. Finally, the scale developers agreed with the Thai version of *SAWS* and authorised the researcher to proceed. At the same time, all the rest measures in Thai version were approved and granted to proceed by the expert.

4.4.5 Ethical Issues

According to the ethical framework set by Aston University, ethical issues need to be addressed in all research involving human participants. The ethical principals promulgated by the University (Aston University, 2004) include (1) Beneficence ('to do positive good') & Non-Malfeasance ('to do no harm'); (2) Informed Consent; and (3) Confidentiality/Anonymity. The meaning of each principle and how it was integrated into this research are outlined as followed.

Beneficence ('to do positive good') & non-malfeasance ('to do no harm') holds that researchers need to ensure their study is beneficial not malevolent. Steps should be taken to eliminate or minimise the risk or harm to the participants. For this research, the respondents might have concerns that the questionnaire would be an assessment of their performance and might feel uneasy filling it. To reduce this concern, the objectives of this survey and its benefits were stated clearly in the cover letter that prefaced the questionnaire.

Informed consent means respondents needed to be fully informed of the objective, the procedures, the potential benefits and other relevant information (e.g. information that is deemed important to respondents) of the survey. Researchers should also ensure respondents take part in the survey out of their own free will or voluntarily. When there are questions and concerns regarding the survey, researchers need to provide sufficient information to ensure respondents understand the nature and objectives of the survey. As a longitudinal research design and multiple rating of performance, the researcher provided all necessary and important information to

respondents in the cover letter as follows: (1) "Since this research is conducted in a longitudinal manner, after this first time of data collection, there will be the second voluntary participation in the next eight to nine month time."; (2) "You are free to withdraw at any time and then your responses will be excluded from the study"; (3) "In this study, your immediate supervisor also will be invited to comment on your behaviours at work"; and (4) the researcher and supervisory team full contact details provided so that respondents could contact if they had any enquiries. Regarding the issue of the status of the HR contact and their relationship with the research participants in this study, the HR contact had no effect on the voluntary participation of the research participants and was not regarded as a superior within the organisation. In this study the HR contact was regarded as a facilitator. For the process of the data collection, the HR contact would cooperate with the researcher by distributing the questionnaires to the employees who fully volunteered to participate. If any employee rejected to participate, the HR contact would not give the questionnaire.

The principle of confidentiality/anonymity requires that identifiable individual and company details should not be divulged to anyone who is not involved in the research unless consent is given by the party concerned. It also requires that the use of data and the storage of questionnaires should meet the regulations relating to data protection. Regarding the confidentiality issue, the cover letter stated clearly that "All your responses will be analysed at the group level. Also, no information will be made public that might identify you or your organisation". For anonymity purposes in this study, participants' names were replaced with codes (running numbers). Since finishing data collection Time 1, the notes of these codes which were recorded by the HR contact had been collected and returned to the researcher. Only this researcher knows the link

between the name and the code. After the survey Time 2, the researcher entered the data and stored the returned questionnaires in a place where no one other than them self would have access to them.

4.4.6 Measures

A detailed explanation for each of the measures used in this study is described below. Full questionnaires are presented in appendices: Appendix 4 (questionnaire for employees in English), Appendix 5 (questionnaire for employees in Thai), Appendix 6 (questionnaire for immediate supervisors in English), and Appendix 7 (questionnaire for immediate supervisors in Thai).

***Individual Spirit at Work*:** The Spirit at Work Scale (*SAWS*) that assess the individual experience of spirituality at work was developed by Kinjerski & Skrypnek (2006a). It is an eighteen-item measure with four subscales: engaging work, sense of community, spiritual connection, and mystical experience. The Cronbach's alpha indicated very acceptable internal consistency reliabilities for the total scale ($\alpha = .93$) and the four subscales (α's from .86 to .91). Items are rated on a six-point scale ranging from 1 (completely disagree) to 6 (completely agree). Samples items are "I am fulfilling my calling through my work.", "I feel like I am part of "a community" at work.", "My spiritual beliefs play an important role in everyday decisions that I make at work.", and "At moments, I experience complete joy and ecstasy at work."

***Job Satisfaction*:** Warr, Cook, & Wall's (1979) Job satisfaction Scale was used. The ffteen-item scale was designed to cover both extrinsic and intrinsic job features.

O'Driscoll & Beehr (1994)'s study was adapted to use only twelve items, the Cronbach alphas was .86. Respondents were asked to rate the various intrinsic and extrinsic job characteristics on a scale ranging from 'Extremely dissatisfied' (1) to 'Extremely satisfied' (7). Some items include "Your fellow workers", "the amount of responsibility you are given", "your rate of pay", and "your opportunity to use your ability".

Organisational Identification: The Organisational Identification Measure (Mael & Ashforth, 1992) was used. This is a well-established measure and has been used extensively in many studies (e.g. Mael & Ashforth, 1995, α = .74; Dukerich, Golden, & Shortell, 2002, α = .90; Carmeli, Gilat, & Waldman, 2007, α = .74). The measure was assessed on a seven-point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree). Sample items are "When I talk about my organisation, I usually say 'we' rather than 'they'.", "My organisation's successes are my successes.", and "When someone criticises my organisation, it feels like a personal insult."

Psychological Well-Being: The eight-item Index of Psychological Well-Being (Berkman, 1971a, b) was used. Respondents were asked how often they feel at work during the past 2 weeks (coded as Never; Sometimes; Often). After comparing the answers against the metric table of positive and negative affects, final scoring of Psychological Well-Being is become on a seven-point scale ranging from 1 (Low PWB) to 7 (High PWB). This is a well-established measure and evidence of the construct validity of this measure has been previously demonstrated in a series of studies i.e. with job performance (Wright & Staw, 1999; α = .74), job satisfaction (Wright & Cropanzano, 2000; α = .72), and turnover (Wright & Bonett, 1992; α = .74). Some

indicative items are "Very lonely or remote from other people.", "On top of the world", "Depressed or very unhappy", and "Pleased about having accomplished something".

In-role Performance: The six-item In-Role Behavior (IRB) Measure (William & Anderson, 1991) was used. This is a well-established measure and evidence of the construct validity of this measure has been previously demonstrated in many studies (e.g. Randall, Cropanzano, Bormann, & Birjulin (1999), $\alpha = .88$; Turnley, Bolino, Lester, & Bloodgood, (2003), $\alpha = .93$; Cropanzano, Rupp, & Byrne, (2003), $\alpha = .88$). The measure was assessed on a seven-point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree). The researcher used this measure for employees rating their own performance and in the same time asking their immediate supervisors rating their performance by adapted the subject of each questions from 'I' to 'He/She'. Some sample items are "He/she fulfils all the responsibilities specified in his/her job description.", "He/she sometimes fails to perform essential duties of his/her job.(reversed)", "He/she consistently meets the formal performance requirements of his/her job.", and "He/she adequately completes all of my assigned duties."

Organisational Citizenship Behaviours (OCB): The twelve-item of OCB-O (directed toward the whole organisation) and OCB-I (directed at other individuals) Scale (William & Anderson, 1991) was used. Multiple studies have confirmed strong coefficient alpha values for this scale (e.g. Randall *et al* (1999), OCB-O $\alpha = .70$ and OCB-I $\alpha = .80$; Turnley *et al* (2003), OCB-O $\alpha = .83$ and OCB-I $\alpha = .88$; Cropanzano *et al* (2003), OCB-O $\alpha = .79$). The measure was assessed on a seven-point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree). Along the same line of using In-Role Performance measure, the researcher asked both employees and their

immediate supervisors rating in this scale. Some items include "He/she adheres to informal organisational rules devised to maintain order.", "He/she sometimes complains about insignificant or minor things at work.(reversed)", "He/she goes out of the way to help new employees.", and "He/she generally helps others who have heavy workloads."

***Turnover intentions*:** Konovsky & Cropanzano (1991)'s three-item of Scale was used. Respondents were asked to rate on seven-point scales which have three different anchors. Multiple studies have confirmed strong coefficient alpha values for this scale (e.g. Cropanzano, R., James, K., & Konovsky, M. A. (1993), $\alpha = .91$; Grandey & Cropanzano (1999), $\alpha = .74$; Randall, *et al* (1999), $\alpha = .80$; Cropanzano *et al* (2003), $\alpha = .82$). For the first item was anchored by very unlikely (1) to very likely (7). The second item was anchored by never (1) to all the time (7). The third item was anchored by strongly disagree (1) to strongly agree (7). Sample items are "How likely is it that you will actively look for a job outside of this organisation during the next year?", and "How often do you think about quitting your job at this organisation?"

***Antecedent Conditions of Individual Spirit at Work*:** The previous research and literature reviews suggest that these variables would be possibly linked to employee experiences spirituality in the workplace: age, tenure, marital status, current position, and personal religious/spiritual practices (Kinjerski & Skrypnek, 2006a; Kolodinsky, Giacalone, & Jurkiewicz, 2008; Pawar, 2009b). Thus, the researcher developed three following questions in the questionnaires asking the participants to respond about their religious/spiritual practices,: (1) How frequently do you attend religious/spiritual services range (1 to 5) from never to quite often; (2) How often do you pray range (1 to

7) from never to several times a week; (3) How often do you read religious or spiritual scripture or literature range (1 to 7) from never to several times a week.

Apart from demographical variables, in order to explore the potential antecedent conditions of individual spirit at work from the organisational factors, the researcher conducted a survey to investigate the necessary factors for organisations to foster employees' spirit at work. Also, respondents were asked to assess to what extent their current employment fosters spirit at work. Based on Kinjerski & Skrypnek's (2006b) qualitative study, they found seven organisational factors that foster an individual's experience of spirit at work (inspired leadership; strong organisational foundation; organisational integrity; positive workplace culture; sense of community among members; opportunities for personal fulfilment; and appreciation and regard for employees and their contribution). Therefore, these criteria were used as a framework in this part of the study.

4.4.7 Data Analysis Method

Due to the method of Structural Equation Modelling (SEM) being mainly used in this research, both for CFA and hypotheses testing, we need to clarify more about this method. SEM is a statistical technique for testing and estimating causal relations i.e. hypothesis-testing, analysis of a structural theory bearing on some phenomenon (Byrne, 2001). Byrne also notes that the term SEM expresses two important aspects of the procedure: (1) the causal processes under study are presented by a series of structural (i.e. regression) equations and (2) these structural relations can be modelled pictorially to enable a clearer conceptualisation of the theory under study. After that the

hypothesised model can be examined statistically in simultaneous analysis of the entire system of variables to determine the extent to which it is consistent with data. If the goodness of fit is adequate, the model argues for the plausibility of postulated relations among variables; if it is inadequate, the tenability of such relations is rejected (2001, p. 3). Structural Equation Modelling can also be utilised very effectively to address numerous research problems involving non-experimental research. Given these highly desirable characteristics, SEM has become a popular methodology for non-experimental research and therefore the researcher decided to choose SEM to test CFA and the hypotheses in this study with AMOS software version 7.0 (Arbuckle, 2007). Regarding the adequacy indicators of model fit in the present study, the researcher used the $\chi2/df$ ratio below 3.0 (or as high as 5.0 suggested by Marsh & Hocevar, 1985) which is considered acceptable; the *CFI, IFI*, and *TLI* index value above 0.9 are acceptable but values above 0.95 are preferred; and the *RMSEA* index value 0.05 or below is considered a sign of good fit, between 0.05 – 0.10 an acceptable fit, and larger than 0.10 should not be accepted (Hu & Bentler, 1999; more discussion in chapter 5 section 5.5.3).

4.5 CONCLUSION

This chapter has discussed the choices of research paradigm and research design. It also provided a description of the research design and methodology used to implement the study, including data collection procedure, access and ethics, sample, and measures. The validation testing of the Spirit at Work Scale (*SAWS*) and results are presented in chapter 5. Data analysis of Time 1 and Time 2, the testing of hypotheses and results are reported in chapter 6 and 7.

CHAPTER 5

VALIDATION TESTING: SPIRIT AT WORK SCALE

5.1 CHAPTER OVERVIEW

The purpose of this chapter is to report the validation testing of the main measure used in this study: the Spirit at Work Scale (*SAWS*, Kinjerski & Skrypnek, 2006a). The overview of the scale and the concept of validation testing are provided. The two pilot studies with 155 British and 175, 715 Thai samples conducted for scale validation are described.

5.2 INTRODUCTION

The Spirit at Work Scale (*SAWS*, Kinjerski & Skrypnek, 2006a) was developed in Canadian university context. Due to this being a new scale which has never been published and tested elsewhere, an initial study was conducted to assess its validity and reliability by drawing on a sample of British employees from four UK universities. Such a sample would account for effects of an idiosyncratic context, meaning at least there are not many different characteristics between Canadian and British samples such as both use English as their first language, share the western culture and work in a university context, rather than to do comparison testing with Thai samples from the beginning of which context and language use are very different. Exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and internal consistency reliability analysis were carried out on this data (Hinkin, 1995, 1998). As a new measure,

discriminant validity analysis was also used to examine a construct which is theoretically distinct from other related constructs (Campbell & Fiske, 1959). After having reviewed the outcome of the UK validation in Study 1, the measure was translated into Thai and back-translated. In order to enhance the generalisability of the new measure, this translation was similarly validated in Study 2 with 175 and 715 samples in Thailand before being used in the main study.

5.3 OVERVIEW OF SPIRIT AT WORK SCALE

The Spirit at Work Scale (*SAWS*) was designed to assess the individual experience of spirituality at work, developed by Kinjerski & Skrypnek (2006a). It is a new eighteen-item measure with the four subscales: engaging work, sense of community, spiritual connection, and mystical experience. The initial Cronbach's alphas indicated very acceptable internal consistency reliabilities for the total scale (α = .93) and the four subscales (α's from .86 to .91). Items are rated on a 6-point scale ranging from 1 (completely disagree) to 6 (completely agree) (mostly disagree = 2; somewhat disagree= 3; somewhat agree = 4; mostly agree = 5). The eighteen items are as follows:

Note: Numbers used between brackets are represented the number sequence in the questionnaire i.e. (saw1), (saw2) … etc.

1.) **Engaging Work (EW):** characterised by a profound feeling of well-being, a belief that one is engaged in meaningful work that has a higher purpose, an awareness of alignment between one's values and beliefs and one's work, and a sense of being authentic. It is composed of the following seven items:

EW1 I experience a match between the requirements of my work and my values, beliefs and behaviours. (saw1)

EW2 I am able to find meaning or purpose at work. (saw5)

EW3 At the moment, I am right where I want to be at work. (saw6)

EW4 I am fulfilling my calling through my work. (saw10)

EW5 I feel grateful to be involved in work like mine. (saw13)

EW6 I am passionate about my work. (saw15)

EW7 I have a sense of personal mission in life, which my work helps me to fulfil. (saw18)

2.) Sense of Community (SOC): characterised by a feeling of connectedness to others and common purpose. It is composed of the following three items:

SOC1 I experience a real sense of trust and personal connection with my co-workers. (saw2)

SOC2 I feel like I am part of "a community" at work. (saw7)

SOC3 I share a strong sense of purpose and meaning with my co-workers about our work. (saw17)

3.) Spiritual Connection (SPC): characterised by a sense of connection to something larger than self. It is composed of the following three items:

SPC1 I receive inspiration or guidance from a Higher Power about my work. (saw3)

SPC2 I experience a connection with a greater source that has a positive effect on my work. (saw8)

SPC3 My spiritual beliefs play an important role in everyday decisions that I make at work. (saw11)

4.) Mystical Experience (ME): characterised by a positive state of energy or

vitality, a sense of perfection, transcendence, and experiences of joy and bliss. It

is composed of the following five items:

ME1 At times, I experience a "high" at my work. (saw4)

ME2 At moments, I experience complete joy and ecstasy at work. (saw9)

ME3 At times, I experience an energy or vitality at work that is difficult to describe.

   (saw12)

ME4 I experience moments at work where everything is blissful. (saw14)

ME5 I have moments at work in which I have no sense of time or space. (saw16)

5.4 VALIDATION TESTING CONCEPT

A vital issue of the development of a new psychometric measure is validation

testing in order to assure the accuracy of measurement of the constructs under

examination. Nunnally (1978) argues that a construct is a representation of something

that does not exist as an observable dimension of behaviour; the more abstract the

construct, the more difficult it is to measure. Therefore, a new elusive scale such as

Spirit at Work needs extensive construct validation evidence to support. Conforming to

the scale development process in accordance with established psychometric principles

for use in survey research suggested by Hinkin (1998), he provides 6 stages to

increasing the confidence in the construct validity of the new measure (1) item

generation: the creation of items to assess the construct examination; (2) questionnaire

administration: the researcher will use the items that have survived the content validity

assessment to measure the construct under examination; (3) initial item reduction:

exploratory factor analysis – the reduction of a set of observed variables to a smaller set

of variables, and internal consistency assessment or reliability – the accuracy or precision of measuring instrument will be assessed; (4) confirmatory factor analysis: allows the researcher to quantitatively assess the quality of the factor structure providing further evidence of the construct validity of the new measure; (5) discriminant validity: examining the extent to which the scales correlate with similar measures; and (6) replication: the use of an independent sample will enhance the generalisability of the new measure and the use of a new sample would also allow the application of the measure in a substantive test. Since the Spirit at Work Scale (*SAWS*, Kinjerski & Skrypnek, 2006a) was developed from one sample and completed by only the third stage in line with Hinkin's (1998) recommendation mentioned earlier, further validation examination can best advance and assure the accuracy of measurement of Spirit at Work construct under examination when all above 6 issues are addressed as will be presented in the following sections.

5.5 STUDY 1 WITH 155 UK SAMPLES

5.5.1 Overview

The first pilot study conducted with UK university employees was primarily used in order to assess the construct validity and internal consistency in the similar context and the same English version in which the original scale was developed with Canadian university employees. Having reviewed the outcome of the construct validity and internal consistency in the English version based on the theoretical analysis, more confidence would be gained to study further in other context such as Thailand, the non-Western context.

5.5.2 Procedure

According to Hinkin's (1995, 1998) suggestion of checking the psychometric principles of a sound measurement, after the data was received firstly exploratory factor analysis (EFA) was performed. Since EFA is able to examine the pattern of correlations (or covariances) between the factors or each dimensions of Spirit at Work construct. Items that were highly correlated were likely influenced by the same factors, while those that were relatively uncorrelated were likely influenced by different factors. Even though it is repeated from stage three as original scale, one could be assured of construct validity whether it may or may not go in the same way when there is testing with a new sample. Subsequently, confirmatory factor analysis (CFA), Hinkin's (1998) fourth-step suggestion mentioned above, allows the researcher to specify correlated measurement errors, constrain loadings or factor correlations to be equal to one another, perform statistical comparisons of alternative models, test second-order factor models, statistically compare the factor structure of two or more groups, and provide a fit of the hypothesized factor structure to the observed data (Thompson, 2004). Finally, internal consistency reliability analysis was carried out on the final model in order to examine its psychometric properties of the Cronbach's alphas of the total scale and each subscale of *SAWS* whether it is or not a sound measurement.

Since the original *SAWS* was developed from 332 employees, across a wide range of occupations at a large mid-western university in Canada (Kinjerski & Skrypnek, 2006a), therefore a similar sample in initial study was also drawn from the university employees in the UK because there are not many contextual differences. Four hundred questionnaires including the *SAWS* and another three work attitude

measures in the main study (job satisfaction, organisational identification, and psychological well-being) were distributed to employees of four universities in UK by the researcher, Aston University, University of Birmingham, University of Exeter, and University of Birmingham City during February - March 2008. The cover sheet of the questionnaire clearly specified that the participation in the study was completely voluntary and anonymous. Each questionnaire also clearly stated that after they voluntarily completed the questionnaire, they personally had to put it in the envelope provided and directly posted it back to the researcher's address.

5.5.3 Analysis and Results

In all, 400 questionnaires were distributed, 155 fully completed were returned, a response rate of 38.75%. Although there is a widely-cited rule of thumb from Nunnally (1978) that the subject to item ratio for exploratory factor analysis (EFA) should be at least 10:1, Osborne & Costello (2004) argue that recommendation was not supported by published research. Also, there is no one ratio that will work in all cases; the number of items per factor and communalities and item loading magnitudes can make any particular ratio overkill or hopelessly insufficient (MacCallum, Widaman, Preacher, & Hong, 2001). Given that the number of *SAWS* items was 18, the total sample of 155 participants satisfies the absolute minimum ratio of five individuals per each variable suggested by Gorsuch (1983) and Hatcher (1994). It also has been indicated that in most cases a sample size of 150 sufficient to obtain an accurate solution in EFA, provided that item intercorrelations are reasonably strong (Guadanoli & Velicer, 1988).

The participants consisted of males (26%) and females (74%). The sample reported their ages as either between 26-35 (36%), 46-55 (19%), 36-45 (18%), over 55

(14%) and under 25 (13%), respectively. Most of them described their marital status as married (45%), single (36%), cohabiting (10%), and separated or divorced (9%), respectively. They reported their tenure years in the organisation as either 4-9 (30%), 1-3 (27%), under 1 (18%), 10-20 (16%), and over 20 (9%), respectively. Lastly, the respondents described their current positions as either administrative/clerical (54%), professional including academic staff (24%), management (12%), service (7%), and technical (3%), respectively.

After several extraction attempts, using multiply techniques (i.e., principal component, maximum likelihood, and unweighted least squares) and attempts at forcing a four-factor solution, only three factors appeared. The Spirit at Work construct in 155 UK samples produced only a three-factor solution (explained 63.41% of the variance) versus the four-factor solution expected. Surprisingly, the three items of engaging work construct were appearing in sense of community factor and the two items of mystical experience loaded in spiritual connection factor. Moreover, all the remaining items of both engaging work and mystical experience were loaded in the third combined factor. An explanation of this occurrence may be identified within the definition of *SAWS* used herein, which explains engaging work by using terms such as a profound feeling of well-being, a belief that one is engaged in meaningful work that has a higher purpose, an awareness of alignment between one's values and beliefs and one's work, and a sense of being authentic. These terms are intuitively related to the other two factors in some extent: (1) a mystical experience characterised by a positive state of energy or vitality, a sense of perfection, transcendence, and experiences of joy and bliss and (2) a sense of community characterised by a feeling of connectedness to others and common purpose. Also, the two items of mystical experience (ME1 "At times, I experience a

"high" at my work" and ME2 "At moments, I experience complete joy and ecstasy at work") can possibly interpret in some part of spiritual connection which characterised by a sense of connection to something larger than self. Thus, table 5.1 depicts the factor loadings of the *SAWS* for 155 UK samples.

Table 5.1: Factor Loadings of *SAWS* for 155 UK Samples

Spirit at Work Items	Factor Loading		
	SPC/ME	SOC/EW	EW/ME
SPC2	.96		
SPC3	.74		
SPC1	.73		
ME3	.72		
ME4	.62		
SOC2		.85	
SOC1		.80	
SOC3		.70	
EW2		.68	
EW3		.67	
EW1		.58	
EW4			.77
EW5			.77
EW6			.74
ME2			.74
ME1			.72
EW7			.69
ME5			.47

Note: SPC = Spiritual Connection, ME = Mystical Experience, SOC = Sense of Community, and EW=Engaging Work

Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normallization.

Further, the Bartlett test of sphericity was significant ($p < .000$), indicating that the 18- item matrix was significantly different from a matrix of essentially uncorrelated items. Moreover, the Kaiser-Meyer-Olkin (KMO) value was 0.89. It is argued that values above 0.6 are required for good factor analysis solutions (Tabachnick & Fidell, 2007). Finally, an analysis of the scree plot was confirmed the selection of three factors, as shown in figure 5.1. The slope decreases sharply between the third and fourth factor, suggesting that the three initial factors accounted for the major part of the variance. Factor 1, *spiritual connection and mystical experience*, explained 44.11% of the variance; factor 2, *sense of community and engaging work*, accounted 12.75% of the variance; and finally factor 3, *engaging work and mystical experience*, was responsible for 6.55% of the variance.

Figure 5.1: Scree Plot Factor Analyses for 155 UK Samples
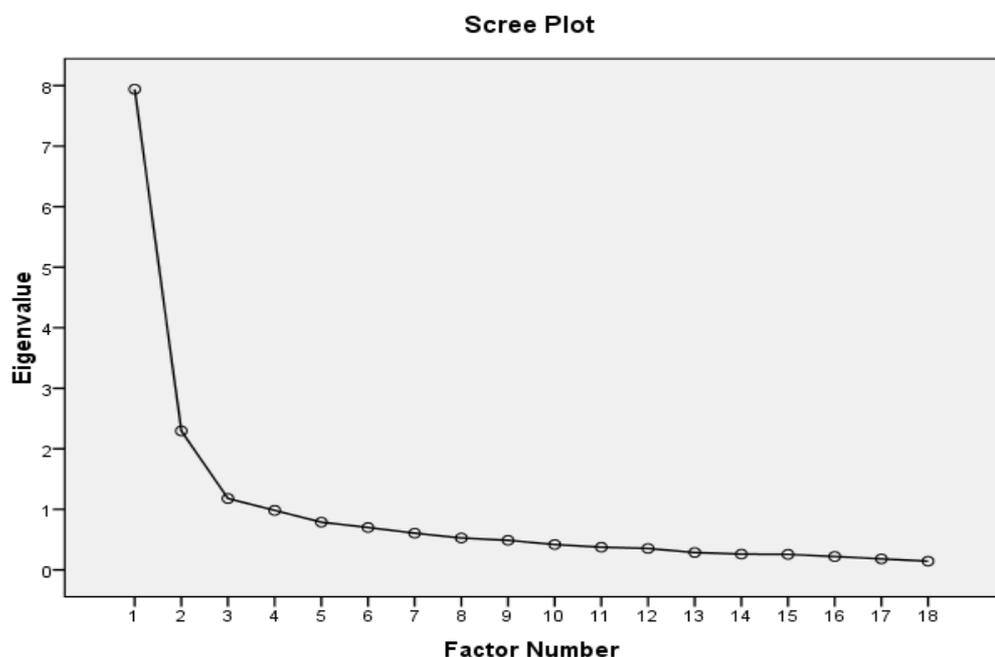
Exploratory factor analysis is useful as an initial test of the theoretical assumptions about the constructs under investigation, since these do not have to be

declared and consequently the analysis is not influenced by them. Thompson (2004) suggests that when the theory has already been developed Confirmatory Factor Analysis (CFA) is more useful, as it allows the theory to be directly tested and the degree to which the data fits the model can be quantified in several ways. After having reviewed the EFA outcomes, CFA was used to directly test the underlying theory and examine construct validity. Since CFA was used to estimate the adequacy of the measurement model for structural equation modelling (SEM). However, it is still difficult to find a consensus in the literature concerning the most adequate fit indices to be used (Byrne, 2001). Model evaluation is one of the most unsettled issues related to SEM and many different statistics have been proposed as measures of the adequacy of a model (Arbuckle, 2007).

Typically, a common indicator of the adequacy of the SEM model is the chi-square statistical significant test. If the model has an adequate fit, chi-square (χ^2) should be non-significant and it means that the model is not rejected. Nevertheless, the χ^2 significant test is highly affected by sample size and normally large sample sizes tend to present significant levels (Loehlin, 1992; Byrne, 2001). Regarding the χ^2 indicator there is not only checking on a significant test, but the size of χ^2. It has been suggested that a χ^2 two or three times as large as the degrees of freedom (*df*) is acceptable (Carmines & McIver, 1981) which means the closer the χ^2 value is to the degrees of freedom, the better the model. Therefore, researchers have recommended reporting the χ^2/*df* ratio (Marsh, Balla & McDonald, 1988). There is no general agreement about the optimal or adequate magnitude of the χ^2/*df* ratio although a ratio below 3.0 is considered acceptable, but with ratios below 2.0 indicating a reasonable fit (Buss & Perry, 1992).

Another indicator examining the adequacy of the SEM model is a series of goodness-of-fit statistics, which can be classified as incremental or comparative indices. These indices are based on a comparison of the hypothesized model against a baseline model. One of the popular applied indices is the comparative fit index (*CFI*; Bentler, 1990) which was modified from the normed fit index (*NFI*; Bentler & Bonnett, 1980), as the *NFI* has shown a tendency to underestimate the fit in small samples. The incremental fit index (*IFI*; Bollen, 1989) was developed to address the issue of parsimony and sample size which was associated with the *NFI*. The Tucker-Lewis index (*TLI* referred to as non-normed fit index, *NNFI*; Tucker & Lewis, 1973) was also developed to overcome one of the weaknesses of the *NFI*. Whereas in the *NFI* there is no penalty for adding parameters, the *TLI* has such a penalty. For these indices (*CFI, IFI, TLI*) vary from 0 to 1, closer coefficients to unity indicate good fit, with acceptable levels of fit being above 0.9 (Marsh, Balla & McDonald, 1988), but values above 0.95 are preferred (Tucker & Lewis, 1973). Next, the root-mean-square error of approximation (*RMSEA*; Steiger & Lind, 1980) estimates how well the model parameters are able to reproduce the population covariance. Usually, a *RMSEA* value around 0.05 is considered a sign of good fit, between $0.05 - 0.10$ an acceptable fit, and larger than 0.10 should not be accepted (Hu & Bentler, 1999). Lastly, the Akaike's Information Criterion (*AIC*: Akaike, 1987) was developed to compare non-nested models, adjusting for the number of parameters estimated. If the models to be compared are not nested models, the principle that model should be as simple as possible, indicates that we should generally keep the simpler model. The model that generates the lowest *AIC* value is optimal. The absolute value of *AIC* has relatively little meaning; rather the focus is on the relative size, the model with the smaller *AIC* being preferred.

Considering the above analysis, the *CFI, IFI, TLI, RMSEA* and *AIC* are the indices used to evaluate the fit of the *SAWS* models for UK sample.

The models were examined using Confirmatory Factor Analysis (CFA) with AMOS software version 7.0 (Arbuckle, 2007). Principally, the purpose of the CFA is to compare the goodness-of-fit of rival models. Therefore the following 3 initial models were tested: (1) a null model where all items load on separate factors; (2) a single common model where including all 18 items assuming *SAWS* has only one factor; and (3) a four-factor theoretical model. The results are presented in the table 5.2.

Table 5.2: Fit Indices of Confirmatory Factor Analysis for Initial 18-item of *SAWS*: UK University Employees

Model	χ^2	Df	χ^2/df	$\Delta\chi^2$,(Δdf)	CFI	IFI	TLI	RMSEA	AIC
1) Null Factor	1757.29**	153	11.49	-	.00	.00	.00	.26	1793.29
2) One Factor	647.27**	135	4.79	1110.02(18)**	.68	.68	.64	.16	719.27
3) Four Factors	367.30**	129	2.85	279.97(6)**	.85	.85	.82	.11	451.30

Note: *N*=155, **p* < .001 CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation; AIC= Akaike's Information Criterion.

The CFA showed that a structure with only one factor did not fit the data adequately (model 2: $\chi 2 = 647.27$, $df = 135$; $p < .001$; $\chi 2/df = 4.79$; *CFI* = .68; *IFI* = .68; *TLI* = .64; *RMSEA* = .16; *AIC* = 719.27), neither did a structure with a four-factor theoretical model (model 3; $\chi^2 = 367.30$, $df = 129$; $p < .001$; $\chi 2/df = 2.85$; *CFI* = .85; *IFI* = .85; *TLI* = .82; *RMSEA* = .11; *AIC* = 451.30). The difference in fit between model 2 and 3 was highly significant ($D^2 = 279.97$, $df = 6$, $p < .001$), indicating that four factors captured the covariation among the 18 items much better than a single common factor. However, initial fit statistics indicated that the four-factor theoretical model was very poor fit with the data and none of the criteria of acceptable model fit were met. Several options exist for modification of the measurement model to obtain adequate fit statistics (Diamantopoulos & Siguaw, 2006). Anderson & Gerbing (1998) state that this would be normally require modification by removing problem reflective indicators; however, one must be cautious to avoid using only statistical selection for removal of items which appear to be problematic.

Firstly, due to two factors between engaging work and mystical experience being loaded in the same factor in EFA and found highly correlated ($r = .81$), the researcher decided to combine these two factors into one called 'EW+ME'. Secondly, since low squared multiple correlations (R^2) values identified items that were poor indicators of their target factor; a minimum loading of 0.4 was required (Hair, Anderson, Tatham, & Black, 1995; Hinkin, 1998). Lastly, after reviewing all items concerned by starting the items with the highest modification index (MI) and then the items with the lower R^2; some problem reflective indicators were considered to be eliminated. Taken together, six items were dropped [ME5 (saw16, $R^2 = 0.20$); EW1 (saw1, $R^2 = 0.24$); EW3 (saw6, $R^2 = 0.36$); EW7 (saw18, MI = 20.60); EW2 (saw5, MI = 19.50), and ME3

(saw12, MI = 11.16]. Finally, the final CFA model of *SAWS* for 155 UK university employees contained a total of 12 items, six capturing *combined engaging work and mystical experience* [EW4(saw10), EW5(saw13), EW6(saw15), ME1(saw4), ME2(saw9), and ME4(saw14)], three capturing *a sense of community* [(SOC1(saw2), SOC2(saw7), and SOC3(saw17)] and three capturing *spiritual connection* [(SPC1(saw3), SPC2(saw8), and SPC3(saw11)] and with all items loading significantly on their respective factors, no cross-loadings and no correlated measurement errors.

Again the reduced twelve-item scale was subsequently treated with CFA. Given that in CFA, multiple models may fit the same dataset, it is best practice to not only test the single postulated model, but also a number of plausible rival models (Thompson, 2000). Therefore, the modified second-order model (representing the three sub-dimensions of Spirit at Work) was tested against a three-factor first order model, a one factor model (assuming respondents do not differentiate between the sub-dimensions, but Spirit at Work factor does exist) and a null-factor model (the data does not yield a single factor). Further, the three-factor first order model was tested with both correlated factors and uncorrelated factors. Table 5.3 details the results from the CFA of the 12-item *SAWS*.

The results showed that the modified three-factor correlated model's overall fit was greatly improved and satisfactory as well as the second order three-factor model (model 4 = model 5: $\chi2$ = 106.08, *df* = 51; *p* < .001; $\chi2$/df = 2.08; *CFI* = .94; *IFI* = .94; *TLI* = .92; *RMSEA* = .08; *AIC* = 160.08) and were much better than the one-factor model (model 2: $\chi2$ = 323.09, *df* = 54; *p* < .001; $\chi2$/df = 5.98; *CFI* = .72; *IFI* = .72; *TLI* = .65; *RMSEA* = .18; *AIC* = 371.09) and the 3-factor uncorrelated (model 3: $\chi2$ = 227.28,

df = 54; *p* < .001; χ2/df = 4.21; *CFI* = .82; *IFI* = .82; *TLI* = .78; *RMSEA* = .14; *AIC* = 275.28) which the CFA showed that they did not fit the data adequately. Moreover, the χ2 index to degree of freedom (χ2/*df*) ratio of both the model 4 and 5 fell marginally to 2.08, indicating a reasonable fit of the models. The difference in fit between model 3 and model 4 and 5 also was highly significant (D^2 = 121.20, *df* = 3, *p* < .001), indicating that three factors correlated and captured the covariation among the 12 items much better than the three-factor uncorrelated factor. Therefore, the 3-factor solution for *SAWS* was eventually confirmed and consistent with the previous EFA outcomes. The results are presented in the table 5.3.

Table 5.3: Fit Indices of Confirmatory Factor Analysis for 12-item of *SAWS*:

UK University Employees

Model	χ^2	Df	χ^2/df	$\Delta\chi^2$,(Δdf)	CFI	IFI	TLI	RMSEA	AIC
1.Null Factor	1009.61**	66	15.30	-	.00	.00	.00	.31	1033.61
2.One Factor	323.09**	54	5.98	686.52(12)**	.72	.72	.65	.18	371.09
3. Three-factor (Un-Correlated)	227.28**	54	4.21	95.81(0)*ns*	.82	.82	.78	.14	275.28
4.Three-factor (Correlated)	106.08**	51	2.08	121.20(3)**	.94	.94	.92	.08	160.08
5.Second-order Three-factor	106.08**	51	2.08	NA	.94	.94	.92	.08	160.08

Note: *N*=155, **p < .001 CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation; AIC= Akaike's Information Criterion.

After reviewing all 6 items of 'EW+ME' dimension;

EW4 I am fulfilling my calling through my work. (saw10)

EW5 I feel grateful to be involved in work like mine. (saw13)

EW6 I am passionate about my work. (saw15)

ME1 At times, I experience a "high" at my work. (saw4)

ME2 At moments, I experience complete joy and ecstasy at work. (saw9)

ME4 I experience moments at work where everything is blissful. (saw14)

The researcher decided to name this emerging combined factor as 'Meaning in Work' because this term is consistent with the meaningful work aspect of workplace spirituality definition of Ashmos & Duchon (2000, p.141), the aspect of meaning in work reflects "a sense of what is important, energizing, and joyful about work". Of which this meaning, as can be seen the meaning of the six items covered: the first two items (EW4, EW5) are addressed "a sense of what is important about work"; the next two items (EW6, ME1) are expressed "a sense of what is energizing about work" and the last two items (ME2, ME4) are included the meaning "a sense of what is joyful about work".

The path diagram with standardised regression weights is depicted in figure 5.2. As can be seen, all latent factors load moderately/highly and significantly onto the second-order factor, suggesting that the three sub-dimensions accurately represents the higher latent construct of Spirit at Work. The mean of the first order loadings was 0.76, denoting that an average of 70% of the variance in the first-order factors was attributable to the *SAWS* (James & James, 1989); thus confirming that the conceptualisation of a second-order factor is reasonable. Therefore, the second-order of

SAWS measurement model for 155 UK samples is believed to be the most appropriate

model for further study.

Figure 5.2: The Second-Order of *SAWS* Model for UK Sample with

Statistically Significant Loading Standardised Coefficients
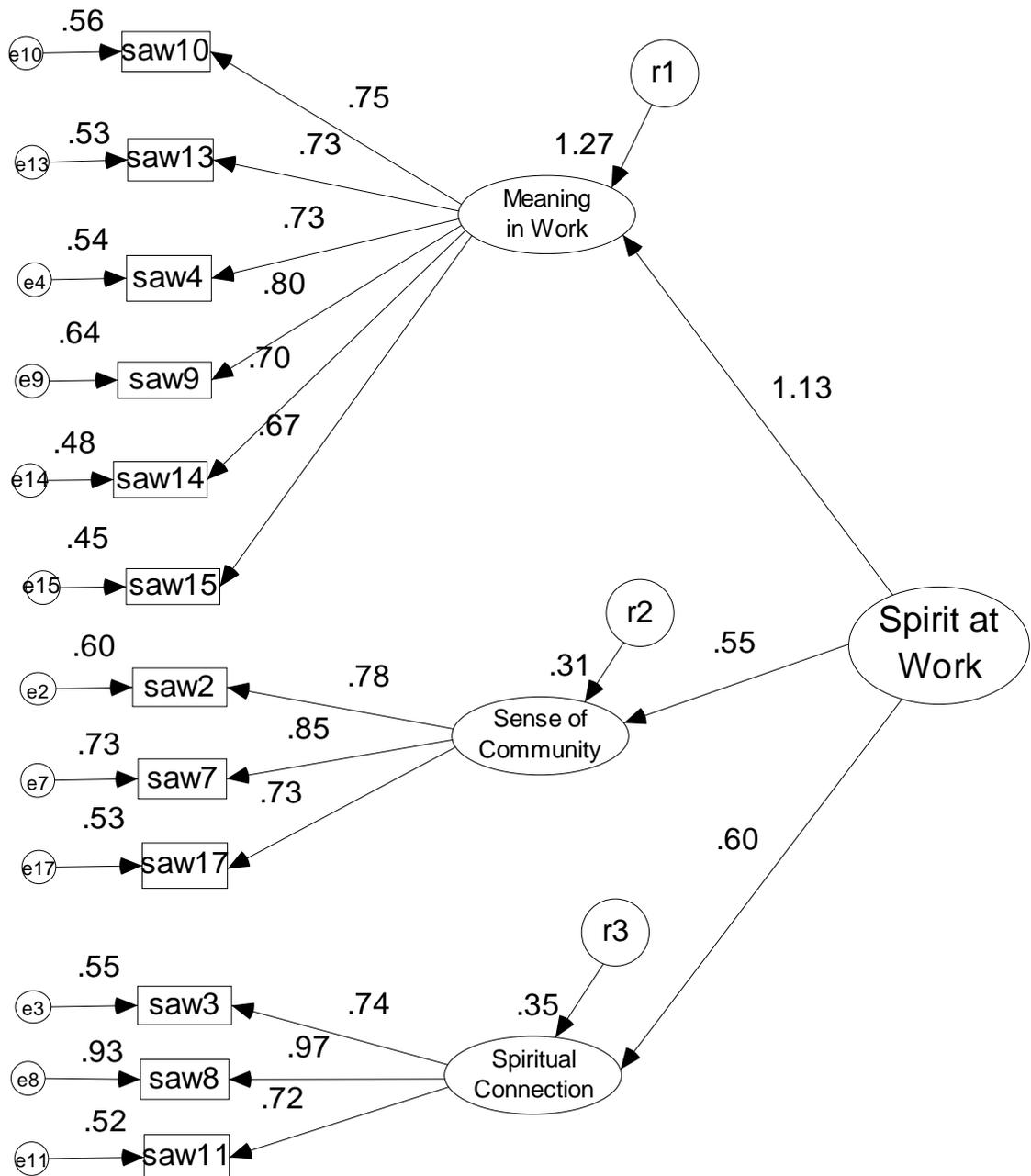
Note: *N* = 155: All paths significant at minimally *p* < .001

Another step in the evaluation of the adequacy of a measure is the assessment of reliability. Hinkin (1995, 1998) argues that the most common measure of reliability is Cronbach's Alpha or internal consistency. Overall the higher-order of the *SAWS* with the UK sample a Cronbach α = .89 and all three subscales exhibited a Cronbach α above .80: *meaning in work* = .87; *a sense of community* α = .83; and. spiritual *connection* α = .84. Nunally (1978) suggested that alpha values of above .70 are acceptable, with values between .80 and .90 being very good. Therefore, these values showed the scale had very acceptable reliability. Lastly, the overall *SAWS* and three subscale means, standard deviations, correlations, and reliability estimates are presented in Table 5.4. Moderate to strong correlations between the three factors again support the notion of an over-riding Sprit at Work factor.

Table 5.4: Means, Standard Deviations, Correlations and Reliability Estimates: Overall *SAWS* and Three Subscales for 155 UK Samples

Scales	*Mean*	SD	1	2	3	4
1.Overall *SAWS*	3.51	0.97	(0.89)			
2. Meaning in Work	3.48	1.10	.93**	(0.87)		
3. Sense of Community	4.11	1.07	.67**	.54**	(0.83)	
4. Spiritual Connection	2.98	1.45	.77**	.58**	.25**	(0.84)

Notes: Reliability estimates are in parentheses; ** $p < .01$

5.6 STUDY 2 WITH 175 and 715 THAI SAMPLES

5.6.1 Overview

The objective of this second study is to further examination whether the new Thai translated version of the *SAWS* has the psychometric principles of a sound measurement or not before being used in the main study. Moreover, in order to enhance the generalisability and to also allow the application of the new Spirit at Work measure in a substantive test, a new and independent sample with 175 and 715 Thai samples in this study was used as recommended in the sixth step by Hinkin (1998), mentioned in the section of validation testing concept. The results of the study would give a sufficient confidence of the main measure in the further hypothesised testing of this research.

5.6.2 Procedure

Following procedures suggested by Brislin (1980), after having reviewed the outcomes of the UK validation study, the *SAWS* and the other three work attitude measures were translated into Thai by the researcher who is a native speaker and back-translated by an English-Thai expert. The original English and back-translated versions of the *SAWS* were then compared by the scale developers (Dr. Val Kinjerski and Dr. Berna J. Skrypnex), and discrepancies were corrected. Also, the original English and back-translated versions of the other measures were compared by an English native speaker and expert in Work & Organisational Psychology field (Dr. Ann Davis). This process was applied until the back-translated version matched very closely the original English version (see Brislin, 1970, 1986). Very minor translation discrepancies arose and these were usually associated with slight differences in the wording rather than in the meaning of statements. Finally, the scale developers agreed with the Thai version of

the *SAWS* and authorised the researcher to proceed. At the same time, the three work attitude measures in the Thai version were approved and granted to proceed by the expert. This translation was similarly validated with 175 employees in four Thai universities before being used in the main study.

In similar fashion to the first study, four hundred questionnaires including the Spirit at Work scale (*SAWS*) and another three work attitude measures in the main study were distributed to employees of four universities in Thailand: Chiang Mai University, Maejo University, North-Chiang Mai University, and Chiang Mai Rajaphat University during June 2008. Again, the cover sheet of the questionnaire clearly specified that the participation in the study was completely voluntary and anonymous. Each questionnaire also clearly stated that after they completed the questionnaire, they personally had to put it in the envelope provided and directly posted it back to the researcher's address in Thailand.

5.6.3 Analysis and Results

Of the 400 questionnaires distributed for Thai samples, 175 fully completed were returned, a response rate of 43.75%. The participants consisted of males (26%) and females (74%). The sample reported their ages as either between 26-35 (65%), 36-45 (16%), 46-55 (10%), and under 25 years old (9%), respectively. Most of them described their marital status as single (60%), married (35%), separated or divorced (3%), and cohabiting (2%), respectively. They reported their tenure years in the organisation as between 1-3 (30%), 10-20 (25%), 4-9 (24%), under 1 (12%), and over 20 years (9%), respectively. Lastly, the respondents described their current positions as

professional including academic staff (35%), service (30%), administrative/clerical (13%), management (12%), technical (8%), and maintenance (2%), respectively.

The same analysis procedure as described in the first study was followed. The EFA results of the *SAWS* construct in 175 Thai samples produced a three-factor solution versus the four-factor solution expected (explained 62.64% of the variance). Similar to the UK samples the most two problematic items of engaging work (EW1: I experience a match between the requirements of my work and my values, beliefs and behaviours) appearing in a sense of community factor and the other item of mystical experience (ME3: At times, I experience an energy or vitality at work that is difficult to describe) appearing in spiritual connection factor. An explanation of this occurrence may be identified perhaps resulted of ambiguous meaning. Moreover, along the same pattern of the UK samples, apart from the spiritual connection and a sense of community factors, all the rest of the remaining items between engaging work and mystical experience were loaded into one combined factor. An explanation of this occurrence may be identified within the definition of the *SAWS* used herein, which explains engaging work by using terms such as a profound feeling of well-being, a belief that one is engaged in meaningful work that has a higher purpose, an awareness of alignment between one's values, beliefs and one's work, and a sense of being authentic. These terms are intuitively related to the mystical experience factor in some extent which characterized by a positive state of energy or vitality, a sense of perfection, transcendence, and experiences of joy and bliss. Thus, Table 5.5 depicts the factor loadings of the *SAWS* for the 175 Thai samples.

Table 5.5: Factor Loadings of *SAWS* for 175 Thai Samples

Spirit at Work Items	Factor Loading		
	EW/ME	SOC/EW	SPC/ME
EW7	.81		
EW3	.81		
EW6	.76		
EW4	.70		
ME4	.64		
ME2	.62		
EW5	.61		
EW2	.57		
ME5	.57		
ME1	.53		
SOC1		.87	
SOC3		.72	
SOC2		.69	
EW1		.55	
SPC1			.87
SPC2			.86
SPC3			.86
ME3			.60

Note: SPC = Spiritual Connection, ME = Mystical Experience, SOC = Sense of
Community, and EW=Engaging Work

Extraction Method: Principal Component Analysis.

Rotation Method: Viramax with Kaiser Normallization.

Further, for the 175 Thai samples, the Bartlett test of sphericity was again significant ($p < .000$) and the Kaiser-Meyer-Olkin (KMO) value was above the recommended level of 0.60 (0.90, Tabachnick & Fidell, 2007). Given that the overall findings from study 2 of the Thai sample, EFA closely mirrored those from study 1 of

the UK sample, the EFA was repeated, specifying a three-factor solution. Finally, an analysis of the scree plot was confirmed the selection of three factors, as shown in figure 5.3. The slope decreases sharply between the third and fourth factor, suggesting that the three initial factors accounted for the major part of the variance. Factor 1, *engaging work and mystical experience*, explained 44.97% of the variance; factor 2, *sense of community and engaging work*, accounted 10.90% of the variance; and finally factor 3, *spiritual connection and mystical experience* , was responsible for 6.77% of the variance.

Figure 5.3: Scree Plot Factor Analyses for 175 Thai Samples
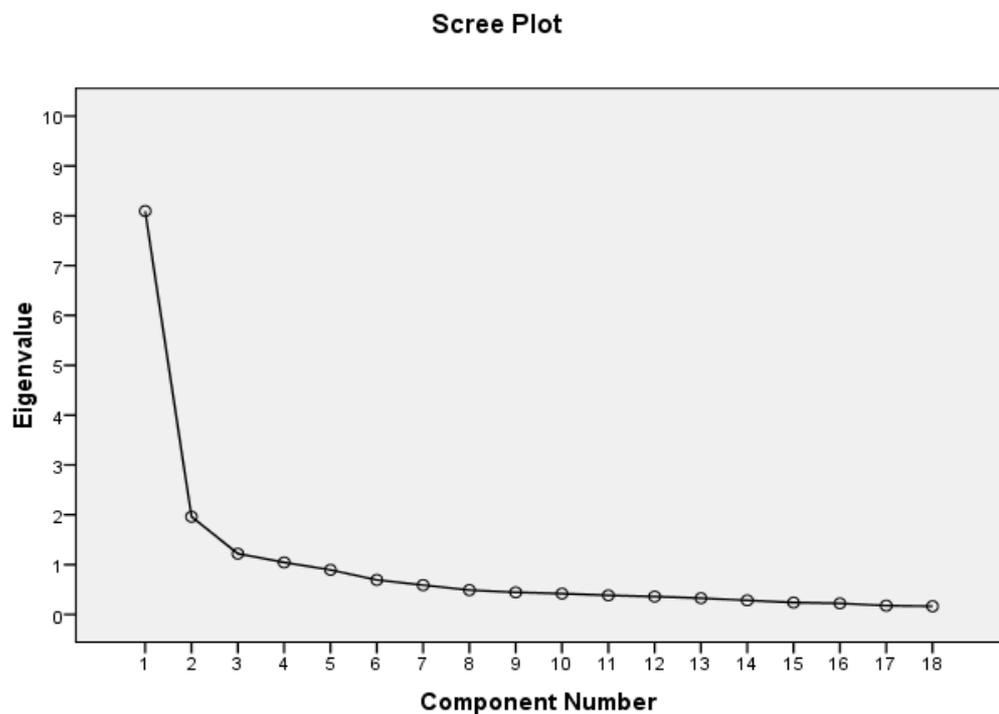
Next, the three initial models using Confirmatory Factor Analysis (CFA) as the same procedure in study 1 were examined. Given that testing CFA after EFA, it is best

practice to not use the same dataset because the data in a new sample will help support the factor structure reliability and the validity of the scale. Thus, 715 Thai samples from the data collection Time 1 in the main study were used in this analysis. The demographic composition of the sample is demonstrated in Table 4.2. Finally, the CFA results for initial 18-item of *SAWS* with 715 Thai samples are presented in Table 5.6.

