THE MODERATING EFFECTS OF JOB DEMAND BETWEEN JOB RESOURCES, WORK-LIFE ENRICHMENT, AND CORE SELF-EVALUATIONS ON WORK ENGAGEMENT AMONG ACADEMICS IN MALAYSIAN PUBLIC UNIVERSITIES

NG LEE PENG

DOCTOR OF BUSINESS ADMINISTRATION
UNIVERSITI UTARA MALAYSIA
April 2015

THE MODERATING EFFECTS OF JOB DEMAND BETWEEN JOB RESOURCES, WORK-LIFE ENRICHMENT, AND CORE SELF-EVALUATIONS ON WORK ENGAGEMENT AMONG ACADEMICS IN MALAYSIAN PUBLIC UNIVERSITIES

By

NG LEE PENG

**Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
In Partial Fulfillment of the Requirement for the Doctor of Business Administration**

PERMISSION TO USE

In presenting this dissertation/project paper in partial fulfillment of the requirements for a Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this dissertation/project paper in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor(s) or in their absence, by the Dean of Othman Yeop Abdullah Graduate School of Business where I did my dissertation/project paper. It is understood that any copying or publication or use of this dissertation/project paper parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my dissertation/project paper.

Request for permission to copy or to make other use of materials in this dissertation/project paper in whole or in part should be addressed to:

<div align="center">

Dean of Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
06010 UUM Sintok
Kedah DarulAman

</div>

ABSTRACT

The purpose of this research is to examine the relationship between job resources (i.e. perceived organisational support, immediate superior support, colleague support, autonomy, recognition, job prestige, and perceived external prestige), work-life enrichment and core self-evaluations on work engagement among academics in Malaysian public universities. In addition, this study also examined the moderating effects of job demands on these relationships. The survey questionnaire was designed to elicit responses from the participants. A total of 756 questionnaires were distributed to the academics from 18 public universities in Peninsular Malaysia. Three hundred eighty five (385) usable questionnaires were returned, yielding a response rate of 50.9%. The data were analysed using multiple regression analysis. The results indicated that immediate superior support, perceived external prestige, work-to-personal life enrichment, personal life-to-work enrichment, and core self-evaluations were positively related to work engagement. On the other hand, colleague support was found to be negatively related to work engagement. Result from hierarchical regression analysis showed that job demands only moderate the relationship between work-to-personal life enrichment and work engagement. This means the effect of work-to-personal life enrichment and work engagement is strengthened when academic staff is confronted with high job demands. This study shows that systematic training programs are needed to enhance more supportive supervisory practices. To reduce the adverse impact of colleague support on work engagement, academics should be exposed to how communication content can have profound influence on both emotional and instrumental functions of different sources of support. The management should recruit and develop academics with positive core self-evaluation. Besides, efforts to promote prestige image of the universities is likely to bear fruitful results in enhancing the work engagement. In addition, the management should assist employees in achieving greater balance between their work and personal life through work life policies and programs. Last but not least, the limitations of the present study and some suggestions for future research are discussed as well.

Keywords: work engagement, job resources, job demands, work-life enrichment, core self-evaluation

ABSTRAK

Kajian ini bertujuan untuk menganalisa hubungan antara sumber-sumber kerja (persepsi sokongan daripada organisasi, sokongan penyelia, sokongan rakan sekerja, autonomi, pengiktirafan, prestij kerja, dan persepsi prestij luaran), pengayaan kerja-kehidupan peribadi, dan penilaian utama diri terhadap penglibatan kerja. Selain itu, peranan permintaan kerja sebagai penyerhana di antara pembolehubah-pembolehubah tersebut turut dikaji selidik. Sebanyak 756 borang kaji selidik telah diedarkan kepada para akademik daripada 18 buah univesiti kerajaan di Semenanjung Malaysia. Seramai 385 akademik telah memulangkan soal selidik yang boleh digunakan, jadi kadar maklum balas adalah sebanyak 50.9%. Data yang diperolehi telah dianalisa melalui regresi berbilang. Keputusan daripada analisa tersebut menunjukkan sokongan penyelia, persepsi prestij luaran, pengayaan kerja–kepada-kehidupan peribadi, pengayaan kehidupan peribadi-kepada-kerja dan penilaian utama diri mempunyai hubungan positif dengan penglibatan kerja. Selain itu, sokongan rakan kerja menunjukkan hubungan negatif dengan penglibatan kerja. Keputusan regresi hirarki berbilang menunjukkan hanya permintaan kerja mengantara antara hubungan pengayaan kerja-kepada-kehidupan peribadi dan penglibatan kerja. Ini bermaksud kesan pengayaan kerja-kepada-kehidupan peribadi dan penglibatan kerja meningkat apabila staf akademik menghadapi permintaan kerja yang tinggi. Program latihan yang sistematik diperlukan untuk meningkatkan amalan-amalan penyelia yang menunjukkan lebih banyak sokongan terhadap pekerja. Untuk mengurangkan kewujudan kesan negatif daripada sokongan rakan sekerja, para akademik perlu didedahkan terhadap bagaimana kandungan komunikasi yang disampaikan terhadap seseorang boleh mempengaruhi fungsi emosi dan instrumental daripada sumber di mana sokongan diberikan. Pengurusan universiti adalah digalakkan untuk merekrut dan membentuk para academik yang mempunyai penilaian diri yang positif. Selain itu, usaha yang lebih diperlukan untuk mempromosikan imej baik universiti. Usaha ini akan membuahkan hasil yang berkesan dalam meningkatkan penglibatan kerja para akademik. Tambahan pula, pihak pengurusan patut membantu pekerja untuk mengecapai keseimbangan antara kerja dan kehipupan persendirian melalui polisi dan program yang berkaitan. Limitasi dan cadangan untuk kajian masa akan datang turut dibincangkan.