Table 5.6: Fit Indices of Confirmatory Factor Analysis for Initial 18-item of *SAWS*: 715 Thai Samples

Model	χ^2	Df	χ^2/df	$\Delta\chi^2,(\Delta df)$	CFI	IFI	TLI	RMSEA	AIC
1) Null Factor	8051.14**	153	52.62	-	.00	.00	.00	.27	8087.14
2) One Factor	1448.52**	135	10.73	6602.02(18)**	.83	.83	.81	.12	1520.54
3) Four Factors	808.37**	129	6.27	640.15(6)**	.91	.91	.89	.09	892.37

Note: *N*=715, **$p < .001$ CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation; AIC= Akaike's Information Criterion.

The CFA results showed that a structure with only one factor did not fit the data adequately (model 2: χ^2 = 1448.52, *df* = 135; *p* < .001; χ^2/df = 10.73; *CFI* = .83; *IFI* = .83; *TLI* = .81; *RMSEA* = .12; *AIC* = 1520.54), neither did a structure with a four-

factor theoretical model (model 3: $\chi2 = 808.37$, *df* = 129; *p* < .001; $\chi2/df = 6.27$; *CFI* = .91; *IFI* = .91; *TLI* = .89; *RMSEA* = .09; *AIC* = 892.37). The difference in fit between model 2 and 3 was highly significant ($D^2 = 640.15$, *df* = 6, *p* < .001), indicating that four factors captured the covariation among the 18 items much better than a single common factor. However, initial fit statistics indicated that the four-factor theoretical model was poor fit with the data. This result mirrored repeatedly those from study 1 of the UK sample. Therefore, the following steps for modification of the measurement model in order to obtain adequate fit statistics are described as followed.

Firstly, due to two factors between engaging work and mystical experience being loaded in the same factor in EFA and found to be highly correlated (*r* = .95), the researcher decided to combine these two factors into one called 'EW+ME'. Secondly, since low squared multiple correlations (R^2) values identified items that were poor indicators of their target factor; a minimum loading of 0.4 was required. Lastly, after reviewing all items concerned by starting the items with the highest modification index (MI) and then the items with the lower R^2; some problem reflective indicators were considered to be eliminated. Most of the problematic items were found to be the same as in the UK samples. All things considered, six items were removed [ME3 (saw12, R^2 = 0.30); EW1 (saw1, R^2 = 0.28); ME1 (saw4, MI = 37.20); ME5 (saw16, MI = 22.84); EW3 (saw6, MI = 28.04); and EW7 (saw18, MI = 32.92)]. Finally, the final CFA model of the *SAWS* for the 715 Thai employees contained a total of 12 items, six capturing *combined engaging work and mystical experience* [EW2(saw5), EW4(saw10), EW5(saw13), EW6(saw15), ME2(saw9), and ME4(saw14)], three capturing *spiritual connection* [(SPC1(saw3), SPC2(saw8), and SPC3(saw11)] and three capturing *a sense of community* [(SOC1(saw2), SOC2(saw7), and SOC3(saw17)] with all items loading

significantly on their respective factors, no cross-loadings and no correlated measurement errors.

Subsequently, the reduced twelve-item scale was treated with CFA and tested with a number of plausible rival models (Thompson, 2000) as the same procedure in study 1. Table 5.7 details the results from the CFA of the twelve-item *SAWS* of the 715 Thai samples. The results showed that the modified three-factor correlated model's overall fit was greatly improved and satisfactory as well as the second order three-factor model (model 4 = model 5: $\chi2$ = 175.69, *df* = 51; *p* < .01; $\chi2$/df = 3.44; *CFI* = .98; *IFI* = .98; *TLI* = .97; *RMSEA* = .06; *AIC* = 229.69) and were much better than the one-factor model (model 2: $\chi2$ = 735.25, *df* = 54; *p* < .001; $\chi2$/df = 13.62; *CFI* = .86; *IFI* = .86; *TLI* = .83; *RMSEA* = .13; *AIC* = 783.25) and the 3-factor uncorrelated (model 3: $\chi2$ = 1055.84, *df* = 54; *p* < .001; $\chi2$/df = 19.55; *CFI* = .80; *IFI* = .80; *TLI* = .75; *RMSEA* = .16; *AIC* = 1103.84) which the CFA showed that they both did not fit the data adequately. Moreover, the fit indices of both the model 4 and 5, *CFI, IFI, TLI* were all over .95 and *RMSEA* = .06, indicating a very good fit of the models. The difference in fit between model 3 and model 4 and 5 also was highly significant (D^2 = 880.15, *df* = 3, *p* < .001), indicating that three factors correlated captured the covariation among the 12 items much better than the three-factor uncorrelated factor. Therefore, the 3-factor solution for *SAWS* was finally confirmed and consistent with the previous EFA outcomes. Also, it was consistent with the UK sample. The results are presented in Table 5.7.

Table 5.7: Fit Indices of Confirmatory Factor Analysis for 12-item of *SAWS*:

715 Thai Samples

Model	χ^2	Df	χ^2/df	$\Delta\chi^2,(\Delta df)$	CFI	IFI	TLI	RMSEA	AIC
1.Null Factor	5017.92**	66	76.03	-	.00	.00	.00	.32	5041.92
2.One Factor	735.25**	54	13.62	4282.67(12)**	.86	.86	.83	.13	783.25
3. Three-factor (Un-Correlated)	1055.84**	54	19.55	320.59(0)*ns*	.80	.80	.75	.16	1103.84
4.Three-factor (Correlated)	175.69*	51	3.44	880.15(3)**	.98	.98	.97	.06	229.69
5.Second-order Three-factor	175.69*	51	3.44	NA	.98	.98	.97	.06	229.69

Note: *N*=715, **$p < .001$, * $p < .01$ CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation; AIC= Akaike's Information Criterion.

While reviewing all 6 items of 'EW+ME' dimension;

EW2 I am able to find meaning or purpose at work. (saw5)

EW4 I am fulfilling my calling through my work. (saw10)

EW5 I feel grateful to be involved in work like mine. (saw13)

EW6 I am passionate about my work. (saw15)

ME2 At moments, I experience complete joy and ecstasy at work. (saw9)

ME4 I experience moments at work where everything is blissful. (saw14)

Even though there was only one item different from the UK sample [UK=ME1(saw4) versus Thai=EW2(saw5)], the researcher also decided to name this emerging combined factor as 'Meaning in Work' the same for the UK sample with the same reason (Ashmos & Duchon, 2000).

The path diagram with standardised regression weights is depicted in figure 5.4. As can be seen, all latent factors load moderately/highly and significantly onto the second-order factor, suggesting that the three sub-dimensions accurately represents the higher latent construct of Spirit at Work. The mean of the first order loadings was 0.85, denoting that an average of 72% of the variance in the first-order factors was attributable to the *SAWS* (James & James, 1989); thus confirming that the conceptualisation of a second-order factor is reasonable. Therefore, the second-order of the *SAWS* measurement model for the 715 Thai samples is believed to be the most appropriate model for using in the main study.

Figure 5.4: The Second – Order of *SAWS* Model for 715 Thai Samples with Statistically Significant Loading Standardised Coefficients
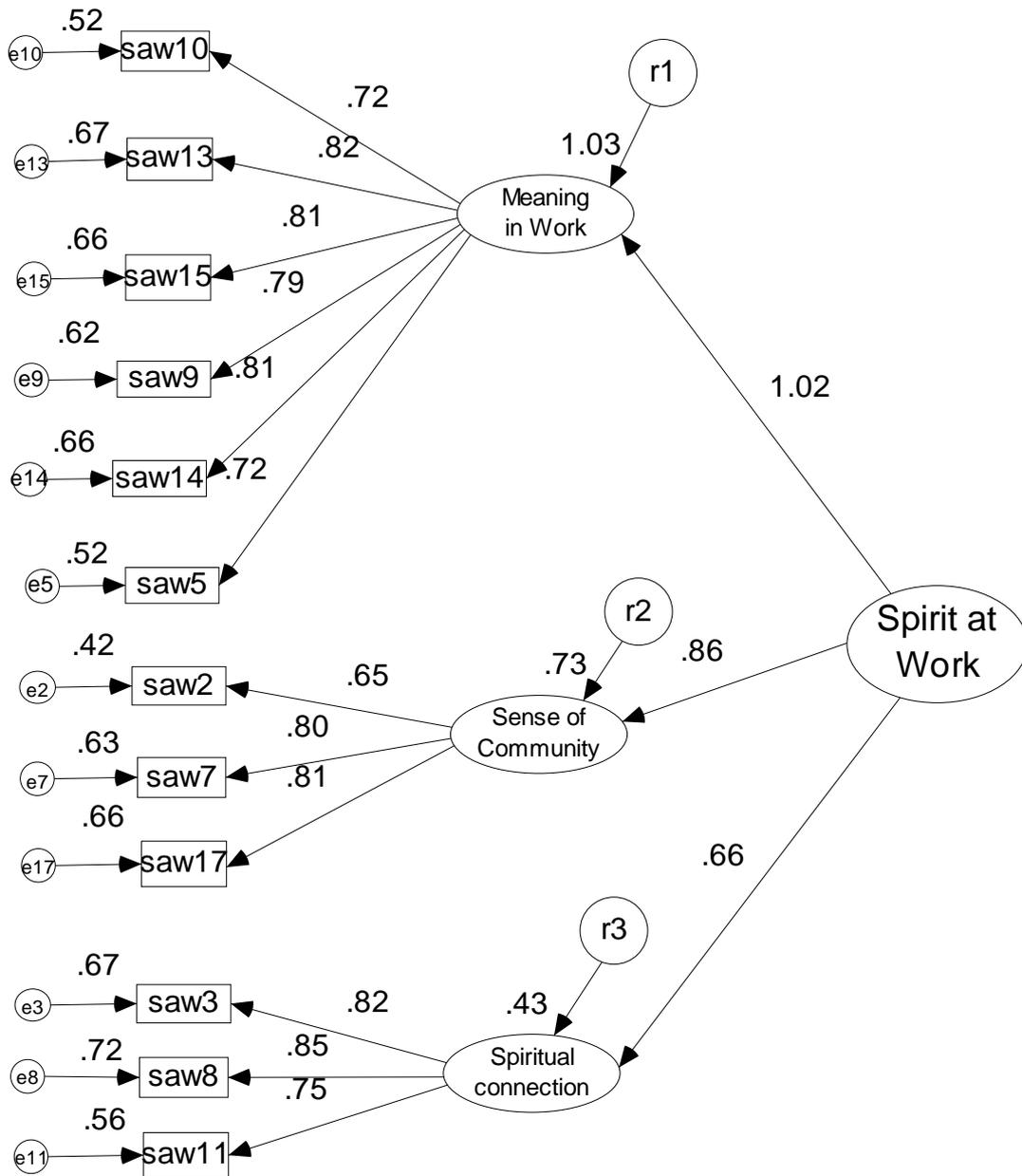
Note: *N* = 715: All paths significant at minimally *p* < .001

The final step in the evaluation of the adequacy of a measure is assessment of reliability. Overall the higher-order of the *SAWS* with the Thai sample a Cronbach α = .92 and all three subscales exhibited a Cronbach α above .80: *meaning in work* = .90;

a sense of community α = .80; and. spiritual *connection* α = .84. Nunally (1978) suggested that alpha values of above .70 are acceptable, with values between .80 and .90 being very good. Therefore, these values showed the scale had very acceptable reliability. Lastly, the overall *SAWS* and three subscale means, standard deviations, correlations, and reliability estimates are presented in Table 5.8. Moderate to strong correlations between the three factors again support the notion of an over-riding Sprit at Work factor.

Table 5.8: Means, Standard Deviations, Correlations and Reliability Estimates: Overall *SAWS* and Three Subscales for 715 Thai Samples

Scales	*Mean*	SD	1	2	3	4
1.Overall *SAWS*	4.45	0.74	(0.92)			
2. Meaning in Work	4.45	0.83	.94**	(0.90)		
3. Sense of Community	4.66	0.74	.82**	.73**	(0.80)	
4. Spiritual Connection	4.26	1.00	.79**	.60**	.47**	(0.84)

Notes: Reliability estimates are in parentheses; ** $p < .01$

5.7 DISCRIMINANT VALIDITY ANALYSIS

The objective of this section is to conduct discriminant validity analysis as recommended in the fifth stage by Hinkin (1998) to increase confidence in the construct

validity of the new measure. It is vital to establish for the new measure, discriminant validity is used to examine a construct which is theoretically distinct from other related constructs (Campbell & Fiske, 1959). Generally, Chen, Gully, & Eden (2001) suggest using Confirmatory Factor Analysis (CFA) in order to examine whether a new construct is empirically divergent from related measures. This research will especially test the correlations between the new construct (*SAWS*) and the three prevalent work-attitudinal variables such as job satisfaction, organisational identification, and psychological well-being. Some would argue that the Spirit at Work construct (meaning in work, sense of community, and spiritual connection) may have a similar or overlap construct with these three work attitude constructs. Despite this, Spirit at Work and the three work attitude constructs are theoretically different concepts, and therefore it is important that the researcher should show that this new scale measures Spirit at Work and not simply Job Satisfaction, Organisational Identification or Psychological Well-being.

In order to examine the discriminant validity between the Spirit at Work Scale (*SAWS*) and three work attitude constructs (job satisfaction, organisational identification, and psychological well-being), the researcher conducted a CFA using AMOS in which the first three models (*SAWS* and job satisfaction, *SAWS* and organisational identification, and *SAWS* and psychological wellbeing) were forced to overlap completely (one factor solution) versus the other three models in which each model they were allowed to be distinct (two factor solution). Evidence that the two factor model fits the data better than the one factor would support the structural and discriminant validity of Spirit at Work construct. Therefore, data from both the 155 UK and the 175 Thai samples were put in this investigation.

5.7.1 UK sample

The following results were apparently shown that the Spirit at Work construct of 155 UK samples was theoretically distinct from the other three work attitude constructs (job satisfaction, organisational identification, and psychological well-being). For the first model (*SAWS* versus job satisfaction), a 2-factor model with *SAWS* and job satisfaction as separate but correlated factors ($\chi2 = 234.68$, *df* = 115; *p* < .001; $\chi2$/df = 2.04; *CFI* = .91; *IFI* = .92; *TLI* = .90; *RMSEA* = .08) fit the data better than did a 1-factor model with *SAWS* and job satisfaction collapsed ($\chi2 = 747.17$ *df* = 119; *p* < .001; $\chi2$/df = 6.28; *CFI* = .55; *IFI* = .55; *TLI* = .48; *RMSEA* = .19). Similarly for the second model (*SAWS* versus organisational identification), a 2-factor model with *SAWS* and organisational identification as separate but correlated factors ($\chi2 = 202.15$, *df* = 115; *p* < .001; $\chi2$/df = 1.76; *CFI* = .94; *IFI* = .94; *TLI* = .93; *RMSEA* = .07) fit the data much better than did a 1-factor model with *SAWS* and organisational identification collapsed ($\chi2 = 707.09$; *df* = 119; *p* < .001; $\chi2$/df = 5.94; *CFI* = .59; *IFI* = .60; *TLI* = .53; *RMSEA* = .18). Lastly, for the third model (*SAWS* versus psychological well-being), a 2-factor model with *SAWS* and psychological well-being as separate but correlated factors ($\chi2 = 126.99$, *df* = 62; *p* < .001; $\chi2$/df = 2.05; *CFI* = .93; *IFI* = .93; *TLI* = .92; *RMSEA* = .08) fit the data better than did a 1-factor model with *SAWS* and psychological well-being collapsed ($\chi2 = 900.76$; *df* = 66; *p* < .001; $\chi2$/df = 13.65; *CFI* = .14; *IFI* = .15; *TLI* = -.02; *RMSEA* = .29). Table 5.9 provides the fit indices of these three model comparison. Moreover, the overall *SAWS* and three work attitude scales means, standard deviations, correlations, and reliability estimates for the 155 UK samples are presented in Table 5.10.

Table 5.9: Fit Indices of Confirmatory Factor Analysis for Testing Discriminant Validity between *SAWS* and Three Work Attitudes Constructs: UK Sample

Model	χ^2	Df	χ^2/df	CFI	IFI	TLI	RMSEA
Model 1 *SAWS* VS Job Satisfaction							
-One-factor Model	747.17 **	119	6.28	.55	.55	.48	.19
-Two-factor Model	234.68**	115	2.04	.91	.92	.90	.08
Model 2 *SAWS* VS Organisational Identification							
-One-factor Model	707.09**	119	5.94	.59	.60	.53	.18
-Two-factor Model	202.15**	115	1.76	.94	.93	.93	.07
Model 3 *SAWS* VS Psychological Well-being							
-One-factor Model	900.76**	66	13.65	.14	.15	-.02	.29
-Two-factor Model	126.99**	62	2.05	.93	.93	.92	.08

Note: N = 155, **p < .001 CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation

Table 5.10: Means, Standard Deviations, Correlations, and Reliability Estimates:

Overall *SAWS* and Three Work Attitude Constructs for

155 UK Samples

Scales	*Mean*	SD	1	2	3	4
1.Overall *SAWS*	3.51	0.97	(0.89)			
2. Job Satisfaction	4.82	0.94	.43**	(0.91)		
3.Organisational Identification	4.68	1.26	.46**	.50**	(0.89)	
4.PsychologicalWell-being	4.14	1.60	.37**	.50**	.45**	(0.65)

Notes: Reliability estimates are in parentheses; ** $p < .01$

5.7.2 Thai sample

Along the same line, the following results of the 175 Thai samples were also clearly demonstrated that the Thai version of Spirit at Work construct was theoretically distinct from the other three work attitude constructs. For the first model (*SAWS* versus job satisfaction), a 2-factor model with *SAWS* and job satisfaction as separate but correlated factors ($\chi 2 = 223.31$, *df* = 131; $p < .001$; $\chi 2/df = 1.70$; *CFI* = .94; *IFI* = .94; *TLI* = .93; *RMSEA* = .06) fit the data better than did a 1-factor model with *SAWS* and job satisfaction collapsed ($\chi 2 = 705.27$; *df* = 135; $p < .001$; $\chi 2/df = 5.22$; *CFI* = .64; *IFI* = .64; *TLI* = .59; *RMSEA* = .16). Next, for the second model (*SAWS* versus organisational identification), a 2-factor model with *SAWS* and organisational

identification as separate but correlated factors ($\chi2$ = 141.18, *df* = 86; *p* < .001; $\chi2$/df = 1.64; *CFI* = .96; *IFI* = .96; *TLI* = .96; *RMSEA* = .06) fit the data better than did a 1-factor model with *SAWS* and organisational identification collapsed ($\chi2$ = 635.21; *df* = 90; *p* < .001; $\chi2$/df = 7.06; *CFI* = .64; *IFI* = .64; *TLI* = .58; *RMSEA* = .19). Finally, for the third model (*SAWS* versus psychological well-being), a 2-factor model with *SAWS* and psychological well-being as separate but correlated factors ($\chi2$ = 98.30, *df* = 62; *p* < .01; $\chi2$/df = 1.59; *CFI* = .97; *IFI* = .97; *TLI* = .96; *RMSEA* = .06) fit the data better than did a 1-factor model with *SAWS* and psychological well-being collapsed ($\chi2$ = 1,004.58; *df* = 66; *p* < .001; $\chi2$/df = 15.22; *CFI* = .18; *IFI* = .19; *TLI* = .03; *RMSEA* = .29). Table 5.11 shows the fit indices of these three model comparison. Further, the overall *SAWS* and three work attitude scales means, standard deviations, correlations, and reliability estimates for the175 Thai samples are demonstrated in Table 5.12.

Table 5.11: Fit Indices of Confirmatory Factor Analysis for Testing Discriminant Validity between *SAWS* and Three Work Attitudes Constructs: Thai Sample

Model	χ^2	Df	χ^2/df	CFI	IFI	TLI	RMSEA
Model 1 *SAWS* VS Job Satisfaction							
-One-factor Model	705.27**	135	5.22	.64	.64	.59	.16
-Two-factor Model	223.31**	131	1.70	.94	.94	.93	.06
Model 2 *SAWS* VS Organisational Identification							
-One-factor Model	635.21**	90	7.06	.64	.64	.58	.19
-Two-factor Model	141.18**	86	1.64	.96	.96	.96	.06
Model 3 *SAWS* VS Psychological Well-being							
-One-factor Model	1,004.58**	66	15.22	.18	.19	.03	.29
-Two-factor Model	98.30**	62	1.59	.97	.97	.96	.06

Note: $N = 175$, **$p < .001$ CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation

Table 5.12: Means, Standard Deviations, Correlations, and Reliability Estimates:

Overall *SAWS* and Three Work Attitude Constructs for

175 Thai Samples

Scales	*Mean*	SD	1	2	3	4
1.Overall *SAWS*	4.28	0.63	(0.90)			
2. Job Satisfaction	4.72	0.87	.55**	(0.92)		
3.Organisational Identification	5.35	0.93	.42**	.34**	(0.88)	
4.PsychologicalWell-being	4.35	1.53	.44**	.50**	.23**	(0.68)

Notes: Reliability estimates are in parentheses; ** $p < .01$

5.7.3 The Fornell and Larcker's (1981) Discriminant Validity Test

Discriminant validity is established when a latent variable accounts for more variance in the observed variables associated with it than other related constructs. If this is not the case, then the validity of the individual indicators and of the construct itself is questionable (Fornell & Larcker, 1981). Hence, to further examine the discriminant validity of the new measure (*SAWS*), the Fornell and Larcker (1981) test was applied, whereby the average variance extracted (AVE) from the three Spirit at Work sub-dimensions (meaning in work, sense of community, and spiritual connection) was compared to the squared correlation between the second-order latent variables of Sprit at Work Scale and each of the three work attitude constructs (job satisfaction,

organisational identification, and psychological well-being). If the AVE is less than 0.5, then the validity of the three sub-dimensions, as well as the overall construct of Spirit at Work is questionable, as the measurement due to error would be larger than the variance captured by the construct (Fornell & Larcker, 1981).

For both the 155 UK and the 175 Thai samples, the mean AVE across the three sub-dimensions exceeded this recommended level ($p = .61$; $p = .61$ respectively). Further, to fully satisfy the requirements for discriminant validity, the AVE must be greater than the squared correlation between the two latent constructs (Fornell & Larcker; 1981). Both samples successfully met this condition with the squared correlation between Spirit at Work and Job Satisfaction (UK, $p = .13$ and Thai, $p = .34$), Spirit at Work and Organisational Identification (UK, $p = .27$ and Thai, $p = .35$), and Spirit at Work and Psychological Well-being (UK, $p = .14$ and Thai, $p = .24$), being exceeded by the AVE (UK, $p = .61$; Thai, $p = .61$, respectively). Moreover, Fornell & Larcker (1981) recommend that the squared correlation between the latent constructs should also be exceeded by the individual variance extracted by each first order factor. This condition again was successfully met in all three Spirit at Work sub-dimensions from both 155 UK samples (meaning in work $p = .54$; sense of community $p = .62$; and spiritual connection $p = .67$) and 175 Thai samples (meaning in work $p = .55$; sense of community $p = .57$; and spiritual connection $p = .72$).

5.8 DISCUSSION

Due to the fact that the Spirit at Work measurement is a new scale and has not been assessed widely in the field research, the two pilot studies were conducted in order

to test psychometric characteristics of the scale. The results of the first pilot study with 155 UK university employees, which initially tested to a similar samples when the original scale was developed in an English version but outside North-American context, showed that the final CFA model of *SAWS* for the UK sample which is presented in Table 5.9, contained a total of twelve items with the three factors solution (meaning in work, sense of community, and spiritual connection) which was a much better fit to the data than the eighteen-item four theoretical factors. Furthermore, the second-order of twelve-item *SAWS* with UK sample, a Cronbach α value was very high (.89) and all three subscales exhibited a Cronbach α above .80, these values showed the scale had very acceptable internal consistency reliability. Therefore, the *SAWS* model for the 155 UK samples was believed to be a sound psychometric measurement and the most appropriate model for further study.

After reviewing the outcomes of the first study, the second pilot study conducted with 175 and 715 Thai samples in order to test validity and reliability of the *SAWS* measurement to enhance the generalisability and also allow the application of the new Spirit at Work measure in a substantive test i.e. non-Western context. The results of the second pilot study with Thai sample closely mirrored the UK sample model. It showed that the final CFA model of *SAWS* contained a total of 12 items with only three factors which is presented in Table 5.9. In addition, the model's overall fit was very satisfactory. Likewise, overall the second-order of 12-item *SAWS* with the Thai sample a Cronbach α was very high (.92) and all three subscales presented a Cronbach α above .80 which these values again manifested the scale had very satisfactory reliability. For that reason, the *SAWS* measurement model for the 715 Thai samples was believed to be the most appropriate model for using in the main study.

According to the final twelve items of both samples as presented in Table 5.13, there is only one item difference between both samples in the dimension of meaning in work but the other two dimensions; a sense of community and spiritual connection, captured exactly the same items as original *SAWS* items. Thus, it was understandable that the one item differences in 'meaning in work' occurred herein perhaps were from translation issue for example in the item ME1 which was not included in the Thai version 'At times, I experience a "high" at my work', for the word 'high' maybe there is not the same meaning when translated into Thai; and in the item EW2 which was not loaded in the UK version 'I am able to find meaning or purpose at work' for a UK working context the word 'meaning or purpose at work' might be not a clear expression or ambiguous meaning. As can be seen that the final CFA model of the *SAWS* for both pilot projects, the final scales were contained only a total of twelve items and three factors. The explanation of having three factors rather than the original scale four factors was apparent because from both studies the engaging work and mystical experience dimensions were highly correlated and loaded in the same factor, indicating that these two dimensions are relative concept. Moreover, when the researcher reviewed the six items remaining in this combined factor called 'meaning in work', according to the definition of the aspect of meaning in work (Ashmos & Duchon, 2000, p.141) reflects "a sense of what is important, energizing, and joyful about work" which is clearly included the meaning of both engaging work and mystical experience dimensions herein. However, analyses revealed that the measurement model fit the data in both countries and that the fit was equivalent across the two cultures. This indicates that the constructs are meaningful in each culture and that the translation of questionnaires was successful in preserving the psychological constructs.

Finally, the results of discriminant validity analysis from both samples were evidently verified that the Spirit at Work Scale (*SAWS*) is not only a sound psychometric measure and also a distinct construct from other work attitude constructs in organisational behaviours literature (job satisfaction, organisational identification, and psychological well-being). Therefore, this gave the researcher more confidence to use the *SAWS* in the further field study.

5.9 CONCLUSION

This chapter has described the validation testing of the Spirit at Work Scale (*SAWS*) with 155 UK and 175, 715 Thai samples. Firstly, the initial pilot study conducted with UK university employees was primarily used in order to assess the construct validity and internal consistency in the similar context and the English version in which the original scale was developed with Canadian university employees was described. Secondly, the second pilot study was to examine the construct validity and reliability of the Thai translation version of the *SAWS* in order to enhance the generalisability. Thirdly, discriminant validity analyses from both samples were conducted. Finally, the results of the two studies including discriminant validity analyses provided supportive evidence that the Spirit at Work Scale (*SAWS*) is a sound psychometric measure and also a distinct construct from the three work attitude constructs. The final model of the *SAWS* contains a total of twelve items; a three factor structure (meaning in work, sense of community, and spiritual connection) in which the sub-factors loaded on higher order factors and also had very acceptable reliability. In line with these results it was decided to use the second-order of the *SAWS* model for the 715 Thai samples in the main study and subsequent analysis.

Table 5.13: The Final Items of *SAWS* from Both Studies

Spirit at Work 3 Dimensions	155 UK Samples (12 items)	175 and 715 Thai Samples (12 items)
1.) Meaning in Work	-	(EW2, saw5) I am able to find meaning or purpose at work.
	(EW4, saw10) I am fulfilling my calling through my work.	(EW4, saw10) I am fulfilling my calling through my work.
	(EW5, saw13) I feel grateful to be involved in work like mine.	(EW5, saw13) I feel grateful to be involved in work like mine.
	(EW6, saw15) I am passionate about my work.	(EW6, saw15) I am passionate about my work.
	(ME1, saw4) At times, I experience a "high" at my work.	-
	(ME2, saw9) At moments, I experience complete joy and ecstasy at work.	(ME2, saw9) At moments, I experience complete joy and ecstasy at work.
	(ME4, saw14) I experience moments at work where everything is blissful.	(ME4, saw14) I experience moments at work where everything is blissful.
2.) Spiritual Connection	(SPC1, saw3) I receive inspiration or guidance from a Higher Power about my work.	(SPC1, saw3) I receive inspiration or guidance from a Higher Power about my work.
	(SPC2. saw8) I experience a connection with a greater source that has a positive effect on my work.	(SPC2. saw8) I experience a connection with a greater source that has a positive effect on my work.
	(SPC3, saw11) My spiritual beliefs play an important role in everyday decisions that I make at work.	(SPC3, saw11) My spiritual beliefs play an important role in everyday decisions that I make at work.
3.) A Sense of Community	(SOC1, saw2) I experience a real sense of trust and personal connection with my co-workers.	(SOC1, saw2) I experience a real sense of trust and personal connection with my co-workers.
	(SOC2, saw7) I feel like I am part of "a community" at work.	(SOC2, saw7) I feel like I am part of "a community" at work.
	(SOC3, saw17) I share a strong sense of purpose and meaning with my co-workers about our work.	(SOC3, saw17) I share a strong sense of purpose and meaning with my co-workers about our work.

CHAPTER 6

PRELIMINARY ANALYSIS AND RESULTS

6.1 CHAPTER OVERVIEW

The objective of this chapter is to present the statistic analyses performed on the data collected from Time 1 and Time 2. Firstly, the results of CFA (Confirmatory Factor Analysis) and discrminant validity of all the measurement models are reported. Next, the scale reliability tests and correlational results are introduced. Additionally, measurement equivalence tests using CFA comparing 155 UK with 175 Thai samples are presented as evidence of the potential for generalisability of findings. Lastly, the manipulation check between high and low spirit at work groups are investigated. This chapter concludes with a discussion of these preliminary results.

6.2 DATA TIME 1

6.2.1 Overview

In the first wave of data collection, 1,200 questionnaires were distributed and 715 fully completed were returned, a response rate of 60%. Confirmatory factor analysis (CFA) of all measures except psychological well-being was primarily used in order to assess the construct validity. After that internal consistency reliabilities were analysed on the final models in order to examine its psychometric properties of the Cronbach's alphas of each measure whether it is or not a sound measurement. Lastly,

the correlations among all variables were reported. The reason that psychological well-being scale was not put into the CFA test because after scoring from eight questions both positive and negative feeling by comparing with the metric table (Berkman, 1971a, b) finally there is only single item remaining for the final score in this measurement.

6.2.2 Confirmatory Factor Analysis of All Measurement Models and Results of Data Time 1

According to Thompson's (2004) suggestion, when the theory has already been developed, the CFA (Confirmatory Factor Analysis) is more useful, as it allows the theory to be directly tested and the degree to which the data fits the model can be quantified in several ways. As noted by Thompson (2004), "It makes little sense to relate constructs within an structural equation modeling (SEM) model if the factors specified as part of the model are not worthy of further attention" (p. 110). Therefore, before assessing the structural model in SEM, researchers should first evaluate the measurement model whether the measured variables accurately reflect the desired constructs or factors. Consequently, all the measurement models in this study were examined using CFA with AMOS software version 7.0 (Arbuckle, 2007). Regarding the adequacy indicators of model fit, the researcher used the $\chi2/df$ ratio below 3.0 (or as high as 5.0 suggested by Marsh & Hocevar, 1985) is considered acceptable; the *CFI, IFI*, and *TLI* index value above 0.9 are acceptable but values above 0.95 are preferred; and the *RMSEA* index value 0.05 or below is considered a sign of good fit, between 0.05 − 0.10 an acceptable fit, and larger than 0.10 should not be accepted (see more discussion in previous chapter section 5.5.3).

The process of modifying the measurement model was based on item content evaluation as well as statistical basis, a minimum loading of 0.4 was required (Hinkin, 1998). Since low squared multiple correlations (R^2) values identified items that are poor indicators of their target factor, the researcher decided first to start checking the items with the highest modification index (MI) and then remove the items with the lower R^2.

CFA for Spirit at Work Time 1: The measurement model of spirit at work consisted of twelve reflective indicators and three factors. CFA results overall demonstrated excellent fit with the data ($\chi2 = 175.70$, $df = 51$; $p < .001$; $\chi2/df = 3.44$; *CFI* = .98; *IFI* = .98; *TLI* = .97; *RMSEA* = .059). Although the $\chi2/df$ ratio was slightly above 3.0 (3.44,), all other fit indices indicated the model fit with the data very well (*CFI, IFI, TLI* index value all were above 0.95 and *RMSEA* index value was around .05). Further, the CFA results are evidently confirmed that the second-order of the *SAWS* model for the 175 Thai samples which was already validated from the previous chapter is the most appropriate model for using in the main study and subsequent analysis. Thus, the second-order twelve-item three-factor of Spirit at Work model was adopted herein.

CFA for Job Satisfaction Time 1: The measurement model of job satisfaction consisted of fifteen reflective indicators and a single factor. Initial fit statistics indicated that the data-to-model fit was problematic and none of required indicators were met ($\chi2 = 716.61$, $df = 90$; $p < .001$; $\chi2/df = 7.96$; *CFI* = .89; *IFI* = .89; *TLI* = .88; *RMSEA* = .10). The modification indices revealed that the error of JS1 and JS2, JS13 and JS14, JS12 and JS11, JS14 and JS6, JS3 and JS5, JS7 and JS10, JS10 and JS11, JS5 and JS4 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators JS1, JS13, JS12, JS14, JS3, JS7, JS10, and JS5 were

removed from the job satisfaction measurement model. The modified model demonstrated excellent fit with the data ($\chi2$= 43.28, *df* = 14; *p* < .001; $\chi2$/df = 3.09; *CFI* = .99; *IFI* = .99; *TLI* = .98; *RMSEA* = .054) and the modified seven-item model was therefore adopted herein.

CFA for Organisational Identification Time 1: The measurement model of organisational identification consisted of six reflective indicators and a single factor. Initial fit statistics indicated that the data did not fit the model adequately ($\chi2$ = 76.20, *df* = 9; *p* < .001; $\chi2$/df = 8.47; *CFI* = .97; *IFI* = .97; *TLI* = .94; *RMSEA* = .10). The modification indices showed that the error of OI1 and OI2, OI2 and OI3 were significantly correlated. Thus, based on item content evaluation as well as statistical basis, the indicators OI1 and OI2 were deleted from the organisational identification measurement model. The modified model demonstrated excellent fit with the data ($\chi2$ = 6.55, *df* = 2; *p* < .05; $\chi2$/df = 3.28; *CFI* = 1.00; *IFI* = 1.00; *TLI* = .99; *RMSEA* = .056) and was adopted herein.

CFA for In-role Performance with Self Report Time 1: The measurement model of in-role performance with self report consisted of six reflective indicators and a single factor. Initial fit statistics indicated that the data-to-model fit was problematic and none of required indicators were met ($\chi2$ = 257.76, *df* = 9; *p* < .001; $\chi2$/df = 28.64; *CFI* = .84; *IFI* = .84; *TLI* = .74; *RMSEA* = .20). The modification indices showed that the error of IPSE2 and IPSE5, IPSE5 and IPSE6, IPSE3 and IPSE6 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators IPSE2, IPSE5 and IPSE6 were removed from the in-role performance with self report measurement model. The modified model was saturated with zero degrees of

freedom which mean that the fit is always perfect ($\chi2 = 0$, *df* $= 0$; *CFI* $= 1.0$; *IFI* $= 1.0$; *TLI* $= 1.0$; *RMSEA* $= 0$) and the modified three-item model was therefore adopted herein.

CFA for In-role Performance with Supervisors' Rating Time 1: The measurement model of in-role performance with supervisors' rating consisted of six reflective indicators and a single factor. Initial fit statistics indicated that the data did not fit the model adequately ($\chi2 = 210.43$, *df* $= 9$; *p* $< .001$; $\chi2$/df $= 23.38$; *CFI* $= .92$; *IFI* $= .92$; *TLI* $= .87$; *RMSEA* $= .18$). The modification indices showed that the error of IPSU2 and IPSU5 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators IPSU5 were deleted from the in-role performance with supervisors' rating measurement model. The modified model indicated excellent fit with the data ($\chi2 = 4.73$, *df* $= 5$; *p* $= .45$; $\chi2$/df $= 0.95$; *CFI* $= .1.00$; *NFI* $= 1.00$; *TLI* $= 1.00$; *RMSEA* $= 0$) and therefore the modified five-item model was adopted herein.

CFA for OCB with Self Report Time 1: The measurement model of organisational citizenship behaviours with self report consisted of twelve reflective indicators and a single factor. Initial fit statistics indicated that the data-to-model fit was problematic ($\chi2 = 466.89$, *df* $= 54$; *p* $< .001$; $\chi2$/df $= 8.65$; *CFI* $= .83$; *IFI* $= .83$; *TLI* $= .79$; *RMSEA* $= .10$). The modification indices showed that the error of OCBSE4 and OCBSE1, OCBSE6 and OCBSE1, OCBSE7 and OCBSE9, OCBSE3 and OCBSE5, OCBSE1 and OCBSE5, OCBSE12 and OCBSE9 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators OCBSE4, OCBSE6, OCBSE7, OCBSE3, OCBSE1, and OCBSE12 were removed from the organisational citizenship behaviours with self report measurement model. The

modified six-item model demonstrated excellent fit with the data ($\chi2 = 24.86$, $df = 9$; $p < .05$; $\chi2/df = 2.76$; $CFI = .99$; $IFI = .99$; $TLI = .98$; $RMSEA = .05$) and was adopted herein.

CFA for OCB with Supervisors' Rating Time 1: The measurement model of organisational citizenship behaviours with supervisors' rating consisted of twelve reflective indicators and a single factor. Initial fit statistics indicated that the data-to-model fit was problematic ($\chi2 = 836.24$, $df = 54$; $p < .001$; $\chi2/df = 15.49$; $CFI = .83$; $IFI = .83$; $TLI = .79$; $RMSEA = .14$). The modification indices showed that the error of OCBSU4 and OCBSU1, OCBSU7 and OCBSU9, OCBSU6 and OCBSU1, OCBSU2 and OCBSU3, OCBSU1 and OCBSU3, OCBSU9 and OCBSU11 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators OCBSU4, OCBSU7, OCBSU6, OCBSU2, OCBSU1, and OCBSU9 were deleted from the OCB with supervisors' rating measurement model. The modified model was saturated with zero degrees of freedom which mean that the fit is always perfect ($\chi2 = 0$, $df = 0$; $CFI = 1.0$; $IFI = 1.0$; $TLI = 1.0$; $RMSEA = 0$) and the modified six-item model was therefore adopted herein.

CFA for Turnover Intentions Time 1: The measurement model of turnover intentions consisted of three reflective indicators and a single factor. CFA results indicated that the model was saturated; therefore the model was just-identified, with zero degrees of freedom which mean that the fit is always perfect ($\chi2 = 0$, $df = 0$; $CFI = 1.0$; $IFI = 1.0$; $TLI = 1.0$; $RMSEA = 0.00$) and was then adopted herein.

6.2.3 Discrminant Validity Analysis of All Measurement Models and Results of Data Time 1

The aim of this section is to conduct discriminant validity analysis as recommended in the fifth stage by Hinkin (1998) to increasing the confidence in the construct validity of the new measure. In particular, this research will examine the correlations between the Second-order of Spirit at Work Scale (*SAWS*) and all other variables used in the hypothesised model in order to confirm whether or not they are all theoretically different constructs.

In order to examine the discriminant validity between the *SAWS* and the other six variables used in the hypothesised model (job satisfaction, organisational identification, psychological well-being, in-role performance, OCB, and turnover intentions), the researcher conducted a CFA using AMOS in which the first model (all variables) were forced to overlap completely (one factor solution) versus the other model in which they were allowed to be distinct (seven-factor solution). Evidence that the seven-factor model fits the data better than the one factor would support the structural and discriminant validity of the second-order of Spirit at Work construct. Therefore, data from Time 1 (715 Thai samples) were put in this investigation. Since there were two different types of in-role performance and OCB constructs which one was from employee self-report and the other the immediate supervisor's rating, the results were accordingly reported in two different types of models.

Table 6.1 shows that the results of the Thai-version second-order of the Spirit at Work construct were theoretically distinct from the other six constructs. For the self-

report model (*SAWS* versus six constructs), a seven-factor model with *SAWS* and the other six constructs as separate but correlated factors (χ^2 = 1,163.81, *df* = 571; *p* < .001; χ^2/df = 2.04; *CFI* = .94; *IFI* = .94; *TLI* = .93; *RMSEA* = .04) fit the data better than did a one-factor model with *SAWS* and all constructs collapsed (χ^2 = 4,418.52; *df* = 594; *p* < .001; χ^2/df = 7.44; *CFI* = .62; *IFI* = .62; *TLI* = .59; *RMSEA* = .11). In the same way, for the supervisor rating model (*SAWS* versus six constructs), a seven-factor model with *SAWS* and the other six constructs as separate but correlated factors (χ^2 = 1,202.84, *df* = 642; *p* < .001; χ^2/df = 1.87; *CFI* = .95; *IFI* = .95; *TLI* = .95; *RMSEA* = .04) fit the data better than did a one-factor model with *SAWS* and all constructed collapsed (χ^2 = 6,535.68; *df* = 629; *p* < .001; χ^2/df = 10.39; *CFI* = .46; *IFI* = .47; *TLI* = .43; *RMSEA* = .14). The SEM models of self report are presented in Appendix 8 and 9 for the supervisor report models in Appendix 10 and 11.

Table 6.1: Fit Indices of Confirmatory Factor Analysis for Testing Discriminant Validity between *SAWS* and the Other Six Constructs: Time 1

Model	χ^2	Df	χ^2/df	CFI	IFI	TLI	RMSEA
1.) Self-report Model							
SAWS VS Six Constructs							
-One-factor Model	4,418.52**	594	7.44	.62	.62	.59	.11
-Seven-factor Model	1,163.81**	571	2.04	.94	.94	.93	.04
2.) Supervisor Rating Model							
SAWS VS Six Constructs							
-One-factor Model	6,535.68**	629	10.39	.46	.47	.43	.14
-Seven-factor Model	1,202.84**	642	1.87	.95	.95	.95	.04

Note: $N = 715$, **$p < .001$ CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation

6.2.4 The Internal Consistency of All Measures and Results of Data Time 1

The internal consistency reliabilities of all the final measurement models were carried out in order to check its psychometric properties of the Cronbach's alphas of each measure whether it is or not a sound measurement. According to Nunally's (1978) suggestion that Cronbach's alpha values of above .70 are acceptable, with values

between .80 and .90 being very good. Cronbach's alphas of all measures including psychological well-being scale are presented in Table 6.2. The estimated reliabilities of all nine measures Time 1 are as follows: (1) spirit at work = .92; (2) job satisfaction = .87; (3) organisational identification = .85; (4) psychological well-being = .72; (5) in-role performance with self report = .83; (6) in-role performance with supervisor rating = .86; (7) organisational citizenship behaviours; (OCB) with self report = .80; (8) OCB with supervisor rating = .87; and (9) turnover intentions = .89. As can be seen in Table 6.1, the internal consistencies of all measures are above .70, indicating all variable scales exhibit acceptable reliability. Further, for the rest of the measures besides psychological well-being (.72), the Cronbach's alphas range from .80 to .92 indicating measures in Time 1 mostly had very high reliability.

6.2.5 Correlations, Means, and Standard Deviations of All Measures and Results of Data Time 1

Descriptive statistics and zero-order correlations of all variable scales are presented in Table 6.2. Individual spirit at work was significantly and positively correlated with job satisfaction ($r = .63$, $p < .01$), organisational identification ($r = .54$, $p < .01$), psychological well-being ($r = .50$, $p < .01$), in-role performance with self report ($r = .52$, $p < .01$), in-role performance with supervisor rating ($r = .18$, $p < .01$), organisational citizenship behaviours (OCB) with self report ($r = .51$, $p < .01$), OCB with supervisor rating ($r = .17$, $p < .01$) and negatively correlated with turnover intentions ($r = -.45$, $p < .01$), indicating preliminary support for the relationships suggested in Hypotheses 1 – 6.

Furthermore, three work attitudinal variables (job satisfaction, organisational identification, and psychological well-being) showed the significant relationships with the three organisational outcomes (in-role performance, organisational citizenship behaviours, and turnover intentions), indicating preliminary support for the relationships suggested in Hypotheses 7 − 15. First, job satisfaction was significantly and positively correlated with in-role performance with self report ($r = .37$, $p < .01$), in-role performance with supervisor rating ($r = .18$, $p < .01$), organisational citizenship behaviours (OCB) with self report ($r = .33$, $p < .01$), OCB with supervisor rating ($r = .17$, $p < .01$) and negatively correlated with turnover intentions ($r = -.56$, $p < .01$). Second, organisational identification was significantly and positively correlated with in-role performance with self report ($r = .39$, $p < .01$), in-role performance with supervisor rating ($r = .12$, $p < .01$), organisational citizenship behaviours (OCB) with self report ($r = .43$, $p < .01$), OCB with supervisor rating ($r = .15$, $p < .01$) and negatively correlated with turnover intentions ($r = -.37$, $p < .01$). Lastly, psychological well-being was significantly and positively correlated with in-role performance with self report ($r = .31$, $p < .01$), in-role performance with supervisor rating ($r = .13$, $p < .01$), organisational citizenship behaviours (OCB) with self report ($r = .27$, $p < .01$), OCB with supervisor rating ($r = .16$, $p < .01$) and negatively correlated with turnover intentions ($r = -.51$, $p < .01$). These correlations are also presented in Table 6.2.

Table 6.2: **Scale Means, Standard Deviations, Correlations and Reliabilities**

Scales	*M*	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.) Spirit at work [a] Time 1	4.45	0.74	(0.92)																	
2.) Spirit at work [a] Time 2	4.44	0.68	.59**	(0.91)																
3.) Job Satisfaction Time 1	5.00	0.96	.63**	.45**	(0.87)															
4.) Job Satisfaction Time 2	4.97	0.93	.46**	.61**	.57**	(0.85)														
5.) Organisational identification Time 1	5.51	1.03	.54**	.36**	.45**	.31**	(0.85)													
6.) Organisational identification Time 2	5.44	0.93	.41**	.54**	.27**	.40**	.56**	(0.82)												
7.) Psychological well-being Time 1	4.33	1.56	.50**	.33**	.59**	.38**	.38**	.24**	(0.72)											
8.) Psychological well-being Time 2	4.41	1.53	.33**	.47**	.34**	.52**	.21**	.31**	.44**	(0.73)										
9.) In-role performance -self report Time 1	5.42	0.86	.52**	.31**	.37**	.24**	.39**	.30**	.31**	.17**	(0.83)									
10.) In-role performance -self report Time 2	5.17	0.81	.34**	.47**	.28**	.39**	.27**	.42**	.29**	.37**	.49**	(0.80)								

Table 6.2: **Scale Means, Standard Deviations, Correlations and Reliabilities (Continued)**

Scales	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
11.) In-role performance rated by supervisor Time 1	5.24	0.91	.18**	.13**	.18**	.13**	.12**	.15**	.13**	.08 ns	.22**	.17**	(0.86)							
12.) In-role performance rated by supervisor Time 2	5.94	0.83	.15**	.17**	.14**	.17**	.11*	.13**	.12**	.15**	.18**	.17**	.40**	(0.88)						
13.) Organisational citizenship behaviours (OCB) self report Time 1	5.18	0.83	.51**	.39**	.33**	.26**	.43**	.34**	.27**	.22**	.52**	.35**	.12**	.15**	(0.80)					
14.) OCB- self report Time 2	5.24	0.80	.29**	.48**	.21**	.30**	.23**	.41**	.17**	.30**	.27**	.51**	.02 ns	.11*	.51**	(0.80)				
15.) OCB rated by supervisor Time 1	5.08	0.98	.17**	.14**	.17**	.13**	.15**	.12**	.16**	.11*	.14**	.10*	.65**	.35**	.21**	.15**	(0.87)			
16.) OCB rated by supervisor Time 2	4.97	1.01	.07 ns	.11*	.04 ns	.12**	.07 ns	.08 ns	.10*	.14**	.08 ns	.12**	.28**	.66**	.19**	.19**	.42**	(0.87)		
17.) Turnover intentions Time 1	3.24	1.54	-.45**	-.33**	-.56**	-.36**	-.37**	-.23**	-.51**	-.30**	-.20**	-.21**	-.16**	-.12**	-.19**	-.10*	-.17**	-.06 ns	(0.89)	
18.) Turnover intentions Time 2	3.05	1.47	-.40**	-.48**	-.43**	-.57**	-.26**	-.32**	-.38**	-.46**	-.21**	-.30**	-.19**	-.11**	-.19**	-.18**	-.19**	-.03 ns	.59**	(0.88)

Notes: Reliability estimates are in parentheses; Time 1 ($N = 715$) and Time 2 ($N = 501$) for all variables. [a] = Scale range from 1 to 6 whereas all the others range from 1 to 7. ** $p<.01$ * $p<.05$ ns = non significant

6.3 DATA TIME 2

6.3.1 Overview

For the second wave of data collection, 715 questionnaires were distributed to the same participants of Time 1 and 501 fully completed were returned, a response rate of 70%. Along the same line with data analyses in Time 1, CFA of all measures Time 2 except psychological well-being were assessed. As a longitudinal research design apart from checking the internal consistency reliability (Cronbach's alpha), test re-test reliability of all measures also were analysed and reported herein. Furthermore, the correlations among all variables were presented.

6.3.2 Confirmatory Factor Analysis of All Measurement Models and Results of Data Time 2

CFA for Spirit at Work Time 2: The measurement model of spirit at work consisted of twelve reflective indicators and three factors. CFA results again demonstrated very good fit with the data ($\chi2$ = 174.66, *df* = 51; *p* < .001; *χ2/df* = 3.42; *CFI* = .96; *IFI* = .96; *TLI* = .95; *RMSEA* = .07). Although the *χ2/df* ratio was slightly above 3.0 (3.42), all other fit indices were indicated the model fit with the data very well (*CFI, IFI, TLI* index value above 0.95 and *RMSEA* index value between 0.05 – 0.08). Moreover, the CFA model fit indexes of the second-order of *SAWS* model remained having a very good fit with the data across time. These provide further evidence for the sound measurement of the second-order of *SAWS* model. Therefore, the modified twelve-item three-factor of Spirit at Work model was adopted herein.

CFA for Job Satisfaction Time 2: The measurement model of job satisfaction consisted of fifteen reflective indicators and a single factor. Initial fit statistics indicated that the data-to-model fit was problematic and none of required indicators were met ($\chi2$ = 680.20, *df* = 90; *p* < .001; $\chi2$/df = 7.56; *CFI* = .87; *IFI* = .87; *TLI* = .84; *RMSEA* = .12). The modification indices revealed that the error of JS12 and JS11, JS1 and JS2, JS13 and JS14, JS3 and JS4, JS9 and JS11, JS5 and JS4, JS11 and JS10, JS7 and JS10, JS4 and JS14, JS15 and JS10 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators JS12, JS1, JS13, JS3, JS9, JS5, JS11, JS7, JS4 and JS15 were removed from the job satisfaction measurement model. The modified five-item model demonstrated excellent fit with the data ($\chi2$= 10.03, *df* = 5; *p* = .07; $\chi2$/df = 2.01; *CFI* = .99; *IFI* = .99; *TLI* = .99; *RMSEA* = .045) and was adopted herein.

CFA for Organisational Identification Time 2: The measurement model of organisational identification consisted of six reflective indicators and a single factor. Initial fit statistics indicated that the data did not fit the model adequately and none of required indicators were met ($\chi2$ = 128.16, *df* = 9; *p* < .001; $\chi2$/df = 14.24; *CFI* = .93; *IFI* = .93; *TLI* = .88; *RMSEA* = .16). The modification indices showed that the error of OI1 and OI2, OI5 and OI4 were significantly correlated. Thus, based on item content evaluation as well as statistical basis, the indicators OI1 and OI5 were deleted from the organisational identification measurement model. The modified four-item model indicated very good fit with the data ($\chi2$= 9.61, *df* = 2; *p* < .05; $\chi2$/df = 4.80; *CFI* = .99; *IFI* = .99; *TLI* = .97; *RMSEA* = .08) and was adopted herein.

CFA for In-role Performance with Self Report Time 2: The measurement model of in-role performance with self report consisted of six reflective indicators and a single factor. Initial fit statistics indicated that the data-to-model fit was problematic and none of required indicators were met (χ^2 = 165.50, *df* = 9; *p* < .001; χ^2/df = 18.39; *CFI* = .88; *IFI* = .88; *TLI* = .80; *RMSEA* = .19). The modification indices showed that the error of IPSE2 and IPSE5 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators IPSE2 were removed from the in-role performance with self report measurement model. The modified five-item model demonstrated excellent fit with the data (χ^2 = 9.88, *df* = 5; *p* = .08; χ^2/df = 1.98; *CFI* = 1.0; *IFI* = 1.0; *TLI* = .99; *RMSEA* = .04) and was adopted herein.

CFA for In-role Performance with Supervisors' Rating Time 2: The measurement model of in-role performance with supervisors' rating consisted of six reflective indicators and a single factor. Initial fit statistics indicated that the data did not fit the model adequately (χ^2 = 134.48, *df* = 9; *p* < .001; χ^2/df = 14.94; *CFI* = .94; *IFI* = .94; *TLI* = .89; *RMSEA* = .17). The modification indices showed that the error of IPSU5 and IPSU2 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators IPSU5 were deleted from the in-role performance with supervisors' rating measurement model. The modified five-item model indicated excellent fit with the data (χ^2 = 13.04, *df* = 5; *p* < .05; χ^2/df = 2.61; *CFI* = .99; *NFI* = .99; *TLI* = .99; *RMSEA* = .057) and then was adopted herein.

CFA for OCB with Self Report Time 2: The measurement model of organisational citizenship behaviours with self report consisted of twelve reflective indicators and a single factor. Initial fit statistics indicated that the data-to-model fit was

problematic and none of required indicators were met ($\chi2 = 541.42$, *df* = 54; *p* < .001; $\chi2/df = 10.03$; *CFI* = .76; *IFI* = .76; *TLI* = .71; *RMSEA* = .13). The modification indices showed that the error of OCBSE4 and OCBSE1, OCBSE5 and OCBSE3, OCBSE6 and OCBSE1, OCBSE7 and OCBSE9, OCBSE11 and OCBSE7, OCBSE2 and OCBSE3, OCBSE1 and OCBSE3, OCBSE3 and OCBSE12 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators OCBSE4, OCBSE5, OCBSE6, OCBSE7, OCBSE11, OCBSE2, OCBSE1, and OCBSE3 were removed from the organisational citizenship behaviours with self report measurement model. The modified four-item model demonstrated excellent fit with the data ($\chi2 = 6.70$, *df* = 2; *p* < .05; $\chi2/df = 3.35$; *CFI* = .99; *IFI* = .99; *TLI* = .98; *RMSEA* = .07) and was adopted herein.

CFA for OCB with Supervisors' Rating Time 2: The measurement model of organisational citizenship behaviours with supervisors' rating consisted of twelve reflective indicators and a single factor. Initial fit statistics indicated that the data-to-model fit was problematic and none of required indicators were met ($\chi2 = 461.49$, *df* = 54; *p* < .001; $\chi2/df = 8.55$; *CFI* = .87; *IFI* = .87; *TLI* = .84; *RMSEA* = .12). The modification indices showed that the error of OCBSU4 and OCBSU1, OCBSU11 and OCBSU8, OCBSEU6 and OCBSU1, OCBSU7 and OCBSU9, OCBSU1 and OCBSU3, OCBSU2 and OCBSU3, OCBSU3 and OCBSU5 were significantly correlated. Therefore, based on item content evaluation as well as statistical basis, the indicators OCBSU4, OCBSU11, OCBSU6, OCBSU7, OCBSU1, OCBSU2, and OCBSU3 were deleted from the OCB with supervisors' rating measurement model. The modified five-item model showed excellent fit with the data ($\chi2 = 3.94$, *df* = 5; *p* = .56; $\chi2/df = 0.79$; *CFI* = 1.0; *IFI* = 1.0; *TLI* = 1.0; *RMSEA* = 0) and then the model was adopted herein.

CFA for Turnover Intentions Time 2: The measurement model of turnover intentions consisted of three reflective indicators and a single factor. CFA results indicated that the model was saturated; therefore the model was just-identified, with zero degrees of freedom which means that the fit is always perfect ($\chi2 = 0$, *df* = 0; *CFI* = 1.0; *IFI* = 1.0; *TLI* = 1.0; *RMSEA* = 0.00) and was then adopted herein.

6.3.3 Discrminant Validity Analysis of All Measurement Models and Results of Data Time 2

Along the same line of data Time 1, this section is also aimed to conduct discriminant validity analysis for data Time 2 (501 Thai samples) in order to confirm whether or not the second-order of *SAWS* and all other six variables used in the hypothesised model (job satisfaction, organisational identification, psychological well-being, in-role performance, OCB, and turnover intentions) are all theoretically different constructs.

With the same analysis procedures as described in the previous section (6.2.3), the results in Table 6.3 clearly demonstrates that the results of the Thai-version second-order of Spirit at Work construct were theoretically distinct from the other six constructs. For the self-report model (*SAWS* versus six constructs), a seven-factor model with *SAWS* and the other six constructs as separate but correlated factors ($\chi2 = 1{,}141.18$, *df* = 504; *p* < .001; $\chi2$/df = 2.26; *CFI* = .93; *IFI* = .93; *TLI* = .92; *RMSEA* = .05) fit the data better than did a one-factor model with *SAWS* and all constructs collapsed ($\chi2 = 4{,}144.39$; *df* = 527; *p* < .001; $\chi2$/df = 7.86; *CFI* = .61; *IFI* = .61; *TLI* = .58; *RMSEA* = .12). Similarly, for the supervisor rating model (*SAWS* versus six

constructs), a seven-factor model with *SAWS* and the other six constructs as separate but correlated factors ($\chi 2 = 951.08$, *df* $= 537$; *p* $< .001$; $\chi 2/df = 1.77$; *CFI* $= .96$; *IFI* $= .96$; *TLI* $= .96$; *RMSEA* $= .04$) fit the data better than did a one-factor model with *SAWS* and all constructed collapsed ($\chi 2 = 5,995.61$; *df* $= 560$; *p* $< .001$; $\chi 2/df = 10.71$; *CFI* $= .46$; *IFI* $= .46$; *TLI* $= .43$; *RMSEA* $= .14$). The SEM models of self report are presented in Appendix 12 and 13 for the supervisor report in Appendix 14 and 15.

Table 6.3: Fit Indices of Confirmatory Factor Analysis for Testing Discriminant Validity between *SAWS* and the Other Six Constructs: Time 2

Model	χ^2	Df	χ^2/df	CFI	IFI	TLI	RMSEA
1.) Self-report Model							
SAWS VS Six Constructs							
-One-factor Model	4,144.39**	527	7.86	.61	.61	.58	.12
-Seven-factor Model	1,141.18**	504	2.26	.93	.93	.92	.05
2.) Supervisor Rating Model							
SAWS VS Six Constructs							
-One-factor Model	5,995.61**	560	10.71	.46	.46	.43	.14
-Seven-factor Model	951.08**	537	1.77	.96	.96	.96	.04

Note: $N = 501$, **$p < .001$ CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation

6.3.4 The Internal Consistency of All Measures and Results of Data Time 2

The internal consistency reliabilities of all the final measurement models Time 2 were carried out. The Cronbach's alphas of all measures including psychological well-being scale are displayed in Table 6.2. The estimated reliabilities of all nine measures Time 2 are as follows: (1) spirit at work = .91; (2) job satisfaction = .85; (3) organisational identification = .82; (4) psychological well-being = .73; (5) in-role performance with self report = .80; (6) in-role performance with supervisor rating = .88; (7) organisational citizenship behaviours (OCB) with self report = .80; (8) OCB with supervisor rating = .87; and (9) turnover intentions = .88. As can be seen in Table 6.2, the internal consistencies of all measures are above .70, indicating all variable scales exhibit acceptable reliability. Again for the rest of measures besides psychological well-being (.73) the Cronbach's alphas range from .80 to .91 indicating measures in Time 2 mostly had very high reliability.

6.3.5 The Test Re-test Reliability of All Measures and Results

Test-retest reliability is measured by administering a test twice at two different points in time. This type of reliability assumes that there will be no change in the quality or construct being measured. Spearman correlation coefficients were computed, correlations between the mean scores on all nine measures at two time points are displayed in Table 6.4. Although there are no generally agreed upon standards for interpreting the magnitude of effect sizes, researchers have typically followed Cohen's (1988) recommendations. According to Cohen (1988), the operational definitions of the effect size for correlation coefficients are 0.10 (small, negligible practical importance),

0.30 (medium, moderate practical importance), and 0.50 (large, critical practical importance). Therefore, based on these recommendations, the correlation coefficients between Times 1 and 2 of all 9 measures in this study (*r* values above .40, *p* < .01) indicate adequate test re-test reliability over a nine month period. However, one would not expect the test re-test reliability to be too high, given that people's attitudes and behaviours which might change and evolve over time.

Table 6.4: **Test Re-test Correlations for All 9 Measures**

Scales	Test Re-test Reliability ($N = 501$)
1. Individual Spirit at work	0.59**
2. Job satisfaction	0.57**
3.Organisational Identification	0.56**
4. Psychological well-being	0.44**
5. In-role performance - self report	0.49**
6. In-role performance rated by supervisor	0.40**
7.Organisational citizenship Behaviours (OCB) - self report	0.51**
8. OCB rated by supervisor	0.42**
9. Turnover intentions	0.59**

Notes: *p* value computed by Spearman correlation ** *p*<.01 (Time 1 and Time 2 about 9 month period)

6.3.6 Correlations, Means, and Standard Deviations of All Measures and Results of Data Time 2

Descriptive statistics and zero-order correlations of all variable scales in Time 2 are also displayed in Table 6.1. Individual spirit at work was significantly and positively correlated with job satisfaction ($r = .61, p < .01$), organisational identification ($r = .54, p < .01$), psychological well-being ($r = .47, p < .01$), in-role performance with self report ($r = .47, p < .01$), in-role performance with supervisor rating ($r = .17, p < .01$), organisational citizenship behaviours (OCB) with self report ($r = .48, p < .01$), OCB with supervisor rating ($r = .11, p < .05$) and negatively correlated with turnover intentions ($r = -.48, p < .01$), indicating preliminary support for the relationships suggested in Hypotheses 1 – 6.

Moreover, in Time 2 apart from the relationship between organisational identification and OCB with supervisor rating (not significant), three work attitudinal variables (job satisfaction, organisational identification, and psychological well-being) demonstrated the significant relationships with the three organisational outcomes (in-role performance, organisational citizenship behaviours, and turnover intentions), indicating preliminary support for the relationships suggested in Hypotheses 7 – 15. First, job satisfaction was significantly and positively correlated with in-role performance with self report ($r = .39, p < .01$), in-role performance with supervisor rating ($r = .17, p < .01$), organisational citizenship behaviours (OCB) with self report ($r = .30, p < .01$), OCB with supervisor rating ($r = .12, p < .05$) and negatively correlated with turnover intentions ($r = -.57, p < .01$). Second, organisational identification was significantly and positively correlated with in-role performance with self report ($r = .42$,

$p < .01$), in-role performance with supervisor rating ($r = .13$, $p < .01$), organisational citizenship behaviours (OCB) with self report ($r = .41$, $p < .01$), OCB with supervisor rating ($r = .08$, ns) and negatively correlated with turnover intentions ($r = -.32$, $p < .01$). Lastly, psychological well-being was significantly and positively correlated with in-role performance with self report ($r = .37$, $p < .01$), in-role performance with supervisor rating ($r = .15$, $p < .01$), organisational citizenship behaviours (OCB) with self report ($r = .30$, $p < .01$), OCB with supervisor rating ($r = .14$, $p < .01$) and negatively correlated with turnover intentions ($r = -.46$, $p < .01$). These correlations are also presented in Table 6.2.

6.4 MEASUREMENT EQUIPVALENCE TESTS

Since Spirit at Work Scale (*SAWS*) is a new measure and never has been tested widely especially across cultures, it is essential to establish equivalent measurement of relevant constructs across cultures. If measurement invariance cannot be established, then the finding of a between-group difference cannot be unambiguously interpreted. One does not know if it is due to a true attitudinal difference, or to different psychometric responses to the scale items. This is of particular concern in cross-cultural research when the cultures speak different languages, and researchers use translated versions of a survey instrument (Cheung & Rensvold, 2002; Janssens, Brett, & Smith, 1995). This implies that a same measurement instrument used in different cultures whether measures the same construct or not. In this study, there are two different samples between 175 Thai and 155 UK samples. Thus, the researcher will use the final validated second-order of *SAWS* comparing the 175 Thai with 155 UK university employee samples.

First, Confirmatory Factor Analysis (CFA) is used to each sample separately. The fit indices for the 175 Thai and 155 UK samples were very different which also showed that the 175 Thai sample model fits better (CFI = .97 and RMSEA = .07, see Table 6.5). All fit indices of the 155 UK model were not acceptable (CFI < .90 and RMSEA > .10). This result indicated the validated second-order of *SAWS* from 715 Thai sample model did not fit with the 155 UK samples. Also, this confirms the validation studies that there was one item difference between the two samples in the Meaning in Work construct.

Table 6.5: Fit Indices of the 175 Thai and 155 UK Samples on the Second-order of Spirit at Work Scale

Model	χ^2	Df	χ^2/df	CFI	IFI	TLI	RMSEA
175 Thai samples	89.37*	51	1.75	.97	.97	.96	.07
155 UK samples	155.37**	51	3.05	.89	.89	.86	.12

Note: *p < .01 **p < .001 CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation

To further examine the generalisaibility of the measurement model, the same two samples of data were treated with a Multigroup Confirmatory Factor Analysis

(MGCFA). MGCFA is an extension of CFA which tests the invariance of estimated parameters of two nested models across groups (Cheung & Rensvold, 2002). Firstly, a two-group second order CFA model was estimated, in which all parameters were set free across the two samples or so-called Configural Invariance (Model A). The conceptual meaning of Model A is both groups associate the same subsets of items with the same constructs. Eventually, a series of equality constraints were imposed. Firstly, a model was estimated in which the factor loadings were constrained to be equal across the two groups or so-called Construct-level Metric Invariance (Model B) and the conceptual meaning of Model B is the strength of the relationships between items and their underlying constructs overall are the same for both groups. Secondly, Model C or so-called Item-level Metric Invariance fixed the variance of factors to be the same across groups and the conceptual meaning of Model C is the strength of the relationships between *each* item and its underlying construct is the same for both groups. Finally, Model D or so-called Residual Variance Invariance also fixed the covariances and variances of the errors to be the same and the conceptual meaning of Model D is items have the same internal consistency for both groups.

The comparison of these four models provides a test of measurement equivalence across the two groups between 175 Thai and 155 UK samples, whereby once can assess whether the stricter metric invariance conditions in Models B, C and D are met by both samples. As can be seen in Table 6.6, the fit indices for Model A, B, and C suggested that the second-order measurement model of Spirit at Work Scale (*SAWS*) had acceptable fit within each of the two groups of data (χ^2/df < 3; CFI > .90; and RMSEA < .08). In order to test for measurement invariance in MGCFA, changes in CFI values of 0.01 or less (or alternatively, between 0.01 and 0.02) have been proposed

to be indicative of factor invariance across the groups (Cheung & Rensvold, 2002; Vandenberg & Lance, 2000). After the comparison of the Chi-square differences ($\Delta\chi^2$), each the fix indices in the three models (Model A, B, and C) and the change in CFI between three models, the results indicated that Model B (Construct-level Metric Invariance) was the best fit within the two groups of Thai and UK samples. This means overall the strength of the relationships between items and their underlying constructs are the same for both groups. Alternatively, it suggested that the three constructs (Meaning in Work, Sense of Community, and Spiritual Connection) were manifested in the same way across two samples. However, only Model D (Residual Variance Invariance) suggested that the second-order measurement model of Spirit at Work Scale (*SAWS*) had unacceptable fit within the two groups of samples (χ^2/df > 3; CFI < .90; and RMSEA > .10). This result showed that items had not the same internal consistency for both groups. Alternatively, it suggested that for both groups, items had not the same quality as measures of the underlying construct, which this again obviously confirms the validation studies that there was one item difference between the two samples in the Meaning in Work construct for both groups.

As discussed in the previous chapter (validation testing), there was only one item difference between both samples in the dimension of Meaning in Work but the other two dimensions; Sense of Community and Spiritual Connection, captured exactly the same items as original Spirit at Work Scale items. The one item differences in 'Meaning in Work' dimension were the item ME1 which was not included in the Thai version 'At times, I experience a "high" at my work', and the item EW2 which was not loaded in the UK version 'I am able to find meaning or purpose at work'.

To sum up, using a single measurement model which constrains the factor loadings (Model B), factor variances (Model C), and the error variance and covariances (Model D) to be equal across both Thai and UK samples generated the same empirical fit for the three constructs (Meaning in Work, Sense of Community, and Spiritual Connection) as using two different measurement models across the two samples. However, it suggested that for both groups, one item had not the same quality as measures of the underlying of Meaning in Work construct. Overall, this provides further evidence for the generalisability of the second-order of Spirit at Work Scale (*SAWS*) model.

Table 6.6: Fit Indices of Multigroup Confirmatory Factor Analysis for the Second-order of *SAWS*: 175 Thai and 155 UK Samples

Model	χ^2	Df	χ^2/df	$\Delta\chi^2$,(Δdf)	CFI	IFI	TLI	RMSEA
A	244.76**	102	2.40	-	.93	.93	.91	.065
B	258.24**	111	2.33	13.48(9)*ns*	.93	.93	.92	.064
C	328.65**	117	2.80	70.41(6)**	.90	.90	.89	.074
D	697.84**	129	5.41	369.19(12)**	.73	.73	.72	.116

Note: **$p < .001$, CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI=Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation.

6.5 MANIPULATION CHECK

Another method in order to examine whether employees who had high individual spirit at work perceived work attitudes and behaved at work different from those who had low individual spirit at work or not, the researcher conducted a one-way analysis of variance (ANOVA) with high-low level of individual spirit at work. Regarding the method used for dividing the two groups into high versus low individual spirit at work, the researcher used the median score (4.42 median value which came out the same both Time 1 and Time 2) to determine for the cutting point. Thus, there were 348 (48.70%) and 239 (47.70%) for high level group of individual spirit at work and 367 (51.30%) and 262 (52.30%) for lower level group in Time 1 and Time 2 respectively. The results of means Time 1 ($N = 715$) and Time 2 ($N = 501$) are depicted in Figure 6.1 and 6.2 respectively. The researcher found that compared to employees who had low level individual spirit at work, employees who had high level of individual spirit at work (a) had significantly higher levels of job satisfaction [Time1 $F(1, 713) = 247.89$, $p < .001$, Time2 $F(1, 499) = 156.26$, $p < .001$]; (b) had significantly higher levels of organisational identification [Time1 $F(1, 713) = 211.27$, $p < .001$, Time2 $F(1, 499) = 134.28$, $p < .001$]; (c) experienced significantly higher levels of psychological well-being [Time1 $F(1, 713) = 145.29$, $p < .001$, Time2 $F(1, 499) = 96.63$, $p < .001$]; (d) had significantly higher levels of in-role performance with self report [Time1 $F(1, 713) = 156.30$, $p < .001$, Time2 $F(1, 499) = 96.50$, $p < .001$]; (e) also had significantly higher levels of in-role performance with supervisor rating [Time1 $F(1, 713) = 14.82$, $p < .001$, Time2 $F(1, 499) = 15.37$, $p < .001$]; (f) were significantly more willing to engage in organisational citizenship behaviours with self report [Time1 $F(1, 713) = 135.11$, $p < .001$, Time2 $F(1, 499) = 103.06$, $p < .001$]; (g) were also significantly more willing to

engage in organisational citizenship behaviours with supervisor rating [Time1 $F(1, 713)$ = 27.87, $p < .001$, Time2 $F(1, 499) = 8.15$, $p < .01$]; and finally (h) had significantly less desire to leave the organisation [Time1 $F(1, 713) = 129.18$, $p < .001$, Time2 $F(1, 499) = 99.88$, $p < .001$].

Figure 6.1: **Means Ratings of Work Attitudes and Organisational Outcomes as a Level of Individual Spirit at Work in Time 1 ($N = 715$)**
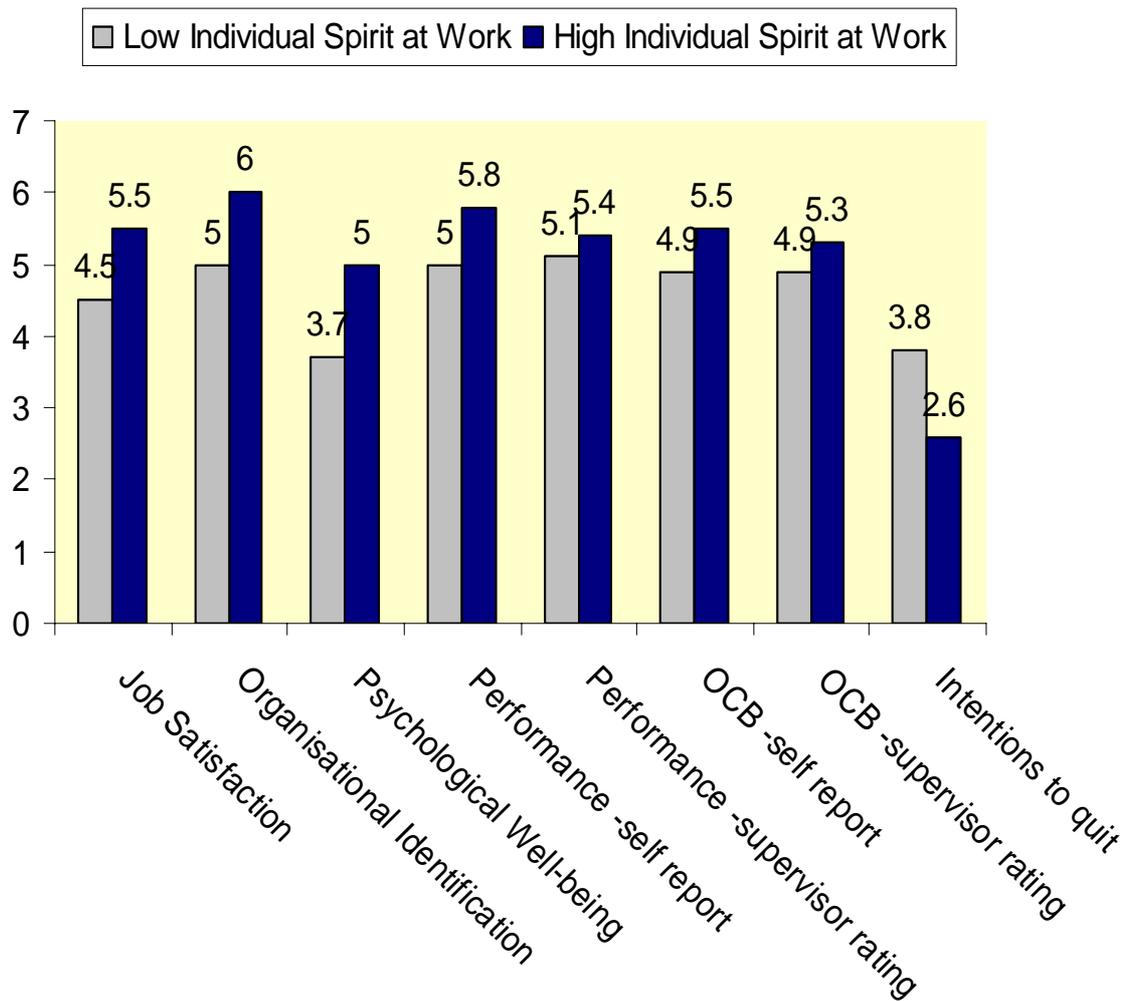
Figure 6.2: **Means Ratings of Work Attitudes and Organisational Outcomes as a Level of Individual Spirit at Work in Time 2 ($N = 501$)**
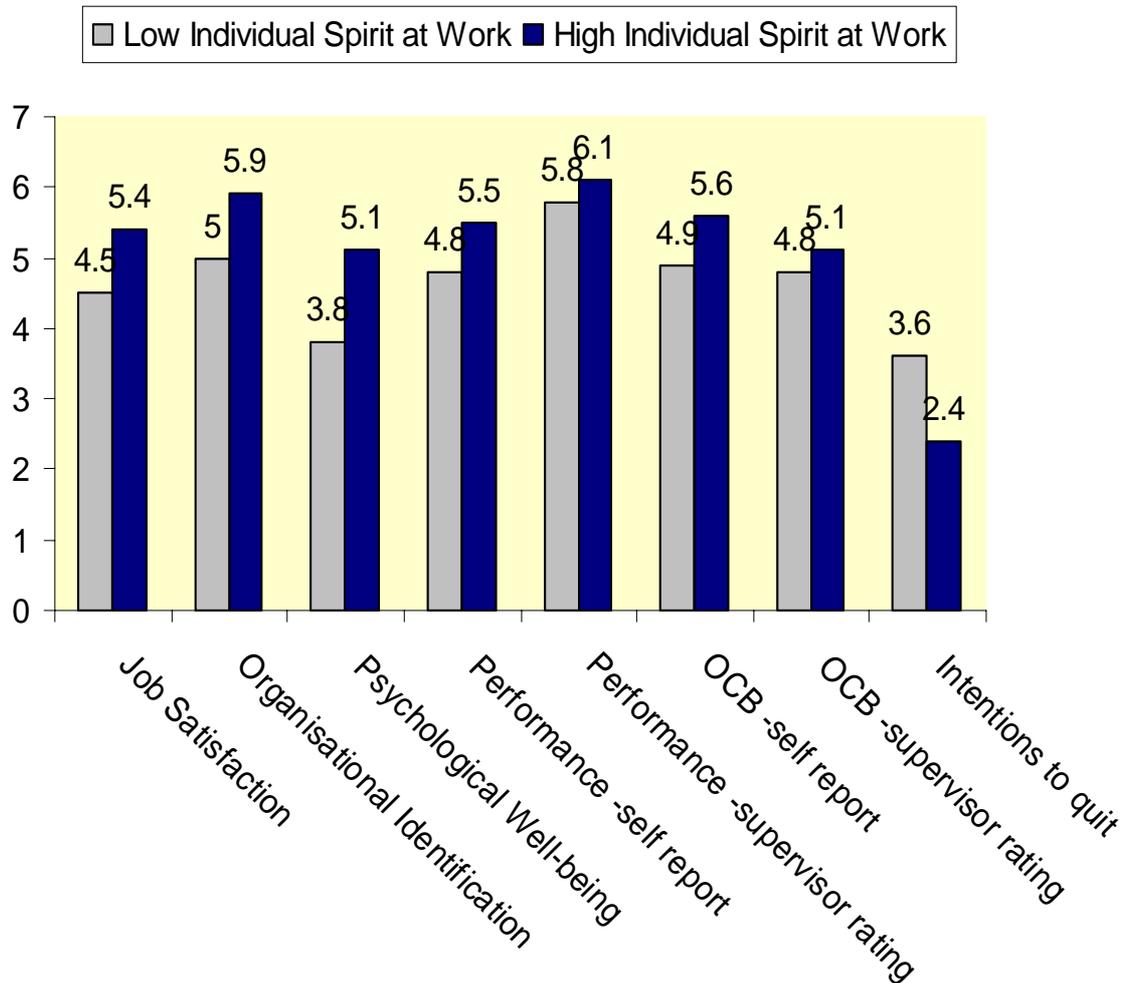
6.6 DISCUSSION

The primary aim of this chapter was to present the statistical analyses performed on the data collected from Time 1 and Time 2: (1) the results of CFA (confirmatory factor analysis) of all the measurement models were examined; (2) the discriminant validity between the second-order of the *SAWS* and the other six constructs were tested; (3) the scale reliability tests of the final measurement models were assessed; (4) the correlational results among the interest variables were investigated; and (5) the manipulation check between high and low spirit at work groups were also investigated.

First, CFA results of the final nine measurement models, both Time 1 and 2, demonstrated an excellent fit with the data and all of required indicators were met. Specifically, the main scale in this study, the Spirit at Work Scale (*SAWS*) which has been validated and presented in chapter 5, showed the CFA model fit indexes of the second-order of the *SAWS* model remained a very good fit with the data across time. These provide further evidence for the sound measurement of the second-order of *SAWS* model. Therefore, the modified twelve-item three-factor of Spirit at Work model is the most appropriate model for using in the main study and subsequent analysis. For the final model of job satisfaction scale, all the items remaining in the construct were intrinsic job characteristics. Subsequently, when the researcher mentions the term job satisfaction in this study, it simply implies as employees' satisfaction from intrinsic job features (i.e. promotion, autonomy, recognition rather than pay, hours of work etc.). The final model of organisational identification scale was fine only removing one item, there was nothing significant change of the construct.

Since the negative or reversed items which are typically given very low squared multiple correlations (R^2) values identified items that are poor indicators of their target factor, this resulted in removing items from both in-role performance and OCB scales. While only one item was deleted from the final model of in-role performance and there was no significant change to the construct, whole items of OCB-O (directed toward the whole organisation) were removed from the OCB scale whereas the items of OCB-I (directed at other individuals) remained. Again when the researcher mentions the term OCB in this study, it simply implies as employees' engaging in organisational citizenship behaviours and directly benefit to other individuals not toward the whole organisation (i.e. helping other colleagues, new employees, etc.).

Second, the results of the discriminant validity analysis confirmed that the Second-order of Spirit at Work Scale (*SAWS*) and the other six variables used in the hypothesised model (job satisfaction, organisational identification, psychological well-being, in-role performance, OCB, and turnover intentions) were all theoretically different constructs.

Third, all the rest of measures except psychological well-being (acceptable reliability) the Cronbach's alphas indicated measures had very high reliability. Furthermore, the correlation coefficients between Times 1 and Time 2 of all nine measures used in this study indicate adequate test re-test reliability over a nine month period.

Fourth, for both Time 1 and Time 2, individual spirit at work was significantly and positively correlated with job satisfaction, organisational identification, psychological well-being, in-role performance with self report, in-role performance with supervisor rating, organisational citizenship behaviours (OCB) with self report, OCB with supervisor rating, and negatively correlated with turnover intentions. These results indicated preliminary support for the relationships suggested in Hypotheses 1 – 6. Moreover, apart from the relationship between organisational identification and OCB with supervisor rating (only in Time 2 not significant), both Time 1 and Time 2 three work attitudinal variables (job satisfaction, organisational identification, and psychological well-being) demonstrated the significant relationships with the three organisational outcomes (in-role performance, organisational citizenship behaviours, and turnover intentions). These findings were manifested preliminary support for the relationships suggested in Hypotheses 7 – 15.

Fifth, Multigroup Confirmatory Factor Analysis (MGCFA) was used to test the invariance of estimated parameters of two nested models across 175 Thai and 155 UK samples. The results suggested that the three constructs (Meaning in Work, Sense of Community, and Spiritual Connection) are manifested in the same way across two samples. However, it also suggested that for both groups, one item had not the same quality as measures of the underlying of Meaning in Work construct. Overall, this provides further evidence for the generalisability of the second-order of Spirit at Work Scale (*SAWS*) model.

Lastly, for both Time 1 and Time 2, the researcher discovered that compared to employees who had low level individual spirit at work, employees who had high level of individual spirit at work (a) had significantly higher levels of job satisfaction; (b) had significantly higher levels of organisational identification; (c) experienced significantly higher levels of psychological well-being; (d) had significantly higher levels of in-role performance with self report; (e) also had significantly higher levels of in-role performance with supervisor rating; (f) were significantly more willing to engage in organisational citizenship behaviours with self report; (g) were also significantly more willing to engage in organisational citizenship behaviours with supervisor rating; and (h) had significantly less desire to leave the organisation.

6.7 CONCLUSION

This chapter has outlined the statistic analyses performed on the data collected from Time 1 and Time 2 (1) the CFA results of all the measurement models demonstrated an excellent fit with the data; (2) the reliability tests of the final

measurement models showed scales mostly had very high reliability; (3) the correlational results among the interest variables indicated preliminary support for the relationships suggested in Hypotheses 1 – 15; (4) Multigroup Confirmatory Factor Analysis (MGCFA) was used to test the measurement equivalence of two nested models across 175 Thai and 155 UK samples and the results provided further evidence for the generalisability of the second-order of Spirit at Work Scale (*SAWS*) model; and (5) the manipulation check between high and low spirit at work groups were discovered that employees experienced high individual spirit at work and thereby experienced greater job satisfaction, organisational identification, psychological well-being, in-role performance, organisational citizenship behaviours (OCB), and lesser intentions to quit the organisation. For the test of main 15 hypotheses and results of Structural Equation Modelling (SEM) models in longitudinal design are presented in chapter 7.

CHAPTER 7

HYPOTHESES ANALYSES AND RESULTS

7.1 CHAPTER OVERVIEW

The aim of this chapter is to present the statistical analyses performed on the data in the form of Structural Equation Modelling (SEM) models and in longitudinal study design. All the main 15 Hypotheses are analysed and reported. It also explores what the antecedents of individual spirit at work are. All the possible variables are analysed and reported in the extra findings. The chapter concludes with a summary of these findings.

7.2 INTRODUCTION

In order to test the main 15 hypotheses that were put forward in Chapter 3, a longitudinal data and SEM method were designed as proposed in Chapter 4. In this chapter, data is analysed and the results are presented from the study. Due to the fact longitudinal study provides an investigation of the causal link, the hypothesised structural models were used for the Time 1 data of individual spirit at work for testing direct and indirect effects models unto data of Time 2 of three employee work attitudinal variables (job satisfaction, organisational identification, and psychological well-being) and also data of Time 2 of three organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). The testing models were divided into 2 types which were based on different sources of

performance and OCB rating on the outcomes (by using self report versus immediate supervisors' rating models). However, to avoid confusion in the presentation of the findings structure and strong validity of supervisors' rating on performance and OCB, the results of the self-report models are moved to the appendices.

7.3 HYPOTHESES TESTS

7.3.1 Direct Structural Model: In order to investigate Hypotheses 1 – 6, the researcher used the direct structural models. Thus, the first two nested models tested were the direct effects models (self-report and supervisor rating model). These models fixed the mediation paths (from: job satisfaction, organisational identification, and psychological well-being to: in-role performance, organisational citizenship behaviours (OCB), and turnover intentions) to zero. Fit statistics indicated satisfactory results in supervisors' rating model ($\chi 2$ = 1,464.93, df = 552; p < .001; $\chi 2/df$ = 2.65; CFI = .91; IFI = .91; TLI = .91; $RMSEA$ = .058). Moreover, many SEM studies rely on only the $\chi 2/df$ ratio statistic, CFI, and RMSEA for fit assessment (McDonald & Ho, 2002), which for the present study ($\chi 2/df$ < 3.0, CFI > .90 and $RMSEA$ < .08) was able to indicate a reasonably good fit.

Figure 7.1 (simplified model) and 7.2 (full SEM model) depict the direct model along with its standardised path coefficients. The path coefficients display strong and statistically significant relationships between individual spirit at work and each of the attitudinal and outcomes variables in the predicted positive direction excepting a negative direction in turnover intentions. These results also demonstrate that the significant relationship between the exogenous variable (individual spirit at work) and

the endogenous variables (in-role performance, OCB, and turnover intentions) exist, which is necessary before testing for possible mediation associations for the further step as recommended by Baron & Kenny (1986). As can be seen from the models in Figure 7.1 and 7.2, the results of hypotheses 1 to 6 are reported as follows, whereas the self-report model which also showed strong and statistically significant relationships supported hypotheses 1 to 6 is presented in Appendix 16 and 17.

Hypothesis 1 *suggested that the greater the experience of individual spirit at work, the greater the job satisfaction of the individual*

The standardised path coefficients demonstrated strong and positive relationships between individual spirit at work Time 1 and job satisfaction Time 2 (β = .65) and were significant minimally at the $p < .001$ level. Thus, this hypothesis was fully supported.

Hypothesis 2 *suggested that the greater the experience of individual spirit at work, the greater the organisational identification of the individual*

The standardised path coefficients showed strong and positive relationships between individual spirit at work Time 1 and organisational identification Time 2 (β = .56) and were significant minimally at the $p < .001$ level. So, this hypothesis was fully supported.

Hypothesis 3 *suggested that the greater the experience of individual spirit at work, the greater the psychological well-being of the individual*

The standardised path coefficients revealed strong and positive relationships between individual spirit at work Time 1 and psychological well-being Time 2 ($\beta = .47$) and were significant minimally at the $p < .001$ level. As a result, this hypothesis was fully supported.

Hypothesis 4 *suggested that the greater the experience of individual spirit at work, the greater the in-role behaviours of the individual*

The standardised path coefficients demonstrated strong and positive relationships between individual spirit at work Time 1 and in-role performance Time 2 ($\beta = .20$) and were significant minimally at the $p < .001$ level. Thus, this hypothesis was fully supported.

Hypothesis 5 *suggested that the greater the experience of individual spirit at work, the greater the organisational citizenship behaviours of the individual*

The standardised path coefficients showed strong and positive relationships between individual spirit at work Time 1 and organisational citizenship behaviours Time 2 ($\beta = .14$) and were significant minimally at the $p < .01$ level. So, this hypothesis was fully supported.

Hypothesis 6 *suggested that the greater the experience of individual spirit at work, the less the intention of the individual to quit the organisation*

The standardised path coefficients revealed strong and negative relationships between individual spirit at work Time 1 and turnover intentions Time 2 ($\beta = -.56$) and were significant minimally at the $p < .001$ level. As a result, this hypothesis was fully supported.

Figure 7.1: Direct Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 (Supervisors' Rating; Simplified Model)
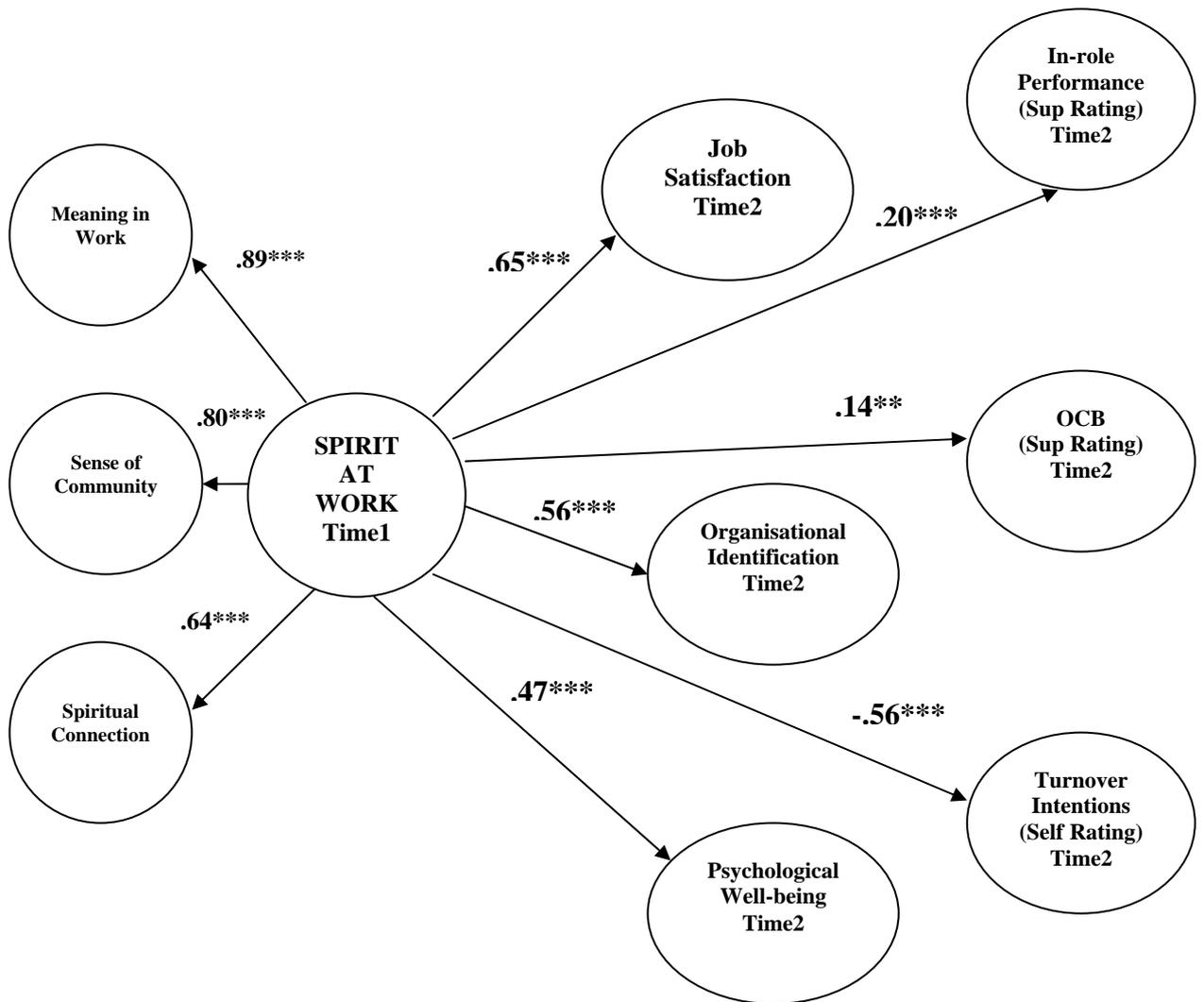
Note: $N = 501$: *** indicates paths significant $p < .001$, ** $p < .01$: Fit indices ($\chi2 = 1,464.93$, $df = 552$; $p < .001$; $\chi2/df = 2.65$; $CFI = .91$; $IFI = .91$; $TLI = .91$; $RMSEA = .058$).

Figure 7.2: Direct Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 (Supervisors' Rating; Full SEM Model)

Note: *N* = 501: *** indicates paths significant *p* < .001, ** *p* < .01: Fit indices (χ2 = 1,464.93, *df* = 552; *p* < .001; χ2/*df* = 2.65; *CFI* = .91; *IFI* = .91; *TLI* = .91; *RMSEA* = .058).

7.3.2 Fully Mediated Model: In order to examine the hypotheses 7 to 15, the researcher used the indirect structural models or the fully mediated models. The aim of this analysis is to check whether or not the three attitudinal variables (job satisfaction, organisational identification, and psychological well-being) play the role as mediators between individual spirit at work and the three outcomes relationships (in-role performance, OCB, and intention to quit) and to what extent of these impacts. Thus, the next two nested model tested were fully mediated models (self-report and supervisor rating model) where the direct paths between individual spirit at work (*ISAW*) and in-role performance, OCB, and turnover intentions were fixed to zero. As mentioned earlier about the presentation of the findings about the self-report model, so the fully mediated self-report models are presented in the Appendix 18 and 19.

The fit statistics of fully mediated supervisors' rating model produced results that were slightly distinctive when compared to the direct structural model ($\chi2$ = 1,348.29, *df* = 546; *p* < .001; $\chi2/df$ = 2.47; *CFI* = .92; *IFI* = .92; *TLI* = .92; *RMSEA* = .054). Further, to check on which model explained the data better, a $\chi2$ difference test is required as suggested by Werner and Schermelleh-Engel (2010). This test allows deciding whether a given model fits significantly better or worse than a competing model. To compute a $\chi2$ difference test, the difference of the $\chi2$ values of the two models in question is taken as well as the difference of the degrees of freedom (*df*).

$$\chi2 \text{ differ} = \chi2 \text{ s} - \chi2 \text{ l and } df \text{ differ} = df \text{ s} - df \text{ l}$$

According to the symbols in the formula above, s refers to the 'smaller' model with fewer parameters and therefore more degrees of freedom, whereas l refers to the

'larger' model with more parameters and therefore fewer degrees of freedom. If the χ2 differ value is significant, the 'larger' model with more freely estimated parameters fits the data better than the 'smaller' model in which the parameters in question are fixed. Since *df* of the fully mediated model (546) is less than the direct structural model (552), thus the fully mediated model is characterised as the 'larger' model. Then, χ2 difference test by using the χ2 calculator presented at http://www.fourmilab.ch/rpkp/experiments/ analysis/chiCalc.html (accessed February 5, 2011). Following the procedure, the result showed that the difference in fit between the direct structural and fully mediated models was highly significant (χ2 differ = 116.64, *df* differ = 6, *p* < .001). Therefore, the result indicates that the fully mediated model explained the data better than the direct structural model.

In fact, the partially mediated models were initially tested, but the results showed there were not significant in direct paths from individual spirit at work to all the three outcomes (in-role performance, OCB, intention to quit; see Appendix 20 and 21). Also, the χ2 difference in fit between fully and partially mediated models was not significant (χ2 differ = 5.39, *df* = 3, *p* = .15). Regarding the non-significance direct paths from individual spirit at work to all the three outcomes and there was no significant χ2 difference between the two models, this would indicate that the fully mediated model explained the data better than partially mediated model. Thus, the fully mediated model was chosen to explain the mediation effects in this study as it is the best fit with the data.

Figure 7.3 (simplified model) and 7.4 (full SEM model) depict the fully mediated structural model along with its standardised path coefficients. The path

coefficients indicate a strong and statistically significant relationship between individual spirit at work (*ISAW*) and the attitudinal variables of job satisfaction, organisational identification, and psychological well-being was evident. Three mediation outcomes appeared partially as follows:

First, as hypothesised, a distinct, mediated path exists between *ISAW* -> job satisfaction -> performance/turnover intentions (but not identified in OCB). This clearly indicates that *ISAW* positively affects in-role performance and negatively affects intentions to quit through job satisfaction. Second, a significant mediated path between *ISAW* -> organisational identification -> three outcome variables was not identified. This result reveals that for this sample, *ISAW* does not affect the three outcome variables through organisational identification, which is antithetical to what was hypothesised. Third, a significant mediated path between *ISAW* -> psychological wellbeing -> OCB and intention to quit (not identified in performance). This obviously shows that *ISAW* negatively affects intentions to quit and positively OCB through psychological wellbeing.