Kata kunci: penglibatan kerja, sumber-sumber kerja, permintaan kerja, pengayaan kerja-kehidupan peribadi, penilaian utama diri

ACKNOWLEDGEMENTS

First and foremost, I would like to express my appreciation and gratitude to my supervisor, Professor Dr. Hassan Ali, for his consistent guidance and support throughout the writing of this dissertation. It has been a privilege and honour to work with him and have him as my supervisor. Thanks for the patience that he had showed me throughout this process despite of his extremely busy schedule.

In addition, I would like to express my deepest appreciation to my husband, Kuar Lok Sin, who provides me with endless supports and constant encouragement. Besides, I wish to extend my gratitude to Associate Professor Dr. Lim Hock Eam, Associate Professor Dr. Cheng Wei Hin, and Assistant Professor Dr. Wye Chung Khain for their assistance, invaluable advices and comments. In addition, I also would like to express my sincere thanks to Dr. Chandrakantan Subramaniam, Associate Professor Dr. Husna bt Johari, and Associate Professor Dr. Nur Naha bt Abu Mansor who have provided me with useful and constructive feedback. Next, I take this opportunity to express my gratitude to all my family members and my good friend, Ms. Teoh Sok Yee, who have given me encouragement throughout this research process. Thanks to all my colleagues, friends and other people who have lent their hands to me directly or indirectly in my research. This dissertation is impossible to be completed without the participation and assistance from all the respondents from various public universities. Thus, I would like to express my appreciation to all of you who have participated in this survey.

TABLE OF CONTENT

CHAPTER ONE   BACKGROUND OF THE RESEARCH

CHAPTER THREE   RESEARCH METHODOLOGY

CHAPTER FOUR   FINDINGS

LIST OF APPENDICES

LIST OF TABLES

xvii

LIST OF FIGURES

Page

LIST OF ABBREVIATIONS

COR	Conservation of Resources
CSE	Core Self-Evaluations
CSES	Core Self-Evaluations Scale
HEI	Higher Education Institution
JD	Job Demands
JD-R	Job Demands-Resources
KMO	Kaiser-Meyer-Olkin
MSA	Measure of Sampling Adequacy
MRA	Multiple Regression Analysis
NHESP	National Higher Education Strategic Plan
PEP	Perceived External Prestige
POB	Positive Organisational Behaviour
PLWE	Personal Life-to-Work Enrichment
QS	Quacquarelli Symonds
THE	Times Higher Education
UWES	Utrecht Work Engagement Scale
WPLE	Work-to-Personal Life Enrichment

CHAPTER ONE

INTRODUCTION

1.1   Introduction

Quite a number of researches in organisational behaviour have explained that enhancing human potential is very important in improving organisational performance (e.g. Luthans & Youssef, 2007; Bakker & Schaufeli, 2008). The increased attention on positive organisational behaviour, such as work engagement inspires scholars to continuously emphasize on theory building and perform relevant research in relation to this area. Such efforts would enable more effective application of positive traits and behaviour among employees in the work place (Luthans & Youssef, 2007).

In view of today's competitive and dynamic environment, various organisations are facing with greater challenges in attracting and retaining talented employees, which are critical in determining an organisation's performance and sustainable competitive advantage. Besides, it is also equally important for an organisation to prepare an avenue that allows employees to unleash their full potential and be engaged in their work. The above issues not only concern the corporate sector, but also the higher education institutions (HEIs), particularly the universities. No doubt, human resources would be a crucial factor to enable the universities to produce competent graduates and enhance the institutions' position internationally.

1.2 Research Background

Work engagement is a motivational concept that reflects "a positive, work-related state of well-being or fulfilment characterized by a high level of energy and strong identification with one's work" (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). Despite many writings about employee engagement at work were published by the practitioners and consulting firms (e.g. Aon Hewitt, 2012; Gallup, 2013), this concept only started to grab more attention among the scholars in recent years (Bakker, Schaufeli, Leiter, & Taris, 2008; May, Gilson, & Harter, 2004; Pienaar & Willemse, 2008; Saks, 2006; Schaufeli *et al.*, 2002; Schaufeli & Bakker, 2004). This development is consistent with the increased interest in positive psychology (Seligman & Csikszentmihalyi, 2000), which has been extended later to positive organisational behaviour (POB) (Luthans, 2002) since the last decade.

POB is known as "a study of positively oriented human resource strengths and psychological capabilities that can be measured, developed, and effectively managed for performance improvement in today's workplace" (Luthans, 2002, p. 59). Prior empirical studies recognised that enhancing human potential improves organisational performance and employee well-being (Bakker & Schaufeli, 2008; Harter, Schmidt, & Hayes, 2002; Koyuncu, Burke, & Fiksenbaum, 2006; Luthans & Youssef, 2007). In line with such progress in academic literatures, the positive antithesis of burnout, i.e. work engagement, has emerged (Maslach & Leiter, 1997). This indicates that continuous efforts should be devoted to scientific study in developing human strengths, unique talents and optimal functioning or competency, rather than merely focus on individual's weaknesses or

malfunctioning, such as stress and burnout (Bakker *et al*., 2008; Burke & El-Kot, 2010; Mauno, Kinnunen & Roukolainen, 2007; Seligman & Csikszentmihalyi, 2000; Seligman, 2003; Stairs, 2005). Human capital is recognised as an important asset and a source of competitive advantage to today's modern organisations, which are confronted with fast changing environment (Endres & Mancheno-Smoak, 2008; Luthans & Youssef, 2004). There is increasing tendencies that employees at all levels have to deal with unanticipated decision making more frequently (Masson, Royal, Agnew, & Fine, 2008). Thus, having a group of engaged workers would be beneficial to the organisations. Bakker and Demerouti (2008) noted that engaged employees have greater creativity and they are more productive. Besides, they are willing to put in extra efforts to achieve the organisation goal.