As given organisational identification did not operate as a mediator in this model, a further model with excluding organisational identification variable and the removal of non-significant hypothesised relationships was examined. The result showed that there was no significant $\chi 2$ difference between these two models ($\chi 2$ differ $= 215.63$, *df* $= 120$, *ns*). According to Werner and Schermelleh-Engel's suggestion (2010), if the $\chi 2$ differ value is insignificant, both models fit equally well statistically, so the parameters in question can be eliminated from the model (fixed to zero) and the 'smaller' model can be accepted just as well. As a result, the final fully mediated model without organisational identification construct as a mediator was selected to report the

results of the fully mediated structural model in this study because it is a simpler model and gives a stronger significance and size of both direct and indirect effects to the outcome variables. The final fully mediated models with an excluding organisational identification construct are illustrated in Figure 7.5 (simplified model) and 7.6 (full SEM model), where the figures on the model are standardised regression coefficients and are all significant to least 99.99% level. The results about individual spirit at work had indirect effects to the three organisational outcome variables are summarised in Table 7.1.

Figure 7.3: Fully Mediated Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 (Supervisor's Rating; Simplified Model)
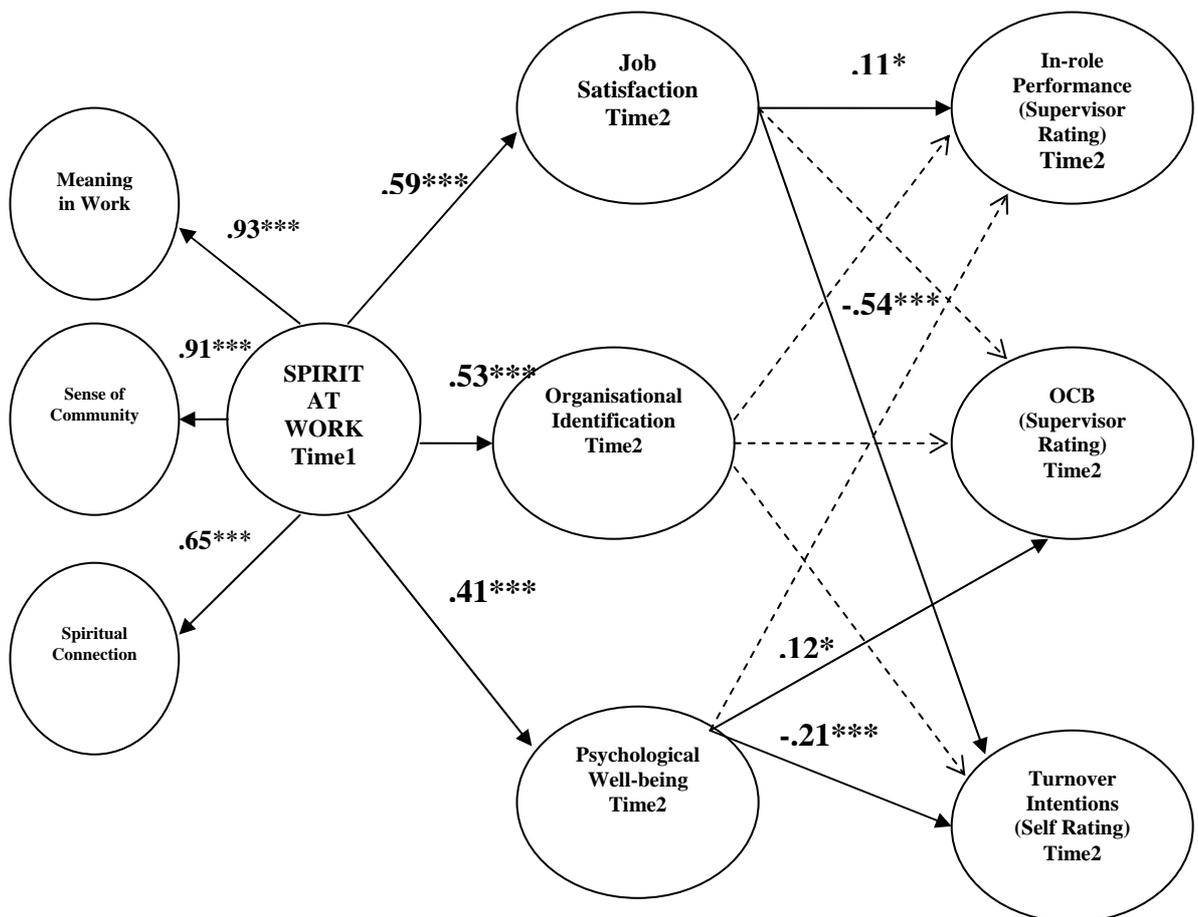
Note: $N = 501$: *** indicates paths significant $p < .001$, * $p < .05$, --->= ns: Fit indices ($\chi2 = 1,348.29$, $df = 546$; $p < .001$; $\chi2/df = 2.47$; $CFI = .92$; $IFI = .92$; $TLI = .92$; $RMSEA = .054$)

Figure 7.4: Fully Mediated Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 (Supervisors' Rating; Full SEM Model)

Note: *N* = 501: ******* indicates paths significant *p* < .001, ***** *p* < .05, --->= *ns*: Fit indices (χ2 = 1,348.29, *df* = 546; *p* < .001; χ2/*df* = 2.47; *CFI* = .92; *IFI* = .92; *TLI* = .92; *RMSEA* = .054)

Figure 7.5: Final Fully Mediated Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 with an Excluding Organisational Identification Construct as Mediator (Simplified Model)

Note: *N* = 501: *** indicates paths significant *p* < .001: Fit indices (χ2 = 1,132.66, *df* = 426; *p* < .001; χ2/*df* = 2.66; *CFI* = .92; *IFI* = .93; *TLI* = .92; *RMSEA* = .058)
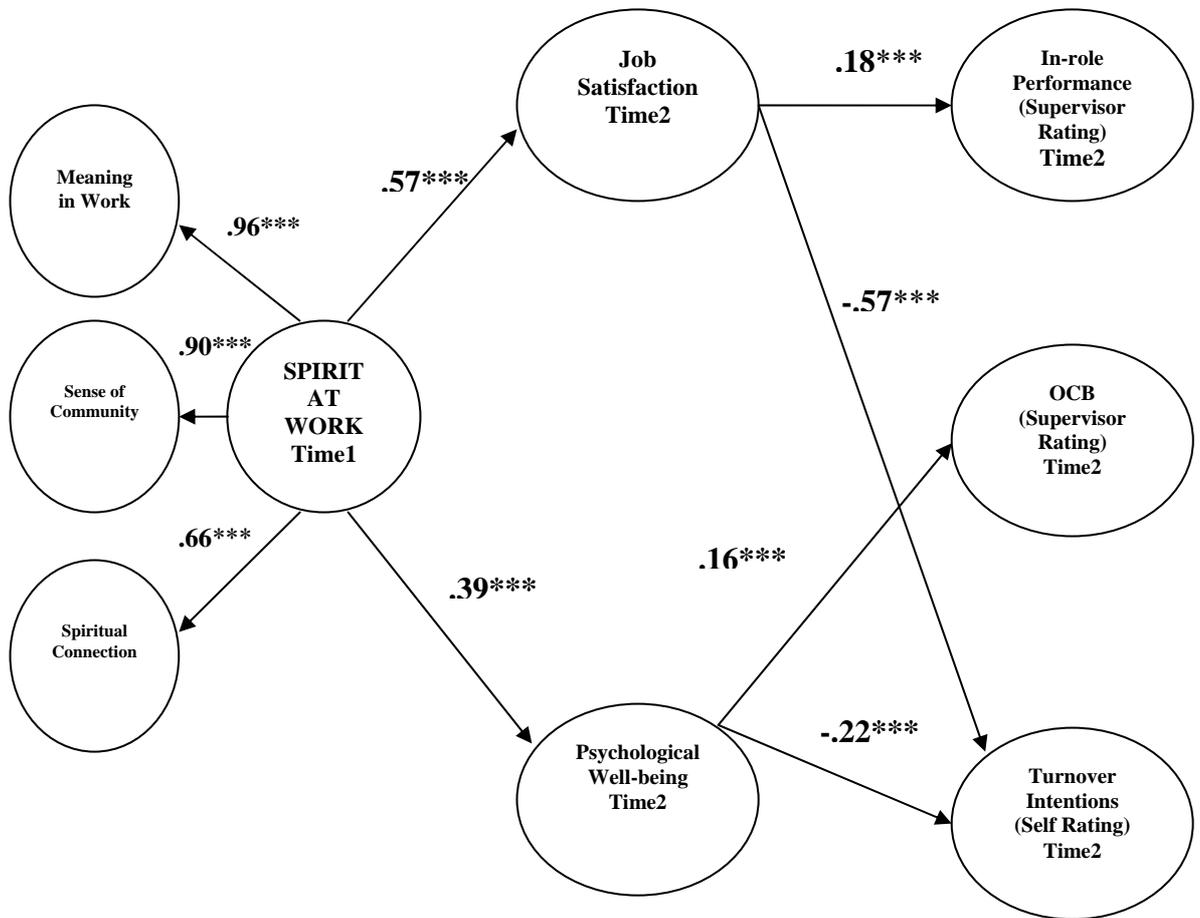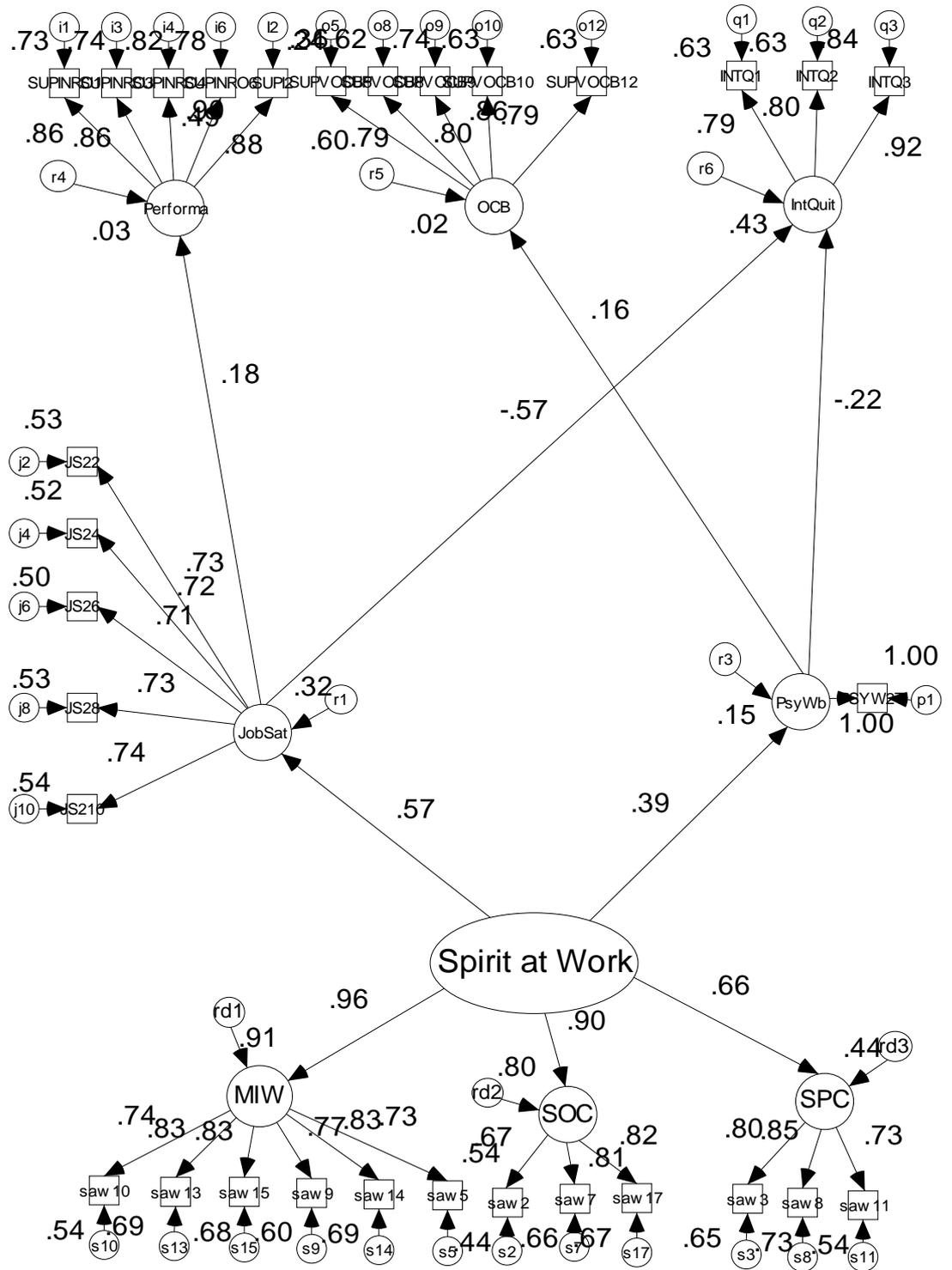
Note: $N = 501$: *** indicates paths significant $p < .001$: Fit indices ($\chi2 = 1,132.66$, $df = 426$; $p < .001$; $\chi2/df = 2.66$; *CFI = .92; IFI = .93; TLI = .92; RMSEA = .058*)

Table 7.1: Indirect Effects for Fully Mediated Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2

Outcome Constructs	Individual Spirit at Work (β)
1. In-role Performance	
Indirect effect	.10**
2. Organisational Citizenship Behaviours	
Indirect effect	.06**
3. Turnover Intentions	
Indirect effect	-.41**

Note: $N = 501$: ** indicates significant $p < .01$

As can be seen from the models in Figure 7.5 and 7.6, the results of hypotheses 7 to 15 are reported as follows:

Hypothesis 7 suggested that the relationship between one's individual spirit at work and in-role behaviours would be mediated by their job satisfaction.

Hypothesis 8 suggested that the relationship between one's individual spirit at work and organisational citizenship behaviours would be mediated by their job satisfaction.

Hypothesis 9 suggested that the relationship between one's individual spirit at work and turnover intentions would be mediated by their job satisfaction.

The results of the final fully mediated model showed that job satisfaction completely mediated the relationship between individual spirit at work and in-role performance (β = .18, p < .001) and turnover intentions (β = -.57, p < .001), but did not identify with organisational citizenship behaviours (*ns*). Also, the indirect effects of individual spirit at work on in-role performance (β = .10, p < .01) and turnover intentions (β = -.41, p < .01), via job satisfaction are both significant. Therefore, hypotheses 7 and 9 were supported but hypothesis 8 was rejected.

Hypothesis 10 *suggested that the relationship between one's individual spirit at work and in-role behaviours would be mediated by their organisational identification.*

Hypothesis 11 *suggested that the relationship between one's individual spirit at work and organisational citizenship behaviours would be mediated by their organisational identification.*

Hypothesis 12 *suggested that the relationship between one's individual spirit at work and turnover intentions would be mediated by their organisational identification.*

According to the results from the final fully mediated models, there was no significant mediation between individual spirit at work and the three outcome variables (in-role performance, organisational citizenship behaviours, and turnover intentions) through organisational identification (*ns*). Therefore, altogether hypotheses 10, 11, and 12 were rejected.

Hypothesis 13 *suggested that the relationship between one's individual spirit at work and in-role behaviours would be mediated by their psychological well-being.*

Hypothesis 14 suggested that the relationship between one's individual spirit at work and organisational citizenship behaviours would be mediated by their psychological well-being.

Hypothesis 15 suggested that the relationship between one's individual spirit at work and turnover intentions would be mediated by their psychological well-being.

The results of the final fully mediated model illustrated that psychological well-being completely mediated the relationship between individual spirit at work and organisational citizenship behaviours (β = .16, p < .001), and turnover intentions (β = -.22, p < .001), but not identified with in-role performance (*ns*). Also, the indirect effects of individual spirit at work on organisational citizenship behaviours (β = .06, p < .01) and turnover intentions (β = -.41, p < .01), via psychological well-being are both significant. Therefore, hypotheses 14 and 15 were supported but hypothesis 13 was rejected.

7.4 EXTRA FINDINGS

The aims of the following section are to present the extra findings which are divided into two parts. First, a fully cross-lagged analysis of a model that contains all available data across two time points in order to examine the reciprocal relationships between individual spirit at work and the other variables. A detailed procedure for a longitudinal, fully cross-lagged panel SEM analysis using AMOS software version 7.0 (Arbuckle, 2007) is presented along with a summary of the results. Subsequently, the researcher hopes to contribute to a scarce literature involving full longitudinal, SEM tests of models of individual spirit at work. Second, to archive the last objective in this

thesis about exploring the antecedent conditions of individual spirit at work, all the possible variables are analysed and reported along with a summary of the results.

7.4.1 Fully Cross-lagged Model: In order to examine the reciprocal relationships between individual spirit at work and the other variables excluding organisational identification (job satisfaction, psychological well-being, in-role performance, organisational citizenship behaviours, and turnover intentions), all these variables from Time 1 and Time 2 were put in the nested model across two time points and tested simultaneously in SEM model using AMOS software version 7.0 (Arbuckle, 2007). Burkholder and Harlow (2003) assert that cross-lagged longitudinal models have the advantage of making use of all of the data associated with a particular measure. Furthermore, when combined with existing theory and empirical findings, longitudinal SEM analysis provide a powerful means of testing full theoretical models and adding to accumulating evidence for cause and effect relations. In a fully cross-lagged design, information for each variable assessed at each time point is analysed. Figure 7.7 presents a template model that has six variables: (1) individual spirit at work; (2) job satisfaction; (3) psychological well-being; (4) in-role performance; (5) organisational citizenship behaviours; and (6) turnover intentions, six of which are assessed at two time points. By convention, circles represent latent variables and squares represent measured variables. Double-headed arrows connecting Time 1 constructs indicate correlations among independent factors. Single-headed arrow lines connecting like constructs from Time 1 to Time 2 show all possible logical regression paths connecting different and the same constructs. By including regression paths between the same construct measured at both times, one can estimate the cross-time, relative stability of the construct.

Figure 7.7: The Template of the Fully Cross-lagged Model (Individual Spirit at Work and Other Outcome Variables) Over Two Time Points

Regarding the adequacy indicators of model fit in the present study, the researcher used the χ2/*df* ratio below 3.0 (or as high as 5.0 suggested by Marsh & Hocevar, 1985) is considered acceptable; the *CFI, IFI*, and *TLI* index value above 0.9 are acceptable but values above 0.95 are preferred; and the *RMSEA* index value 0.05 or below is considered a sign of good fit, between 0.05 – 0.10 an acceptable fit, and larger than 0.10 should not be accepted (Hu & Bentler, 1999).

The results indicate that all the six constructs (1) individual spirit at work; (2) job satisfaction; (3) psychological well-being; (4) in-role performance; (5) organisational citizenship behaviours; and (6) turnover intentions in the model are relatively stable across time because the regression paths between the same construct measured at Time 1 and Time 2 are all significant. One interpretation of this is that there is relative inter-individual positional stability exhibited; at the group level people appear to be at the same place at each assessment. The other findings were found and consistent with the hypotheses results that individual spirit at work was positively associated with job satisfaction ($\beta = .33$, $p < .001$), psychological well-being ($\beta = .29$, $p < .01$) and negatively associated with turnover intentions ($\beta = -.25$, $p < .01$). More importantly, the results showed that there were not significant regression paths at all from the other variables (Time 1) → individual spirit at work (Time 2). Therefore, this means it is confirmed that the impact direction only from individual spirit at work → the attitudinal and outcome variables in this study, and the impact direction from the attitudinal and outcome variables → individual spirit at work were not supported. Figure 7.8 and 7.9 illustrate these results. By all criteria, the model indicated a good fit to the data ($\chi2 = 4,091.61$, $df = 1,987$; $p < .001$; $\chi2/df = 2.05$; *CFI* = .90; *IFI* = .90; *TLI* = .90; *RMSEA* = .046). Table 7.2 contains the paths that were statistically significant.

Only statistically significant paths are reported for ease of presentation and interpretation.

Table 7.2: Statistically Significant Paths in the fully Cross-lagged of Individual Spirit at Work and Other Outcome Variables Over Two Time Points

Path	Standardised Regression Coefficients
Individual Spirit at work (T1) → Individual Spirit at work (T2)	0.72**
Individual Spirit at work (T1) → Job Satisfaction (T2)	0.33***
Individual Spirit at work (T1) → Psychological Well-being(T2)	0.29**
Individual Spirit at work (T1) → Turnover Intentions (T 2)	-0.25**
Job Satisfaction (T1) → Job Satisfaction (T 2)	0.42**
Psychological Well-being(T1) →Psychological Well-being(T 2)	0.27**
In-role Performance (T1) → In-role Performance (T 2)	0.48**
OCB (T1) → OCB (T 2)	0.46**
Turnover Intentions (T1) → Turnover Intentions (T 2)	0.52**

Notes: ** *p*<.01 *** *p*<.001

Figure 7.8: The Fully Cross-lagged Standardised Structural Model of Individual Spirit at Work and Other Outcome Variables Over Two Time Points (Simplified Model)
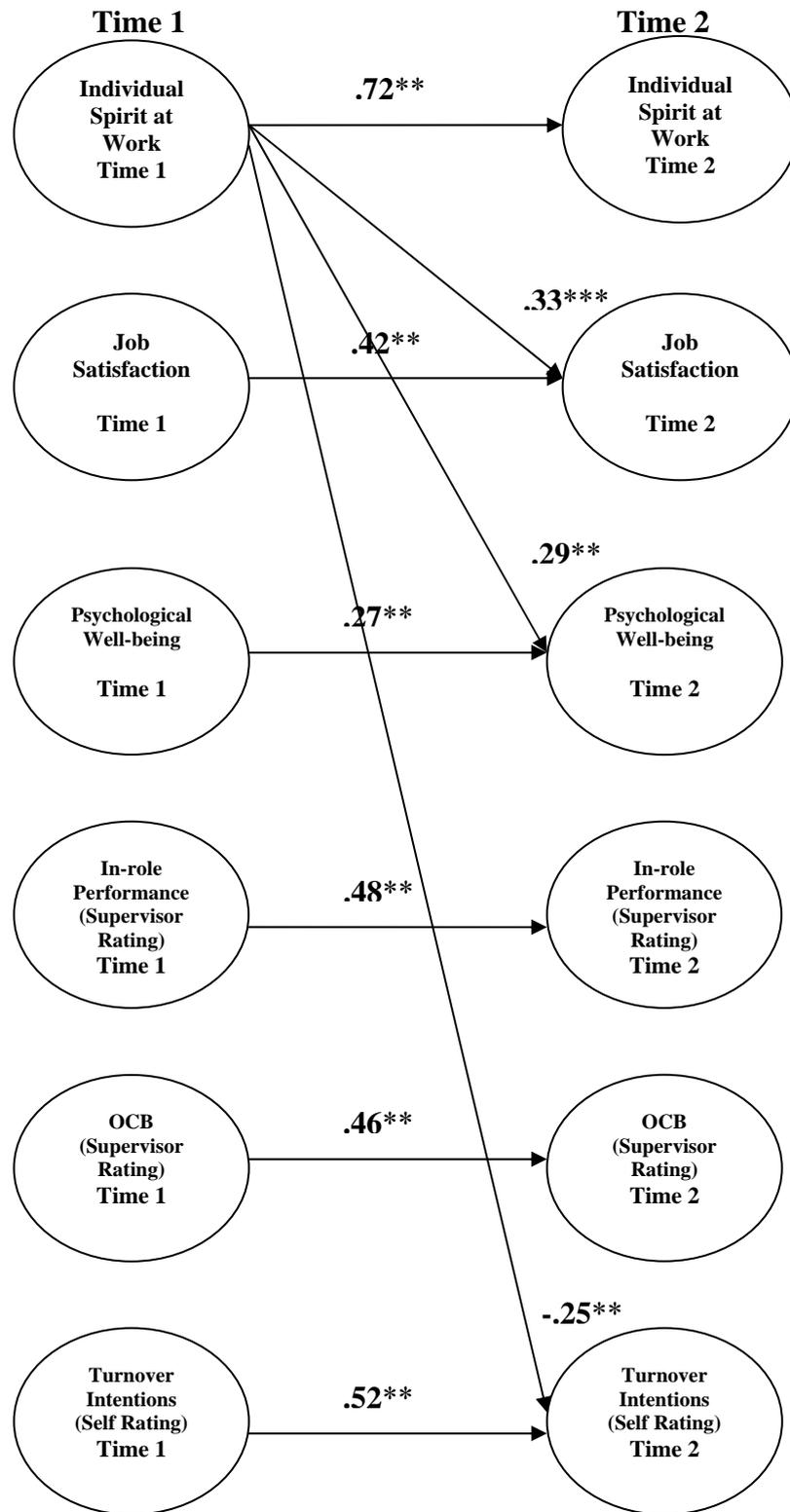
Fit indices ($\chi 2$ = 4,091.61, *df* = 1,987; *p* < .001; $\chi 2/df$ = 2.06; *CFI* = .90; *IFI* = .90; *TLI* = .90; *RMSEA* = .046).

Figure 7.9: The Fully Cross-lagged Standardised Structural Model of Individual Spirit at Work and Other Outcome Variables Over Two Time Points (Full SEM Model)
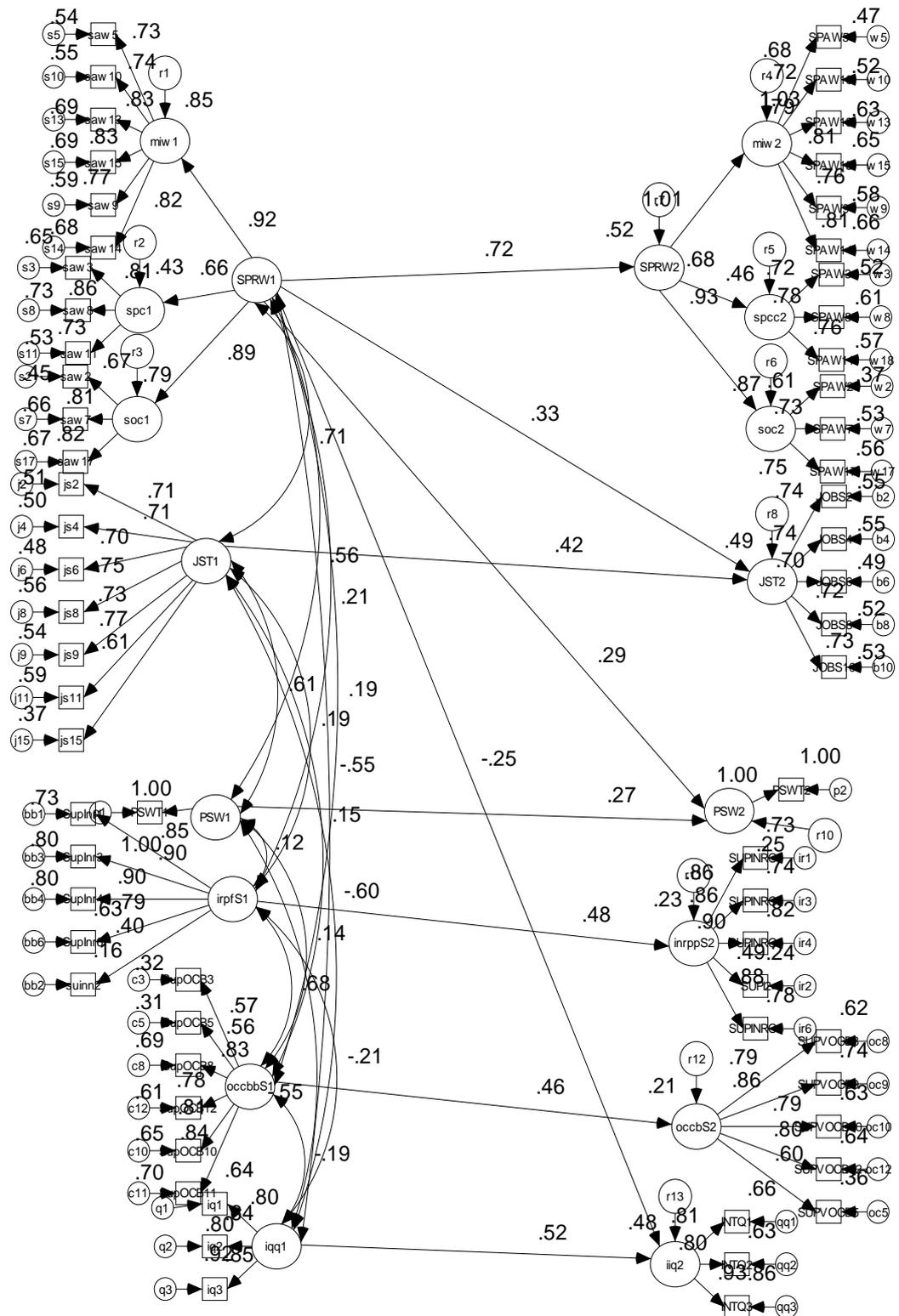
Fit indices ($\chi 2$ = 4,091.61, *df* = 1,987; *p* < .001; $\chi 2/df$ = 2.06; *CFI* = .90; *IFI* = .90; *TLI* = .90; *RMSEA* = .046).

7.4.2 Exploring Potential Antecedents of Individual Spirit at Work

In this study, individual spirit at work is hypothesised to be related to work attitudes (job satisfaction, organisational identification, psychological well-being) and organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). Consequently, it is necessary to understand the situations that foster individual spirit at work. Recently, empirical studies have been conducted in the area of workplace spirituality, but few have empirically examined what conditions are the antecedents of individual spirit at work.

The previous research and literature reviews suggest that these variables are possibly linked to the employee experiencing spirituality at work: age, tenure, marital status, current position, and personal religious/spiritual practices (Kinjerski & Skrypnek, 2006a; Kolodinsky, Giacalone, & Jurkiewicz, 2008; Pawar, 2009a, b). Thus, apart from the demographical variables mentioned earlier, the researcher developed the three following questions in the questionnaires asking the participants to respond about their religious/spiritual practices to examine whether these practices affect employees' spirit at work or not: (1) How frequently do you attend religious/spiritual services range (1 to 5) from never to regularly; (2) How often do you pray range (1 to 7) from never to several times a week; (3) How often do you read religious or spiritual scripture or literature range (1 to 7) from never to several times a week (see Appendix 4 section E).

In order to explore the potential antecedent conditions of individual spirit at work from the organisational factors, the researcher conducted a survey to investigate the necessary factors for organisations to foster employees' spirit at work. Also, in the

second column respondents were asked to assess to what extent their current employment fosters spirit at work. Based on Kinjerski & Skrypnek's (2006b) qualitative study, they found seven organisational factors that foster an individual's experience of spirit at work (inspired leadership; strong organisational foundation; organisational integrity; positive workplace culture; sense of community among members; opportunities for personal fulfilment; and appreciation and regard for employees and their contribution). Therefore, these criteria were used as a framework in this part of the study (see Appendix 4 section D).

7.4.2.1 Descriptive Statistic Results of Religious/Spiritual Practices

Figure 7.10: **Percentage of How often Respondents Attended Religious/Spiritual Services in Time 1 ($N = 715$) and Time 2 ($N = 501$)**
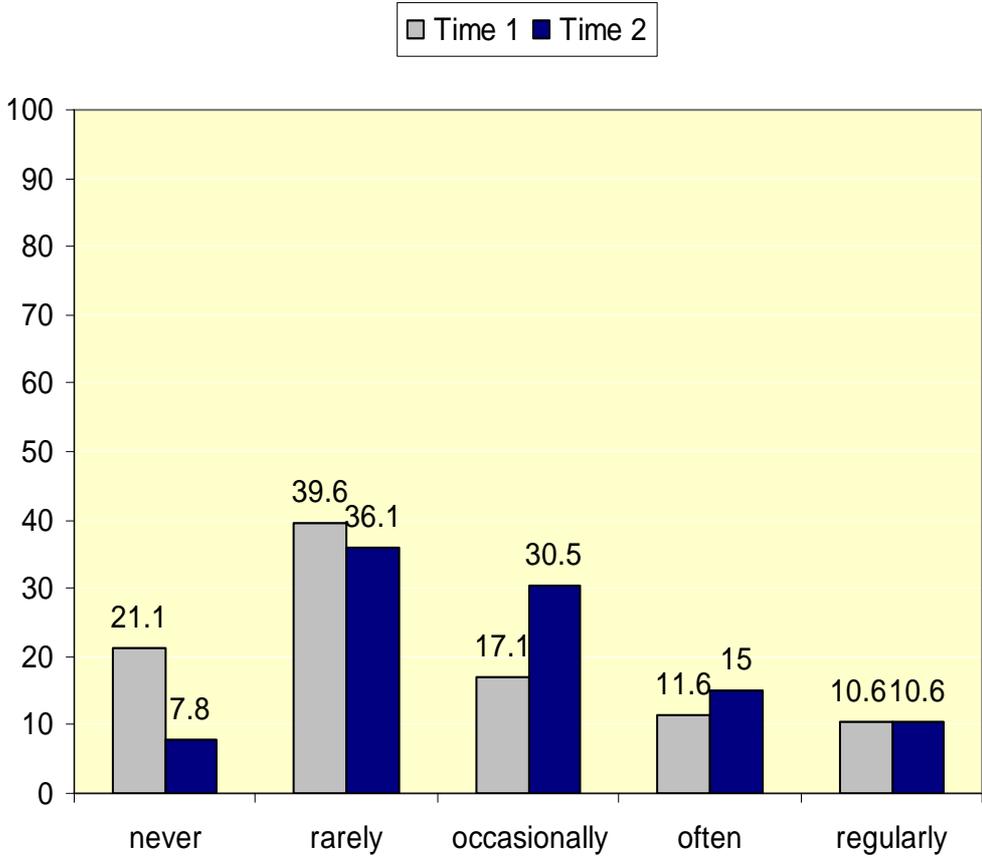
First, as indicated in Figure 8.1 the majority of respondents both Time 1 (39.60%) and Time 2 (36.10%) rarely attended religious/spiritual services. The second most responses reported that they never in Time1 (21.10%) and occasionally in Time 2 (30.50%) attended religious/spiritual services. Overall, this evidently presents that almost a half of the sample in this study generally rarely attended religious/spiritual services.

Figure 7.11: **Percentage of How Often Respondents Prayed in Time 1 (N = 715) and Time 2 (N = 501)**
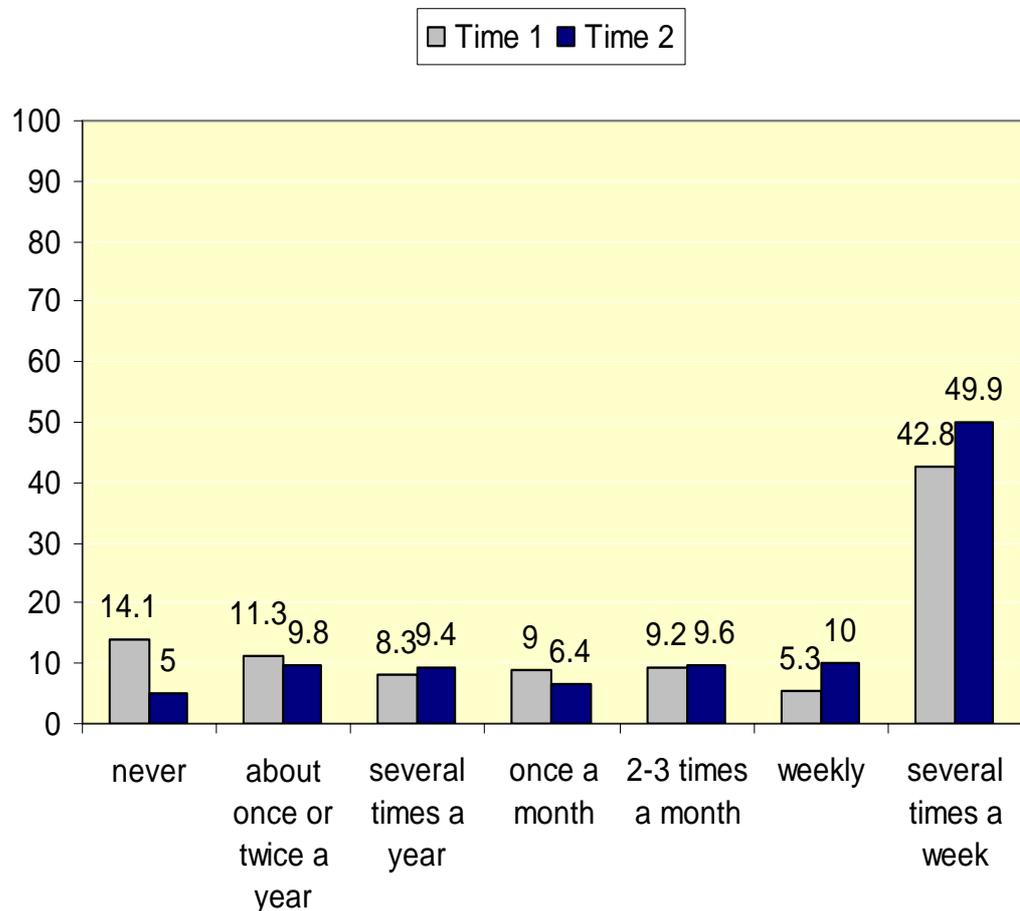
Second, as demonstrated in Figure 8.2 the majority of respondents for both Time 1 (42.80%) and Time 2 (49.90%) prayed several times a week. The second most responses reported that they never in Time 1 (14.10%) and weekly in Time 2 (10%)

prayed. The third most responses stated that they prayed about once or twice a year in both Time 1 (11.30%) and Time 2 (9.80%). Altogether, this obviously shows that more than a half of the sample in this study generally did pray once a week or more than one time a week.

Figure 7.12: **Percentage of How Often Respondents Read Religious/Spiritual Scripture or Literature in Time 1 ($N = 715$) and Time 2 ($N = 501$)**
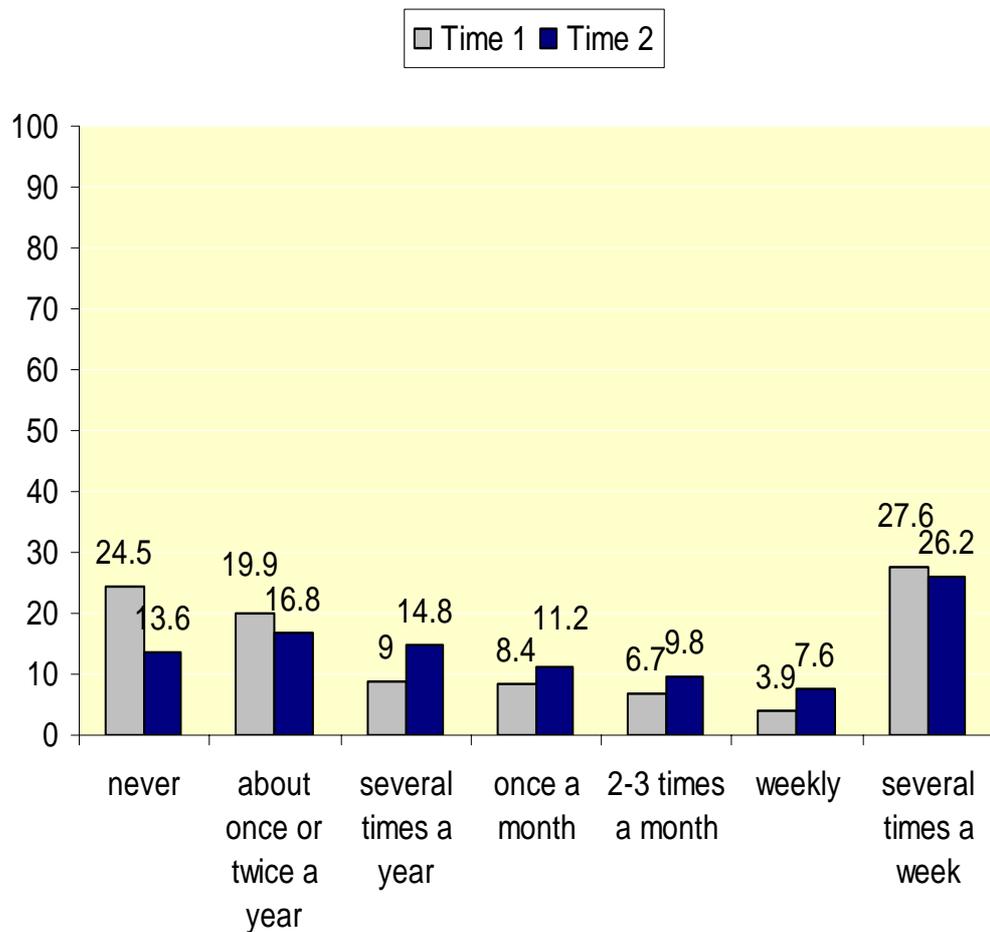
Third, the majority of respondents for both Time 1 (27.60%) and Time 2 (26.20%) read religious/spiritual scripture or literature several times a week. The second most responses disclosed that they never in Time 1 (24.50%) and about once or twice a year in Time 2 (16.80%) read religious/spiritual scripture or literature. The third

most responses identified that they read about once or twice a year in Time 1 (19.90%) and about several times a year in Time 2 (14.80%). In general, the statistics exhibit that almost a half of the sample in this study rarely did read religious/spiritual scripture or literature.

7.4.2.2 Descriptive Statistic Results of the Necessary Factors for Organisation to Foster Employees' Spirit at Work

The following results displayed in Table 7.3 determined that respondents viewed what the necessary level of each organisational factor for fostering employee's individual spirit at work in both Time 1 and Time 2. According to the responses the majority of respondents viewed all seven organisational conditions in the high to the highest necessary levels in both times.

Table 7.3: **The Necessary Level of Organisational Conditions for Fostering Employee's Individual Spirit at Work in Time 1 ($N = 715$) and Time 2 ($N = 501$)**

Conditions	Least	Little	Moderate	High	Highest
1.) Inspired Leadership: leaders and senior members who inspire employees through their leadership and their example					
Time 1	2.0%	3.4%	18.6%	35.5%	40.6%
Time 2	0.6%	0.4%	12.2%	40.3%	46.5%
2.) Strong Organisational Foundation: including a shared vision, mission, purpose, and an intention to contribute to the overall good of society					
Time 1	1.7%	3.5%	13.7%	33.3%	47.8%
Time 2	0.0%	0.2%	8.0%	34.7%	57.1%
3.) Organisational Integrity: that is aligned with its mission and purpose					
Time 1	1.8%	3.2%	14.4%	31.7%	48.8%
Time 2	0.0%	0.4%	8.0%	38.1%	53.5%
4.) Positive Workplace Culture: including a positive physical space for employees to work in					
Time 1	1.1%	3.6%	16.6%	34.3%	44.3%
Time 2	0.0%	0.0%	8.8%	42.1%	49.1%
5.) Sense of Community: among members positive connections among all members and a sense of community in the organisation					
Time1	1.8%	3.4%	15.4%	34.1%	45.3%
Time 2	0.0%	0.4%	9.6%	37.3%	52.7%
6.) Opportunities for Personal Fulfilment: opportunities for members to pursue professional and personal growth and to fulfil their own personal mission through work					
Time 1	1.7%	2.9%	17.5%	33.1%	44.8%
Time 2	0.4%	0.8%	9.8%	41.3%	47.7%
7.) Appreciation and Regard for Employees and Their Contribution: made by its members					
Time 1	2.0%	3.8%	15.2%	36.2%	42.8%
Time 2	0.2%	0.6%	11.6%	40.1%	47.5%

7.4.2.3 Correlations Results between Possible Antecedents of Individual Spirit at Work

Descriptive statistics and zero-order correlations of all possible antecedent variables of individual spirit at work are presented in Table 7.4. The main results show that individual spirit at work Time 2 was significantly and positively correlated with organisational factors Time 1 ($r = .34$, $p < .01$), types of organisation ($r = .30$, $p < .01$), age Time 1 ($r = .15$, $p < .01$), tenure years ($r = .11$, $p < .05$), and religious/spiritual practices ($r = .29$, $p < .01$), indicating preliminary support for the proposed SEM model which will be further analysed in the next step.

Table 7.4: **Means, Standard Deviations, Correlations and Reliabilities of the Possible Antecedents of Individual Spirit at Work**

Variable	M	SD	1	2	3	4	5	6	7	8
1.) Spirit at work Time 2	4.44	0.68	(0.91)							
2.) Organisational Factors Time 1	3.43	0.80	.34**	(0.91)						
3.) Types of Organisation Time 1	1.95	0.83	.30**	.34**	(-)					
4.) Age Time 1	2.21	0.77	.15**	.02^{ns}	-.02^{ns}	(-)				
5.) Tenure years Time 1	2.68	1.09	.11*	-.04^{ns}	-.04^{ns}	.56**	(-)			
6.) Marital Status Time 1	1.60	0.79	.06^{ns}	.04^{ns}	.04^{ns}	.27**	.14**	(-)		
7.) Current Position Time 1	3.45	1.97	.05^{ns}	-.05^{ns}	-.03^{ns}	-.03^{ns}	-.06^{ns}	-.18^{ns}	(-)	
8.) Religious/ Spiritual Practices Time 1	3.66	1.69	.29**	.20**	.40**	.02^{ns}	.05^{ns}	-.03^{ns}	.05^{ns}	(0.77)

Notes: Reliability estimates are in parentheses; $N = 501$ ** $p<.01$ * $p<.05$ ^{ns} = non-significant

7.4.2.4 Results of Structural Equation Modelling in Longitudinal Design the Antecedent Conditions for Fostering Employees' Spirit at Work

In order to assess the antecedent conditions of individual spirit at work (*ISAW*) from the organisational factors including organisational types (public, private, and not-for-profit organisation) and demographical variables (age, tenure, marital status, current position, and personal religious/spiritual practices) to predict *ISAW*, the researcher used all the possible antecedent variables from Time 1 and *ISAW* of Time 2 and put into the proposed structural model as depicted in Figure 7.13. For the organisational factors data, the researcher employed the respondents' answers from the second column which were asked them to rate to what extent their current employment fostering their spirituality at work. Although it had not been found previously in the literature about whether the organisational type would influence individual spirit at work or not, the researcher proposed it as one of the interest variables into the model and would consequently argue that the empirical finding found in this study could add to the literature of workplace spirituality field and at least this contribution could have evidence for further discussion.

The rival models were examined with Analysis of Moment Structures (AMOS) software version 7.0 (Arbuckle, 2007). The researcher used the estimation procedure of AMOS (Byrne, 2001) to construct the Structural Equation Models (SEM) because SEM can simultaneously observe the effects and changes of the variables in the model. Moreover, the AMOS SEM provides a number of tests to measure the goodness of fit between the data and the proposed model. Finally, regarding to the adequacy indicators of model fit, the researcher used the $\chi 2/df$ ratio below 3.0 is considered acceptable; the

CFI, IFI, and *TLI* index value above 0.9 are acceptable but values above 0.95 are preferred; and the *RMSEA* index value 0.05 or below is considered a sign of good fit, between 0.05 – 0.10 an acceptable fit, and larger than 0.10 should not be accepted (Hu & Bentler, 1999).