The rising interest among the practitioners, consulting firms and scholars in the study about work engagement in recent years indicated that the concept of work engagement is not just a passing management fad (Leiter & Bakker, 2010). A considerable amount of researches and analyses have been conducted in the last few years in building up the understanding of engagement at work. Studies on work engagement complement the previous findings on burnout to better understand what organisation can do to improve employees' performance. This is because a number of work engagement studies were stimulated by research of burnout (Maslach & Leither, 1997). Intense job demands, role conflicts, lacks of resources and other work stressors are found to be the causes of burnout (Cooper, Dewe, & O'Driscoll, 2001; Maslach & Leiter, 2008; Maslach, Schaufeli, & Leiter, 2001). Evidences of burnout resulting in withdrawal behaviour and

health problems are well documented in the literatures (e.g. Cropanzano, Rupp & Byrne, 2003; Lewig, Xanthopoulou, Bakker, Dollard, & Metzer, 2007). Nonetheless, by simply focusing on the burnout experience alone, it is inadequate to justify why some individuals always feel enthusiastic, energetic, dedicated and enjoy their work despite the fact that they are always busy or occupied with various tasks (Leiter & Bakker, 2010). Moreover, prior research findings indicated that it is not always true that employees who are encountered with long working hours and other demanding requirements in the job would experience burnout. In contrast, certain employees view that dealing with different job demands and working hard are something pleasurable or enjoyable (Nelson & Simmons, 2003; Bakker, 2009). Empirical evidences obtained from the survey among dentists in the Netherlands, Finland and the United Kingdom showed that majority of them find that their job are stimulating and engaging despite high job demands (Brake, Bouman, Gorter, Hoogstraten, & Eijkman, 2007; Denton, Newton, & Bower, 2008; Hakanen, Bakker,& Demerouti, 2005).

As compared to the abundant researches on burnout, the study on work engagement is relatively new (Bakker *et al*., 2008), thus it deserves more extensive empirical studies to gain a better understanding about employees' work engagement (Mauno *et al*., 2007, Robbinson, Perryman & Hayday, 2004; Saks, 2006). Empirically, work engagement has been found to have an inverse relationship with turnover intention (Brunetto, Teo, Shacklock, & Farr-Wharton, 2012; Harter *et al*., 2002; Saks, 2006; Schaufeli & Bakker, 2004). Apart from that, other favourable outcomes of work engagement have been reported in the literatures as well. For example, work engagement can improve job

performance (Chung & Angeline, 2010; Harter *et al*., 2002; Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008), organisational citizenship behaviour (Babcock-Roberson & Strickland, 2010; Saks, 2006), personal initiative (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008a), job satisfaction and organisational commitment (Hakanen, Bakker & Schaufeli, 2006; Saks, 2006; Schaufeli & Bakker, 2004). Furthermore, employees who are high in work engagement exhibit more enthusiasm, create greater value to the employer, have better physical health and are happier (Loehr, 2005). Harter *et al*. (2002) performed a meta-analysis by utilizing Gallup database which contains 7,939 business units in 36 companies. Their results concluded that employee engagement is an invaluable predictor of customer satisfaction-loyalty, productivity, profit, employee turnover and safety at the business unit level.

Unfortunately, the research by consulting firm, such as Towers Perrin (2008) showed that many employees in different types of business organisations worldwide are not fully engaged in their work. The report indicated that only 21% out of about 90,000 employees worldwide are engaged in their work, whereas 38% are partly to fully disengaged (Towers Perrin, 2008). This phenomenon is described as an "engagement gap", which reflects lower employees' actual engagement at work as compared to the expectations by the management. Various organisations are concerned about the gap as firms with higher level of employee engagement end up yield better financial performance and will have more ability in retaining valuable employees (Towers Perrin, 2008).

Recent research by Gallup (2013) found that 70 percent of the employees in the United States are either not engaged or actively disengaged from their work. This phenomenon costs the American businesses from $450 billion to $550 billion a year due to the loss in productivity (Gallup, 2013). Disengaged workers tends to have higher absenteeism, produce poorer quality output, drive customer away, and have negative influence on their colleagues (Gallup 2013). Obviously, organisations' performance suffers as a result of disengaged workers. Managers who pay attention to their employees' strengths can practically reduce the problem of employee disengagement. Moreover, employees who show high job satisfaction may not put in their best effort in performing their job (Crossman & Abou-Zaki, 2003). Report by Gallup (2013) further stressed that by merely focusing on measuring employees' satisfaction and happiness is inadequate. This is because employees who are satisfied or happy are not necessarily engaged in their work. Thus, engaged workers are important for an organisation in order to ensure better profitability, staff retention as well as the capability to adapt to changes (Gallup, 2013).

1.3 The Critical Role of Work Engagement among Academic Staff of the Universities

Review of the literatures on higher education research clearly revealed that restructuring and transformation of HEIs are unavoidable for every nation (Lee, 2004; Morshidi Sirat, 2010). Universities, which are crucial in developing human resources and enhancing industry-university collaboration, are facing with greater challenges in respond to the rapidly changing globalised knowledge economy (Lee, 2004). Universities are viewed as playing a central role in ensuring the nation to be able to compete with others in the edge

of globalised knowledge economy, in which the productivity of an economy depends on the development of science, technology, knowledge and creative ideas (Lee, 2004). Moreover, universities have unique characteristics since they play dual core functions, which are the creation of knowledge and the transmission of knowledge via teaching and research activities (Romainville, 1996). Undoubtedly, academics are key resources for universities. They play significant role in ensuring quality education and continuous innovation (Rowley, 1996). Academics are involved in multiple tasks in the university with the main focus given to teaching and research activities while the secondary emphasis is on service or administration works (Houston, Meyer, & Paewai, 2006).

The number of public and private universities in Malaysia has been expanding dramatically since the past two decades (Lee, 2004; Morshidi Sirat, 2010). As at 2012, there are a total of 20 public universities and 29 private universities in Malaysia (Ministry of Higher Education [MoHE], 2012a, 2012b). In addition to this number, there are five branch campuses of foreign universities in Malaysia (MoHE, 2012b). In recent years, there are rising concerns on the quality and standard of public universities. Discussions and debates appear quite often via different media pertaining to the international ranking of HEIs and the employability of public universities' graduates.