Figure 7.13: The Proposed Model of Antecedent Conditions of Individual Spirit at Work
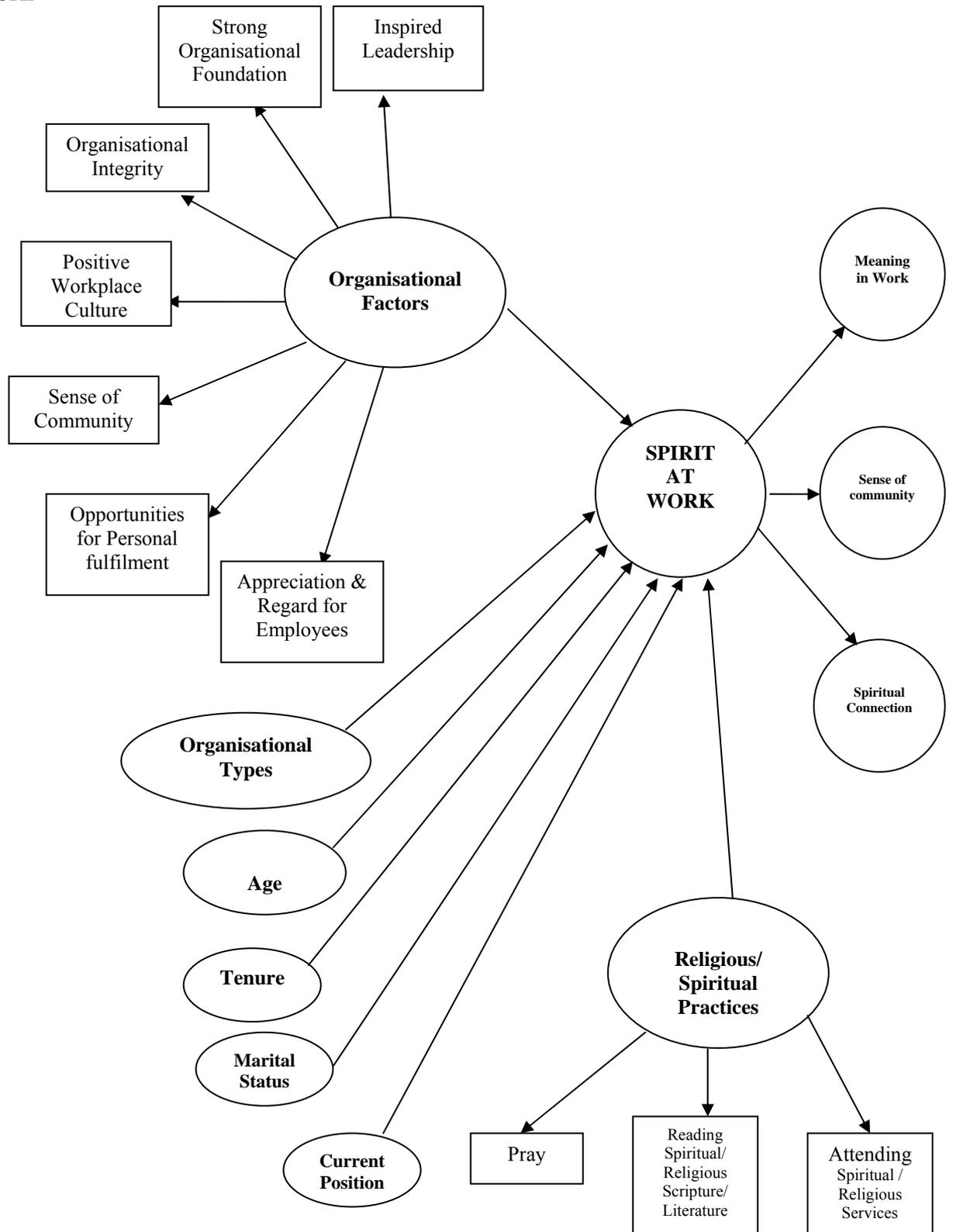
Table 7.5: Fit Indices of the Structural Models of Antecedent Conditions of Individual Spirit at Work

Model	χ^2	Df	χ^2/df	CFI	IFI	TLI	RMSEA
Model 1 (all variables)	1,242.54**	321	3.87	.86	.86	.84	.08
Model 2 (deleted organisational tenure, marital status, and current positions)	905.99**	249	3.64	.90	.90	.88	.07

Note: $N = 501$, **$p < .001$ CFI=Comparative Fit Index; IFI=Incremental Fit Index; TLI= Tucker-Lewis Index; RMSEA=Root-Mean-Square Error of Approximation

Table 7.5 displays the results of the fit indices of the structural model of the antecedent conditions of individual spirit at work. The fit statistics of the proposed model (Model 1) indicated the model barely fits ($\chi2 = 1,242.54$, $df = 321$; $p < .001$; $\chi2/df = 3.87$; *CFI* = .86; *IFI* = .86; TLI = .84; *RMSEA* = .08). In particular, the researcher noticed that the relationships between organisational tenure, marital status, current positions of Time 1 and individual spirit at work (*ISAW*) Time 2 were not significant. Consequently the researcher took *organisational tenure, marital status, and current positions* out of the model and tested it again (Model 2). Model 2 was found to moderately fit ($\chi2 = 905.99$, $df = 249$; $p < .001$; $\chi2/df = 3.64$; *CFI* = .89; *IFI* = .89; TLI = .88; *RMSEA* = .07). However, the difference in fit between Model 1 and Model 2 was

highly significant (D^2 = 336.55, *df* = 72, *p* < .001). The overall fit indices of Model 2 met the acceptable requirements, except the χ2/*df* ratio did not fall below 3.0 (3.64). Therefore, the final model (Model 2) is a reasonably good fit, indicating only seven organisational factors, age, organisational types, and religious/spiritual practices were strong predictors for fostering employees' individual spirit at work as depicted in Figure 7.14.

Figure 7.14: Final Model of Antecedents of Individual Spirit at Work (Simplified Model)
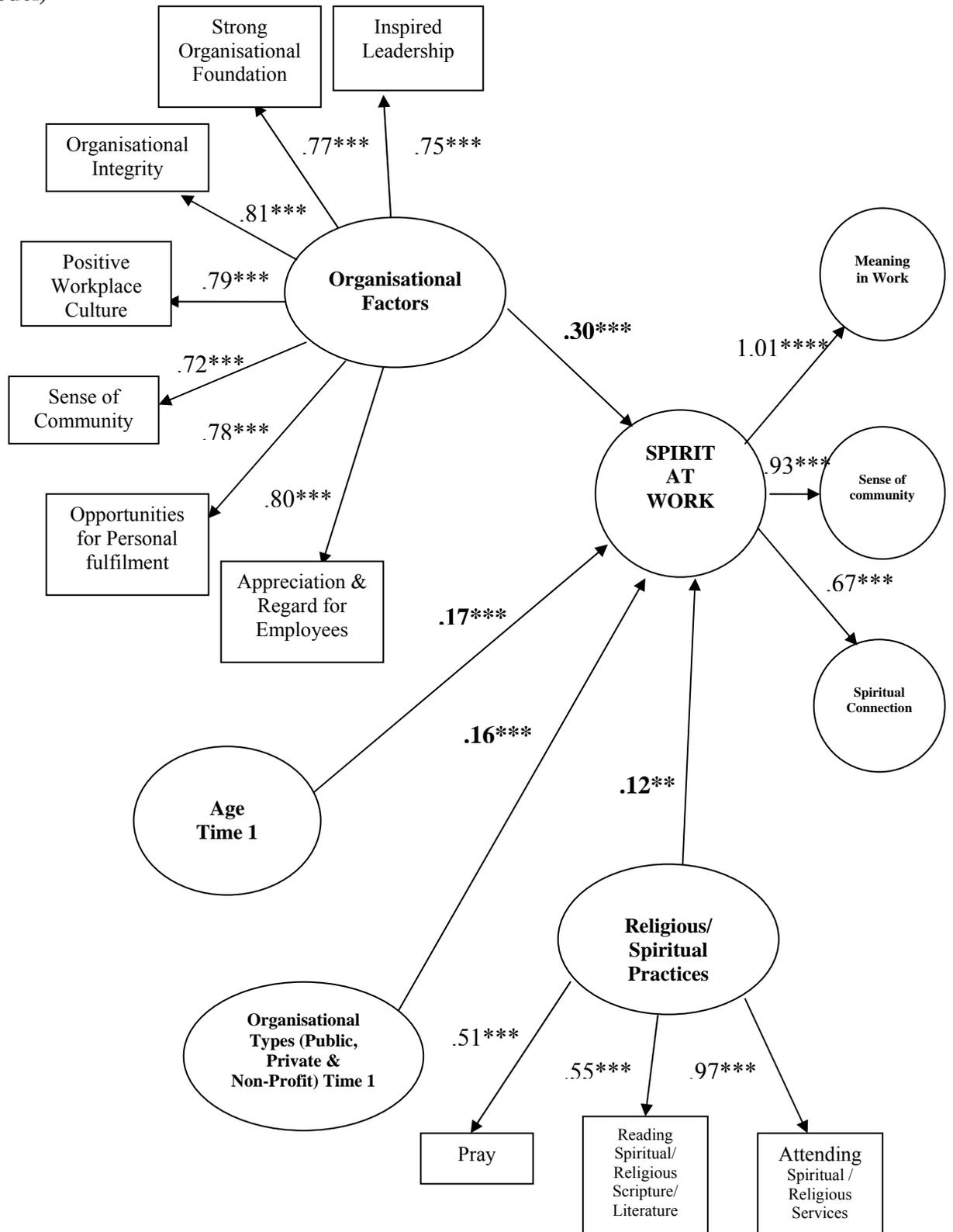
Note: *N* = 501: *** indicates paths significant *p* < .001, ** *p* < .01 Fit indices ($\chi 2$ = 905.99, *df* = 249; *p* < .001; $\chi 2/df$ = 3.64; *CFI* = .90; *IFI* = .90; *TLI* = .88; *RMSEA* = .07).

Figure 7.15: Final Model of Antecedents of Individual Spirit at Work (Full SEM Model)
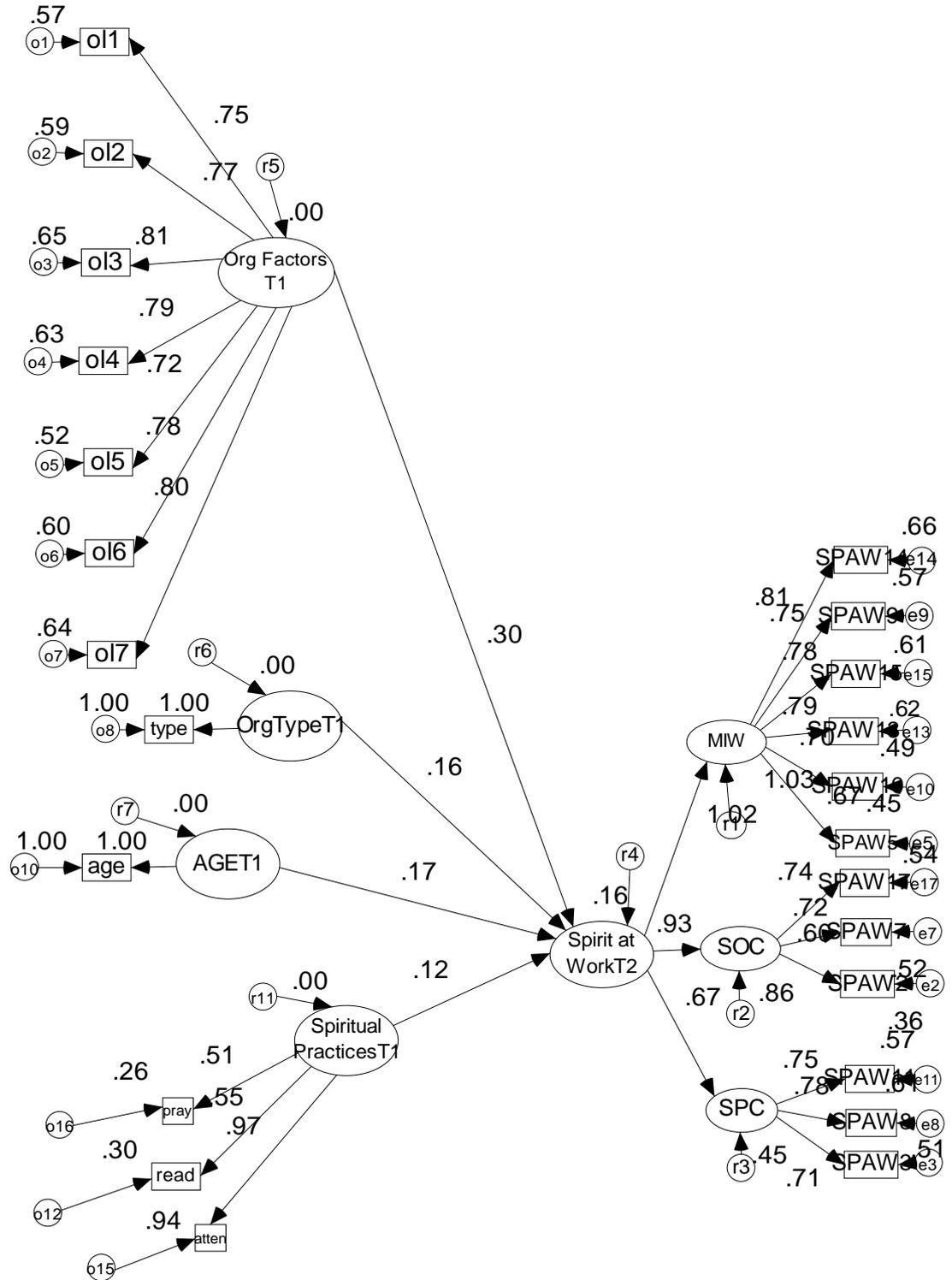
Note: $N = 501$: *** indicates paths significant $p < .001$, ** $p < .01$ Fit indices ($\chi2 = 905.99$, $df = 249$; $p < .001$; $\chi2/df = 3.64$; $CFI = .90$; $IFI = .90$; $TLI = .88$; $RMSEA = .07$).

As there are three types of organisation in this study (public, for-profit, and not-for-profit), Analysis of Variance (ANOVA) and Scheffe post-hoc analysis are required to test which type is significant difference. The result as displayed in Figure 7.16 showed that there was a statistically significant difference between types of organisation as determined by one-way ANOVA (F (2, 498) = 29.02, p = .001). Further, a Scheffe post-hoc test revealed that the mean of individual spirit at work was statistically significantly higher than public organisations (4.26, p < .001) and for-profit organisations (4.34, p < .001) compared to not-for-profit organisations (4.76). There were no statistically significant differences between the public and for-profit organisations (p = .516).

Figure 7.16: Antecedent Conditions of Individual Spirit at Work by Types of Organisation
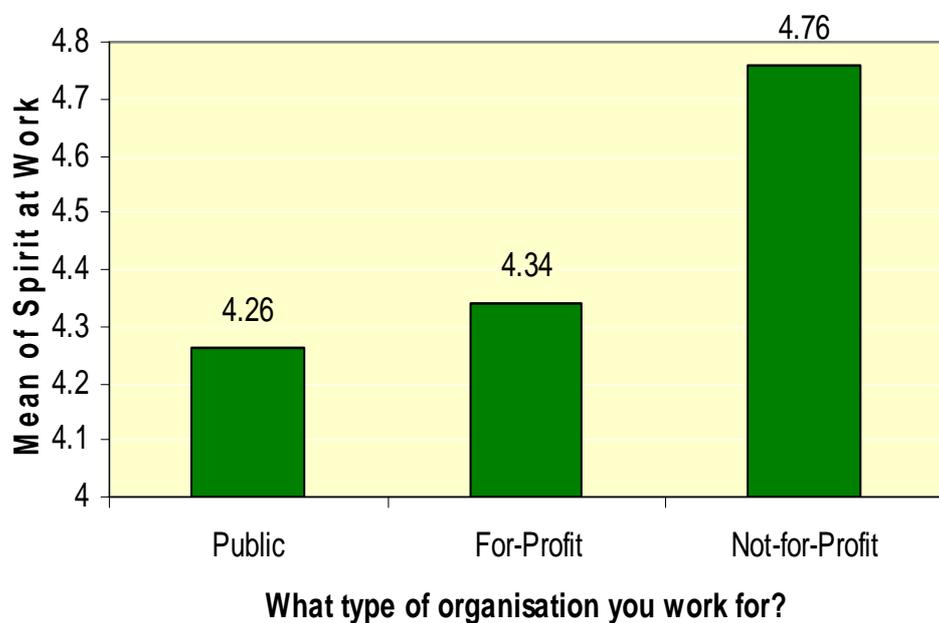
7.4.2.5 The Results Summary of Antecedents of Individual Spirit at Work

The researcher found that all seven organisational factors which foster an individual's experience of spirit at work (1) inspired leadership; (2) strong organisational foundation; (3) organisational integrity; (4) positive workplace culture; (5) sense of community among members; (6) opportunities for personal fulfilment; and (7) appreciation and regard for employees and their contribution, is the greatest predictor to foster Thai employees' experienced individual spirit at work (*ISAW*), as variance explained accounted of 30% out of 75% in the model. This finding is consistent with the majority (over 75%) of the responses obtained, which viewed all seven organisational conditions are necessary factors to boost their spirituality at work. Moreover, the following factors were found to act as predictors of *ISAW*, respectively; age (the older of employees, the more experienced in *ISAW*), and types of organisation (not-for-profit organisation employees had experienced higher in *ISAW* than the employees who worked for the public and private sectors). The three conditions of religious/spiritual practices in this study (attending religious/spiritual services, reading religious/spiritual scripture or literature and how often do they pray) all had influence on employees experienced in *ISAW*.

7.5 SUMMARY

The findings of the direct structural models of both self report and supervisor rating on performance and OCB were strongly supportive for Hypotheses 1 to 6, which mean the greater employees experienced individual spirit at work, the greater they had job satisfaction, organisational identification, psychological well-being, in-role

performance, organisational citizenship behaviours (OCB), and the lesser they intended to quit the organisation. Furthermore, these results empirically provide consistent support for the correlation outcomes and the manipulation check between high and low spirit at work groups from the previous chapter, indicating the direct structural models proposed in this study were convincingly accepted.

Moreover, the results of the fully mediated models were partially supportive for Hypotheses 7 to 15 and the fit statistics produced results that were better when compared to the direct structural models. This would denote that the fully mediated models explained the data better and also supported the hypotheses in which the work attitudinal variables in this study mediated the relationships between individual spirit at work (*ISAW*) and the outcome variables. The summary of the final fully mediated model results are outlined as follows: (1) job satisfaction fully mediated the relationship between *ISAW* and in-role performance/ intentions to quit/ not OCB; (2) organisational identification did not mediate the relationship between *ISAW* and three outcome variables, which is antithetical to what was hypothesised; and (3) psychological well-being fully mediated the relationship between *ISAW* and OCB / intentions to quit/ not in-role performance. The summary of the hypothesised relationships can be seen in Table 7.6.

7.6 CONCLUSION

This chapter has described the statistical analyses performed on the data collected in the form of Structural Equation Modelling (SEM) models and in longitudinal study design. All the main 15 Hypotheses were analysed and reported.

Also, the fully cross-lagged model and the potential antecedent conditions of individual spirit at work were analysed and reported in the extra findings. The implications of these findings for theory and practice, limitations of the research and directions for future research are discussed in the next chapter.

Table 7.6: Results of the Hypotheses and Extra Findings

Hypothesis	Standardised Regression Coefficients	Conclusion
H1 Individual Spirit at work (T1) → Job Satisfaction (T2)	.65 ***	Supported
H2 Individual Spirit at work (T1) → Organisational Identification (T2)	.56 ***	Supported
H3 Individual Spirit at work (T1) → Psychological Well-being (T2)	.47 ***	Supported
H4 Individual Spirit at work (T1) → In-role Performance (T2)	.20 ***	Supported
H5 Individual Spirit at work (T1) → Organisational Citizenship Behaviours -OCB (T2)	.14 **	Supported
H6 Individual Spirit at work (T1) → Turnover Intentions (T2)	-.56 ***	Supported
H7 Individual Spirit at work (T1) → Job Satisfaction (T2) → In-role Performance (T2)	.18 ***(direct) .10 **(indirect)	Supported
H8 Individual Spirit at work (T1) → Job Satisfaction (T2) → OCB (T2)	Not significant	Rejected
H9 Individual Spirit at work (T1) → Job Satisfaction (T2) → Turnover Intentions (T2)	-.57***(direct) -.41 **(indirect)	Supported
H10 Individual Spirit at work(T1)→Organisational Identification(T2)→In-role Performance (T2)	Not significant	Rejected
H11 Individual Spirit at work(T1)→Organisational Identification(T2)→ OCB (T2)	Not significant	Rejected
H12 Individual Spirit at work(T1)→Organisational Identification(T2)→ Turnover Intentions (T2)	Not significant	Rejected
H13 Individual Spirit at work (T1) → Psychological Well-being(T2) → In-role Performance (T2)	Not significant	Rejected
H14 Individual Spirit at work (T1) → Psychological Well-being(T2) → OCB (T2)	.16 ***(direct) .06 **(indirect)	Supported
H15 Individual Spirit at work (T1) → Psychological Well-being(T2) → Turnover Intentions (T2)	-.22***(direct) -.41 **(indirect)	Supported

Note: → has influence on   _____. ** $p < .01$, ***$p < 0.001$, T1 = Time1, T2 = Time 2

Table 7.6: Results of the Hypotheses and Extra Findings (Continued)

Extra Findings	Standardised Regression Coefficients	Conclusion
1. Fully Cross-lagged Model		
1.1 Construct Stability Across Time		
Individual Spirit at work (T1) → Individual Spirit at work (T2)	.72**	Supported
Job Satisfaction (T1) → Job Satisfaction (T2)	.42**	Supported
Psychological Well-being (T1) → Psychological Well-being (T2)	. 27**	Supported
In-role Performance (T1) → In-role Performance (T2)	.48**	Supported
Organisational Citizenship Behaviours (T1) → Organisational Citizenship Behaviours (T2)	.46**	Supported
Turnover Intentions (T1) → Turnover Intentions (T2)	.52**	Supported
1.2 Causal Effects Direction		
Individual Spirit at work (T1) → Job Satisfaction (T2)	.33***	Supported
Individual Spirit at work (T1) → Psychological Well-being (T2)	.29**	Supported
Individual Spirit at work (T1) → Turnover Intentions (T2)	-. 25**	Supported
Job Satisfaction (T1) → Individual Spirit at work (T2)	Not significant	Rejected
Psychological Well-being (T1) → Individual Spirit at work (T2)	Not significant	Rejected
In-role Performance (T1) → Individual Spirit at work (T2)	Not significant	Rejected
Organisational Citizenship Behaviours (T1) → Individual Spirit at work (T2)	Not significant	Rejected
Turnover Intentions (T1) → Individual Spirit at work (T2)	Not significant	Rejected

Note: → has influence on _____. ** $p < .01$, ***$p < 0.001$, T1 = Time1, T2 = Time 2

Table 7.6: Results of the Hypotheses and Extra Findings (Continued)

Extra Findings	Standardised Regression Coefficients	Conclusion
2. Exploring the Antecedent Conditions of Individual Spirit at Work Model		
Organisational Factors (T1) → Individual Spirit at work (T2)	.30***	Supported
Age (T1) → Individual Spirit at work (T2)	.17***	Supported
Organisational Types (T1) → Individual Spirit at work (T2)	.16***	Supported
Religious/Spiritual Practices (T1) → Individual Spirit at work (T2)	. 12**	Supported

Note: → has influence on _____. ** $p < .01$, ***$p < 0.001$, T1 = Time1, T2 = Time 2

CHAPTER 8

DISCUSSION AND CONCLUSION

8.1 CHAPTER OVERVIEW

The purpose of this chapter is to summarise the main findings and discusses the theoretical and practical implications of the research reported in this thesis. The limitations of the study are outlined, and a number of suggestions for future research are presented.

8.2 SUMMARY OF THE KEY FINDINGS

In order to draw conclusions from the thesis, it is useful to remind the reader of the initial research objectives. Thus, this section revisits the main objectives of the research and summarise the results relating to them.

1.) To validate the main measure in this study: the Spirit at Work Scale (*SAWS*, Kinjerski & Skrypnek, 2006a) which is a new measure and has not been widely tested. In brief, this objective is to answer the first research question "What are the properties of the Spirit at Work Scale or What is spirit at work at the individual level?"

In order to achieve this goal, the two pilot studies with 155 UK and 175, 715 Thai employees were conducted for validation testing of the *SAWS* measure. The results

of the two studies including discriminant validity analyses strongly provided supportive evidence that the Spirit at Work Scale (*SAWS*) is a sound psychometric measure and also a distinct construct from other work attitude constructs (job satisfaction, psychological well-being, and organisational identification). The final model of the *SAWS* contains a total of twelve items; a three factor structure (meaning in work, sense of community, and spiritual connection) in which the sub-factors loaded on higher order factors and had very acceptable reliability. Furthermore, the second-order of *SAWS* model showed the CFA model fit indexes remained a very good fit with the data across two time intervals in the main field studies with the Thai samples. The Cronbach's alphas also demonstrated that the *SAWS* in Time 1 and Time 2 had very high internal consistency reliabilities (.92 and .91).

Finally, in contrast to Kinjerski and Skrypnek's four-factor spirit at work model (2006a), this research found only three factors that (1) *meaning in work* which collapsed the original engaging work and mystical experiences dimensions together: a belief that one is engaged in meaningful work that has a higher purpose, a sense of being authentic, a positive state of energy or vitality, and experiences of joy and bliss; (2) *sense of community*: a feeling of connectedness to others and common purpose that includes support, freedom of expression, and genuine caring; and (3) *spiritual connection*: a sense of connection to something larger than self that helps one's work are more joyful, balanced, meaningful, and spiritually nourishing resulting for a positive effect on his/her work. Moreover, analyses in the two pilot studies revealed that the measurement model fit the data in both countries and that the fit was equivalent across the two cultures. This indicates that the constructs are meaningful in each culture and that the translation of questionnaires was successful in preserving the psychological

constructs. Therefore, this research confirms the value of the Spirit at Work Scale (*SAWS*) as a sound psychometric measure in the field albeit with some amendment.

2.) To investigate the relationships between individual spirit at work and three employee work-attitudinal variables (organisational identification, job satisfaction and psychological well-being) and three organisational outcomes (in-role performance, organisational citizenship behaviours (OCB), and turnover intentions). Also, to further examine causal relations among these organisational behaviour variables with a longitudinal design. In short, this objective is to answer the second research question "How and to what extent individual spirit at work impacts to work-related outcomes?"

The findings of both the correlations and SEM analyses with a longitudinal design from individual spirit at work in Time 1 and three employee work-attitudinal variables in Time 2 (organisational identification, job satisfaction and psychological well-being) and three organisational outcomes (supervisor-rated in-role performance, supervisor-rated OCB, and self-reported turnover intentions) significantly demonstrated that individual spirit at work has directly positive impacts on all these six dependent variables. This means that compared to employees who experienced low level individual spirit at work, employees who experienced high level of individual spirit at work (1) had significantly greater levels of job satisfaction; (2) had significantly higher levels of organisational identification; (3) experienced significantly greater levels of psychological well-being; (4) had significantly higher levels of in-role performance; (5) were significantly more willing to engage in organisational citizenship behaviours; and (6) had significantly less desire to leave the organisation. Moreover, the fully cross-lagged analyses evidently provided not only for cause and effect relations to be

explored but also the impact direction. This research discovered that the impact directions were only from individual spirit at work → the attitudinal and outcome variables, and not from the attitudinal and outcome variables → individual spirit at work.

3.) To investigate three employee work attitudes (job satisfaction, organisational identification, and psychological well-being) as mediator variables between individual spirit at work and three organisational outcomes (in-role performance, OCB, and turnover intentions). In short, this objective is to answer the third research question "How and to what extent the mediator variables mediate individual spirit at work and employees' effectiveness relationships?"

The findings from the field study with a longitudinal design evidently supported the fully mediated model whereas there was not significant support for partial mediation. Also, the results indicated strong support for the hypotheses in which the work attitudinal variables in this study (except organisational identification) mediated the relationships between individual spirit at work (*ISAW*) and the outcome variables. The summary of the final fully mediated model results are outlined as follows: (1) job satisfaction fully mediated the relationship between *ISAW* and in-role performance / intentions to quit / but not OCB; (2) organisational identification did not mediate the relationship between *ISAW* and three outcome variables, which is antithetical to what was hypothesised; and (3) psychological well-being fully mediated the relationship between *ISAW* and OCB / intentions to quit / but not in-role performance.

4.) To explore the potential antecedents that foster employee experienced individual spirit at work from organisational conditions, organisational types, demographical data, and religious/spiritual practices.

The extra findings about the antecedent variables of individual spirit at work (*ISAW*) found that all seven organisational factors foster an individual's experience of spirit at work, (1) inspired leadership; (2) strong organisational foundation; (3) organisational integrity; (4) positive workplace culture; (5) sense of community among members; (6) opportunities for personal fulfilment; and (7) appreciation and regard for employees and their contribution, among Thai employees. This finding is consistent with the majority (over 75%) of the responses obtained, which viewed all seven organisational conditions necessary factors to boost their spirituality at work. Also, the following factors were found to act as predictors of *ISAW*, respectively; age (the older of employees, the more experienced in *ISAW*) and, types of organisation (not-for-profit organisation employees had experienced higher in *ISAW* than the employees who worked for the public and private sectors). The three conditions of religious/spiritual practices in this study (attending religious/spiritual services, reading religious/spiritual scripture or literature and how often do they pray), all had influence on employees experienced *ISAW*.

8.3 THEORETICAL IMPLICATIONS

Just as in the first part of this thesis, the researcher would like to use this section to make explicit some of the theoretical implications of the data discussed and the analyses performed. This will help situate the main findings of this part in a broader

theoretical framework. This research has several important implications for the workplace spirituality literature. Since the works of Kinjerski and Skrypnek (2004 & 2006a, c) were mainly used as the conceptual underpinning for the individual spirit at work (*ISAW*) construct in this study, the findings of this thesis confirmed and extended knowledge of *ISAW* conceptualisations. Given the relative newness of *ISAW* analyses (e.g. CFA analyses of the *SAWS* measure across two countries/cultures in pilot studies, and a longitudinal design with a large sample in the field study); support for the conceptualisations was significant for the expansion of knowledge within the field.

First, this study confirms that the concept of spirit at work (Kinjerski & Skrypnek, 2004, 2006a, b, c, 2008a, b) includes three main dimensions (sense of meaning in work, community, and transcendence) which is consistent with the conceptual definitions of others (Ashmos & Duchon, 2000; Mitroff & Denton, 1999a, b; Smith & Rayment, 2007; Marques, Dhiman, & King's study, 2007). Moreover, individual spirit at work refers to the desire of employees to express all aspects of their being at work, to be engaged in meaningful work (Ashmos & Duchon, 2000; Mitroff & Denton, 1999a, b) and to archive their personal fulfilment through work (Krishnakumar & Neck, 2002; Mitroff & Denton, 1999a, b; Neck & Milliman, 1994). Specifically, this concept addresses the spiritual dimension of work and more clearly describes the nature of the individual experience of spirit at work. Some researchers have restricted themselves to only attitudinal aspects of work and totally ignored or neglected the dimensions falling under the realm of spirituality (Milliman *et al*., 2003; Sheep, 2004). As can be seen, the spiritual connection aspect of spirit at work, to some extent, is associated with self-interest transcendence. This can be inferred from various views in some of the literature in the broader area of spirituality. For example, McKnight (1984,

as cited in Giacalone and Jurkiewicz, 2003, p. 7) defines spirituality as "the animating force that inspires one toward purposes that are beyond one's self…" Further, Neck and Milliman (1994, p. 10) note, "a central aspect of spirituality is desiring to go beyond one's self-interests…" Similarly, drawing on the literature in the area of spiritual survival and focusing specifically on the transcendence aspect, Fry (2003) notes that transcendence implies serving others, thus reflecting self-interest transcendence. Therefore, the results of this work extend our understanding about employee transcendence of self-interest (spiritual connection) needs to be included as a substantial element of spirit at work.

Second, this study adds to the literature on management and organisational behaviour science on several issues. Most importantly, unlike Kahn's (1990) the psychological meaningfulness for employee engagement that describes has more to do with meaningfulness in work than meaningfulness at work, the conceptual and empirical analyses put forth in this research highlight that apart from meaning in work dimension of spirit at work, sense of community and spiritual connection dimensions which are especially the essential components for employees to experience meaningfulness at work that goes beyond the meaning that one might experience in work. Spiritual connection is, when employees are involved in and part of something greater that serves a purpose beyond self-interest, they will experience meaningfulness at work. Also, the experience of meaningfulness at work will be more likely when employees feel that they are part of and connected to a caring and supportive community. Specifically, the study provides evidence of consistent with Kinjerski and Skrypnek's fundamental definition (2004) that "spirit at work is a holistic experience where individuals share a sense of interconnectedness and common purpose,

authenticity, alignment between their values and actions, feel good about what they do, are aware of a spiritual presence, sense that they are contributing to the common good, and enjoy mystical moments" (p. 39). Furthermore, spirit at work is not about any one dimension, but the whole of all three dimensions collectively (meaning in work, sense of community, and spiritual connection) which can boost employee engagement because they experience meaningfulness both in work and at work.

Third, a concept that seems to be accepted in the literature of workplace spirituality that spirit at work involves the ability to bring one's whole self to work and to express oneself completely at work, including one's spirit. The extent to which an individual expresses themselves completely at work has been described as authenticity. According to Kinjerski and Skrypnek (2004), "authenticity is about being who we are all of the time, even at work. It means speaking our truth and living with honesty and integrity" and "involves the integration of an individual's physical, mental, emotional, and spiritual energies at work" (p. 32). They also found that the opportunity to be authentic and integrated in one's work is an underlying theme in the experience of spirit at work. Therefore, a key component of spirit is the ability to bring one's whole self to work and to express oneself completely at work. Most recently, Rich, Lepine, and Crawford (2010) conceptualised engagement as the investment of one's complete self into a role. They assert that when employees are engaged they are investing their hands, head, and heart (Rich *et al*, 2010). In this respect, we can see the similarities between spirit at work and employee engagement in term of the complete self in the performance of one's work role. Thus, spirit at work might be an important new driver or antecedent in models of employee engagement and give us a better understanding how and when

spirit at work leads to a more engaged workforce and a greater performance in organisation as a whole.

Fourth, since this study conducted solely in Thailand, one should be aware of the findings in term of generalisability to other cultural contexts. In spite of the argument that spirituality is trait-like individual difference and spirit at work should be generally stable over time and integral to the individual. Specifically, Thai cultural/religious context as an enabler of a particular form of spirituality, and spirituality might be evidenced in Thai attitudes/behaviour. As can be obviously seen, most Thais (95% of the population) are Buddhists and followers of this religion are fundamentally encouraged to progress from becoming more compassionate, generous, focused mentally on spiritual wisdom and purity. Thus, these qualities are highly related to spiritual inclination characteristics. According to Kinjerski and Skrypnek (2006c), they assert that spiritual inclination is the key personality dimension responsible for fostering people experience spirit at work. However, in this empirical evidence, the results showed that the test-retest reliability value of spirit at work was just moderate. That is, spirit at work was not stable over time as expected. There may have an explanation about this phenomenon. One reason may from the antecedent conditions of organisation which might influence individual experience spirit at work. According to the extra findings about the antecedent variables of individual spirit at work (*ISAW*) found that all seven organisational factors foster an individual's experience of spirit at work and also was the strongest predictor to foster Thai employees' experienced spirit at work among antecedent variables in the model, (1) inspired leadership; (2) strong organisational foundation; (3) organisational integrity; (4) positive workplace culture; (5) sense of community among members; (6) opportunities

for personal fulfilment; and (7) appreciation and regard for employees and their contribution, among Thai employees. This finding was consistent with the majority (over 75%) of the responses obtained, which viewed all seven organisational conditions necessary factors to boost their spirituality at work. This research therefore points out that in order to create and cultivate an individual's experience of spirit at work these seven organisational characteristics need to take into account.

Fifth, the spirit at work scale (*SAWS*, Kinjerski & Skrypnek, 2006a) was employed with conceptual and statistical favourable outcomes. Although the three-factor solution found to be most appropriate for this research, versus a four-factor solution of the original scale, *SAWS* was found to demonstrate statistical reliability and validity, producing excellent fit for the higher-order spirit at work construct model. By demonstrating conceptual and empirical support for *SAWS*, three of the four scientific inquiry weaknesses (the lack of an accepted conceptual definition, inadequate measurement tools, and limited theoretical development) of workplace spirituality identified by Giacalone and Jurkiewicz (2003) have been optimistically addressed.

Sixth, since previous scholars conceptualised and tested spirit at work as separate factors (e.g. Ashmos & Duchon, 2000; Milliman *et al*., 2003; Sheep, 2004), the findings of two pilot studies with both UK and Thai samples provided empirical support for the conceptualisation of individual spirit at work (*ISAW*) as a higher-order latent construct. Therefore, this is of vital importance, as in the quest of Giacalone and Jurkiewicz (2003); if workplace spirituality is to demonstrate effects then a higher-order construct must be developed.

Seventh, as suggested by Giacalone, Jurkiewicz, and Fry (2005), if we want to advance as a workplace spirituality paradigm rooted in science, three critical issues will need to be addressed: levels of conceptual analysis; conceptual distinctions and measurement foci; and clarification of the relationship between criterion variables. They argue that these issues lie at the heart of scientific inquiry and the theory building and testing process central to it. By adopting the definition of Kinjerski and Skrypnek (2006a, c) operationalised in this study, the three issues have been positively addressed. First, the unit of analysis of the *SAWS* is only the individual and not the work unit or organisation. Second, rather than assess employee attitude, which may very well reflect workplace attitude rather than real action, the *SAWS* assesses the experience of spirit at work as a state of being. Third, this study provided significant support with respect to correlation and theory-based direct antecedent relationships between individual spirit at work (*ISAW*) and attitudes and behaviours. These outcomes are imperative, given the infancy of the holistic study of workplace spirituality and specifically the empirical analysis between *ISAW* and beneficial workplace outcomes. The confirmation of a viable direct structural model (Figure 7.1) *ISAW* → job satisfaction, *ISAW* → organisational identification, *ISAW* → psychological well-being, *ISAW* → in-role performance, *ISAW* → OCB, and *ISAW* → turnover intentions, where all direct paths were examined simultaneously, develops opportunity for future model creation and comparative analysis within the *ISAW* construct. Furthermore, this finding presents the first empirical data indicating a positive association between higher-order construct of *ISAW* (meaning in work, sense of community, and spiritual connection) and three employee work attitudes (job satisfaction, organisational identification, psychological well-being) and three organisational outcomes (in-role performance, OCB, and turnover intentions).

Eighth, this research provides a better understanding the relationship between individual spirit at work and the outcome variables proposed in the current model. By employing self-determination theory (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000) in this study we can better understand the process and mechanisms that link individual spirit at work with other work-related variables (job satisfaction, organisational identification, psychological well-being, in-role performance, OCB, and turnover intentions). Self-determination theory might explain this thought people high in spirit at work experiencing greater intrinsic need satisfaction on the job. Consequently, they feel more autonomous, more competent, and more related to other people in the workplace. This, in turn, fosters the most volitional and high quality forms of motivation and engagement for activities, including enhanced job satisfaction, organisational identification, psychological well-being, performance, OCB, and loyalty. While this assumption requires further investigation, it at least supplements understanding of individual spirit at work.

Ninth, the confirmation of the previously unanalysed mediation relationships, with job satisfaction and psychological well-being mediating the relationships between individual spirit at work (*ISAW*) and in-role performance/turnover intentions, *ISAW* and OCB/turnover intentions, respectively, has expanded and opened the door for additional workplace spirituality theory expansion. The final fully mediated model in Figure 7.5 established a viable model with significant indirect path coefficients: (1) *ISAW* → job satisfaction → in-role performance; (2) *ISAW* → job satisfaction → turnover intentions; (3) *ISAW* → psychological well-being → OCB; and (4) *ISAW* → psychological well-being → turnover intentions. These outcomes suggest that the most appropriate understanding of how *ISAW* ultimately affects workplace behaviours may occur

- 242 -

through job satisfaction and psychological well-being. Since *ISAW* did not significantly affect three outcome variables through the attitudinal variable of organisational identification, this suggests that not all attitudes mediate the relationships between *ISAW* and outcomes. Although no clear foundation was determined for this outcome, one factor might explain this unexpected result. Although individual high spirit at work engendered greater identification to the organisation, this may not fully translate into employee in-role performance/OCB (immediate supervisor rating) due to the different sources of evaluation of performance/OCB. In the fully mediated structural model with self-report in-role performance/OCB in Appendix 18 it was found that organisational identification functioned as the mediator of the relationships between *ISAW* and employee in-role performance/OCB. In any case, for this research, attitudinal mediation between *ISAW* and organisational outcomes are best represented only by job satisfaction and psychological well-being.

Additionally, the confirmation of the previously unanalysed reciprocal relationships (extra findings from the fully cross-lagged model in Figure 7.8) between individual spirit at work and attitudes and the organisationally related outcomes has expanded the existing knowledge of workplace spirituality. Therefore, this first rigorous empirical study confirms that the impact directions were only from individual spirit at work → the attitudinal and outcome variables, and not from the attitudinal and outcome variables → individual spirit at work. This finding develops opportunity for further investigation and comparative analysis within the workplace spirituality field.

Finally, the strong and statistically significant relationships confirmed in the longitudinal field research not only prove relationships but expand knowledge by the

utilisation of a large, various sectors/industries sample which have not previously explored. This is important because the previous empirical research in workplace spirituality might have a problem in term of generalisability by using unrepresentative/ limited sector/industry samples (e.g. Ashmos and Duchon's sample (2000) was drawn from the health care sector, and Milliman *et al*'s sample (2003) was MBA students).

8.4 PRACTICAL IMPLICATIONS

This research uses rigorous longitudinal research methods and presents the first empirical data indicating a positive association between the higher-order construct of individual spirit at work (*ISAW*: meaning in work, sense of community, and spiritual connection) and three employee work attitudes (job satisfaction, organisational identification, psychological well-being) and three organisational outcomes (in-role performance, OCB, and turnover intentions). Moreover, this study provides empirical support for the premise that *ISAW* can also have a positive impact on employee work attitudes and ultimately organisational effectiveness. Given there clearly are significant positive outcomes of employees experiencing high *ISAW*, which is believed to provide motivation for management interest, some useful suggestions for organisations or managers that may want to implement the concept of *ISAW* as a tool to increase positive workplace effects are as follows.

First, the positive associations between individual spirit at work (*ISAW*) and every variables of interest analysed herein are striking. This study demonstrates that as *ISAW* experiences increase, job satisfaction increases, organisational identification increases, psychological well-being increases, in-role performance increases, OCB

increases, and intentions to quit decreases. The practical implications for leaders and managers are in order to increase these positive workplace outcomes, we have to increase *ISAW*. According to self-determination theory (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000), this might be explained by people high in spirit at work they experience greater intrinsic need satisfaction on the job. Consequently, they feel more autonomous, more competent, and more related to other people in the workplace. This, in turn, fosters the most volitional and high quality forms of motivation and engagement for activities, including enhanced job satisfaction, organisational identification, psychological well-being, performance, OCB, and loyalty. Hence, creating and cultivating an individual's experience of high in spirit at work, these seven organisational characteristics (1) inspired leadership; (2) strong organisational foundation; (3) organisational integrity; (4) positive workplace culture; (5) sense of community among members; (6) opportunities for personal fulfilment; and (7) appreciation and regard for employees and their contribution, could be suggested and acknowledged to lead to more positive organisational outcomes. Specifically, according to Kinjerski and Skrypnek's findings (2006b), inspired leadership emerged as central to influencing individual experiences of spirit at work and was strongly linked to six other organisational factors because inspiring leaders created a caring culture, practiced enabling leadership, and modelled behaviours that were consistent with the organisation's philosophy and intention. They also assert that given the powerful influence attributed to the leaders in each of these conditions; it would be difficult for the other six conditions to occur without the presence of an inspiring leader. Thus, in this respect leaders in organisations play a key role to create and cultivate an individual's experience of high in spirit at work. Along the same line, Duchon and Plowman (2005) suggest that leaders apparently have a responsibility for nurturing

spirit by helping their subordinates be open to their inner lives, by helping them find meaning in their work, and by strengthening a sense of community in the workplace. Therefore, such leaders Fry (2003) would call spiritual leaders, will find themselves managing work that is more satisfying for its members, resulting in enhancing both employees' positive attitudes and organisational effectiveness.

Second, the strongest indicators of individual spirit at work (*ISAW*) were those reflective of meaning in work and sense of community. If the organisations want to develop workplace spirituality, the two constructs of *ISAW* must be seriously acknowledged by the top management and capitalised upon through their leadership. This research confirms that Thai employees enjoying meaningful work and a sense of community are really continuously striving for excellence both attitudes towards work (satisfied their jobs, highly identified with their organisations, and having more positive affect at work) and behaviours at work (better performance, going beyond the call of duty, and low intensions to leave their current employer). So, this is likely the notion of meaningfulness in work and meaningfulness at work (Pratt & Ashforth, 2003) that being accepted and also filling a gap in the engagement literature. Regard to the practical implications from these findings, the researcher recommends that we have to consider how to help employees to find both meaningfulness in work (meaning in work) and meaningfulness at work (a sense of community). First, creating meaningfulness in work involves making work and one's tasks intrinsically motivating. Meaning in work could be achieved from task characteristics (Kahn 1990, 1992) that provide challenging work, variety, allow the use of different skills, personal discretion, and the opportunity to make important contributions. Since jobs that are high on the core job characteristics (i.e. skill variety, task identity, task significance, autonomy, and feedback) provide

employees with motivation to be more engaged (Kahn 1992). Second, creating meaningfulness at work stems from one's membership in an organisation rather than from the work that one does. According to Gravenkemper's (2007) suggestion, there are six key principles that help to create a sense of community in organisations and these six principles are also applicable to a wide variety of organisations. These principles include: (1) communicating a message throughout the organisation that employees buy into; (2) create a group of champions that can spread the message and help to create the engagement culture; (3) identify ways to make decisions based on principles and values rather than simply compliance; (4) identify the key engagement indicators that organisational leadership wants to focus on (important for assessment and evaluation of engagement activities); (5) create culture than supports open communication throughout all levels; and (6) develop strategies to socialise new employees, managers, and leaders. Clearly, these suggestions will be required to help promote meaningfulness both in work and at work.

Third, while the first two constructs of individual spirit at work (*ISAW*) are argued to be more critical, the indicator of spiritual connection should not be overlooked. Programs or interventions that encourage energy and vitality development, so called spiritual practices or experiences, have clear potential to increase *ISAW* experiences. However, there are no easy prescriptions for how leaders or managers go about creating such programs or interventions in the workplace because promoting some kind of spiritual practices might be considered inappropriate in the workplace, or dangerous, potentially giving rise to accusations of discrimination, proselytising, or even become unethical or illegal. Notwithstanding, human being are rational, but also by nature, emotional and spiritual. From this study, it is rather substantial that

- 247 -

employers pay extra attention to their employees' spiritual feelings or should include spirituality in management agendas as spirituality is embodied in every employee. There is no doubt that the employers must work to instil the values and concepts of caring and loving the society within the subordinates. Additionally, they should encourage the employees to engage in the organisation's activities that will enhance their inner lives such as engaging themselves in the corporate social responsibility activities such as community projects, green projects, and etc. It is essential that development programmes associated with spirit at work have strong employee participation so that input is heard from all levels of the organisation. Since the concept is highly personal and abstract, creating forums for open discussion and greater clarification of what spirit at work means is the most important aspect. Strong organisational values will need to be developed to ensure that the values and rights of all employees are respected. Most importantly, some suggestions for successful spirit at work development programmes must be guided by a clear philosophy and practiced in an authentic manner because spirit at work represents truth and the right thing to do, not because it may lead to higher profits. This is one of the best ways to make the employees be able to satisfy the employees' spiritual needs and having more positive perceptions on their employers that ultimately will result in long term benefits both for the employee and the employer and also to the organisation as a whole.

Additionally, given the demographics of a large sample with various sectors/industries, which is believed to be representative of most professional groups, it is apparent in this research that the construct of individual spirit at work (*ISAW*) create positive workplace effects, providing a strong confidence in term of generalisability for leaders and managers. As noted motivation for this study was to provide empirical

evidence of *ISAW* and its association with positive workplace effectiveness, the findings therefore have shown significant implications for leaders and managers because increasing employee's experiences spirit at work could have benefits both for the unfulfilled employee and the underperforming organisation.

Finally, this research found that the types of organisation had an influence on employees' experiences spirit at work. In particular, in not-for-profit organisations employees reported their experiences of spirit at work were higher than those who worked for public and private organisations. This result strongly supports Alexander's (2010) work that not-for-profit organisations offer a unique medium for employees and clients alike to achieve personal transformation. Paid employees and volunteers have found spiritual renewal and emotional fulfilment through work that served a larger purpose beyond the self. People have created communities and also been supported by the relationships within them. As can be seen in all criteria that not-for-profit organisations have offered to their employees, they were those reflective of individual spirit at work (*ISAW*) construct. Therefore, if leaders and managers in private and public organisations want to develop and promote effectively workplace spirituality, the constructs of *ISAW* suggested in this research (meaning in work, sense of community and spiritual connection) must be magnified.

8.5 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The present research produces exciting findings in the domain of individual spirit at work (*ISAW*) and its relationship with employee attitudes and organisational outcomes with a longitudinal design, a large sample from various sectors/industries,

multiple sources of rating on performance and OCB, yet there are some limitations to this study which should be noted.

The first limitation is inherent in longitudinal studies relates to dropping response rate over time. Although longitudinal research provides invaluable, unique, and critical insight into problems and issues of interest to social scientists, all longitudinal studies have the potential to be affected by respondent attrition. Like in this research for the second wave of data collection, the samples reduced from 715 in Time 1 to 501 in Time 2. However, this limitation is not as severe as it could be: 501 participants is a large enough sample to generate reliable data for this study.

Second, given the subjective and highly personal nature of the spirit at work construct, it would be ideal if multiple methods of research were used to cross-validate these measures, including employee interviews, employer or manager interviews, quantitative organisational measures of employee effectiveness, and actual turnover rate. These methods can help us to determine whether they could produce comparable data and make sure that we obtain the accurate results.

A third limitation relates to the exploration of antecedents. The possible antecedents have not been measured with proper scales, therefore, it should be noticed that this finding has to be interpreted cautiously, as it was based on an exploring study in which the generation questions were relative broad and lacked supporting theory, so in future studies would benefit from validated and established scales.

Fourth, it would be interesting to see if any factors in the extrinsic work environment, such as the nature of the human-resource-management system, the supervisor, the organisational structure or culture, and factors in the employee's work environment moderate or mediate the relationship between spirit at work and employee work attitudes/behaviours.

Fifth, since this research focuses on merely the positive aspects of spirit at work, future studies also need to consider potential negative aspects of spirit at work. For example, it may be possible that what one considers to be a highly spiritual belief or practice may have a negative impact on other people. Some potential negative implications include the potential for proselytising a set of spirituality values as the only path which can cause intolerance. It is also possible that employees who experience a high degree of spirituality at work may become deeply attached to the current practices of the organisation and therefore become resistant to change.

A final limitation relates to the generalisability of the findings in different cultures. This research was conducted in Thailand where the culture has been greatly influenced by Buddhism. However, replication in other cultures, especially in countries where other religious beliefs are not Buddhism or a great diversity of religions, would be required.

Furthermore, the researcher recommends that future research should be replicated by utilising the Spirit at Work Scale (*SAWS*) in order to further understanding of the individual spirit at work (*ISAW*) construct such as to validate the *SAWS* in other cultural contexts, and to examine the relationships between *ISAW* and other areas of

organisational interest e.g. creativity, innovation, counterproductive behaviours, leadership, work group cohesion, and work-family balance. In order to provide evidence and confirm the theoretical assumption derived from Self-determination regarding the mechanism through which *ISAW* produces positive outcomes, future study would be needed. Another area of the researcher's interest is implementing an intervention to try to affect *ISAW* and seeing if there are the predicted outcomes. In other words, the focus should be placed on intervention studies in order to determine what kind of interventions will improve *ISAW* and to direct and motivate employees in achieving desired levels of effectiveness.

8.6 CONCLUDING REMARKS

This research through its two pilot and longitudinal studies presented sufficient evidence that the Spirit at Work Scale (*SAWS*) enjoys psychometric properties acceptably in UK and Thai settings. This indicates that it is a sound psychometric and multicultural measure and can be used in measuring individual's experiences spirit at work. Individual spirit at work (*ISAW*) refers to employee experiences of spirituality in the workplace, these experiences includes aspects such as sense of meaning in work, community, and transcendence: (1) *meaning in work*: a belief that one is engaged in meaningful work that has a higher purpose, a sense of being authentic, a positive state of energy or vitality, and experiences of joy and bliss; (2) *sense of community*: a feeling of connectedness to others and common purpose that includes support, freedom of expression, and genuine caring; and (3) *spiritual connection*: a sense of connection to something larger than self that helps one's work are more joyful, balanced, meaningful, and spiritually nourishing resulting for a positive effect on his/her work. Furthermore,

this research offers insights into increasing job satisfaction, organisational identification, psychological well-being, in-role performance, organisational citizenship behaviours, and loyalty by fostering *ISAW*. This could be a useful starting point towards the improvement of management strategies for accommodating spirituality in the workplace and being successful in the new business paradigm.

REFERENCES

Abrams, D., Ando, K., & Hinkle, S. (1998). Psychological attachment to the group: cross cultural differences in organizational identification and subjective norms as predictors of workers' turnover intentions. *Personality and Social Psychology Bulletin*, *24*, 1027–1039.

Ackerman, P., & Humphreys, L. G. (1990). Individual differences theory in industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 1, pp. 223-282). Palo Alto, CA: Consulting Psychologists Press.

Adams, G., & Schvaneveldt, J. (1991). *Understanding research methods* (2nd ed.). New York, NY:Longman.

Agor, W. H. (1989). Introduction. In W. H., Agor (Ed.), *Intuition in Organizations: Leading and Managing productively*. Newbury Park, CA: Sage Publications.

Akaike, H. (1987). Factor analysis and AIC, *Psychometrika, 3*, 317–332.

Alexander, J. (2010). Spirituality of work in nonprofit organizations. In R. A. Giacalone and C. L. Jurkiewicz (2nd ed.), *Handbook of workplace spirituality and organizational performance*, (pp 291-305). Armonk, NY: M.E. Sharpe.

Amabile, T. M., & Kramer. S. T. (2011). The Power of Small Wins. *Harvard Business Review*, *89*(5), (May, 2011).

Anderson, J., & Gerbing, D. (1998). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*, 411-423.

Arbuckle, J. L. (2007*). AMOS 7.0 User's Guide.* Spring House: AMOS Development Corporation.

Asher, H., & Lane-Maher, M. (2004). Success and spirituality in the new business paradigm. *Journal of Management Inquiry, 13*, 249-260.

Ashforth, B. E., & Mael, S. G. (1989). Social identity theory and the organization. *Academy of Management Review, 14*, 20-39.

Ashforth, B. E., & Pratt, M.G. (2003). Institutionalized spirituality: An oxymoron? In R. A. Giacalone and C. L. Jurkiewicz (Eds.), *Handbook of workplace spirituality and organizational performance*, (pp 93-107). Armonk, NY: M.E. Sharpe.

Ashmos, D. P., & Duchon, D. (2000). Spirituality at work: A conceptualization and measure, *Journal of Management Inquiry*, *9*(2), 134–145.

Aston University. (2004) *Guidelines on the submission of projects for consideration by the university ethics committee* (REG/04/623). Birmingham: United Kingdom.

Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis for performance and well-being in two work settings. *Journal of Applied Social Psychology, 34*, 2045-2068.

Bandura, A. (1997). *Self-efficacy; The exercise of control.* New York: Freeman.

Baron, R. M., & Kenny, D.A. (1986). The Moderator–Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology, 51,* 1173–82.

Barrett, R. (1998). *Liberating the corporate soul*. Boston: Butterworth-Heinemann.

Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: the relationship between affect and employee 'citizenship'. *Academy of Management Journal, 26*, 587–595.

Beazley, H. (1997). *Meaning and measurement of spirituality in organizational settings: development of a spirituality assessment Scale*. Unpublished PhD dissertation, George Washington University: Washington, DC.

Bell, E., & Taylor, S. (2003). The elevation of work: Pastoral power and the new age work ethic. *Organization*, *10*(2), 329–349.

Benefiel, M. (2003a). Mapping the terrain of spirituality in organizations research. *Journal of Organizational Change Management, 16*(4), 367-377.

Benefiel, M. (2003b). Irreconcilable foes? The discourse of spirituality and the discourse of organizational science. *Organization, 10*(2), 383–391.

Bentler, P. M. (1990). Comparative Fit Indexes in Structural Models. *Psychological Bulletin, 107*, 238-246.

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*, 588-606.

Berkman, P. L. (1971a). Measurement of mental health in a general population survey. *American Journal of Epidemiology*, *94*, 105-111.

Berkman, P. L. (1971b). Life stress and psychological well-being: A replication of Langer's analysis in the midtown Manhattan Study. *Journal of Health and Social Behavior, 12*, 35-45.

Bird, A. (1980). The Halt and the Blind: Philosophy and History of Science. British *Journal for the Philosophy of Science, 31*, 181–192.

Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods and Research, 17*, 306-313.

Bowman, J. S., & West, J. P. (2006). Ending civil service protections in Florida Government: Experiences in state agencies. *Review of Public Personnel Administration, 26*, 39-157.

Braud, W. (2009). Dragons, spheres, and flashlights: Appropriate research approaches for studying workplace spirituality. *Journal of Management, Spirituality & Religion, 6*(1), 59-75.

Briskin, A. (1996). *The Stirring of Soul in the Workplace*. San Francisco: Jossey-Bass Inc., Publishers.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross Cultural Psychology, 1*(3), 185-216.

Brislin, R. W. (1980). Translation and content analysis of oral and written material. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of cross-cultural psychology: Methodology* (Vol. 2, pp. 349-444). Boston: Allyn & Bacon.

Brislin, R. W. (1986). A culture general assimilator: Preparation for various type of sojourns. *International Journal of Intercultural Relations, 10*(2), 215-234.

Brown, B.R. (2003). Organizational spirituality: The sceptic's version. *Organization, 10*, 393-400.

Brown, J. (1992). Corporation as community: a case for a new era. In J. Renesch (Ed.), *New Traditions in Business: Spirit and Leadership in the 21st Century* (pp. 123-139). San Francisco, CA: Berrett-Koehler.

Burke, R. J., Graham, J. & Smith, F, (2005). Effects of reengineering on the employee satisfaction-customer satisfaction relationship. *The TQM Magazine, 17*, 358 – 363.

Burkholder, G. J., & Harlow, L. L. (2003). An illustration of a longitudinal cross-lagged
design for larger structural equation models. *Structural Equation Modeling*: *A
Multidisciplinary Journal, 10*, 465 – 486.

Burrel, G., & Morgan, G. (1979). *Sociological paradigms and organizational analysis*.
London: Heinemann Educational Books.

Burton-Jones, A. (2009). Minimizing method bias through programmatic research. *MIS
Quarterly, 33,* 445-471.

Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality
and Social Psychology, 63*, 452–459.

Butts, D. (1999). Spirituality at Work: An overview. *Journal of Organizational Change
Management, 12*(4), 328-323.

Byrne, B. M. (2001). *Structural Equation Modeling with AMOS: Basic Concepts,
Applications, and Programming.* Mahwah, NJ: Lawrence Erlbaum Associates.

Cacioppe, R. (2000a). Creating spirit at work: Re-visioning organizational development
and leadership – Part I. *The Leadership & Organization Development Journal,
21*, 48-54.

Cacioppe, R. (2000b). Creating spirit at work: Re-visioning organizational development
and leadership – Part II. *The Leadership & Organization Development Journal,
21*, 110-119.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the
multitrait–multimethod matrix. *Psychological Bulletin, 56*, 81–103.

Cappelli, P., Bassi, L., Katz, H., Knoke, D., Osterman, P., & Useem, M. (1997).
Change at work. New York, NY: Oxford University Press, Inc.

Carmines, E. G., & McIver, J. (1981). Analysing models with unobserved variables: Analysis of covariance structure. In G. Bohrnstedt & E. Borgatta (Eds.), *Social Mesurement: Current Issues.* Beverly Hills: Sage.

Carmeli, A., Gilat, G., & Waldman, D. A. (2007). The role of perceived organizational performance in organizational identification, adjustment and job performance. *Journal of Management Studies, 44*(6), 972-992.

Cash K. C., & Gray G. R. (2000). A framework for accommodating religion and spirituality in the workplace. *Academy of Management Executive, 14*(3), 124-134.

Casio Wayne, F. (1991). *Costing Human Resources: Financial Impact of Behaviour on Organizations.* Cincinnati, OH: Prentice-Hall.

Chalofsky, N. E. (2010). *Meaningful workplace: reframing how and where we work.* San Francisco, CA: Jossey-Bass.

Chappell, T. (1993). *The Soul of a Business: Managing for Profit and the Common Good.* New York: Bantam Books.

Chawla, V., & Guda, S (2010). Individual spirituality at work and its relationship with job satisfaction, propensity to leave and job commitment: An exploratory study among sales professionals. *Journal of Human Values, 16*(2), 157–167.

Chen, C. (2005). *Measuring the movement of a research paradigm.* Invited paper proceedings of SPIE-IS&T: Visualization and Data Analysis Conference, San Jose, CA, 17-18 January, 2005. SPIE, vol. 5669, pp. 63-76.

Chen, G., Gully, S.M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4*, 62-83.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling, 9*, 233-255.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New Jersey: Lawrence Erlbaum.

Conger, J. A. (1994). *Spirit at Work: Discovering the Spirituality in Leadership*. San Francisco: Jossey-Bass Publishers.

Creswell, J. (1994). *Research design: Quanlitative and quatitative approaches*. Thousand Oaks, CA: SAGE publications.

Cropanzano, R., James, K., & Konovsky, M. A. (1993). Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organizational Behavior, 14*, 595–606.

Cropanzano, R., Rupp, D. E., & Byrne, Z. S. (2003). The Relationship of emotional exhaustion to work attitudes, job performance, and organizational citizenship behaviors. *Journal of Applied Psychology, 88*(1), 160–169.

Cropanzano, R., & Wright, T. A. (1999). A five-year study of the relationship between wellbeing and performance. *Journal of Consulting Psychology, 51*, 252-265.

Csikszentmihalyi, M. (1988). The flow experience and its significance for human psychology. In M. Csikszentmihalyi and I. S. Csikszentmihalyi (Eds.), *Optimal experience: Psychological studies of flow in consciousness*, (pp.15-35). New York: Cambridge University Press.

Currivan, D. B. (1999). The casual order of job satisfaction and organization Commitment in models of employee turnover. *Human Resource Management Review, 9*, 495-524.

Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology, 90*(6), 1241–1255.

Dean, K. L., Fornaciari, C. J., & McGee J. J. (2003). Research in spirituality, religion, and work: Walking the line between relevance and legitimacy. *Journal of Organizational Change Management, 16*(4), 378-395.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* New York: Plenum Press.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268.

Deci, E. L., Ryan, R. M., Gagné, M., Leone, D. R., Usunov, J., & Kornazheva, B. P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former eastern bloc country. *Personality and Social Psychology Bulletin, 27*, 930-942.

Deci, E. L., & Vansteenkiste, M. (2004). /self-determination theory and basic need satisfaction: Understanding human development in positive psychology. *Ricerche di Psicologia, 27*, 23-40.

Dehler, G. E., & Welsh, M.A. (1994). Spirituality and Organizational Transformation. *Journal of Managerial Psychology, 9*(6), 17-27.

Dent, E. B., Higgins M. E., & Wharff, D. M. (2005). Spirituality and Leadership: An Empirical Review of Definitions, Distinctions, and Embedded Assumptions. *Leadership Quarterly, 16* (5), 625–653.

Diamantopoulos, A., & Siguaw, J. A. (2006). Formative Versus Reflective Indicators in Organizational Measure Development: A Comparison and Empirical Illustration. *British Journal of Management, 17*, 263–282.

Droel, W. L. (1990). *Business People: the Spirituality of Work* Chicago: ACTA Publications.

Duchon, D., & Plowman D. A. (2005). Nurturing the Spirit at Work: Impact on Work Unit Performance. *Leadership Quarterly, 16* (5), 807–833.

Duerr, M. (2004). The contemplative organization. *Journal of Organizational Change Management, 17*(1), 43-61.

Dukerich, J. M., Golden, B. R. & Shortell, S. M. (2002). Beauty is in the eye of the beholder: The impact of organizational identification, identity and image on the cooperative behaviors of physicians. *Administrative Science Quarterly, 47*, 507–533.

Dutton, G. (1997). Nurturing employees and the bottom lines. *HR Focus, 74*(9), 1-4.

Dutton, J. E., Dukerich, J. M., & Harquail, C. V. (1994). Organizational images and member identification. *Administrative Science Quarterly, 39*, 239-263.

Edmondson, A. C. & McManus, S. E. (2007). Methodological fit in management field research. *Academy of Management Review, 32*, 1155-1179.

Elkins, D. N., Hedstrom, L. J., Hughes, L. L., Leaf, J. A., & Saunders, C. (1988). Toward phenomenological spirituality: definition, description, and measurement. *Journal of Humanistic Psychology, 28*(4), 5–18.

Ellison, C. W. (1983). Spiritual well-being: conceptualization and measurement. *Journal of Psychology and Theology, 11*, 330–340.

Emmons, R. A. (2000). Is spirituality an intelligence? Motivation, cognition, and the psychology of ultimate concern. *The International Journal for the Psychology of Religion, 10*, 3-26.

Fabricatore, A. N., Handal, P. J., & Fenzel, L. M. (2000). Personal spirituality as a moderator of the relationship between stressors and subject well-being. *Journal of Psychology & Theology, 28*, 221-229.

Fornaciari, C., & Dean, K. L. (2001). Making the quantum leap: lessons from physics on studying spirituality and religion in organizations. *Journal of Organizational Change Management, 14*(4), 335-351.

Fornaciari, C. J., & Dean, K. L. (2004). Diapers to car keys: The state of spirituality, religion and work research. *Journal of Management, Spirituality & Religion, 1*(1), 7-33.

Fornaciari, C. J., & Dean, K. L. (2009). Foundations, lessons, and insider tips for MSR research. . *Journal of Management, Spirituality & Religion, 6*(4), 301-321.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*, 39-50.

Forray, J. M., & Stork, D. (2002). All for one: A parable of spirituality and organization. *Organization, 9*(3), 497-509.

Freshman, B. (1999). An exploratory analysis of definitions and applications of spirituality in the workplace. *Journal of Organizational Change Management, 12*(4), 318-327.

Fry L. W. (2003). Toward a theory of spiritual leadership *The Leadership Quarterly, 14*(6), 693–727.

Fry, L. W., & Cohen M. P. (2009). Spiritual Leadership as a Paradigm for Organizational Transformation and Recovery from Extended Work Hours Cultures. *Journal of Business Ethics*, *84*, 265-278.

Fry L. W., Vitucci, S., & Cedillo, M. (2005). Transforming the army through spiritual leadership: Theory, measurement, and establishing a baseline. The Leadership Quarterly, 16(5), 835-862.

Gagné, M. (2003). The role of autonomy support and autonomy orientation in the engagement of prosocial behavior. *Motivation and Emotion, 27*, 199–223.

Gagné, M., Chemolli, E., Forest, J., & Koestner, R. (2008). A temporal analysis of the relation between organisational commitment and work motivation. *Psychologica Belgic, 48*, 219-241.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, *26*, 331-362.

Garcia-Zamor, J-C. (2003). Workplace spirituality and organizational performance. *Public Administration Review, 63*(3), 355–363.

Gechman, A., & Wiener, Y. (1975). Job involvement and satisfaction as related to mental health and personal time devoted to work. *Journal of Applied Psychology*, *60*, 521-523.

Giacalone, R. A., & Jurkiewicz, C. L. (2003). *Handbook of workplace spirituality and organizational performance.* Armonk, NY: M.E. Sharpe.

Giacalone, R. A., Jurkiewicz, C. L. & Fry, L. W. (2005). From advocacy to science: The next steps in workplace spirituality research. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality,* (pp.515-528). New York: Guilford Press.

Giddens, A. (1974). *Positivism and sociology*. London: Heinemann.

Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review, 17,* 183-211.

Gockel, A. (2004). The trend toward spirituality in the workplace: Overview and implications for career counseling. *Journal of Employment Counseling, 41*, 156-168.

Gorsuch, R. L. (1983). *Factor analysis*. Hillsdale, NJ:Erlbaum.

Grandey, A. A., & Cropanzano, R. (1999). The conservation of resources model applied to work–family conflict and strain. *Journal of Vocational Behavior, 54,* 350–370.

Gravenkemper, S. (2007). Building community in organizations: Principles of engagement. *Consulting Psychology Journal: Practice and Research, 59*, 203–208.

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation design. *Educational Evaluation and Policy Analysis, 11*, 255-274.

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management, 26*(3), 463–488.

Guadagnoli, E., & Velicer, W. F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin, 103*, 265-275.

Gull, G.A., & Doh, J. (2004). The 'transmutation' of the organization: Toward a more spiritual workplace. *Journal of Management Inquiry*, *13*, 128-139.

Hair, J.F., Anderson, R.E., Tatham, R.L., & Black, W.C. (1995). *Multivariate data analysis.* Englewood Cliffs, NJ: Prentice Hall.

Hall, T. W., & Edwards, K. J. (1996). The initial development and factor analysis of the Spiritual Assessment Inventory. *Journal of Psychology and Theology, 24*, 233–246.

Harlos, K. P. (2000). Toward a spiritual pedagogy: Meaning, practice and applications in management education. *Journal of Management Education, 24*, 612-627.

Haslam, S. A., Powell, C., & Turner, J. (2000). Social identity, self-categorization, and work motivation: Rethinking the contribution of the group to positive and sustainable organisational outcomes. *Applied Psychology: An International Review, 49*, 319-339.

Hatcher, L. (1994). *A Step-by-Step Approach to Using the SAS System for Factor Analysis and Structural Equation Modeling.* Cary, N.C.: SAS Institutte, Inc.

Heaton, D. P., Schmidt-Wilk, J. & Travis, F. (2004). Constructs, Methods, and Measures for Researching Spirituality in Organizations. *Journal of Organizational Change Management*, *17*(1), 62–82.

Hill, P. C., Pargament, K. I., Hood, R. W., McCullough, M. E., Swyers, J. P., Larson, D. B., & Zinnbauer, B. J. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behaviour, 30*(1), 51-77

Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. *Journal of Management, 21*(5), 967-988.

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods, 1*(1), 104-121.

Ho, D. Y. F., & Ho, R. T. H. (2007). Measuring spirituality and spiritual emptiness: Toward ecumenicity and trans-cultural applicability. *Review of General Psychology, 11*(1), 62-74.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values.* Beverly Hills, CA: Sage.

Hofstede, G. (1991). *Cultures and organizations: Software of the mind.* London: McGraw- Hill.

Holmes, H. & Tangtongtavy, S. (1995). *Working with the Thais: A guide to managing in Thailand.* Bangkok, Thailand: White Lotus.

Hom, P. W., & Griffeth, R. W. (1995). *Employee turnover.* Cincinnati, OH: South/Western.

Hom, P. W., & Kinicki, A. J. (2001). Toward a greater understanding of how dissatisfaction drives employee turnover. *Academy of Management Journal, 44*, 975–987.

Hough, L. M., & Schneider, R. J. (1996). Personality traits, taxonomies, and applications in organizations. In K. R. Murphy (Ed.), *Individual differences and behavior in organizations* (pp. 31-88). San Francisco, CA: Jossey-Bass.

Howden, J. W. (1992). *Development and psychometric characteristics of the Spirituality Assessment Scale.* Unpublished doctoral dissertation, Texas Women's University.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1–55.

Humprhrey, S. E., Nahrang, J. D., & Morgeson, F. (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology, 92*(5), 1332-1356.

Ilardi, B. C., Leone, D., Kasser, T., & Ryan, R. M. (1993). Employee and supervisor ratings of motivation: Main effects and discrepancies associated with job satisfaction and adjustment in a factory setting. *Journal of Applied Social Psychology*, *23*, 1789-1805.

Jamal, M. (2007). Job stress and job performance controversy revisited: An empirical examination in two countries international. *Journal of Stress Management, 14*(2), 175–187.

James, L.A., & James, L.R. (1989). Integrating work environment perceptions: Explorations into the measurement of meaning. *Journal of Applied Psychology, 74,* 739-751.

Janssens, M., Brett, J. M., & Smith, F. J. (1995). Confirmatory cross-cultural research: Testing the viability of a corporation-wide safety policy. *Academy of Management Journal, 38,* 364–382.

JMSR. (2011). *Journal of Management, Spirituality & Religion: Our mission.* Retrieved March 7, 2011 from http://www.jmsr.com/mission.html

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*(3), 376-407.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33*, 692–724.

Kahn, W. A. (1992). To be full there: psychological presence at work. *Human Relations, 45*, 321–349.

Kass, J. D., Friedman, R., Leserman, J., Zuttermeister, P.C., & Benson, H. (1991). Health outcomes and a new index of spiritual experience. *Journal for the Scientific Study of Religion, 30*(2), 203–211.

Keat, R., & Urry, J. (1975). *Social theory as science*. London: Routledge & Kegan Paul.

Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relations: A theory of interdependence.* New York: Wiley-Interscience.

Kinjerski, V. (2004). *The interconnectedness of personality, personal actions, organizational features, and the paths to spirit at work.* Unpublished Dissertation, University of Alberta, Edmonton.

Kinjerski, V., & Skrypnek, B. J. (2004). Defining spirit at work: finding common ground. *Journal of Organizational Change Management, 17*, 26-42.

Kinjerski, V., & Skrypnek, B. J. (2006a). Measuring the intangible: Development of the Spirit at Work Scale. *Best paper proceedings of the sixty-fifth annual meeting of the Academy of Management* (CD), ISSN 1543-8643, A1-A6.

Kinjerski, V., & Skrypnek, B. J. (2006b). Creating organizational conditions that foster employee spirit at work. *Leadership & Organization Development Journal, 27*(4), 280-295.

Kinjerski, V., & Skrypnek, B.J. (2006c). A Human Ecological Model of Spirit at Work. *Journal of Management, Spirituality, and Religion, 3*(3), 1-7.

Kinjerski, V., & Skrypnek, B. J. (2006d). *The spirit at work project: Creating positive outcomes in long-term care.* 10th Annual Long Term Care Winter Conference, Jasper, Alberta.

Kinjerski, V., & Skrypnek, B. J. (2008a). Four paths to spirit at work: Journeys of personal meaning, fulfillment, well-being, and transcendence through work. *The Career Development Quarterly, 56*(4), 319-329.

Kinjerski, V., & Skrypnek, B. J. (2008b). The promise of spirit at work: Increasing job satisfaction and organizational commitment and reducing turnover and absenteeism in long-term care. *Journal of Gerontological Nursing. 43*(10), 17-27.

Kluckhohn, C. (1962). *Culture and behavior*. New York: The Free Press of Glencoe.

Knoblauch, D. L., & Falconer, J. A. (1986). The relationship of a measured Taoist orientation to Western personality dimensions. *Journal of Transpersonal Psychology, 18* (1), 73–83.

Kolodinsky, R. W., Giacalone, R. A., & Jurkiewicz, C. L. (2008). Workplace values and outcomes: Exploring personal, organizational, and interactive workplace spirituality. *Journal of Business Ethics, 81*, 465–480.

Komala, K., & Ganesh, L. S. (2007). Individual spirituality at work and its relationship with job satisfaction and burnout: An exploratory study among healthcare professionals. *The Business Review, 7*, 124-129.

Konovsky, M. A., & Cropanzano, R. (1991). The perceived fairness of employee drug testing as a predictor of employee attitudes and job performance. *Journal of Applied Psychology, 76*, 698–707.

Konz, G. N. P., & Ryan, F. X. (1999). Maintaining an organizational spirituality: No easy task. *Journal of Organizational Change Management, 12*(3), 200-210.

Krahnke, K., Giacalone, R. A., & Jurkiewicz, C. L. (2003). Point-counterpoint: Measuring workplace spirituality. *Journal of Organizational Change Management, 16*(4), 396-405.

Krishnakumar, S., & Neck, C. P. (2002). The 'what' 'why' and 'how' of spirituality in the Workplace. *Journal of Managerial Psychology, 17*(3), 153-64.

Kuhn, T. S. (1970). *The Structure of Scientific Revolutions*. (2nd ed.) Chicago, IL: University of Chicago Press.

Lee, T. W., & Mowday, R.T. (1987). Leaving the organization: An empirical investigation of the Steers and Mowday (1981) model of turnover. *Academy of Management Journal, 30*(4), 721–743.

Leigh, P. (1997). The new spirit at work. *Training & Development,* 51: 26-41.

Lips-Wiersma, M., & Mills, C. (2002). Coming out of the closet: Negotiating spiritual expression in the workplace. *Journal of Managerial Psychology, 17*(3), 183-202.

Locke, E. A. (1969). What is job satisfaction? *Organizational Behavior and Human Performance*, *4*, 309-336.

Locke, E. A. (1970). Job satisfaction and job performance: A theoretical analysis. *Organizational Behavior and Human Performance, 5*, 484-500.

Loehlin, J.C. (1992). *Latent variable models: An introduction to factor, path, and structural analysis* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

MacCallum, R. C., Widaman, K. F., Preacher, K. J., & Hong, S. (2001). Sample size in factor analysis: The role of model error. *Multivariate Behavioral Research, 36*, 611-637.

MacDonald, D. A. (2000) Spirituality: description, measurement and relation to the five factor model of personality. *Journal of Personality*, *68*(1), 153–197.

Mael, F. A., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behaviour, 13*, 103-123.

Mael, F. A., & Ashforth, B. E. (1995). Loyal from day one: Biodata, organizational identification, and turnover among newcomers. *Personnel Psychology, 48*, 309–333.

Magee, B. (1985). *Popper*. London: Fontana.

Makawatsakul, N. & Kleiner, B. H. (2003). The effect of downsizing on morale and attrition. *Management Research News*, *26*, 52-62.

Malhotra, N. K., Kim, S. S., & Patil, A. (2006). Common method variance in IS research: A comparison of alternative approaches and a reanalysis of past research. *Management Science, 52*, 1865-1883.

Marques, J. F. (2006). The spiritual worker: An examination of the ripple effect that enhances quality of life in- and outside the work environment. *Journal of Management Development, 25*(9), 884-895.

Marques, J. F., Dhiman, S., & King, R. (2007). *Spirituality in the workplace: What it is, Why it matters, How to make it work for you*. Fawnskin, CA: Personhood Press.

Marsh, H. W., Balla, J.R., & McDonald, R.P. (1988). Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin, 103*, 391-410.

Marsh, H. W., & Hocevar, D. (1985). The application of confirmatory factor analysis to the study of self-concept: First and higher order factor structures and their invariance across age groups. *Psychological Bulletin, 97,* 562–582.

Martin, T. N. (1979). A contextual model of employee turnover intention. *Academy of Management Journal, 22*(2), 313–324.

May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology, 77*, 11–37.

May, T. (1997). *Social research: issues, methods and process*. (2nd ed.). Trowbridge: Redwood Books.

Maynard, H. B. (1992). *Evolution of human consciousness*. In Renesch, J. (Ed.), New Traditions in Business: Spirit and Leadership in the 21st Century, Berrett-Koehler, San Francisco, CA, pp. 39-52.

McCrae, R. R., & Costa, P. T. (1999). A five-factor theory of personality. In L.A. Pervin, & O. P. John (Ed.), *Handbook of Personality: Theory and Research* (2nd ed., pp139-153), New York: Guilford.

McDonald R. P., & Ho, M. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods, 7*, 64–82.

Miller, W. C. (1992). *How do we put our spiritual values to work?* In Renesch, J. (Ed.), New Traditions in Business: Spirit and Leadership in the 21st Century, Berrett-Koehler, San Francisco, CA, pp. 69-80

.

Milliman, J., Czaplewski A.J., & Ferguson J. (2003). Workplace spirituality and employee work attitudes: An exploratory empirical assessment. *Journal of Organizational Change Management, 16*(4), 426-447.

Milliman, J., Ferguson, J., Trickett, D., & Condemi, B. (1999). Spirit and community at Southwest Airlines: An investigation of a spiritual values-based model. *Journal of Organizational Change Management, 12*(3), 221-233.

Mitroff, I. (2003). Do not promote religion under the guise of spirituality. *Organization, 10*(2), 375-382.

Mitroff, I., & Denton, E. (1999a). *A Spiritual Audit of Corporate America: A Hard Look at Spirituality, Religion, and Values in the Workplace*. San Francisco, CA: Jossey-Bass.

Mitroff, I., & Denton, E. (1999b). A study of spirituality in the workplace. *Sloan Management Review, 40*(4), 83–92.

Mobley, W. H. (1982). Some unanswered questions in turnover with withdrawn research. *Academy of Management Review, 7*(1), 111–116.

Mohamed, A. A., Wisnieski, J, Askar M, & Syed, I. (2004). Towards a theory of spirituality in the workplace. *Competitiveness Review, 14*, 102-107.

Mone, M. A. (1997). How we got along after the downsizing: Post-downsizing trust as a double-edged sword. *Public Administration Quarterly, 21*, 309-336.

Moore, J. E. (2000). One road to turnover: An examination of work exhaustion in technology professionals. *MIS Quarterly, 24*(1), 141–168.

Moore, T. (1992). *Care of the Soul*. HarperCollins: New York, NY.

MSR Newsletter (2006). *MSR Best Paper Award Abstract II*: *Measuring the Intangible: The Development of the Spirit at Work Scale*. Management, Spirituality & Religion, Volume 6, summer: Academy of Management.

MSRAOM. (2011). *Interest group on Management, Spirituality & Religion, the Academy of Management (AOM)*. Retrieved March 7, 2011 from http://group.aomonline.org/msr/index.html

Muse, L. A., Harris, S. G., & Field, H. S. (2003). Has the inverted-U theory of stress and job performance had a fair test? *Human Performance, 16,* 349–364.

Neal, J., & Biberman, J. (2003). Introduction: The Leading Edge in Research on Spirituality and Organizations. *Journal of Organizational Change Management*, *16*(4), 363–66.

Neck, C. P., & Milliman, J. F. (1994). Thought self-leadership: Finding spiritual fulfilment in organizational life. *Journal of Managerial Psychology*, *9*(6), 9–16.

Nunnally, J. C. (1978), *Psychometric Theory* (2nd ed.), New York, NY: McGraw-Hill.

O'Driscoll, M. P., & Beehr, T. A. (1994). Supervisor behaviours, role stressors and uncertainty as predictors of personal outcomes for subordinates. *Journal of Organizational Behavior, 15*, 141-155.

Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome.* Lexington, MA: Lexington Books

Organ, D. W. (1997). Organizational citizenship behaviour: It's Construct Clean-Up Time. *Human Performance, 10*, 85-90.

Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational behaviour. *Personnel Psychology, 48*, 775-802.

Osborne, J. W., & Costello, A. B. (2004). Sample size and subject to item ratio in principal components analysis. *Practical Assessment, Research & Evaluation, 9* (11). Retrieved on June 5, 2010 from http://PAREonline.net/getvn.asp?v=9&n=11

Pawar, B. S. (2009a). Individual spirituality, workplace spirituality and work attitudes: An empirical test of direct and interaction effects. *Leadership & Organization Development Journal*, *30*(8), 759-777.

Pawar, B. S. (2009b). Workplace spirituality facilitation: A comprehensive model. *Journal of Business Ethics*, *90*, 375–386.

Peters, K., Tevichapong, P., Haslam, S. A., & Postmes, T. (2010). Making the organization fly: Organizational identification and citizenship in full-service and low-cost airlines. *Journal of Personnel Psychology, 9 (3), 145-148.*

Piedmont, R. L. (1999) Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five factor model. *Journal of Personality, 67*, 985-1013.

Piedmont, R. L. (2001) Spiritual transcendence and the scientific study of spirituality, *Journal of Rehabilitation*, *67*, 4-14.

Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*, 879-903.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: a critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management, 26*, 513–563.

Podsakoff, P. M., & Organ, D. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, *12* (4), 531–544.

Pratt, M. G., & Ashforth, B. E. (2003). Fostering meaningfulness in working and at work. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds), Positive organizational scholarship: foundations of a new discipline (309–327). San Francisco, CA: Berrett-Koehler.

Randall, M. L., Cropanzano, R., Bormann, C. A., & Birjulin, A. (1999). Organizational politics and organizational support as predictors of work attitudes, job performance, and organizational citizenship behavior. *Journal of Organizational Behavior, 20*, 159-174.

Reed, P. G. (1987). Spirituality and well-being in terminally ill and hospitalized adults. *Research in Nursing and Health, 10*, 335–344.

Rego, A., & Cunha, M. P. (2008). Workplace spirituality and organizational commitment: an empirical study. *Journal of Organizational Change Management, 21*, 53-75.

Rego, A., Cunha, M. P., & Souto, S. (2007). Workplace spirituality, commitment and self- reported individual performance: An empirical study. *Management Research, 5*(3), 163-183.

Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects of job performance. *Academy of Management Journal, 53*, 617–635.

Riketta, M. (2005). Organizational identification: a meta-analysis. *Journal of Vocational Behavior, 66*, 358–384.

Rindfleisch, A. Malter, A. J, Ganesan, S., & Moorman, C. (2008). Cross-sectional versus longitudinal survey research: Concepts, findings, and guidelines. *Journal of Marketing Research, 45*, 261-279.

Robbins, S. (2003). *Organizational behaviour.* Upper Saddle River, NJ: Prentice Hall.

Robson, C. (1993). *Real world research: A resource for social scientists and practitioners-researchers.* Oxford: Basil Blackwell.

Rusbult, C. E., & Van Lange, P .A. M. (2003). Interdependence, interaction, and relationships. *Annual Review of Psychology, 54*, 351-375.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist, 55,* 68–78.

Saïd, T., Louarn, J., & Tremblay, M. (2007). The performance effects of major workforce reductions: longitudinal evidence from North America. *The International Journal of Human Resource Management, 18*, 2075 – 2094.

Scarpello, V., & Campbell, J. P. (1983). Job satisfaction: Are all the parts there? *Personnel Psychology, 36*, 577-600.

Schiffman, L. G., & Kanuk, L. L. (1997). *Consumer Behaviour*. London: Prentice Hall.

Sekaran, U. (1985). The Paths to mental health: An exploratory study of husbands and wives in dual-career families. *Journal of Occupational Psychology, 58*, 129-137.

Shah, P. P. (2000). Network destruction: Structural implications of downsizing. *Academy of Management Journal, 43*, 101–112.

Sheep, M. L. (2004). *Nailing down gossamer: A valid measure of the person – organization fit of workplace spirituality.* Paper presented at the 64th Annual Conference of the Academy of Management, New Orleans, USA (August 6-11, 2004).

Singhal, M., & Chatterjee, L. (2006). A person–organization fit-based approach for spirituality at work: Development of a conceptual framework. *Journal of Human Values, 12*, 161-178.

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behaviour: its nature and antecedents. *Journal of Applied Psychology, 68*, 653–663

Smith, J. A., & Rayment, J. J (2007). The global SMP fitness framework: A guide for leaders exploring the relevance of spirituality in the workplace. *Management Decision, 45*(2), 217-234.

Spector, P. (1997). *Job satisfaction: Application, assessment, cause and consequences.* London: Sage Publications.

Steiger, J. H., & Lind (1980). *Statistically based tests for the number of common factor* in Paper presented at the Annual Meeting of the Psychometric Society, Iowa City, IA.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.) Boston: Allyn and Bacon.

Taylor, M. A., & Callahan, J. L. (2005). Bringing creativity into being: Underlying assumptions that influence methods of studying organizational creativity. *Advances in Developing Human Resources, 7*(2), 247-270.

Tepper, B. J. (2010). Organizational citizenship behavior and the spiritual employee. In R. A. Giacalone & C. L. Jurkiewicz (2nd Eds.), *Handbook of workplace spirituality and organizational performance* (pp. 143-152). Armonk, NY: M. E. Sharpe.

Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention and turnover: Path analyses based on meta analytic findings. *Personnel Psychology, 46*(2), 259–293.

The National Statistical Office. (2011). *Census in Thailand for the year of 2011: A short version of report for executives.* Retrieved on February 2nd, 2012 from http://popcensus.nso.go.th/file/popcensus-20-12-54.pdf

Thibaut, J. W., & Kelly, H. H. (1959). *The social psychology of group*. New York: Wiley.

Thompson, B. (2000). Ten commandments of structural equation modeling. In L. Grimm & P. Yarnold (Eds.), *Reading and understanding more multivariate statistics* (pp. 261–284). Washington, DC: American Psychological Association.

Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications*. Washington, DC: American Psychological Association.

Tischler, L., Biberman, J., & Altman, Y. (2007). A model for researching about spirituality in organizations. *Business Renaissance Quarterly, 2*(2), 23-37.

Trigg, R. (1985). *Understanding social sciences*. New York: Basil Blackwell.

Trott, D. (1996). *Spiritual well-being of workers: an exploratory study of spirituality in the workplace*. Unpublished PhD dissertation, University of Texas at Austin: Austin, TX.

Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38*, 1-10.

Turnley, W. H., Bolino, M. C., Lester, S. W., & Bloodgood, J. M. (2003). The impact of psychological contract fulfillment on the performance of in-role and organizational citizenship behaviors. *Journal of Management, 29*(2), 187–206.

Tyler, T. R. (1999). Why people cooperate with organizations: an identity-based perspective. *Research in Organizational Behavior, 21*, 201–246.

Van Dick, R., Grojean, M.W., Christ, O., & Wieseke, J. (2006). Identity and the extra mile: Relationships between organizational identification and organizational citizenship behaviour. *British Journal of Management, 17*, 283-301.

Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods, 3,* 4–69.

Vaughan, F. E. (1989). Varieties of Intuitive Experience. In W. H. Agor (Ed.), *Intuition in Organizations* (pp. 40-61). Sage Publications, Newbury Park: CA.

Wagner-Marsh, F., & Conley, J. (1999). The fourth wave: The spiritually-based firm. *Journal of Organizational Change Management, 12*(4), 292-301.

Warr, P., Cook, J., & Wall, T. (1979). Scale for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology, 52*, 129-148.

Werner, C., & Schermelleh-Engel, K. (2010). *Introduction to structural equation modelling with LISREL*. Goethe University, Frankfurt. Retrieved on February 5, 2011 from http://user.uni-frankfurt.de/~cswerner/sem/chisquare_diff_en.pdf

Westaby, J. D., Versenyi, A., & Hausmann, R. C. (2005). Intentions to work during terminal illness: An exploratory study of antecedent conditions. *Journal of Applied Psychology, 90,* 1297–1305.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitments as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*(3), 601-617.

Wright, T. A., & Bonett, D. G. (1992). The effect of turnover on work satisfaction and mental health: Support for a situational perspective. *Journal of Organizational Behavior, 13*(6), 603-615.

Wright, T. A., & Bonett, D. G. (1997). The role of pleasantness and activation-based well-being in performance prediction. *Journal of Occupational Health Psychology, 2*, 212-219.

Wright, T. A., Bonett, D. G., & Sweeney, D. A. (1993). Mental health and work performance: Results of a longitudinal field study. *Journal of Occupational and Organizational Psychology, 66*, 277–284.

Wright, T. A., & Cropanzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology, 5*, 84-94.

Wright, T. A., & Staw, B. M. (1999). Affect and favorable work outcomes: Two longitudinal tests of the happy productive worker thesis. *Journal of Organizational Behavior*, *20*, 1-23.

Wrzesniewski, A. (2003). Finding positive meaning in work. In Cameron K. S., Dutton, J. E, & R. E. Quinn (Eds.), *Positive organizational scholarship* (pp. 296–308). San Francisco: Berrett-Koehler.

Young, J. S., Cashwell, C. S., & Shcherbakova, J. (2000). The Moderating Relationship of Spirituality on Negative Life Events and Psychological Adjustment. *Counseling and Values, 45*, 49-57.

Zaidman, N., Goldstein-Gidoni, O., & Nehemya, I. (2009). From Temples to Organizations: The Introduction and Packaging of Spirituality, *Organization*, *16*, 597-621.

Appendix 1: Letter of Request to Distribute Questionnaires to Employees in the Participating Organisations (English)

Aston Business School

Dear Sir / Madam,

Request to distribute questionnaires to employees at your organisation

I wish to confirm that **Mr Passagorn Tevichapong** is currently a full time doctoral student in the Work and Organisational Psychology Group at Aston Business School, Aston University and under supervisory by myself and Dr. Michael Riketta. Mr Tevichapong's doctoral research focus on **employees' experienced spirit at work and its relationship with their work attitudes and organisational outcomes.** Individual spirit at work is a distinct state characterised by profound feelings of wellbeing, a belief that one is engaged in meaningful work, a connection to others and common purpose, a connection to something larger than self, and it has a transcendent nature.

To gain the necessary research data, sets of questionnaire will be distributed to employees in your organisation in order to get their views on experienced spirit at work and its relationship with their work attitudes and organisational outcomes. Therefore, I would be very grateful if your organisation could give access to employees and their immediate supervisors at your organisation so that they could be a part of Mr Tevichapong's study. I am enclosing an endorsement letter from the university in support of his research.

Your kind consideration and invaluable support regarding this matter is highly appreciated and I look forward to a positive reply from you in the near future. Thank you very much.

Yours sincerely,

Dr. Ann Davis
Associate Dean and PhD Supervisor
Aston Business School
Birmingham B4 7ET
Tel: +44 121 204 3261
Fax: +44 121 204 3327

Appendix 2: Letter of Request to Distribute Questionnaires to Employees in the Participating Organisations (Thai)

เรื่อง ขอความอนุเคราะห์แจกแบบสอบถามกับพนักงานในหน่วยงานของท่าน

เรียน

       ข้าพเจ้าขอรับรองว่า นายภาสกร เตวิชพงศ์ เป็นนักศึกษาระดับปริญญาเอก สังกัด ภาควิชาจิตวิทยาการ ทำงานและองค์การ คณะบริหารธุรกิจ มหาวิทยาลัยแอสตั้น ประเทศสหราชอาณาจักร โดยมีข้าพเจ้าและ ดร.ไมเคิล ริกิตตา ร่วมเป็นอาจารย์ที่ปรึกษา งานวิทยานิพนธ์ปริญญาเอกของนายภาสกร เตวิชพงศ์ ต้องการศึกษาวิจัยถึง ความสัมพันธ์ระหว่างพนักงานที่มีประสบการณ์ทางจิตวิญญาณในการทำงาน กับเจตคติในการทำงานและผลลัพธ์ ขององค์การซึ่งความหมายของจิตวิญญาณในการทำงานในการศึกษาครั้งนี้มี คำจำกัดความว่าประสบการณ์ที่บุคคลสามารถสัมผัสได้ถึงมิติแห่งความสุขในการทำงานโดยมีความเชื่อว่าตนกำลัง ได้มีส่วนร่วมในการทำงานที่มีความหมายและสำคัญเป็นอย่างมากมีมิติแห่งความรู้สึกผูกพันแนบแน่นกับเพื่อน ร่วมงาน มีมิติสัมพันธ์เชื่อมโยงในงานที่ตนทำกับสิ่งที่ตนนับถือหรือหรืออำนาจที่ยิ่งใหญ่กว่าตนเอง

       ดังนั้นเพื่อช่วยให้ได้ข้อมูลที่จำเป็นต่อการศึกษาวิจัยของนักศึกษาตามที่กล่าวมาข้างต้นแล้วนั้นข้าพเจ้าจึง เรียนมาเพื่อขอความอนุเคราะห์ให้นายภาสกรเตวิชพงศ์ได้รับอนุญาตเข้าไปแจกแบบสอบถามกับพนักงานและหัว หน้างานของพนักงานในหน่วยงานหรือองค์การของท่านทั้งนี้ข้าพเจ้าได้แนบจดหมายรับรองจากทางมหาวิทยาลัย เพื่อสนับสนุนในการทำวิจัยวิทยานิพนธ์ระดับปริญญาเอกของ นายภาสกร เตวิชพงศ์ มาพร้อมกับจดหมายฉบับนี้

       ข้าพเจ้าจึงหวังเป็นอย่างยิ่งที่จะได้รับความอนุเคราะห์จากท่านเป็นอย่างดี และขอขอบพระคุณเป็นอย่างสูง

<div align="center">

ขอแสดงความนับถือ

ดร. แอน เดวีส
รองคณบดี และ อาจารย์ที่ปรึกษาวิทยานิพนธ์
คณะบริหารธุรกิจ มหาวิทยาลัยแอสตั้น
เมืองเบอร์มิ่งแฮม ประเทศสหราชอาณาจักร
โทรศัพท์ +44 121 204 3261
แฟ็กซ์ +44 121 204 3327

</div>

Appendix 3: Letter of Ethical Approval to This Research

Aston Business School

Date: 23 July 2008

Dear Passagorn,

I am pleased to be able inform you that committee has granted ethical approval to your project.

Good luck with your research.

Best wishes,

Bhomali Grover
Aston Academy of Research into Management

![Aston Business School logo]

Work & Organisational Psychology Group, Aston University, United Kingdom

Dear Respondents,

I am a doctoral student in the field of Work and Organisational Psychology, Aston Business School, Aston University. **My research is focus on employees' experienced spirit at work and its relationship with their work attitudes and organisational outcomes.** Individual spirit at work is a distinct state characterised by profound feelings of wellbeing, a belief that one is engaged in meaningful work, a connection to others and common purpose, a connection to something larger than self, and it has a transcendent nature.

This research seeks to improve employees' effectiveness in the organisation through exploring the relationships between experienced spirit at work and work attitudes and organisational outcomes. From this I hope to develop guidelines for employers and leaders on how **to improve their management strategy and ultimately enhance employees' morale and performance.**

My efforts cannot be made possible without your valuable input. Therefore, I would like to ask for your cooperation to complete the attached questionnaire. **You are asked to spare 10-15 minutes** of your time to fill out the questionnaire as truthfully as possible, answering all the questions.

Since this research is conducted in a longitudinal manner, after this first time of data collection, **there will be the second voluntary participation in the next 8-9 months time.** Therefore, in order **to protect your anonymity** and help me to match your questionnaire Time 1 and Time 2, I would like you to **put the 4-digit number of your date of birth** which is only day and month (without year) in the follow box (i.e. the 4th of July should be filled 0407)

In this study, **your immediate supervisor also will be invited to comment on your behaviours at work.** All your responses are **confidential** and will be analysed at the group level. Also, no information will be made public that might identify you or your organisation.

After completing the questionnaire**, please put it in the envelope provided and return to me who will come to collect it by myself.**

I look forward to your valuable input and thank you in advance for your assistance in this research.

Yours truly,
Passagorn Tevichapong
PhD student, Aston University

Remark: Please note that completion of this questionnaire is **voluntary**. Also, **you are free to withdraw at any time and then your responses will be excluded from the study.** However, by completing this questionnaire it is assumed that you consent to participate in this research. If you would like further information about the study please contact myself, Mr. Passagorn Tevichapong, (tevichap@aston.ac.uk), or my supervisors, **Dr. Ann Davis, (a.j.davis@aston.ac.uk), Dr. Michael Riketta, (rikettam@aston.ac.uk).** They can all be contacted through the Work & Organisational Psychology Group, Aston Business School, Aston University, Birmingham, United Kingdom, B4 7ET.