The deterioration of education quality in Malaysia is alarming; especially when the global ranking of local premier public universities continue to decline and the achievements are lagging behind many other universities in the region (Hamzah, 2015). Malaysian universities were absent from Times Higher Education (THE) World University

Rankings 2014 (Chapman, 2014a). In fact, none of the public universities in the country manage to get on the list of top 400 universities since year 2000. In contrast, our neighbouring country, Singapore, has two universities (i.e. National University of Singapore and Nanyang Technology University) that were able to make themselves to the top 100 of THE World university rankings. On the other hand, King Mongkut's University of Technology, Thailand was in the top 400 list. The evaluation criteria of THE university ranking encompass 13 different performance indicators that cover five major areas: teaching, industry outcome, research, citations, and international outlook (Chapman, 2014a).

Meanwhile, the local universities were also not in the list of top 100 THE Asia University Rankings in year 2014. Universiti Kebangsaan Malaysia (UKM) was ranked 87th in 2013 for Asia region, but was dropped out from the list in 2014. On the other hand, the universities from Japan, Singapore, Hong Kong, Korea, and China ranked the top five universities in THE Asia university rankings (Gomez, 2014). For Thailand, in addition to King Mongkut's University of Technology, Mahidol University also manage to make it to top 100 (Times Higher Education, 2014). Moreover, Malaysian universities were also unable to grab a place in top 100 THE World Reputation Rankings for the fourth consecutive years since 2000 (Chapman, 2014b).

For Quacquarelli Symonds (QS) University Rankings 2014, the oldest university of the country, Universiti Malaya (UM), was ranked 32th and 151th for Asia and world rankings respectively (Hamzah, 2014). The top 10 of QS world universities rankings were

dominated by universities from the United States and the United Kingdom. National University of Singapore was in the first place for QS Asia university rankings (22th for world rankings) (QS Quacquarelli Symonds University Rankings, 2015). Overall, there were some improvements in international rankings of Malaysian universities in year 2014 as compared to 2013 (Refer Table 1.1 for details). The determinants for QS university rankings include student to faculty ratio, internationalisation, student exchange programmes, employer reputation, academic reputation, and citations per paper (Anisah, 2014). Generally, the improvement of 2014 QS university rankings among Malaysian universities was largely influenced by the increase in the proportion of international students (Anisah, 2014). There're still much room for improvement in different areas, especially if local universities wish to get a spot among the world top 100 in QS rankings.

Table 1.1
Malaysian Public Universities Rankings in QS University Rankings (2013 & 2014)

	Asia		World	
University	2013	2014	2013	2014
Universiti Malaya (UM) *University of Malaya*	33	32	167	151
Universiti Kebangsaan Malaysia (UKM) *National University of Malaysia*	57	56	269	259
Universiti Putra Malaysia (UPM) *Putra University of Malaysia*	72	76	355	294
Universiti Sains Malaysia (USM) *Science University of Malaysia*	61	57	355	309
Universiti Teknologi Malaysia (UTM) *University of Technology Malaysia*	68	66	411-420	376
Universiti Islam Antarabangsa Malaysia (UIAM) *International Islamic University of Malaysia (IIUM)*	151-160	145	501-550	501-550
Universiti Malaysia Sarawak (UNIMAS) *University of Malaysia Sarawak*	181-190	201-250	-	-
Universiti Teknologi Mara (UiTM) *MARA University of Technology*	201-250	201-250	-	-
Universiti Utara Malaysia (UUM) *Northern University of Malaysia*	201-250	201-250	-	-
Universiti Malaysia Sabah (UMS) *University of Malaysia Sabah*	301+	251-300	-	-
Universiti Malaysia Pahang (UMP) *University of Malaysia Pahang*	251-300	251-300	-	-
Universiti Malaysia Terengganu (UMT)	251-300	251-300	-	-

University of Malaysia Terengganu				
Universiti Tun Hussein Onn Malaysia (UTHM)	251-300	251-300	-	-
Tun Hussein Onn University of Malaysia				

Source: QS Quacquarelli Symonds University Rankings (2015)

The employability of graduates from public universities is another issue that frustrate the parents and general public. The issue related to unemployed local graduates has been a topic of discussion since year 2000 (Arokiasamy, 2010). The unemployment rate among Malaysian graduates increase from 15.3% in year 2000 to 21.1% in 2007 (World Bank, as cited in Asia Development Bank, 2012). Recent report showed that close to 40% graduates from local public universities are either jobless or having a job that does not match with their qualification (Ji, 2013; Lee, 2015). On the other hand, Hrm Asia (2012) reported that the number of graduates who unable to secure a job have increased from 41,000 in 2009 to 43,000 in year 2011. Survey among 174,464 university graduates that was carried out in year 2011 demonstrated that 24.6% of them did not get any job for more than six months after their graduation (Ji, 2013). Among the reasons identified include the graduates are lack of sufficient knowledge and competency that are relevant to the job they applied, lack of communication skill and language proficiency (especially English), and lack of general knowledge (Ji, 2013; Lee, 2015).

The reports that were released by World Bank in 2007, 2011, and 2013 indicated that Malaysia education is in bad condition (Hamzah, 2015). There is a need to remedy the present quality of education, particularly the higher education in order to realise Malaysia's aspiration to become an excellent international education hub in the region and to attract 200,000 foreign students by 2020 (Hamzah, 2015; Lee, 2015). Up to 2012, the number of foreign students in Malaysia was 72,456 (Lee, 2015). Anyway, besides the

number of students, it is also important for local universities to attract good quality students. This can be achieved if the local universities are able to achieve world class university standard and build stronger reputation in international academic world. Many have criticized on the unsatisfactory performance of Malaysian public universities as compared to other countries despite the government's allocation of budget for education is among the highest in the world based on the percentage of Gross Domestic Product (Hamzah, 2015). Malaysian education sector remain as the biggest recipient in the budget allocation in 2014, which is RM54.6 billion or 21% of the total budget, further increment as compared to RM37.5 billion allocation in year 2013 (Elizabeth, 2014; Hamzah, 2015).

In year 2007, National Higher Education Strategic Plan (NHESP) beyond 2020 was announced by the government. Consequently, there have been increased demands for the transformation of higher education system so that Malaysia can be a leading international education hub (Ahmad, Farley, & Naidoo, 2012; MoHE, 2013). In fact, it is well recognised that universities worldwide today are under greater pressure to improve their productivity and performance (Blackmore & Kandiko, 2011). As a result, members in academic community have to deal with greater demands and wider variety of academic works (Blackmore & Kandiko, 2011). Typically, 90 percent of the expenditures in local public varsities are funded by the federal government, while the balances come from the students' fees (Lee, 2000). With the introduction of NHESP beyond 2020, Malaysian public universities would gradually face the pressure of declining government funding as in the case of HEIs in other countries (Langford, 2010; Winefield & Jarrett, 2001). Local public universities are expected to generate more incomes from internal resources as per

strategies outlined in NHESP beyond 2020. Under the 10th Tenth Malaysian Plan (2011-2015), Performance Based Funding (PBF) was introduced as a result of the funding reforms. The new funding mechanism comprises of two components: Fixed component (e.g. salary and utilities expenditures) and variable component (e.g. research and development, students' achievements) which are based on the institutions' performance, measured through Rating System for Malaysian Higher Education Institutions (SETARA) (Ahmad & Farley, 2013). This development requires public HEIs to make several changes to meet such expectation. Hence, the ability of public HEIs to develop and maintain engaged academics becomes even more essential. This is because staff with high work engagement tends to reflect greater organisational commitment, performance and less tendency of turnover (Halbesleben, 2010).

Adams (1998) investigated the changes in Australia higher education and addressed several issues confronting academics, which are indeed relevant to the scenario in Malaysia today. Among others the author described the bureaucratic changes in HEIs resulting to the rising needs for documentation to show efficiency, quality and accountability in all aspects of academics operations. Besides, academics are burdened with more workload as a result of quantitative changes which stem from the dramatic increase of students intakes (Adams, 1998). The number of students in Malaysian public universities increased from 189,020 in year 1995 to 304,628 in year 2001, and subsequently reached 331,025 in year 2006 (Da, 2007). The rising trend continued and there were a total of 462,780 students in year 2010 and 508,256 in year 2011 (MoHE, 2012a). As a result of such rapid expansion of higher education, the academics in

Malaysia were loaded with more teaching load as compared to their Singaporean counterparts (Lee, 2003). The staff-to-students ratio in Singapore is at about 1:10, but the ratio in Malaysian public universities had been doubled from 1: 20 to as high as 1: 40 (Lee, 2003).

In spite of such development, academics are expected to achieve significant performance in all academic areas (i.e. teaching, research, service, consultancies and administration). As HEIs served as an important instrument of a nation's economic policy, the institutions and their members are not only subjected to government and public scrutiny, but also challenged by increasing competition (Henkel, 2005).

Ismail Hussein Amzat and Abdul Rahman Idris (2012) pointed out that there are increasing complaints among the academics in Malaysian public universities as they have very limited chance to participate in university policy and decision making process. Such autocratic decision making style has resulted to dissatisfaction among the academics. As public universities receive large amount of sponsorship from the federal government, thus the directions of the universities are strongly influenced by the directives from the government. As a result, the universities' autonomy has declined and is merely responding to the directives from the government (Ismail Hussein Amzat & Abdul Rahman Idris, 2012).

Besides, local public universities also losing many experienced academics who left for greener pastures in private sector and/or due to overly bureaucratic culture of the

institution (Lee, 2003). In 2014, 38 medical lecturers left Science University of Malaysia (Universiti Sains Malaysia, USM) in six months (Chin, 2014). Among the reasons are high workload and inadequate compensation as compared to the private sectors. Some of them feel that their contributions were not appreciated by the university, and there were lack of recognition and promotion opportunities (Chin, 2014; "Don: Many of us left," 2014).

No statistics was found for the actual turnover rate among the academics in local universities. This is not surprising as such fact is less documented in the literatures of developing countries (Ng'ethe, Iravo, & Namusonge, 2012). The national survey in Australia demonstrated that turnover intention among the academics reported as high as 68% in early year 2000. In the United Kingdom, academics turnover rate is 6% for 2008 (Universities UK, 2008). In South Africa, academics that left HEIs were between 5 to 18%, which is considered as high (Anderson, Richard, & Saha, 2002). According to Barnes, Agago and Coombs (1998), regardless of how academics perceived about sense of community in the institution, frustration caused by time demands was the most crucial factor that leads academics to leave their career even though they have positive feelings about the organisation. In addition, just like universities in other developing nations, Malaysian universities also challenged by turnover and brain drain among the academics (Khoo, 1981; Lee, 1999). Obviously, this would result in the lost of talented staff in local HEIs. The higher education reform and increase in research and development target has resulted to talent war for academic staff in international market (Universities UK, 2007).

To ensure a high standard and quality of local public universities, it is essential to have academics who exhibit high work engagement. Earlier studies revealed that work engagement is an indicator of positive behaviour and work attitude (Bakker & Schaufeli, 2008; Schaufeli, Taris, & Van Rhenen, 2008a). As such, local public universities that possess a team of engaged academic staff who are enthusiastic, dedicated and persistent in various aspects of their job (e.g. improvement in research and development, teaching and learning measures) are among the critical factors to realise the vision of reforming the HEIs in the country. The reformation would enable Malaysian public universities to have greater ability to compete in the international arena (Ahmad & Farley, 2013). On the contrary, failure in obtaining and creating a group of academics who are engaged in their work might jeopardize the aim of the country to generate quality human capital to face with the challenges of knowledge and innovation based economy as indicated in the second thrust of national mission in the ninth Malaysian Plan (MoHE, 2013). Engaged academics are not only able to enhance their own credential in their profession, but also can significantly contribute to the overall performance of the institutions (Rowley, 1996).