Please turn over when you are ready to begin…

This set of questions asks about your experiences at work**. Please circle the response which most accurately reflects the extent to which you agree or disagree with each statement.**

How true the statement is for you?	completely disagree	mostly disagree	somewhat disagree	somewhat agree	mostly agree	completely agree
1. I experience a real sense of trust and personal connection with my co-workers.	1	2	3	4	5	6
2. I receive inspiration or guidance from a Higher Power about my work.	1	2	3	4	5	6
3. I am able to find meaning or purpose at work.	1	2	3	4	5	6
4. I feel like I am part of "a community" at work.	1	2	3	4	5	6
5. I experience a connection with a greater source that has a positive effect on my work	1	2	3	4	5	6
6. At moments, I experience complete joy and ecstasy at work.	1	2	3	4	5	6
7. I am fulfilling my calling through my work.	1	2	3	4	5	6
8. My spiritual beliefs play an important role in everyday decisions that I make at work.	1	2	3	4	5	6
9. I feel grateful to be involved in work like mine.	1	2	3	4	5	6
10. I experience moments at work where everything is blissful.	1	2	3	4	5	6
11. I am passionate about my work.	1	2	3	4	5	6
12. I share a strong sense of purpose and meaning with my co-workers about our work.	1	2	3	4	5	6

This set of questions asks about your behaviours at work. **Please circle the response which most accurately reflects the extent to which you agree or disagree with each statement.**

To what extent do you <u>agree</u> with each of the following statements?	Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree
1. I fulfil all the responsibilities specified in my job description.	1	2	3	4	5	6	7
2. I sometimes fail to perform essential duties of my job.	1	2	3	4	5	6	7
3. I consistently meet the formal performance requirements of my job.	1	2	3	4	5	6	7
4. I conscientiously perform tasks that are expected of mine.	1	2	3	4	5	6	7
5. I sometimes neglect aspects of the job that I am obligated to perform.	1	2	3	4	5	6	7
6. I adequately complete all of my assigned duties.	1	2	3	4	5	6	7
7. I sometimes take undeserved or extended work breaks.	1	2	3	4	5	6	7
8. I adhere to informal organisational rules devised to maintain order.	1	2	3	4	5	6	7
9. I always give advance notice when I am unable to come to work.	1	2	3	4	5	6	7
10. I sometimes spend a lot of time in personal phone conversations.	1	2	3	4	5	6	7
11. My attendance at work is above the norm.	1	2	3	4	5	6	7
12. I sometimes complain about insignificant or minor things at work.	1	2	3	4	5	6	7
13. I generally help others who have been absent.	1	2	3	4	5	6	7
14. I take a personal interest in the well-being of other employees.	1	2	3	4	5	6	7
15. I generally help others who have heavy workloads.	1	2	3	4	5	6	7
16. I go out of the way to help new employees.	1	2	3	4	5	6	7
17. I generally take time to listen to co-workers' problems and worries.	1	2	3	4	5	6	7
18. I pass along work-related information to co-workers.	1	2	3	4	5	6	7

This set of questions asks about your behaviours at work. **Please answer them and circle the response on the scales provided**

1. How likely is it that you will actively look for a job outside of this organisation during the next year?

Very unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely	Very likely
1	2	3	4	5	6	7

2. How often do you think about quitting your job at this organisation?

Never	Rarely	Sometimes	Neutral	Often	Very often	All the time
1	2	3	4	5	6	7

3. If it were possible, I would like to get a new job.

Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6	7

Section C. Your Attitude at Work

This set of questions asks about your attitudes at work. **Please circle the response that best indicates your level of agreement or disagreement with each of the following statements.**

To what extent do you <u>agree</u> with each of the following statements?	Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree
1. When someone criticizes my organisation, it feels like a personal insult.	1	2	3	4	5	6	7
2. I am very interested in what others think about my organisation.	1	2	3	4	5	6	7
3. When I talk about my organisation, I usually say 'we' rather than 'they.'	1	2	3	4	5	6	7
4. My organisation's successes are my successes.	1	2	3	4	5	6	7
5. When someone praises my organisation, it feels like a personal compliment.	1	2	3	4	5	6	7
6. If a story in the media criticizes my organisation, I will feel embarrassed.	1	2	3	4	5	6	7

This set of questions asks about your attitudes at work. For each item, **please circle the response that most accurately represents your level of satisfaction.**

To what extent are you <u>satisfied</u> each of the following statements?	Extremely Dissatisfied	Very Dissatisfied	Moderately Dissatisfied	Neither satisfied nor dissatisfied	Moderately Satisfied	Very Satisfied	Extremely Satisfied
1. the physical work conditions	1	2	3	4	5	6	7
2. the freedom to choose your own method of working	1	2	3	4	5	6	7
3. your fellow workers	1	2	3	4	5	6	7
4. the recognition you get for good work	1	2	3	4	5	6	7
5. your immediate boss	1	2	3	4	5	6	7
6. the amount of responsibility you are given	1	2	3	4	5	6	7
7. your rate of pay	1	2	3	4	5	6	7
8. your opportunity to use your ability	1	2	3	4	5	6	7
9. relations between management and workers in your organisation	1	2	3	4	5	6	7
10. your chance of promotion	1	2	3	4	5	6	7
11. the way your organisation is managed	1	2	3	4	5	6	7
12. the attention paid to suggestions you make	1	2	3	4	5	6	7
13. your hours of work	1	2	3	4	5	6	7
14. the amount of variety in your job	1	2	3	4	5	6	7
15. your job security	1	2	3	4	5	6	7

<u>How often do you feel</u> the following points <u>at work</u> during the past few weeks? Please circle the response that most accurately represents your level of feeling.	Never	Sometimes	Often
1. Very lonely or remote from other people.	0	1	3
2. On top of the world	0	1	3
3. Depressed or very unhappy	0	1	3
4. Particularly excited or interested in something	0	1	3
5. Bored	0	1	3
6. Pleased about having accomplished something	0	1	3
7. So restless you couldn't sit long in a chair	0	1	3
8. Vaguely uneasy about something without knowing why	0	1	3

Individual spirit at work is a distinct state characterised by profound feelings of wellbeing, a belief that one is engaged in meaningful work, a connection to others and common purpose, a connection to something larger than self, and it has a transcendent nature.

For each of the conditions listed below, please indicate:

 1. What you consider to be the necessary level for fostering employee's individual spirit at work and

 2. What you consider to be the current level of the condition in your organisation.

Please circle the appropriate response for both **Necessary** and **Current** levels**.**

Explanation: The meanings of scale levels

1 = least	2 = little	3 = moderate	4 = high	5 = highest

Conditions	Necessary Level	Your Organisation's Current Level
1.) Inspired leadership leaders and senior members who inspire employees through their leadership and their example	1 2 3 4 5	1 2 3 4 5
2.) Strong organisational foundation including a shared vision, mission, purpose, and an intention to contribute to the overall good of society	1 2 3 4 5	1 2 3 4 5
3.) Organisational integrity that is aligned with its mission and purpose	1 2 3 4 5	1 2 3 4 5
4.) Positive workplace culture including a positive physical space for employees to work in	1 2 3 4 5	1 2 3 4 5
5.) Sense of community among members positive connections among all members and a sense of community in the organisation	1 2 3 4 5	1 2 3 4 5
6.) Opportunities for personal fulfilment opportunities for members to pursue professional and personal growth and to fulfil their own personal mission through work	1 2 3 4 5	1 2 3 4 5
7.) Appreciation and regard for employees and their contribution made by its members	1 2 3 4 5	1 2 3 4 5

Section E. Background Information

Please ✔ in front of the response which most accurately represents your information

1. How many years have you worked for this organisation?

   _____Under 1   _____1-3   _____4-9   _____10-20   _____over 20

2. Which type of organisation do you work for?

   _____Public Organisation   _____For-Profit Organisation   _____Not-For-Profit Organisation

3. What is your gender?

   _____Male   _____Female

4. What is your age?

   _____Under 25   _____26-35   _____36-45   _____46-55   _____Over 55

5. What is your marital status?

   _____Single   _____Married   _____Cohabiting   _____Separated or Divorced   _____Widowed

6. What is your current position?

   _____Administrative//Clerical   _____Service   _____Maintenance   _____Technical   _____Management

   _____Professional   Other (please specify)…..………………….
.
7. How frequently do you attend religious/spiritual services?

   _____Never   _____Rarely   _____Occasionally   _____Often   _____ Regularly

8. How often do you pray?

   ____Never   ____about once or   ____several times   ____once a   ____2 or 3 times   ____weekly ____several times
   twice a year   a year   month   a month   a week

9. How often do you read religious or spiritual scripture or literature?

   ____Never   ____about once or   ____several times   ____once a   ____2 or 3 times ____weekly ____several times
   twice a year   a year   month   a month   a week

Thank you very much for your valuable time and participation.
Please put the questionnaire in the envelope provided, seal it and return to me who
will come to collect it by myself.

Appendix 5: Full Questionnaire for Employees (Thai)

Aston Business School   **Work & Organisational Psychology Group**

ภาควิชาจิตวิทยาการทำงานและองค์การ คณะบริหารธุรกิจ มหาวิทยาลัยแอสตั้น ประเทศสหราชอาณาจักร

เรียน ผู้ตอบแบบสอบถาม

    ข้าพเจ้าชื่อ นายภาสกร เตวิชพงศ์ ปัจจุบันกำลังศึกษา ระดับปริญญาเอก ด้วยทุนรัฐบาลไทย (ก.พ.) สังกัดภาควิชาจิตวิทยาการทำงานและองค์การ คณะบริหารธุรกิจ มหาวิทยาลัยแอสตั้น ประเทศสหราชอาณาจักร หัวข้อวิทยานิพนธ์ของข้าพเจ้า ศึกษาเกี่ยวกับเรื่อง **ความสัมพันธ์ระหว่างพนักงานที่มีประสบการณ์ทางจิตวิญญาณในการทำงาน กับเจตคติในการทำงาน และผลลัพธ์ขององค์กร**

    ซึ่งความหมายของจิตวิญญาณในการทำงานในการศึกษาครั้งนี้มีคำจำกัดความว่าประสบการณ์ที่บุคคลสามารถสัมผัสได้ถึงมิติแห่งความสุขในการทำงานโดยมีความเชื่อว่าตนกำลังได้มีส่วนร่วมในการทำงานที่มีความหมายและสำคัญเป็นอย่างมากมีมิติแห่งความรู้สึกผูกพันแนบแน่นกับเพื่อนร่วมงาน มีมิติสัมพันธ์เชื่อมโยงในงานที่ตนทำกับสิ่งที่ตนนับถือหรืออำนาจที่ยิ่งใหญ่กว่าตนเอง

    จุดประสงค์ของงานวิจัยนี้เพื่อแสวงหาวิธีการในการปรับปรุงพัฒนาทั้งทางด้านประสิทธิภาพและประสิทธิผลของพนักงานในองค์กรให้ดียิ่งขึ้นและผลจากการวิจัยนี้ข้าพเจ้าหวังว่าจะสามารถจัดทำแนวทางการปรับปรุงพัฒนากลยุทธ์ทางด้านการบริหารการจัดการให้กับผู้บริหารหรือผู้นำองค์กรในการนำไปใช้เพื่อให้ได้ประโยชน์สูงสุดในการเพิ่มขวัญกำลังใจและเพิ่มผลการปฏิบัติงานของพนักงานในองค์กรต่อไป

    งานวิจัยครั้งนี้จะ ไม่สามารถสำเร็จลงได้โดยปราศจากความคิดเห็นอันมีคุณค่าของท่านดังนั้นข้าพเจ้าจึงเรียนมาเพื่อขอความร่วมมือจากท่านเพื่อตอบแบบสอบถามฉบับนี้**โดยใช้เวลาประมาณเพียง10-15นาที**โดยการตอบให้ตรงกับความคิดเห็นของท่านมากที่สุดและกรุณาตอบให้สมบูรณ์ทุกข้อคำตอบของท่านจะถูกเก็บเป็นความลับการวิเคราะห์ผลจะกระทำในภาพรวมเท่านั้นซึ่งจะ ไม่ทำให้เกิดความเสียหายต่อตัวท่านและหน่วยงานของท่านแต่อย่างใด

    อนึ่งในงานวิจัยนี้หัวหน้างานของท่านมีส่วนร่วมในการประเมินพฤติกรรมในการทำงานของท่านด้วย**ภายหลังตอบแบบสอบถามเสร็จสิ้นแล้วกรุณาพับแบบสอบถามนี้และใส่ซองที่จัดให้พร้อมปิดผนึกให้เรียบร้อยและคืนให้กับข้าพเจ้าที่จะมาเก็บรวบรวมด้วยตนเอง ทั้งนี้เพื่อป้องกันมิให้ผู้อื่นรู้คำตอบของท่าน และรักษาความลับอันเป็นความคิดเห็นส่วนบุคคลของท่านอีกทางหนึ่ง**

    เนื่องจากการศึกษาวิจัยครั้งนี้เป็นการศึกษาแบบระยะยาวจะมีการเก็บข้อมูล2ครั้ง คือภายหลังจากการเก็บข้อมูลครั้งนี้ไปแล้วประมาณ89เดือนข้าพเจ้าจะกลับมาเก็บข้อมูลอีกครั้งเพื่อป้องกันการเก็บข้อมูลของท่านให้เป็นความลับโดยไม่ต้องการระบุชื่อว่าเป็นตัวท่านและช่วยให้ข้าพเจ้าสามารถจับคู่การตอบแบบสอบถามทั้งสองครั้งของท่านได้ข้าพเจ้าขอให้ท่านกรุณากรอก<u>เฉพาะวันที่และเดือนเกิด</u>ของท่าน เป็นตัวเลข 4 หลักในช่องข้างล่างนี้ ตัวอย่างเช่น ท่านเกิดวันที่ 4 เดือนกรกฎาคม จะกรอกเป็นตัวเลขดังนี้ 0407

                       ขอแสดงความนับถือและขอขอบคุณในความร่วมมือของท่าน มา ณ ที่นี้ด้วย

                                         นายภาสกร เตวิชพงศ์

หมายเหตุ:การตอบแบบสอบถามนี้นั้นขึ้นอยู่กับ**ความสมัครใจของท่าน**เท่านั้น โดยท่านมีอิสระในการขอถอนตัวจากการมีส่วนร่วมในการวิจัยเมื่อใดก็ได้ โดยข้อมูลของท่านจะถูกถอนออกจากงานวิจัยในครั้งนี้ด้วย แต่อย่างไรก็ตามถ้าหากท่านทำการตอบแบบสอบถามนี้ก็ถือได้ว่าท่านยินยอมสมัครใจและยินดีกับการมีส่วนร่วมในการวิจัยครั้งนี้ด้วยและหากท่านต้องการทราบข้อมูลเพิ่มเติมเกี่ยวกับงานวิจัยในครั้งนี้ กรุณาติดต่อข้าพเจ้าได้ทางจดหมายอิเลคทรอนิคส์ นายภาสกร เตวิชพงศ์ (tevichap@aston.ac.uk) หรืออาจารย์ที่ปรึกษาของข้าพเจ้า ดร.แอน เดวีส (a.j.davis@aston.ac.uk) และ ดร.ไมเคิล ริกิตต้า (rikettam@aston.ac.uk) ทั้งนี้ ท่านยังสามารถติดต่อกับเราทั้งสามคนได้ตามที่อยู่ทางไปรษณีย์ดังนี้ The Work & Organisational Psychology Group, Aston Business School, Aston University, Birmingham, United Kingdom, B4 7ET**.**

                         กรุณาเปิดหน้าต่อไปได้ เมื่อท่านพร้อมแล้ว ที่จะเริ่มทำ…

กรุณาตอบคำถามต่อไปนี้ซึ่งเกี่ยวกับประสบการณ์ในการทำงานของท่าน โดย<u>วงกลมรอบหมายเลขคำตอบที่ตรงกับ</u>
<u>ความคิดเห็นของท่านมากที่สุด</u>

ท่านเห็นด้วยมากน้อยเพียงไร กับข้อคำถามต่อไปนี้ ?	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วยมาก	ค่อนข้างไม่เห็นด้วย	ค่อนข้างเห็นด้วย	เห็นด้วยมาก	เห็นด้วยอย่างยิ่ง
1.ฉันมีประสบการณ์ในความไว้วางใจและความสัมพันธ์ต่อกันอย่างแท้จริง กับเพื่อนร่วมงานของฉัน	1	2	3	4	5	6
2.ฉันได้รับแรงบันดาลใจหรือการแนะแนวทางในการทำงานของฉันจากอำนาจที่ยิ่งใหญ่กว่าตัวฉันเอง	1	2	3	4	5	6
3.ฉันสามารถพบความหมายหรือจุดประสงค์ในงานที่ฉันกำลังทำอยู่	1	2	3	4	5	6
4. ฉันรู้สึกว่าฉันเป็นส่วนหนึ่งในสังคมที่ฉันทำงานอยู่นี้	1	2	3	4	5	6
5.ฉันมีประสบการณ์ในความสัมพันธ์กับอำนาจที่ยิ่งใหญ่กว่าตัวฉันเอง ที่สามารถส่งผลดีต่องานของฉันได้	1	2	3	4	5	6
6.บางครั้งฉันมีประสบการณ์ในความเบิกบานใจและความปีติยินดีอย่างเหลือล้นกับงานที่ฉันทำอยู่	1	2	3	4	5	6
7.ฉันกำลังประสบความสำเร็จในอาชีพของฉันผ่านงานที่ฉันทำอยู่	1	2	3	4	5	6
8.ความเชื่อในฝ่ายจิตวิญญาณของฉันมีบทบาทสำคัญต่อการตัดสินใจในทุกเรื่องที่เกี่ยวข้องกับการทำงานของฉัน	1	2	3	4	5	6
9. ฉันรู้สึกซาบซึ้งกับการได้มีส่วนร่วมในงานที่ฉันทำอยู่นี้	1	2	3	4	5	6
10.บางครั้งฉันมีประสบการณ์แห่งความสันติสุขและความสมบูรณ์แบบกับงานที่ฉันทำอยู่	1	2	3	4	5	6
11. ฉันรักในงานของฉันเป็นอย่างมาก	1	2	3	4	5	6
12. ฉันมีความรู้สึกในแง่ดีเช่นเดียวกับเพื่อนร่วมงานของฉันเกี่ยวกับจุดประสงค์และความหมายในงานของเรา	1	2	3	4	5	6

ข. พฤติกรรมในการทำงานของท่าน

กรุณาตอบคำถามต่อไปนี้ซึ่งเกี่ยวกับพฤติกรรมในการทำงานของท่าน โดย<u>วงกลมรอบหมายเลขคำตอบที่ตรงกับความคิดเห็นของท่านมากที่สุด</u>

ท่านเห็นด้วยมากน้อยเพียงไร กับข้อคำถามต่อไปนี้ ?	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	ค่อนข้างไม่เห็นด้วย	ไม่ทั้งเห็นด้วยและไม่เห็นด้วย	ค่อนข้างเห็นด้วย	เห็นด้วย	เห็นด้วยอย่างยิ่ง
1.ฉันปฏิบัติงานสำเร็จตามความรับผิดชอบทุกอย่างที่ระบุไว้ตามคำบรรยายลักษณะงาน	1	2	3	4	5	6	7
2.**บางครั้ง**ฉันปฏิบัติงานล้มเหลวตามหน้าที่ที่จำเป็นต้องทำในงานของฉัน	1	2	3	4	5	6	7
3.ฉันทำงานได้ตรงตามคุณสมบัติที่จำเป็นที่ต้องมีในงานของฉันอย่างสม่ำเสมอ	1	2	3	4	5	6	7
4.ฉันทำงานอย่างรับผิดชอบและเป็นไปตามที่ฉันได้คาดหวังไว้	1	2	3	4	5	6	7
5.**บางครั้ง**ฉันละเลยงานบางอย่างที่ฉันจำเป็นต้องปฏิบัติตามหน้าที่	1	2	3	4	5	6	7
6.ฉันได้ปฏิบัติงานเสร็จสมบูรณ์ครบถ้วนตามที่ได้รับมอบหมาย	1	2	3	4	5	6	7
7.**บางครั้ง**ฉันหยุดพักงานในเวลาที่ไม่ควรพักหรือพักจนเกินเวลาพัก	1	2	3	4	5	6	7
8.ฉันรักษากฏระเบียบที่ไม่เป็นทางการขององค์กร เพื่อคงไว้ซึ่งความเป็นระเบียบเรียบร้อย	1	2	3	4	5	6	7
9.ฉันจะแจ้งล่วงหน้าเสมอถ้าหากฉันไม่สามารถมาทำงานได้	1	2	3	4	5	6	7
10.**บางครั้ง** ฉันใช้เวลาโทรศัพท์ในเรื่องส่วนตัวนานมาก	1	2	3	4	5	6	7
11.เวลาการมาทำงานของฉันอยู่ในเกณฑ์ที่ดีเหนือกว่ามาตรฐาน	1	2	3	4	5	6	7
12.**บางครั้ง**ฉันบ่นต่อว่าในเรื่องเล็กๆน้อยๆในการทำงาน	1	2	3	4	5	6	7
13.โดยปกติแล้วฉันจะช่วยเหลืองานของผู้อื่นที่ขาดงานไป	1	2	3	4	5	6	7
14.ฉันมักจะใส่ใจต่อความสุขของเพื่อนพนักงานคนอื่นๆ	1	2	3	4	5	6	7
15.โดยปกติแล้วฉันจะช่วยเหลืองานของผู้อื่นที่เขามีงานล้นมือ	1	2	3	4	5	6	7
16.ฉันมักจะเสนอตัวเพื่อมีส่วนช่วยเหลือแนะนำให้แก่พนักงานใหม่	1	2	3	4	5	6	7
17.โดยปกติแล้วฉันจะให้เวลาในการรับฟังปัญหาหรือเรื่องทุกข์ใจของเพื่อนร่วมงาน	1	2	3	4	5	6	7
18ฉันบอกต่อข้อมูลต่างๆที่เกี่ยวกับเรื่องงาน ให้กับเพื่อนร่วมงานคนอื่นๆ	1	2	3	4	5	6	7

กรุณาตอบคำถามต่อไปนี้ซึ่งเกี่ยวกับพฤติกรรมในการทำงานของท่าน โดย<u>วงกลมรอบหมายเลข</u>คำตอบที่ตรงกับความคิดเห็นของท่านมากที่สุดในแต่ละมาตรวัดทั้ง 3 ข้อ

1. เป็นไปได้มากน้อยแค่ไหนที่ภายในในช่วงปีหน้านี้ คุณกำลังตั้งใจมองหางานใหม่ในองค์กรอื่น?

เป็นไปไม่ได้ อย่างยิ่ง	แทบเป็น ไปไม่ได้	ค่อนข้าง เป็นไปไม่ได้	ไม่ทั้ง เป็นไปได้ และเป็นไปไม่ได้	ค่อนข้าง เป็นไปได้	เป็นไป ได้มาก	เป็นไปได้ อย่างยิ่ง
1	2	3	4	5	6	7

2. บ่อยเท่าไหร่ที่คุณคิดจะลาออกจากงานที่ทำอยู่ในองค์กรแห่งนี้?

ไม่เคยเลย	แทบไม่เคยเลย	บางครั้ง	ไม่แน่ใจ	บ่อยๆ	บ่อยมาก	ตลอดเวลา
1	2	3	4	5	6	7

3. ถ้าเป็นไปได้ ฉันต้องการจะหางานใหม่ทำ?

ไม่เห็นด้วย อย่างยิ่ง	ไม่เห็นด้วย	ค่อนข้าง ไม่เห็นด้วย	ไม่ทั้ง เห็นด้วย และไม่เห็นด้วย	ค่อนข้าง เห็นด้วย	เห็นด้วย	เห็นด้วย อย่างยิ่ง
1	2	3	4	5	6	7

ค. เจตคติของท่านในการทำงาน

กรุณาตอบคำถามต่อไปนี้ซึ่งเกี่ยวกับเจตคติในการทำงานของท่าน โดย<u>วงกลมรอบหมายเลข</u>คำตอบที่ตรงกับความคิดเห็นของท่านมากที่สุด

ท่านเห็นด้วยมากน้อยเพียงไร กับข้อคำถามต่อไปนี้ ?	ไม่เห็น ด้วยอย่าง ยิ่ง	ไม่เห็น ด้วย	ค่อนข้าง ไม่เห็น ด้วย	ไม่ทั้ง เห็น ด้วย และไม่ เห็นด้วย	ค่อนข้าง เห็นด้วย	เห็นด้วย	เห็นด้วย อย่างยิ่ง
1. เมื่อมีใครวิพากษ์วิจารณ์องค์กรของฉัน ฉันรู้สึกเหมือนเป็นการสบประมาทส่วนตัวด้วย	1	2	3	4	5	6	7
2. ฉันให้ความสนใจมาก ต่อสิ่งที่ผู้อื่นคิดเกี่ยวกับองค์กรของฉัน	1	2	3	4	5	6	7
3. เมื่อฉันพูดเกี่ยวกับองค์กรของฉัน ฉันจะมักใช้คำว่า "พวกเรา" มากกว่า "พวกเขา"	1	2	3	4	5	6	7
4. ความสำเร็จขององค์กรของฉัน ก็เป็นความสำเร็จของฉันด้วย	1	2	3	4	5	6	7
5. เมื่อมีใครพูดในแง่ดีหรือชื่นชมองค์กรของฉัน ฉันรู้สึกเหมือนเป็นคำชมส่วนตัวด้วย	1	2	3	4	5	6	7
6. ถ้าเรื่องราวในสื่อวิพากษ์วิจารณ์องค์กรของฉัน ฉันจะรู้สึกอับอายและไม่สบายใจไปด้วย	1	2	3	4	5	6	7

ค. เจตคติของท่านในการทำงาน (ต่อ)

กรุณาตอบคำถามต่อไปนี้ซึ่งเกี่ยวกับเจตคติในการทำงานของท่าน โดย<u>วงกลมรอบหมายเลขคำตอบที่ตรงกับความคิดเห็น</u>ของท่านมากที่สุด

ท่านพึงพอใจในงานของท่าน มากน้อยเพียงไร กับ ข้อคำถามต่อไปนี้ ?	ไม่พึงพอใจอย่างยิ่ง	ไม่พึงพอใจมาก	ไม่พึงพอใจบ้าง	ไม่ทั้ง พึงพอใจและไม่พึงพอใจ	พึงพอใจบ้าง	พึงพอใจมาก	พึงพอใจอย่างยิ่ง
1. สภาพของสถานที่ทำงาน	1	2	3	4	5	6	7
2. อิสระในการเลือกวิธีการทำงาน	1	2	3	4	5	6	7
3. เพื่อนร่วมงานของคุณ	1	2	3	4	5	6	7
4. การเห็นคุณค่า เมื่อคุณทำสิ่งดี	1	2	3	4	5	6	7
5. หัวหน้างานของคุณที่สูงขึ้นไปหนึ่งระดับ	1	2	3	4	5	6	7
6. ปริมาณงานที่คุณต้องรับผิดชอบ	1	2	3	4	5	6	7
7. เงินเดือนค่าจ้างของคุณ	1	2	3	4	5	6	7
8. โอกาสของคุณที่จะใช้ความรู้ความสามารถ	1	2	3	4	5	6	7
9.ความสัมพันธ์ระหว่างฝ่ายบริหารกับพนักงานในองค์กร	1	2	3	4	5	6	7
10. โอกาสในการเลื่อนตำแหน่งงานของคุณ	1	2	3	4	5	6	7
11. ระบบการบริหารจัดการขององค์กร	1	2	3	4	5	6	7
12. ความใส่ใจต่อข้อเสนอแนะของคุณ	1	2	3	4	5	6	7
13. จำนวนชั่วโมงการทำงานของคุณ	1	2	3	4	5	6	7
14. ปริมาณความหลากหลายในงานของคุณ	1	2	3	4	5	6	7
15. ความมั่นคงในงานของคุณ	1	2	3	4	5	6	7

ในช่วงเวลา 2-3 สัปดาห์ที่ผ่านมา บ่อยมากเท่าไหร่ที่คุณมีความรู้สึกต่อไปนี้ในที่ทำงาน? โดย<u>วงกลมรอบหมายเลขคำตอบที่ตรงกับความคิดเห็นของท่านมากที่สุด</u>	ไม่เคย	บางครั้ง	บ่อยๆ
1. รู้สึกเหงามากหรือห่างไกลจากผู้อื่น	0	1	3
2. มีความสุขมาก	0	1	3
3. หดหู่ใจหรือไม่มีความสุขเลย	0	1	3
4. รู้สึกตื่นเต้นเป็นพิเศษหรือสนใจอะไรในบางสิ่ง	0	1	3
5. รู้สึกเบื่อหน่าย	0	1	3
6. พอใจกับบางสิ่งที่ได้ทำสำเร็จ	0	1	3
7. รู้สึกกระสับกระส่ายจนคุณนั่งไม่ติดเก้าอี้	0	1	3
8. กระวนกระวายใจในบางเรื่องที่ไม่รู้สาเหตุว่าทำไม	0	1	3

"จิตวิญญาณในการทำงาน" ในการศึกษาครั้งนี้มีคำจำกัดความว่า ประสบการณ์ที่บุคคลสามารถสัมผัสได้ถึงมิติแห่งความสุขในการทำงาน โดยมีความเชื่อว่าตนกำลังมีส่วนร่วมในการทำงานที่มีความหมายและความสำคัญอย่างยิ่งต่อตนเอง อีกทั้งมีมิติแห่งความผูกพันแนบแน่นกับเพื่อนร่วมงานและผู้อื่นในองค์กร และรวมไปถึงมีมิติสัมพันธ์เชื่อมโยงในงานที่ตนทำกับอำนาจที่ยิ่งใหญ่กว่าตัวเอง

กรุณาตอบคำถามทั้งสองข้อต่อไปนี้ โดย<u>วงกลมรอบหมายเลขคำตอบที่ตรงกับความคิดเห็นของท่านมากที่สุด</u>

1. ในช่องแรก ให้ท่านพิจารณาว่าปัจจัยแต่ละข้อขององค์กรนั้น <u>ควรมีระดับความจำเป็นมากน้อยเพียงใด</u> ที่จะสามารถมีผลต่อการสนับสนุนส่งเสริมให้พนักงานในองค์กร มีจิตวิญญาณในการทำงานมากยิ่งขึ้น?

2. ในช่องที่สอง ให้ท่านพิจารณาว่าปัจจัยแต่ละข้อขององค์กรนั้น <u>ปัจจุบันองค์กรของท่านมีอยู่ในระดับมากน้อยเพียงใด</u>?

คำอธิบาย: ความหมายของมาตรวัด

1 = น้อยที่สุด	2 = น้อย	3 = ปานกลาง	4 = มาก	5 = มากที่สุด

ปัจจัยด้านต่างๆขององค์กร	ระดับความจำเป็นที่ต้องมีเพื่อเพิ่ม"จิตวิญญาณในการทำงาน"	ระดับปัจจุบัน ที่องค์กรท่านมีอยู่
1.) **"ภาวะผู้นำขององค์กรที่สร้างแรงบันดาลใจ"** ผู้นำและสมาชิกอาวุโสที่สามารถสร้างแรงบันดาลใจให้กับพนักงานในองค์กรโดยผ่านภาวะผู้นำของเขาและการเป็นแบบอย่างที่ดีของเขา	1 2 3 4 5	1 2 3 4 5
2.) **"รากฐานขององค์กรที่เข้มแข็ง"** ทั้งนี้รวมไปถึง วิสัยทัศน์ พันธกิจ วัตถุประสงค์ขององค์กร ที่ตั้งใจจะทำประโยชน์และสิ่งดีต่อสังคมโดยรวม	1 2 3 4 5	1 2 3 4 5
3.) **"ความมีคุณธรรมและจริยธรรมขององค์กร"** ซึ่งสอดคล้องกับพันธกิจและวัตถุประสงค์ขององค์กร	1 2 3 4 5	1 2 3 4 5
4.) **"วัฒนธรรมองค์กรเชิงบวก"** ทั้งนี้รวมไปถึงสภาพสถานที่ทำงานที่เหมาะสมให้กับพนักงานในการทำงานด้วย	1 2 3 4 5	1 2 3 4 5
5.) **"ความรู้สึกแห่งการเป็นชุมชนของพนักงานในองค์กร"** ความสัมพันธ์ที่ดีต่อกันของพนักงานในองค์กร รวมไปถึงความรู้สึกแห่งการอยู่ร่วมกันเป็นชุมชนในองค์กรเดียวกัน	1 2 3 4 5	1 2 3 4 5
6.) **"โอกาสในการบรรลุความสำเร็จของบุคคลในองค์กร"** โอกาสของพนักงานในองค์กรที่จะเจริญเติบโตทั้งทางด้านอาชีพและเรื่องส่วนตัวเพื่อจะได้บรรลุเป้าหมายส่วนตัวในชีวิตผ่านงานที่เขาทำอยู่	1 2 3 4 5	1 2 3 4 5
7.) **"ความชื่นชมและการชมเชยต่อพนักงานในองค์กรที่กระทำ คุณประโยชน์ให้กับองค์กร"**	1 2 3 4 5	1 2 3 4 5

จ. ข้อมูลส่วนบุคคล

กรุณาทำเครื่องหมาย ✔ หน้าข้อความที่ตรงกับข้อมูลของท่านมากที่สุด

1. ท่านทำงานในองค์กรแห่งนี้มานานเท่าไหร่แล้ว?

_____ต่ำกว่า 1 ปี _____1-3 ปี _____4-9 ปี _____10-20 ปี _____มากกว่า 20 ปี

2. ท่านทำงานในองค์กรประเภทใด?

_____องค์กรของรัฐหรือในกำกับของรัฐ _____องค์กรเอกชน/แบบแสวงหากำไร _____องค์กรที่ไม่หวังผลกำไร/มูลนิธิ

3. เพศของท่าน? _____ เพศชาย _____เพศหญิง

4. อายุของท่าน? _____ต่ำกว่า 25 ปี _____26-35 ปี _____36-45 ปี _____46-55 ปี _____มากกว่า 55 ปี

5. สถานภาพสมรสของท่าน?

_____โสด _____แต่งงานแล้ว _____อยู่ด้วยกันแต่ไม่ได้แต่งงาน _____แยกกันอยู่/หย่าร้าง _____หม้าย

6. ตำแหน่งงานปัจจุบันของท่าน?

_____งานธุรการ _____งานให้บริการ _____งานซ่อมแซมบำรุง _____งานด้านเทคนิค _____งานบริหารจัดการ
_____งานสายวิชาชีพเฉพาะ อื่นๆ (กรุณาระบุ)…..………………………………………..

7. บ่อยมากเพียงใดที่ท่านเข้าร่วมการประชุมกิจกรรมทางศาสนาหรือการประชุมทางด้านจิตวิญญาณ (ไปวัดทำบุญ/ไปคริสตจักร/ไปมัสยิด)?

_____ไม่เคยเลย _____น้อยมาก _____บางครั้งบางโอกาส _____บ่อยๆ _____ไปเป็นประจำ

8. บ่อยมากเท่าไหร่ที่ท่านสวดมนต์/อธิษฐาน?

____ไม่เคยเลย ____ ประมาณ 1-2 ครั้งต่อปี ____ 3-4 ครั้งต่อปี ____เดือนละ 1 ครั้ง ____2 หรือ 3 ครั้งต่อเดือน
____สัปดาห์ละครั้ง ____ มากกว่า 2-3 ครั้งต่อสัปดาห์

9. บ่อยมากเท่าไหร่ที่ท่านอ่านหนังสือธรรมะ คัมภีร์ไบเบิลหรือหนังสือทางศาสนา หรือหนังสือที่ส่งเสริมทางด้านจิตวิญญาณ?

____ไม่เคยเลย ____ ประมาณ 1-2 ครั้งต่อปี ____ 3-4 ครั้งต่อปี ____เดือนละ 1 ครั้ง ____2 หรือ 3 ครั้งต่อเดือน
____สัปดาห์ละครั้ง ____ มากกว่า 2-3 ครั้งต่อสัปดาห์

<div align="center">

ขอขอบพระคุณในการให้ความร่วมมือตอบแบบสอบถามในครั้งนี้
กรุณาพับแบบสอบถามนี้ และ ใส่ซองที่จัดเตรียมไว้ให้ ปิดผนึกให้เรียบร้อย
และคืนให้กับข้าพเจ้าที่จะมาเก็บรวบรวมด้วยตนเอง

</div>

Appendix 6: Full Questionnaire for Immediate Supervisors (English)

Work & Organisational Psychology Group, Aston University, United Kingdom

Dear Respondents,

I am a doctoral student in the field of Work and Organisational Psychology, Aston Business School, Aston University. **My research is focus on employees' experienced spirit at work and its relationship with their work attitudes and organisational outcomes.** Individual spirit at work is a distinct state characterised by profound feelings of wellbeing, a belief that one is engaged in meaningful work, a connection to others and common purpose, a connection to something larger than self, and it has a transcendent nature.

 This research seeks to improve employees' effectiveness in the organisation through exploring the relationships between experienced spirit at work and work attitudes and organisational outcomes. From this I hope to develop guidelines for employers and leaders on how **to improve their management strategy and ultimately enhance employees' morale and performance.**

In this study, **immediate supervisors are also invited to comment on their subordinates' behaviours at work.** My efforts cannot be made possible without your valuable input. Therefore, I would like to ask for your cooperation to complete the attached questionnaire. **You are asked to spare 5 minutes** of your time to fill out the questionnaire as truthfully as possible, answering all the questions.

All your responses are **confidential** and will be analysed at the group level. Also, no information will be made public that might identify you or your organisation. Since this research is conducted in a longitudinal manner, after this first time of data collection, **there will be the second voluntary participation in the next 8-9 months time.** Therefore, you will be invited again next time to fill out this questionnaire. **The name of your subordinate** who you will comment is written on the post-it paper in the next page. After completing the questionnaire**, please remove the post-it paper and then put the questionnaire in the envelope provided and return to me who will come to collect it by myself.**

I look forward to your valuable input and thank you in advance for your assistance in this research.

Yours truly,
Passagorn Tevichapong
PhD student, Aston University

Remark: Please note that completion of this questionnaire is **voluntary**. Also, **you are free to withdraw at any time and then your responses will be excluded from the study.** However, by completing this questionnaire it is assumed that you consent to participate in this research. If you would like further information about the study please contact myself, Mr. Passagorn Tevichapong, (tevichap@aston.ac.uk), or my supervisors, **Dr. Ann Davis, (a.j.davis@aston.ac.uk), Dr. Michael Riketta, (rikettam@aston.ac.uk).** They can all be contacted through the Work & Organisational Psychology Group, Aston Business School, Aston University, Birmingham, United Kingdom, B4 7ET.

Please turn over when you are ready to begin…

- 300 -

This set of questions asks about your subordinate's behaviours at work. **Please circle the response which most accurately reflects the extent to which you agree or disagree with each statement.**

To what extent do you <u>agree</u> with each of the following statements?	Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree
1. He/she fulfils all the responsibilities specified in his/her job description.	1	2	3	4	5	6	7
2. He/she sometimes fails to perform essential duties of his/her job.	1	2	3	4	5	6	7
3. He/she consistently meets the formal performance requirements of his/her job.	1	2	3	4	5	6	7
4. He/she conscientiously performs tasks that are expected of mine.	1	2	3	4	5	6	7
5. He/she sometimes neglects aspects of the job that I am obligated to perform.	1	2	3	4	5	6	7
6. He/she adequately completes all of my assigned duties.	1	2	3	4	5	6	7
7. He/she sometimes takes undeserved or extended work breaks.	1	2	3	4	5	6	7
8. He/she adheres to informal organisational rules devised to maintain order.	1	2	3	4	5	6	7
9. He/she always gives advance notice when he/she is unable to come to work.	1	2	3	4	5	6	7
10. He/she sometimes spends a lot of time in personal phone conversations.	1	2	3	4	5	6	7
11. His/her attendance at work is above the norm.	1	2	3	4	5	6	7
12. He/she sometimes complains about insignificant or minor things at work.	1	2	3	4	5	6	7
13. He/she generally helps others who have been absent.	1	2	3	4	5	6	7
14. He/she takes a personal interest in the well-being of other employees.	1	2	3	4	5	6	7
15. He/she generally helps others who have heavy workloads.	1	2	3	4	5	6	7
16. He/she goes out of the way to help new employees.	1	2	3	4	5	6	7
17. He/she generally takes time to listen to co-workers' problems and worries.	1	2	3	4	5	6	7
18. He/she passes along work-related information to co-workers.	1	2	3	4	5	6	7

Section B. Background Information

Please ✔ in front of the response which most accurately represents your information

1. How many years have you worked for this organisation?

    _____Under 1   _____1-3   _____4-9   _____10-20   _____over 20

2. Which type of organisation do you work for?

    _____Public Organisation   _____For-Profit Organisation   _____Not-For-Profit Organisation

3. What is your gender?

    _____Male   _____Female

4. What is your age?

    _____Under 25   _____26-35   _____36-45   _____46-55   _____Over 55

5. What is your marital status?

    _____Single   _____Married   _____Cohabiting   _____Separated or Divorced   _____Widowed

.

Thank you very much for your valuable time and participation.
Please remove the post-it paper which has your subordinate's name on it!
Then, put the questionnaire in the envelope provided, seal it and return to me who
will come to collect it by myself.

เรียน ผู้ตอบแบบสอบถาม

      ข้าพเจ้าชื่อ นายภาสกร เตวิชพงศ์ ปัจจุบันกำลังศึกษา ระดับปริญญาเอก ด้วยทุนรัฐบาลไทย (ก.พ.) สังกัดภาควิชาจิตวิทยาการทำงานและองค์การ คณะบริหารธุรกิจ มหาวิทยาลัยแอสตั้น ประเทศสหราชอาณาจักร หัวข้อวิทยานิพนธ์ของข้าพเจ้า ศึกษาเกี่ยวกับเรื่อง **ความสัมพันธ์ระหว่างพนักงานที่มีประสบการณ์ทางจิตวิญญาณในการทำงาน กับเจตคติในการทำงาน และผลลัพธ์ขององค์กร**

      ซึ่งความหมายของจิตวิญญาณในการทำงานในการศึกษาครั้งนี้มีคำจำกัดความว่าประสบการณ์ที่บุคคลสามารถสัมผัสได้ถึงมิติแห่งความสุขในการทำงานโดยมีความเชื่อว่าตนกำลังได้มีส่วนร่วมในการทำงานที่มีความหมายและสำคัญเป็นอย่างมากมีมิติแห่งความรู้สึกผูกพันแนบแน่นกับเพื่อนร่วมงานมีมิติสัมพันธ์เชื่อมโยงในงานที่ตนทำกับสิ่งที่ตนนับถือหรืออำนาจที่ยิ่งใหญ่กว่าตนเอง

      จุดประสงค์ของงานวิจัยนี้เพื่อแสวงหาวิธีการในการปรับปรุงพัฒนาทั้งทางด้านประสิทธิภาพและประสิทธิผลของพนักงานในองค์กรให้ดียิ่งขึ้นและผลจากการวิจัยนี้ข้าพเจ้าหวังว่าจะสามารถจัดทำแนวทางการปรับปรุงพัฒนากลยุทธ์ทางด้านการบริหารการจัดการให้กับผู้บริหารหรือผู้นำองค์กรในการนำไปใช้เพื่อให้ได้ประโยชน์สูงสุดในการเพิ่มขวัญกำลังใจและเพิ่มผลการปฏิบัติงานของพนักงานในองค์กรต่อไป

      อนึ่งในงานวิจัยนี้หัวหน้างานมีส่วนร่วมในการประเมินพฤติกรรมในการทำงานของพนักงานภายใต้บังคับบัญชาของท่านด้วยงานวิจัยครั้งนี้จะไม่สามารถสำเร็จลงได้โดยปราศจากความคิดเห็นอันมีคุณค่าของท่านดังนั้นข้าพเจ้าจึงเรียนมาเพื่อขอความร่วมมือจากท่านเพื่อตอบแบบสอบถามฉบับนี้ **โดยใช้เวลาประมาณเพียง 5 นาที** โดยการตอบให้ตรงกับความคิดเห็นของท่านมากที่สุด และกรุณาตอบให้สมบูรณ์ทุกข้อคำตอบของท่านจะถูกเก็บเป็นความลับการวิเคราะห์ผลจะกระทำในภาพรวมเท่านั้นซึ่งจะไม่ทำให้เกิดความเสียหายต่อตัวท่านและหน่วยงานของท่านแต่อย่างใด เนื่องจากการศึกษาวิจัยครั้งนี้เป็นการศึกษาแบบระยะยาวจะมีการเก็บข้อมูล 2 ครั้ง คือภายหลังจากการเก็บข้อมูลครั้งนี้ไปแล้ว ประมาณ 8 - 9 เดือน ท่านจะได้มีส่วนร่วมในการกรอกแบบสอบถามนี้อีกครั้งหนึ่ง

   **สำหรับชื่อพนักงานภายใต้บังคับบัญชาของท่านที่ต้องทำการประเมินครั้งนี้ปรากฏอยู่ที่กระดาษโพสอิทซึ่งติดอยู่ด้านมุมขวาบนของกระดาษในหน้าถัดไปแล้วภายหลังตอบแบบสอบถามเสร็จสิ้นแล้วกรุณาดึงกระดาษโพสอิทที่มีรายชื่อพนักงานภายใต้บังคับบัญชาของท่านนี้ออกด้วยพับแบบสอบถามนี้และใส่ซองที่จัดให้พร้อมปิดผนึกให้เรียบร้อยและคืนให้กับข้าพเจ้าที่จะมาเก็บรวบรวมด้วยตนเอง ทั้งนี้เพื่อป้องกันมิให้ผู้อื่นรู้คำตอบของท่าน และรักษาความลับอันเป็นความคิดเห็นส่วนบุคคลของท่านอีกทางหนึ่ง**

                   ขอแสดงความนับถือและขอขอบคุณในความร่วมมือของท่าน มา ณ ที่นี้ด้วย

                   นายภาสกร เตวิชพงศ์

หมายเหตุ: การตอบแบบสอบถามนี้นั้นขึ้นอยู่กับ**ความสมัครใจของท่าน**เท่านั้น โดยท่านมีอิสระในการขอถอนตัวจากการมีส่วนร่วมในการวิจัยเมื่อใดก็ได้ โดยข้อมูลของท่านจะถูกถอนออกจากงานวิจัยในครั้งนี้ด้วย แต่อย่างไรก็ตามถ้าหากท่านทำการตอบแบบสอบถามนี้ก็ถือได้ว่าท่านยินยอมสมัครใจและยินดีกับการมีส่วนร่วมในการวิจัยครั้งนี้ด้วย และหากท่านต้องการทราบข้อมูลเพิ่มเติมเกี่ยวกับงานวิจัยในครั้งนี้ กรุณาติดต่อข้าพเจ้าได้ทางจดหมายอิเลคทรอนิคส์ นายภาสกร เตวิชพงศ์ (tevichap@aston.ac.uk) หรืออาจารย์ที่ปรึกษาของข้าพเจ้า ดร.แอน เดวีส (a.j.davis@aston.ac.uk) และ ดร.ไมเคิล ริกิตต้า (rikettam@aston.ac.uk) ทั้งนี้ ท่านยังสามารถติดต่อกับเราทั้งสามคนได้ตามที่อยู่ทางไปรษณีย์ดังนี้ The Work & Organisational Psychology Group, Aston Business School, Aston University, Birmingham, United Kingdom, B4 7ET**.**

              กรุณาเปิดหน้าต่อไปได้ เมื่อท่านพร้อมแล้ว ที่จะเริ่มทำ......

ก. พฤติกรรมในการทำงานของพนักงานภายใต้บังคับบัญชาของท่าน

กรุณาตอบคำถามต่อไปนี้ซึ่งเกี่ยวกับพฤติกรรมในการทำงานของพนักงานภายใต้บังคับบัญชาของท่าน โดย<u>วงกลมรอบหมายเลข</u>
คำตอบที่ตรงกับความคิดเห็นของท่านมากที่สุด

ท่านเห็นด้วยมากน้อยเพียงไร กับข้อคำถามต่อไปนี้ ?	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	ค่อนข้างไม่เห็นด้วย	ไม่ทั้งเห็นด้วยและไม่เห็นด้วย	ค่อนข้างเห็นด้วย	เห็นด้วย	เห็นด้วยอย่างยิ่ง
1.เขาหรือเธอปฏิบัติงานสำเร็จตามความรับผิดชอบทุกอย่างที่ระบุไว้ตามคำบรรยายลักษณะงาน	1	2	3	4	5	6	7
2. **บางครั้ง** เขาหรือเธอปฏิบัติงานล้มเหลวตามหน้าที่ที่จำเป็นต้องทำในงานของฉัน	1	2	3	4	5	6	7
3.เขาหรือเธอทำงานได้ตรงตามคุณสมบัติที่จำเป็นที่ต้องมีในงานของเขาหรือเธออย่างสม่ำเสมอ	1	2	3	4	5	6	7
4.เขาหรือเธอทำงานอย่างรับผิดชอบและเป็นไปตามที่ได้คาดหวังไว้	1	2	3	4	5	6	7
5.**บางครั้ง** เขาหรือเธอละเลยงานบางอย่าง ที่เขาหรือเธอจำเป็นต้องปฏิบัติตามหน้าที่	1	2	3	4	5	6	7
6.เขาหรือเธอได้ปฏิบัติงานเสร็จสมบูรณ์ ครบถ้วนตามที่ได้รับมอบหมาย	1	2	3	4	5	6	7
7.**บางครั้ง** เขาหรือเธอหยุดพักงานในเวลาที่ไม่ควรพัก หรือพักจนเกินเวลาพัก	1	2	3	4	5	6	7
8.เขาหรือเธอรักษากฎระเบียบที่ไม่เป็นทางการขององค์กร เพื่อคงไว้ซึ่งความเป็นระเบียบเรียบร้อย	1	2	3	4	5	6	7
9.เขาหรือเธอจะแจ้งล่วงหน้าเสมอถ้าหากเขาหรือเธอไม่สามารถมาทำงานได้	1	2	3	4	5	6	7
10.**บางครั้ง**เขาหรือเธอใช้เวลาโทรศัพท์ในเรื่องส่วนตัวนานมาก	1	2	3	4	5	6	7
11.เวลาการมาทำงานของเขาหรือเธอ อยู่ในเกณฑ์ที่ดีเหนือกว่ามาตรฐาน	1	2	3	4	5	6	7
12.**บางครั้ง**เขาหรือเธอบ่นต่อว่าในเรื่องเล็กๆน้อยๆในการทำงาน	1	2	3	4	5	6	7
13.โดยปกติแล้วเขาหรือเธอจะช่วยเหลืองานของผู้อื่นที่ขาดงานไป	1	2	3	4	5	6	7
14.เขาหรือเธอมักจะใส่ใจต่อความสุขของเพื่อนพนักงานคนอื่นๆ	1	2	3	4	5	6	7
15.โดยปกติแล้วเขาหรือเธอจะช่วยเหลืองานของผู้อื่นที่เขามีงานล้นมือ	1	2	3	4	5	6	7
16.เขาหรือเธอมักจะเสนอตัวเพื่อมีส่วนช่วยเหลือแนะนำให้แก่พนักงานใหม่	1	2	3	4	5	6	7
17.โดยปกติแล้วเขาหรือเธอจะให้เวลาในการรับฟังปัญหาหรือเรื่องทุกข์ใจของเพื่อนร่วมงาน	1	2	3	4	5	6	7
18.เขาหรือเธอบอกต่อข้อมูลต่างๆที่เกี่ยวกับเรื่องงาน ให้กับเพื่อนร่วมงานคนอื่นๆ	1	2	3	4	5	6	7

กรุณาทำเครื่องหมาย ✔ หน้าข้อความที่ตรงกับข้อมูลของท่านมากที่สุด

1. ท่านทำงานในองค์กรแห่งนี้มานานเท่าไหร่แล้ว?

_____ต่ำกว่า 1 ปี _____1-3 ปี _____4-9 ปี _____10-20 ปี _____มากกว่า 20 ปี

2. ท่านทำงานในองค์กรประเภทใด?