1.4   Problem Statement

Prior studies related to HEIs, specifically analyses on the job outcomes among the academics across different countries were largely concentrated on job satisfaction (e.g. Chen, Yang, Shiau, & Wang, 2006; Eyupoglua, & Saner, 2009; Fowler, 2005; Lacy & Sheehan, 1997; Sabharwal & Corley, 2009; Toker, 2011; Winefield & Jarrett, 2001), organisational commitment (Wainaina, Iravo, & Waititu, 2014), stress (Gmelch, Wilke & Lovrich, 1986; Winefield, Gillespie, Stough, Dua, Hapuarachchi, & Boyd, 2003) and

15

burnout (Ghorpade, Lackritz, & Singh, 2007). Similar trend found in studies among Malaysian academics. There are numerous studies examining the job attitudes (job satisfaction or/and organisational commitment) of local universities academic staff (e.g. Arif Hassan & Junaidah Hashim, 2011; Fowler, 2005; Lew, 2011; Fauziah Noordin & Kamaruzaman Jusoff, 2009; Ros Intan Safinah Munir, Ramlee Abdul Rahman, Ariff, Md. Ab. Malik, & Hairunnisa Ma'amor, 2012; Santhapparaj & Syed Shah Alam, 2005; Zainudin Awang, & Junaidah Hanim Ahmad, 2010). On the other hand, studies concern with stress or burnout in local academia can be found in the work of Henny, Anita, Hayati, and Lackritz (2004), and Mohd Kamel Idris (2011). Other studies examined knowledge sharing (Ali Jolaee, Khalil Md Nor, Naser Khani, & Rosman Md Yusoff, 2014; Chong, Yuen, & Gan, 2014), organisational culture (Ramachandran, Siong, & Hishamuddin Ismail 2011), turnover intention/intention to leave (Arif Hassan & Junaidah Hashim, 2011; Choi, Lee, Wan Khairuzzaman Wan Ismail, & Ahmad Jusoh, 2012; Khairunneezam Mohd Noor, 2011; Koay, 2010; Lew, 2011), quality culture and work performance (Hairuddin Mohd Ali & Musah, 2012), academic productivity (Aminuddin Hassan, Tymms, & Habsah Ismail, 2008), personality and happiness (Rashid Aziz, Sharif Mustaffa, Narina A. Samah, & Rosman Yusof, 2014). In short, thus far, there are still relatively limited comprehensive and systematic studies that concentrated on work engagement among the public universities' academics in Malaysia.

Langford (2010) pointed out Australian academics experienced high level of stress as compared to employees in other industries. There is no exception with the academics in Malaysian public universities. Workload pressure, performance pressure, and role

ambiguity were found to be among the factors that intensified job stress, which eventually lead to declining job satisfaction among the academics in a local public university (Nilufar Ahsan, Zaini Abdullah, Yong, & Syed Shah Alam, 2009). More extensive study by Mohd Kamel Idris (2011), which involved respondents from top five public universities in Malaysia also revealed that role overload and role ambiguity have lead to psychological strain over time among the academic staff.

The perception that academics are relatively stress free occupation is no longer valid as many empirical studies in recent years have repeatedly showed the evidence of increasing demanding working environment in the universities worldwide (Winefield, Boyd, Saebel, & Pignata, 2008). Due to the increasing competitive landscape of higher education at national and international arena, stricter key performance indicators (KPI) targets are imposed on the academic staff nowadays (Kaur, 2009; Hariati Azizan, Lim, & Loh, 2012). There are greater demands for academics to publish in high ranking journals, and publications are served as important criteria to determine the eligibility for promotion (Hariati Azizan *et al*. 2012; Ng & See, 2012). Nevertheless, the roles of academics are not merely on research and publication, they need to shoulder the responsibilities in disseminating knowledge, stimulating critical thinking, mentoring, and encouraging innovation among the students (Ng & See, 2012). In addition, the academics are also expected to react responsively to the diverse needs and expectations from students (Houston *et al*., 2006). Teaching, dealing with students and others in the workplace involved substantial emotional demands that can cause academics to feel tired and exhausted (Weimer, 2010). As the university environment becomes more demanding, the

17

university academic staff has to perform more complex work (Houston *et al*., 2006; Khairunneezam Mohd Noor, 2011).

Norzaini Azman, Morshidi Sirat and Mohd Ali Samsudin (2013) raised their concerns that the obsession towards higher global university ranking in recent years in fact has caused unnecessary pressure to both the academic staff and administrators as research and publications are viewed as one of the most critical ways to enhance university's performance. They further explained that many Malaysian academics perceived that their core works are expanding due to rising requirement for research activities in addition to teaching and administrative work. This coupled with the fact that there is tremendous increase of job expectation among the academic staff in recent years; this phenomenon further induces job-related stress and resulted to deteriorating morale (Fauziah Noordin & Kamaruzaman Jusoff, 2009).

In view of the intensified workloads and different job demands encountered by the academic community in general (Schmidt & Langberg, 2008), a better understanding of academics' work engagement seems imperative in improving the level of competitiveness of the public universities. Public universities have the largest number of student intakes and obtain substantial government funding through the budget allocation every year in contrast to the private HEIs (Ahmad *et al*., 2012). As such, the overall achievements of the universities and the ability of the institutions to produce quality graduates are under the scrutiny of the internal and external stakeholders. The question remains whether academics in local public universities who are also struggling with the heightened job demands are able to exhibit high work engagement. Another question is to what extent

different resources are able to influence the level of work engagement among the academics.

As explained earlier, the trend towards positive organisational behaviour in the work place has spurred the great interest among the researchers around the globe to look into the strengths and well-beings rather than the limitations of human beings (Luthans & Youssef, 2007). Among the concepts that increasingly gain popularity in recent years is work engagement (Pati & Kumar, 2010; Welborne, 2007). Some researchers, such as Maslach and Leiter (1997) claimed that work engagement is the direct opposite of burnout. However, Schaufeli and Salanova (2011) argued that such perfectly inverse relationship of the two concepts (i.e. burnout and work engagement) is not feasible. This is because individuals who are not suffering from burnout do not necessarily means that they are engaged in the works. In the similar vein, individuals who are not engaged in the work may not necessarily be experiencing burnout (Schaufeli & Salanova, 2011). Schaufeli and colleagues clearly distinguish the concept of work engagement and burnout, they argued that these two concepts should not be measured by using the same instrument (Schaufeli *et al.*, 2002; Schaufeli & Salanova, 2011).

Resources are viewed as important contributors towards the building of engaged employees as described in Job Demands-Resources (JD-R) model of work engagement (Bakker & Demerouti, 2008). This modified model is rooted from the JD-R model that is used to explain the burnout phenomenon (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Non-work resources, specifically personal resources or psychological capital (e.g. resilience and optimisms) have been included in the JD-R model of work engagement

other than job demands and job resources (Bakker & Demerouti, 2008; Bakker & Leiter, 2010). As a result of such development, both job resources and personal resources are recognised as two broad categories of resources that are essential in promoting individuals' willingness to exert effort toward their tasks. Job resources, such as rewards, career opportunity, and job security promote the accomplishment of organisation objectives and encourage self-enhancement among the employees (Demerouti *et al*., 2001; Bakker, Deremouti, & Verbeke, 2004). For instance, Shaufeli and Bakker (2004) in their multi-sample study concluded that high job demands and low job resources may lead to burnout which will subsequently resulted in health problem. Conversely, job resources are the main determinant of work engagement. And work engagement consequently resulted in desired outcomes (e.g lower turnover tendency). On the other hand, job demands (e.g. time pressure, workload, and poor working environment) not only lead to exhaustion of individuals' mental, emotional and physical resources, but also resulted to depletion of energy and affected their health adversely (Demerouti *et al*., 2001; Lewig *et al*., 2007).

Combinations of different job resources (e.g. advancement opportunities, fairness, and value fit) have been used in predicting work engagement in prior studies (Crawford, LePine, & Rich, 2010; Schaufeli & Bakker, 2004; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). In general, job resources appear to be positively correlated with work engagement and consequently improve job performance (Bakker & Demerouti, 2008). The view is also consistent with the assumption of Conservation of Resources (COR) theory (Hobfoll, 1989), which contends that resources play a central motivational role

(Xanthopoulou *et al*., 2009). COR theory also emphasizes that increase in resources can reinforce the creation of more resources, and subsequently lead to positive work outcomes (Hobfoll, 2002). In contrast, in the case of lack of resources or loss of resources, there will be more tension (Hobfoll, 2002).

COR theory (Hobfoll, 1989) and JD-R model (Bakker & Demerouti, 2008) provide the foundation in understanding how resources are served as important predictors of work engagement. Continuous efforts to empirically examine which (and how) different resources operate as antecedents of work engagement are still essential (Mauno *et al*., 2007). Moreover, the contribution of various types of job resources on engagement might vary across different contexts that deserve further investigation. In contrast, academics' stress and burnout are widely acknowledged in the reports from various published academic papers (Azeem & Nazir, 2008; Barnes, Agago, & Coombs, 1998; Taris, Schreurs, & Silfhout, 2001). It is believed that engaged academics would be able to handle various job demands more effectively.

As such, this study intends to build on the previous work engagement studies by incorporating different aspects of resources, namely job resources (i.e. perceived organisational support, supervisor support, colleague support, autonomy, recognition, job prestige, and perceived external prestige), personal resources (core self-evaluations), and work-life enrichment (personal life-to-work enrichment, and work-to-personal life enrichment) into the model in predicting work engagement of academics in Malaysian public universities. Reviews of existing literatures show that there is still a missing link in

evaluating the relationship between the combined effects of the abovementioned resources and work engagement. More detailed justifications are provided in the subsequent parts.

The analyses on how supportive work environments affect work engagement, despite not uncommon, tend to focus on supervisor support and/or co-worker support (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Karatepe & Olugbade, 2009; Xanthopoulou *et al*., 2007b), without including perceived organisation support (POS) as job resources in the model. POS, support from colleagues and immediate supervisor/superior in fact are valuable but different forms of support in an organisation. POS and immediate superior support are two related but distinct concepts (Luxmi & Yodav, 2011; Rhoades & Eisenberg, 2002). This effort is also consistent with the urge by Chiaburu and Harrison (2008) to examine the influences of co-workers, leaders and the organisation simultaneously in order to uncover the implications of each type of support on work outcomes. POS theory explains that the extent to which employees perceive the treatment they received from the organisation as favourable or vice versa, is not based on the action of individual superior, but is through the human-like characteristics assigned to their organisation as a whole (Luxmi & Yodav, 2011; Rhoades & Eisenberg, 2002).

On the other hand, immediate superior has the authority over their employees and they are in charge of managing employees' performance and to retain good performers in the organisation (Rosseau & Aubé, 2010). Supportive immediate superior may provide job-related assistance and encouragement to the employees. On the other hand, colleagues

support represents the lateral social influences by others who are in the same level of hierarchy with the focal employee (Chiaburu & Harrison, 2008; Rosseau & Aubé, 2010). Chiaburu and Harrison (2008) explained that the social influence from colleagues is unique as there is more discretion in the lateral exchanges as compared to the vertical relationship with the superior, which is governed by authority ranking. Apart from that, employees interact more regularly with their colleagues as compared to their superiors. Thus, the impact of these two sources of support on work outcomes might differ which deserve more thorough investigation (Chiaburu & Harrison, 2008).

Job prestige, recognition and autonomous works are found to be among the important driving factors of academics' motivation and job satisfaction (Johnsrud & Heck, 1998; Langford, 2010; Moses, 1986; Schmidt & Langberg, 2008). Unfortunately, the potential influences of job prestige on work outcomes are seemed to be neglected thus far. The inclusion of job autonomy and recognition as job resources in predicting work engagement remain to be valuable since there are quite a number of changes in academia today. For instance, some writers pointed out that professional autonomy of academics are weakening in recent years in view of rising managerial control over their works (Lafferty & Fleming, 2000; Johnsrud & Heck, 1998; Moses, 1986).