_____องค์กรของรัฐหรือในกำกับของรัฐ _____องค์กรเอกชน/แบบแสวงหากำไร _____องค์กรที่ไม่หวังผลกำไร/มูลนิธิ

3. เพศของท่าน? _____เพศชาย _____เพศหญิง

4. อายุของท่าน? _____ต่ำกว่า 25 ปี _____26-35 ปี _____36-45 ปี _____46-55 ปี _____มากกว่า 55 ปี

5. สถานภาพสมรสของท่าน?

_____โสด _____แต่งงานแล้ว _____อยู่ด้วยกันแต่ไม่ได้แต่งงาน _____แยกกันอยู่/หย่าร้าง _____หม้าย

ขอขอบพระคุณในการให้ความร่วมมือตอบแบบสอบถามในครั้งนี้
กรุณาดึงกระดาษโพสอิทที่มีรายชื่อพนักงานภายใต้บังคับบัญชาของท่านออกด้วย พับแบบสอบถามนี้
และใส่ซองที่จัดให้ พร้อมปิดผนึกให้เรียบร้อย และคืนให้กับข้าพเจ้าที่จะมาเก็บรวบรวมด้วยตนเอง

Appendix 8: Discriminant Analysis Time 1 Model 1 (Self Report)
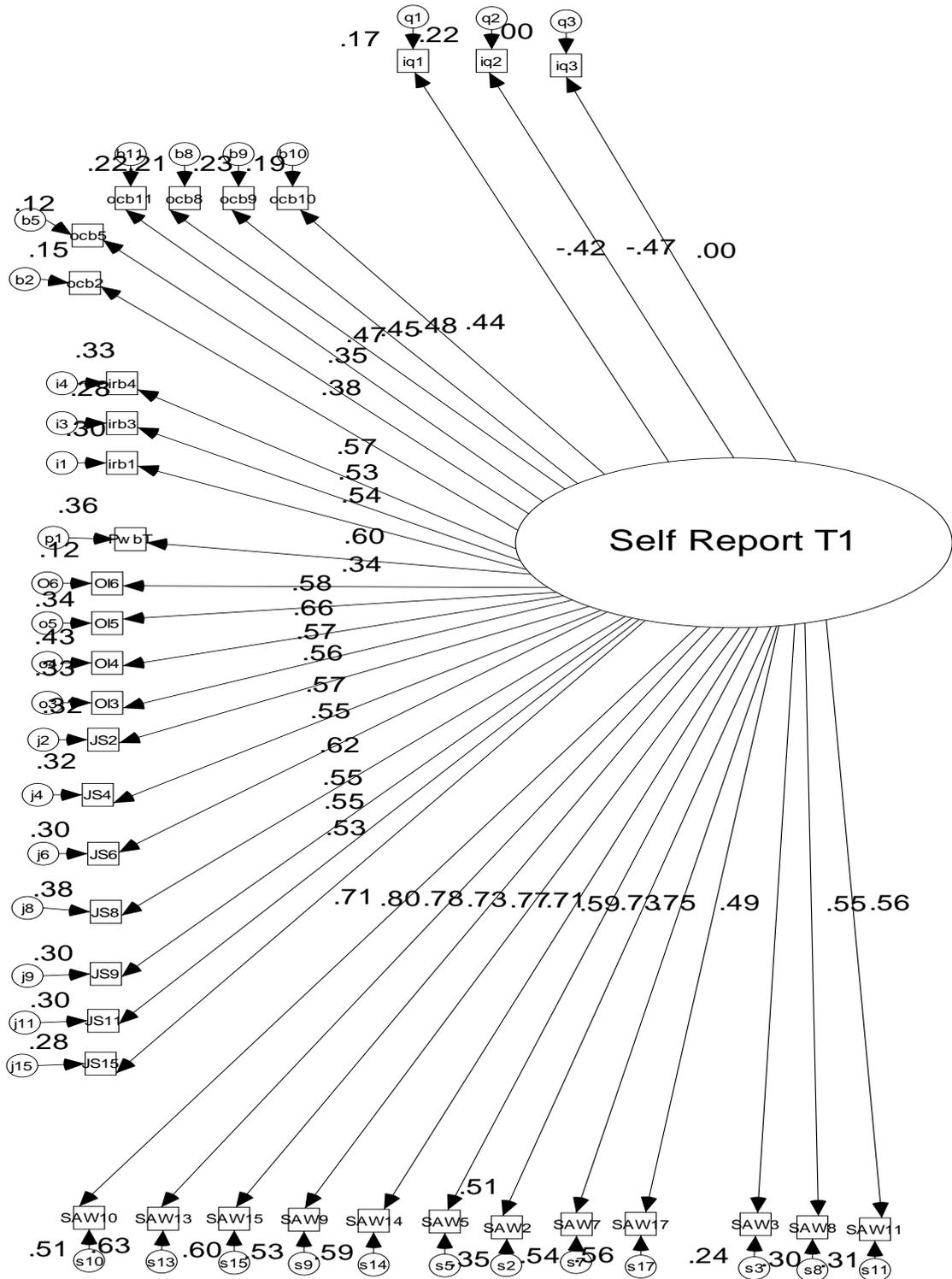
(χ2 = 4,418.52; *df* = 594; *p* < .001; χ2/df = 7.44; *CFI* = .62; *IFI* = .62; *TLI* = .59; *RMSEA* = .11).

Appendix 9: Discriminant Analysis Time 1 Model 2 (Self Report)
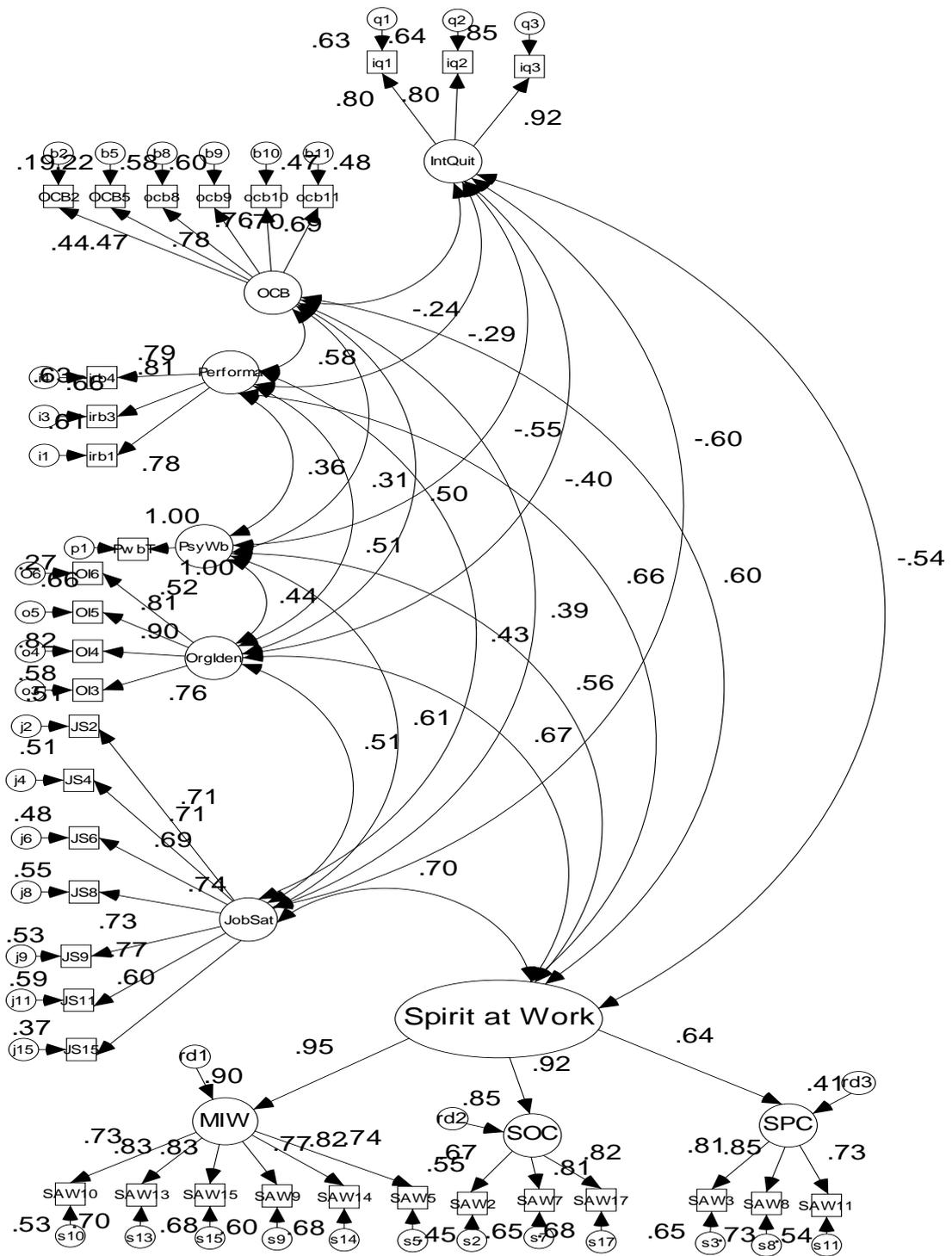
(χ2 = 1,163.81, *df* = 571; *p* < .001; χ2/df = 2.04; *CFI* = .94; *IFI* = .94; *TLI* = .93;
RMSEA = .04)

Appendix 10: Discriminant Analysis Time 1 Model 1 (Supervisor Report)
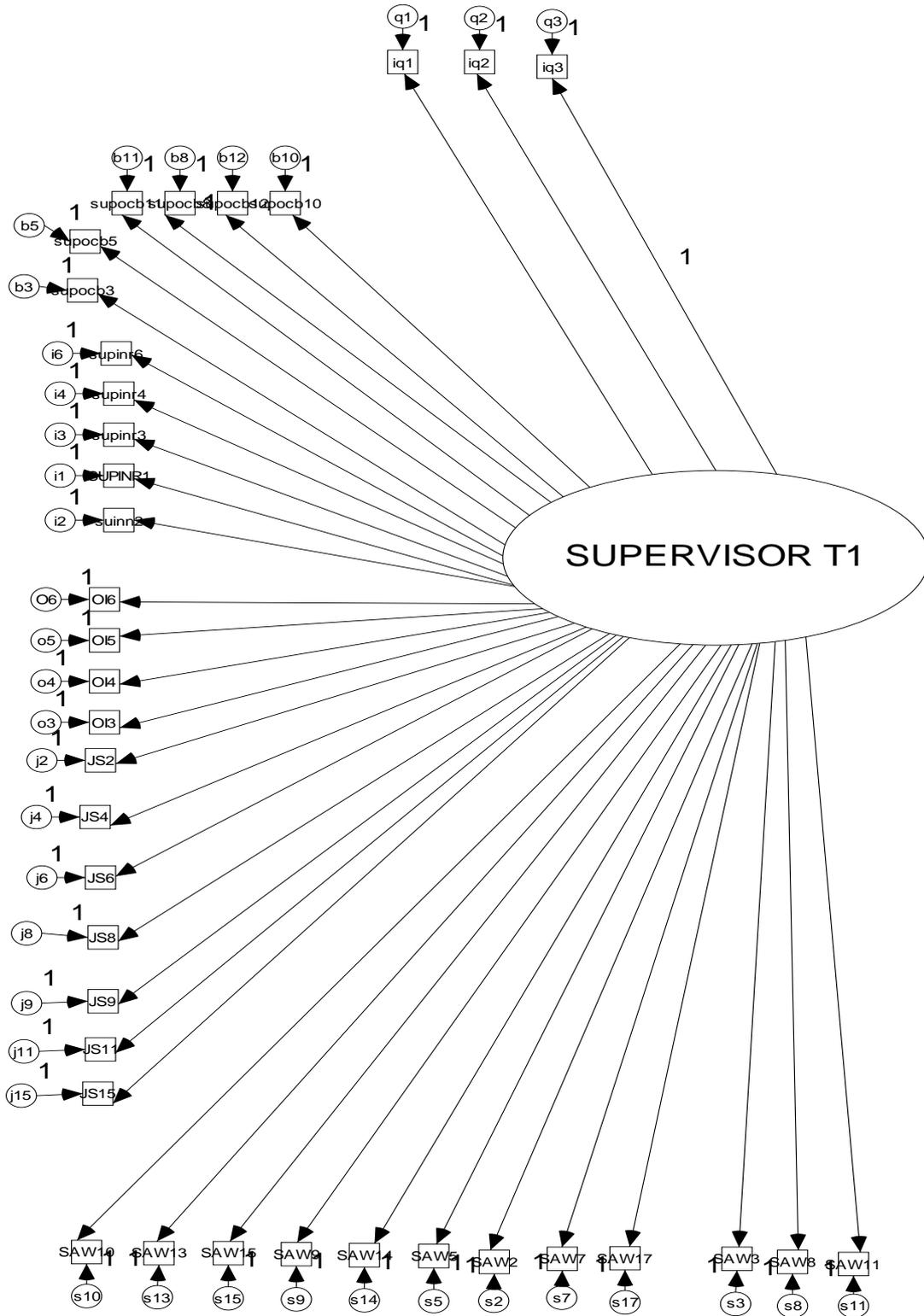
($\chi2$ = 6,535.68; *df* = 629; *p* < .001; $\chi2$/df = 10.39; *CFI* = .46; *IFI* = .47; *TLI* = .43; *RMSEA* = .14).

Appendix 11: Discriminant Analysis Time 1 Model 2 (Supervisor Report)
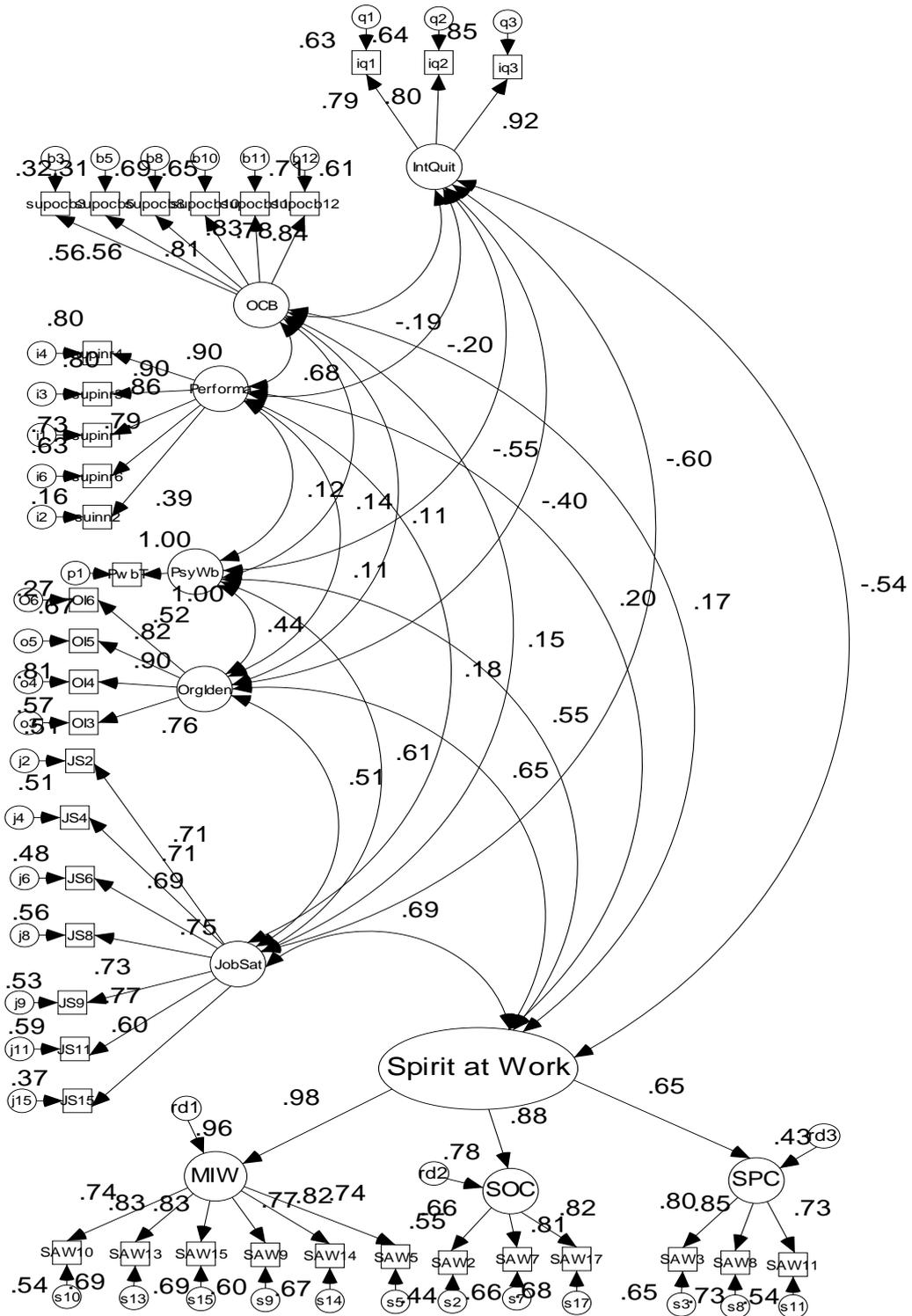
(χ2 = 1,202.84, *df* = 642; *p* < .001; χ2/df = 1.87; *CFI* = .95; *IFI* = .95; *TLI* = .95; *RMSEA* = .04)

Appendix 12: Discriminant Analysis Time 2 Model 1 (Self Report)
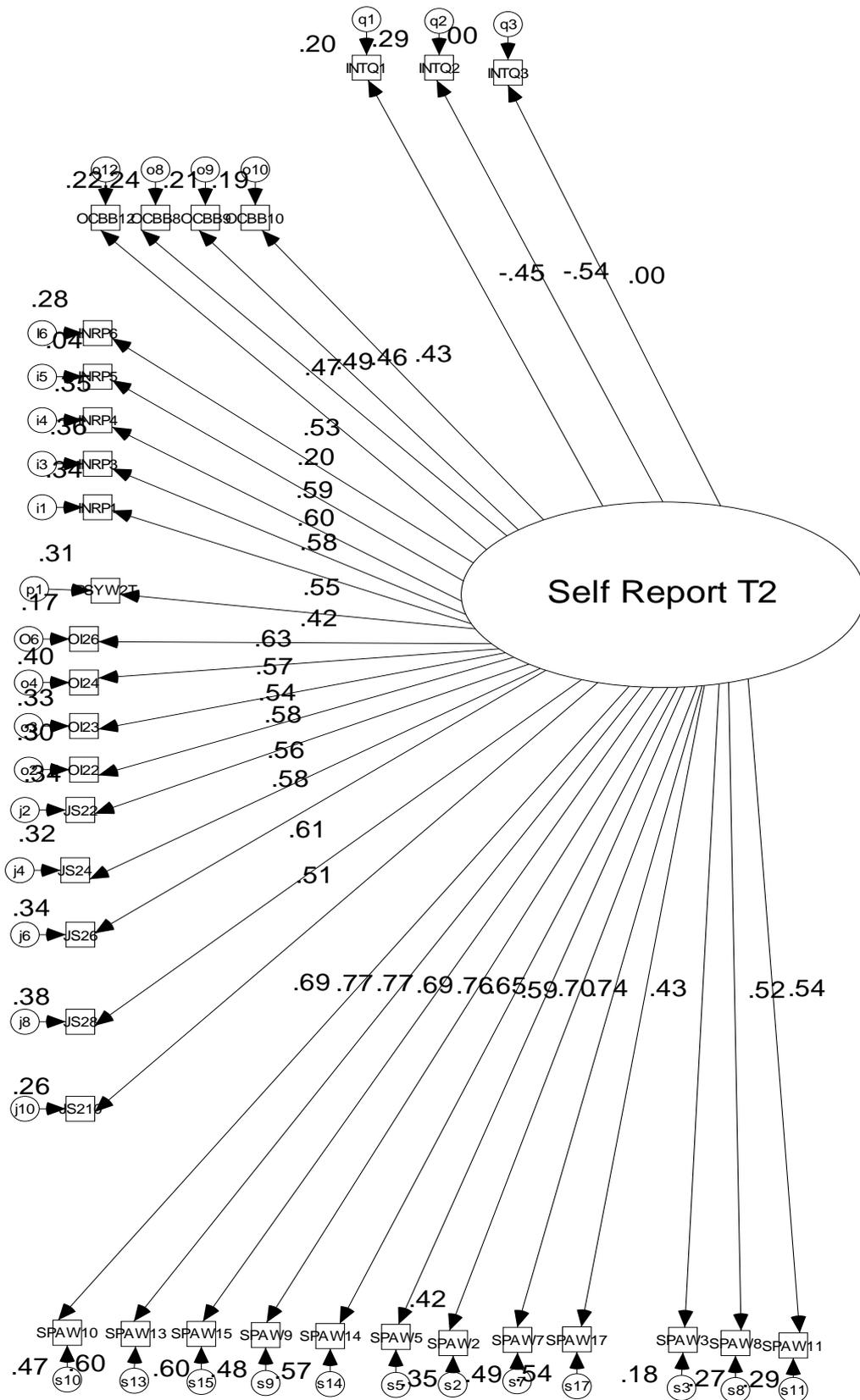
(χ2 = 4,144.39; *df* = 527; *p* < .001; χ2/df = 7.86; *CFI* = .61; *IFI* = .61; *TLI* = .58; *RMSEA* = .12).

Appendix 13: Discriminant Analysis Time 2 Model 2 (Self Report)
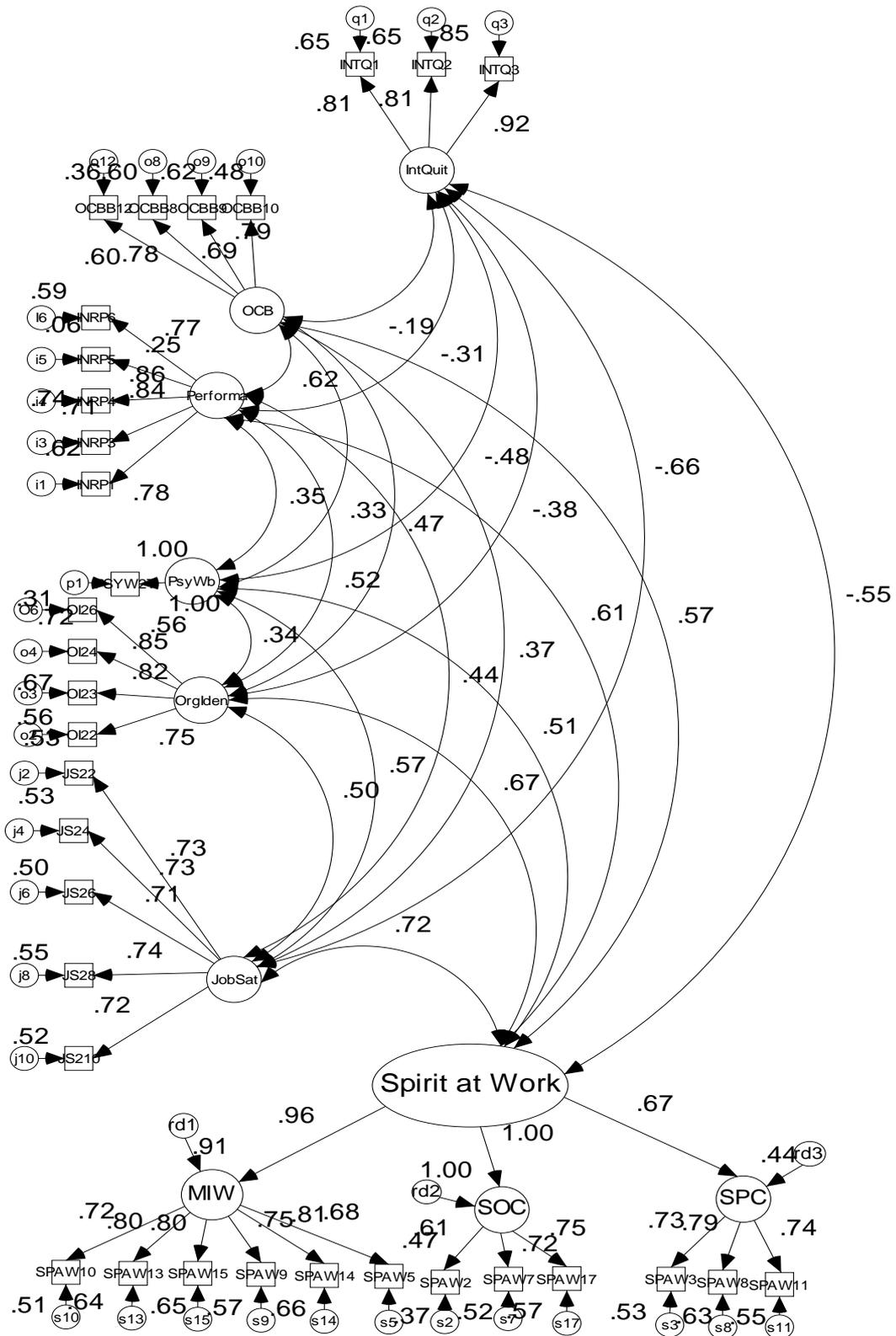
($\chi2 = 1,141.18$, *df* = 504; *p* < .001; $\chi2$/df = 2.26; *CFI* = .93; *IFI* = .93; *TLI* = .92; *RMSEA* = .05)

Appendix 14: Discriminant Analysis Time 2 Model 1 (Supervisor Report)
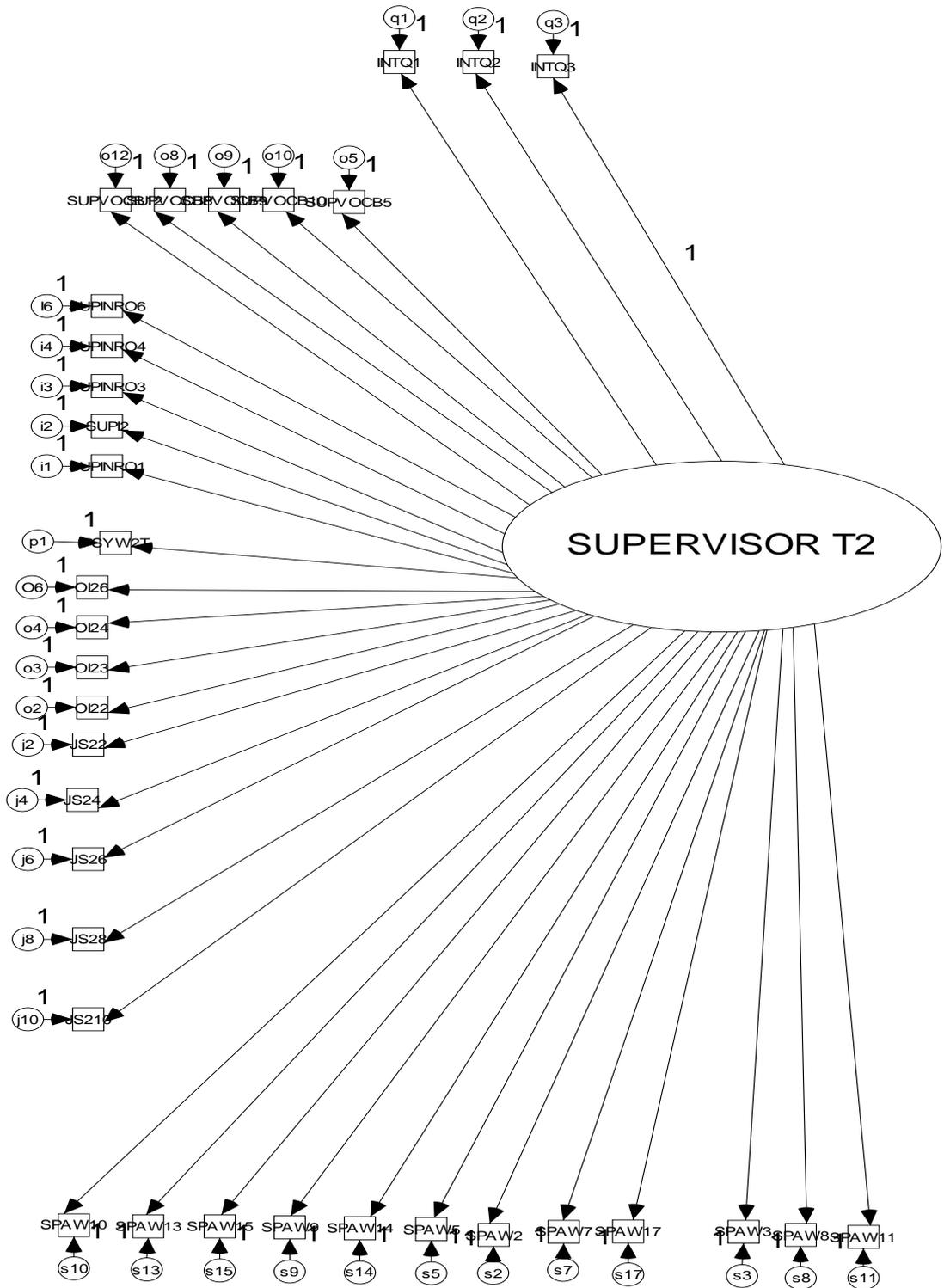
($\chi2$ = 5,995.61; *df* = 560; *p* < .001; $\chi2$/df = 10.71; *CFI* = .46; *IFI* = .46; *TLI* = .43; *RMSEA* = .14)

Appendix 15: Discriminant Analysis Time 2 Model 2 (Supervisor Report)
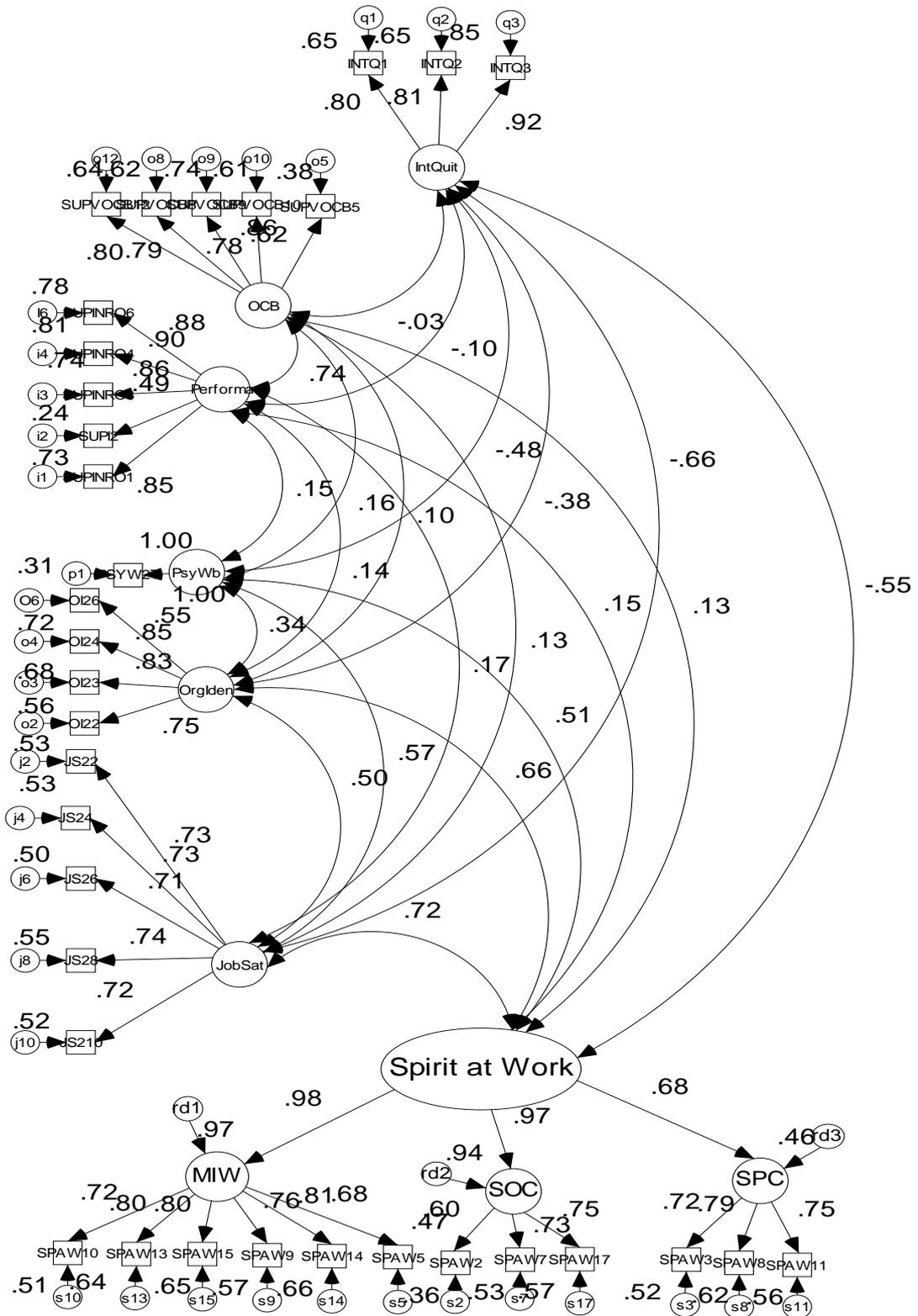
(χ2 = 951.08, *df* = 537; *p* < .001; χ2/df = 1.77; *CFI* = .96; *IFI* = .96; *TLI* = .96; *RMSEA* = .04)

Appendix 16: Direct Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 (Self Report; Simplified Model)

Note: $N = 501$: *** indicates paths significant $p < .001$: Fit indices ($\chi2 = 1,417.43$, *df* = 519; $p < .001$; $\chi2/df$ = 2.73; *CFI* = .90; *IFI* = .90; *TLI* = .90; *RMSEA* = .059)
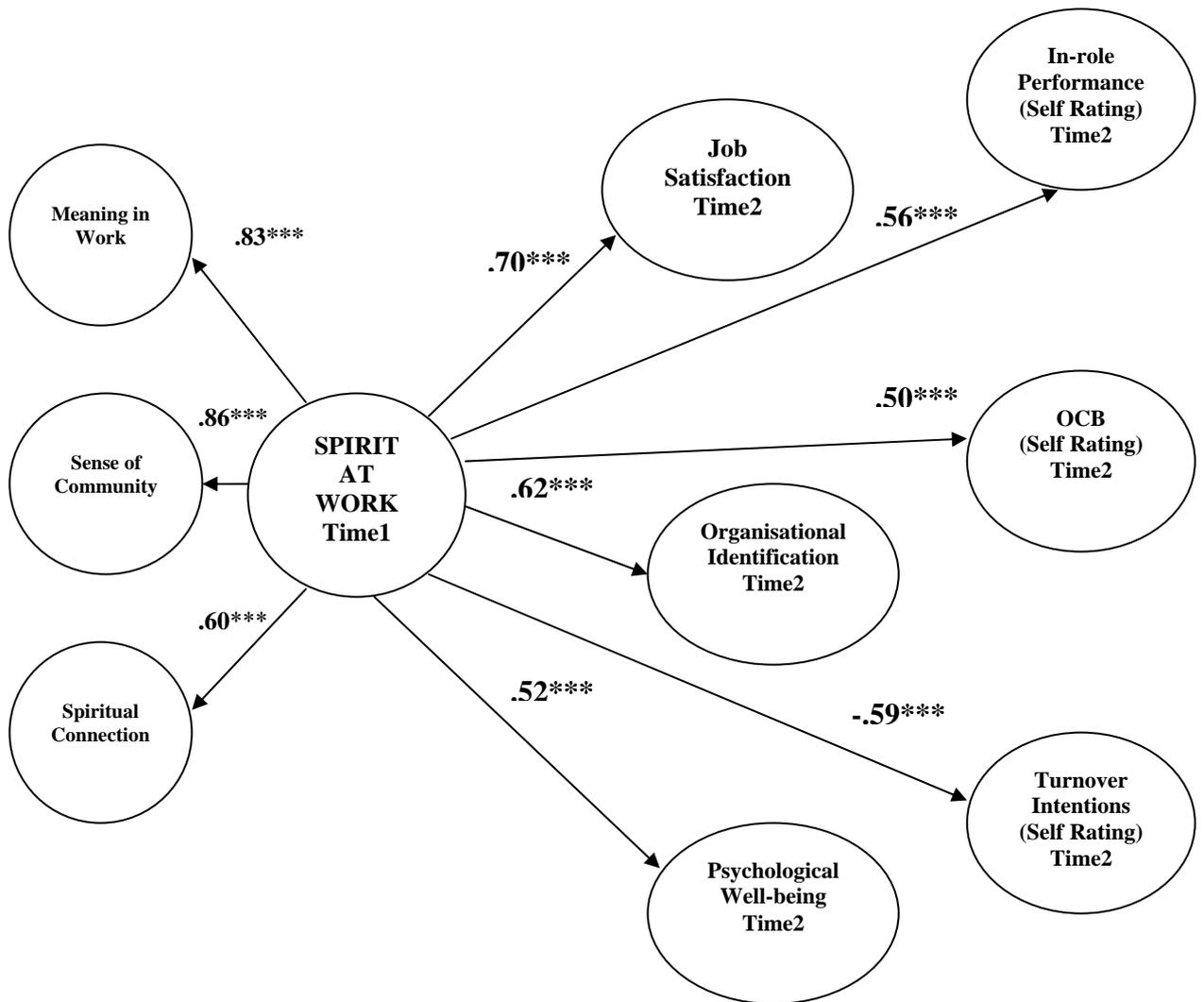
Note: $N = 501$: *** indicates paths significant $p < .001$: Fit indices ($\chi2 = 1,417.43$, $df = 519$; $p < .001$; $\chi2/df = 2.73$; *CFI* = .90; *IFI* = .90; *TLI* = .90; *RMSEA* = .059)

Appendix 18: Fully Mediated Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 (Self Report; Simplified Model)

First, fully mediated path exists as hypothesised between *ISAW* -> job satisfaction -> performance/OCB/turnover intentions. This apparently demonstrates that *ISAW* positively affects performance/OCB and negatively affects intentions to quit through job satisfaction. Second, a significant mediated path was evident between *ISAW* -> organisational identification -> performance/OCB/ (not identified in turnover intentions). This result indicates that *ISAW* positively affects performance and OCB through organisational identification. Third, as hypothesised, a distinct, fully mediated path between *ISAW* -> psychological wellbeing -> performance/OCB/turnover intentions. This clearly shows that *ISAW* positively affects performance and OCB, and negatively affects intentions to quit through psychological wellbeing.
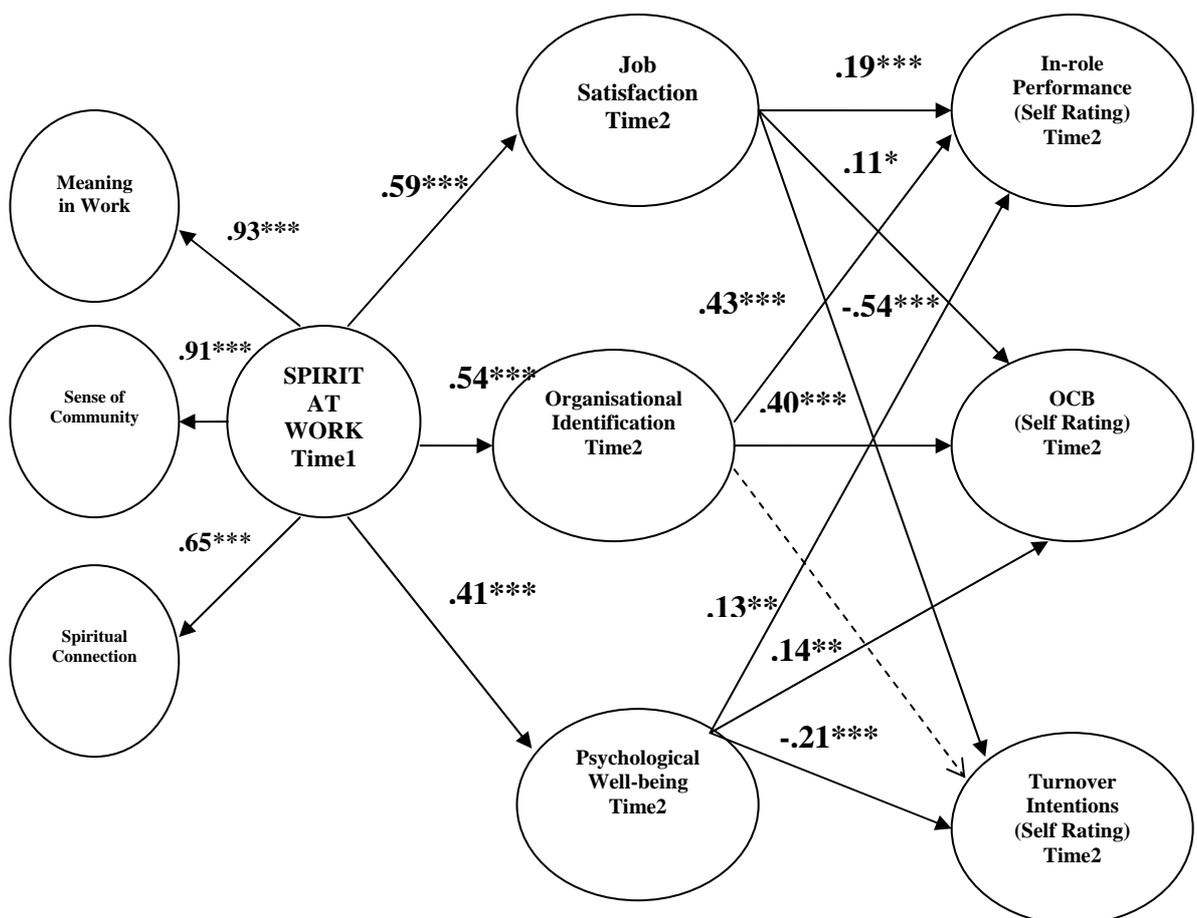
Note: $N = 501$: *** indicates paths significant $p < .001$, ** $p < .01$, * $p < .05$, --->= *ns*: Fit indices ($\chi2 = 1,236.80$, *df* = 513; $p < .001$; $\chi2/df = 2.45$; *CFI* = .92; *IFI* = .92; *TLI* = .92; *RMSEA* = .053)

- 316 -

Appendix 19: Fully Mediated Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 (Self Report; Full SEM Model)

Note: *N* = 501: *** indicates paths significant *p* < .001, ** *p* < .01, * *p* < .05, --->= *ns*:
Fit indices (χ2 = 1,236.80, *df* = 513; *p* < .001; χ2/*df* = 2.45; *CFI* = .92; *IFI* = .92; *TLI* = .92; *RMSEA* = .053)

Appendix 20: Partially Mediated Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 (Supervisor's Rating; Simplified Model)
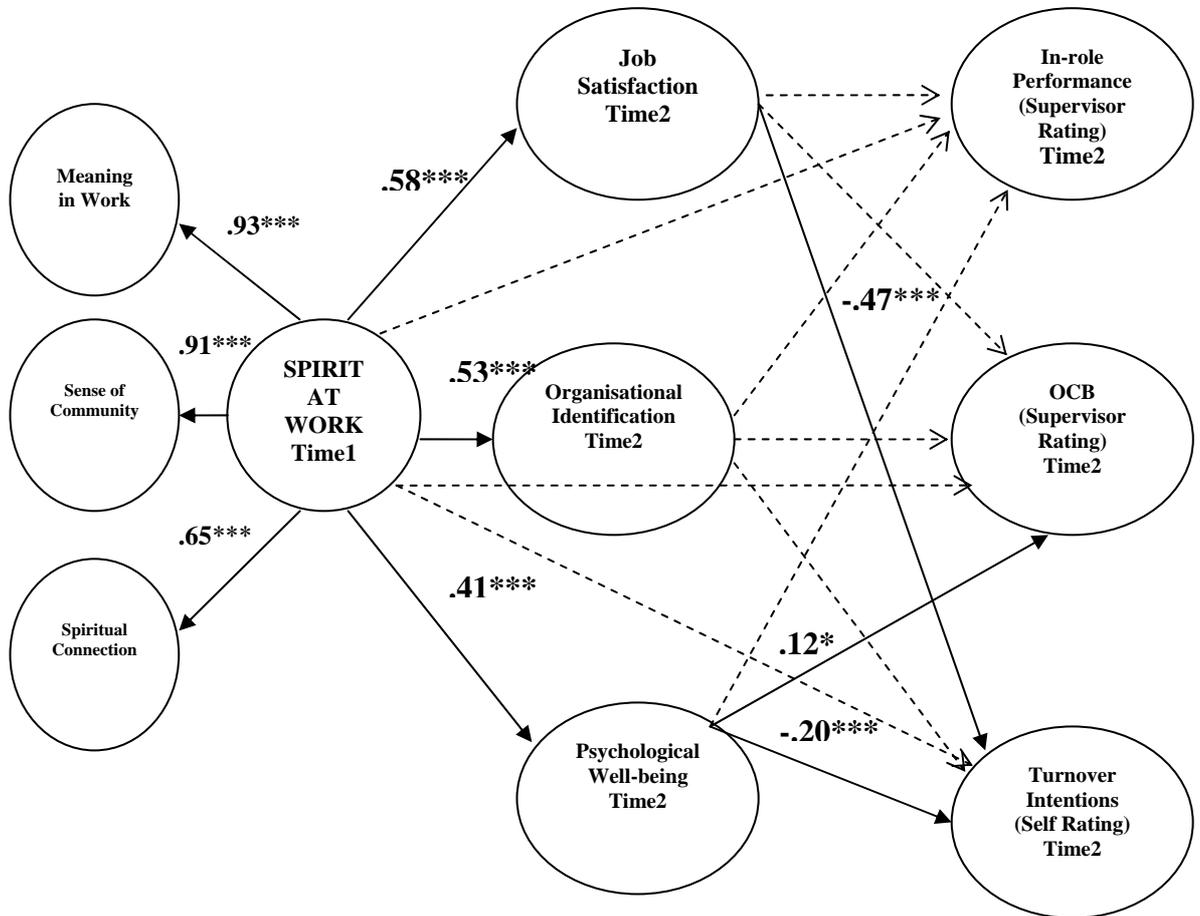
Note: $N = 501$: *** indicates paths significant $p < .001$, * $p < .05$, ---> = *ns*: Fit indices ($\chi2 = 1,342.91$, *df* = 543; $p < .001$; $\chi2/df$ = 2.47; *CFI* = .92; *IFI* = .92; *TLI* = .92; *RMSEA* = .054)

Appendix 21: Partially Mediated Standardised Structural Model of Individual Spirit at Work Time 1 and Outcomes Time 2 (Supervisor's Rating; Full SEM Model)

Note: *N* = 501: *** indicates paths significant *p* < .001, * *p* < .05, --->= *ns*: Fit indices (χ2 = 1,342.91, *df* = 543; *p* < .001; χ2/*df* = 2.47; *CFI* = .92; *IFI* = .92; *TLI* = .92; *RMSEA* = .054)

Appendix 22: The Academy of Management's 2008 Most Promising Doctoral Dissertation Award in Management, Spirituality, and Religion at the 68ᵗʰ Annual Conference of Academy of Management, Anaheim, California, USA

ACADEMY OF MANAGEMENT
at Pace University

PO Box 3020
Briarcliff Manor, NY 10510
914-923-2607

18 August 2008

Mr. Passagorn Tevichapong
Lakeside Residences
Block G Floor 4 Room 4
Aston University
Birmingham B4 7EJ UK

Dear Passagorn:

On behalf of the Management, Spirituality, and Religion Doctoral and New Faculty Consortium, congratulations on your selection as a recipient of the 2008 MSR Most Promising Dissertation Award.

Your application and proposed study was an inspiration to all, and we are looking forward to the completion of your research as well as its submission for presentation at a future Academy of Management conference.

Enclosed, please find your award certificate, cash prize, and a consortium program. Again, congratulations – best wishes to you for every success in your ongoing academic and professional pursuits.

Warmest regards,
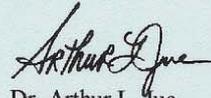
Dr. Arthur L. Jue
Chair, 2008 MSR Doctoral and New Faculty Consortium
Academy of Management

Enclosures

Appendix 23: The Outstanding Presentation Award from the 2nd Samaggi Academic Conference 2009, University of Cambridge, UK

Samaggi Samagom
in collaboration with
Cambridge University Thai Society
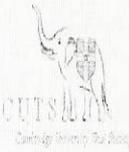
UNDER THE PATRONAGE OF
H.M The King
H.M The Queen
H.R.H The Crown Prince
H.R.H Princess Bejaratana
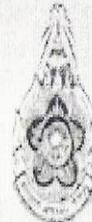
The 2nd Samaggi Academic Conference 2009

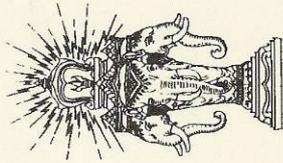*This certificate is awarded to*

Mr Passagorn Tevichapong

in recognition for outstanding presentation

M.L. Patcharapakorn Devakula
Minister (Education), Office of Educational Affairs, UK

H.E. MR. Kitti Wasinondh
Thai Ambassador to the UK

Certificate of Appreciation

SAMAGGI SAMAGOM
THE THAI STUDENTS' ASSOCIATION IN THE UK

Awarded to

Passagorn Tevichapong
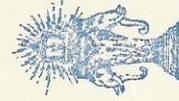
*in recognition of contribution
as guest speaker for*

Samaggi Academic Networking Event
(Economics, Business, Management, Finance and Logistics-Supply Chain)

26 November 2011

London School of Economics and Political Sciences

(Dr. Ekniti Nitithanprapas)

Minister (Economic and Financial)

CERTIFICATE OF APPRECIATION

SAMAGGI SAMAGOM
THE THAI STUDENTS' ASSOCIATION IN THE UK

Awarded to

PASSAGORN TEVICHAPONG

In recognition of submission of academic paper for

5TH SAMAGGI ACADEMIC CONFERENCE

4 FEBRUARY 2012

UNIVERSITY OF OXFORD

H.E. MR.KITTI WASINONDH

Ambassador Extraordinary and Plenipotentiary
of Thailand to the United Kingdom and Northern Ireland