The review of the literatures also shows that previous researches concentrated on the rewards and recognition that were drawn directly from their employers/organisations, but ignored the indirect rewards drawn from outside organisations, such as perceived external prestige (Fuller, Hester, Barnett, Frey, & Relyea, 2006). Perceived external prestige (PEP)

reflects how individuals believe that their organisation is viewed positively by outsiders (Fuller *et al.*, 2006). Favourable PEP promotes positive perception about one's job and organisation (Bartels, Pruyn, De Jong, & Joustra, 2007; Herrbach, Mignonac & Gatignon, 2004). Nonetheless, PEP is relatively under-studied and its relationship with work engagement should be explored as it has been found to serve as invaluable resource that fosters job satisfaction, organisational commitment, organisation identification and reduces turnover intention (Fuller *et al.*, 2006; Herrbach *et al.*, 2004; Mignonac, Herrback & Guerrero, 2006).

Positive work and non-work interface (i.e. work-life enrichment) is another element of resources that would be examined in this study. Traditionally, studies on work and non-work interface tend to be dominated by conflicting paradigm or depletion arguments (e.g. work-family conflict) (Dorio, Bryant, & Allen, 2008). Nevertheless, individuals' commitment in multiple roles will not necessarily lead to strain and deterioration of individuals' well being. In contrast, there are synergies and mutual benefits that individuals can gain from multiple roles, which in turn improve individuals' mental and physical well-being (Barnett & Hyde, 2001; Barnett, 2008). The emergence of the positive side of work-personal life interface provides an avenue for a broader understanding to this area of study. Moreover, there are increasing numbers of employed adults regardless of gender who are highly devoted into playing multiple roles across work and non-work domains in the contemporary society (Montgomery, Peeters, Schaufeli, & Ouden, 2003). As such, it is essential to understand how the interactions of these multiple roles are able to generate favourable work outcomes such as work

24

engagement.

Different conceptualizations are found in the studies of positive perspective of work and personal life (mainly family domain) interface, such as work-family enrichment, enhancement, facilitation, and positive spillover. Maetz and Boyar (2011) urged for putting an end to the proliferation of positive work-family interface constructs by adopting enrichment (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Greenhaus & Powell, 2006) as the central construct. Work-family enrichment model developed by Greenhaus and Powell (2006) integrates support, enhancement and positive spillover.

Previous studies related to work and non-work enrichment tended to concentrate on the importance of "family" in the non-work area. However, by focusing only on family may end up with other areas of non-work life being omitted. Though the term work–life is closely linked to the concept of work–family (which is commonly found in the literatures), it provides a broader meaning. Non-work or personal life of employees does not merely refers to the time spent with family members, but also encompasses different aspects of life, such as time spent with friends, and time for leisure and hobbies (Ng, Kuar, & Lai, 2013). As such, this study will use the term work-life enrichment instead of work-family enrichment. Consistent with the development in work-family literatures, this study will look into the dual directions of work-life enrichment interface (i.e. work-to-personal life enrichment and personal life-to-work enrichment).

Two prior studies in relation to positive work-family interaction and work engagement were found (Montgomery *et al*., 2003; Mostert & Rathbone, 2007), but both studies

focused on family/home in non-work domain and it was not based on the enrichment conceptualisation (Carlson *et al*., 2006; Greenhaus & Powell, 2006). Some methodological limitations were identified as well, for instance, Montgomery *et al*. (2003) failed to distinguish the bi-directions of work-non-work interface; items for both positive work-home and home-work interference were collapsed into one in their study. Besides, their sample merely consisted of 67 newspaper managers (Montgomery *et al*., 2003). Mostert and Rathbone's (2007), on the other hand, performed the relevant study on a group of mining employees of which the nature of their work are very different from academics.

Besides, the knowledge about how individual dispositions and traits may influence work engagement deserve more attentions (Mauno *et al*., 2007). Mauno *et al*. (2007) stressed that especially in the event of insufficient job resources; personal resources will become crucial in determining work engagement. Similarly, Sonnentag, Dormann and Deremouti (2010) also raised the concern that the investigation between personality variables and work engagement had been largely neglected. Sonnetag *et al*. (2010) viewed that personality might have an effect on the variability of work engagement within a person. One of the personality traits that have gain increasing popularity is the core self-evaluation (CSE), which represents the way how individuals perceive their importance, ability and competency (Judge, Bono, Erez, & Locke, 2005; Judge, Van Vianen & De Pater, 2004). Individuals with high CSE appraise themselves positively in different situations. They view themselves as capable, worthy, and in control of their lives (Judge *et al*., 2004). Such positive individual characteristics serve as an important personal

resource that is capable in strengthen employee's work engagement. Nonetheless, based on my best knowledge, no studies linking CSE and work engagement conceptualisation as explained by Schaufeli *et al.* (2002) have been carried out on the academics of Malaysian public universities.

One of the assumptions in JD-R model of work engagement (Bakker & Demerouti, 2008), which is adopted from COR theory (Hobfoll, 1989), is that resources appear to be more important in maintaining work engagement when job demands are high. Thus, job demands are expected to moderate the relationship between resources (e.g. job resources, work-life enrichment, and core self-evaluations) and work engagement. There are still limited studies on the moderating effects of job demands in resources-work engagement study. Thus far, the related studies conducted on this aspect can be found in the published paper by Hakanen, Bakker and Demerouti (2005) and Bakker *et al.* (2007). These analyses, however, were limited to the interaction effect between job resources (e.g. contacts with peers, creativity, and information) and job demands only. To date, it appears that the examination of the moderating effect of job demands on the relationships between job prestige, perceived external prestige, core self-evaluations, work-life enrichment, and work engagement remain scarce. Besides, there is a need to further validate the assumptions put forward in JD-R model of work engagement.

1.5   Research Questions

In light of the earlier discussions, this cross-sectional study would address the following research questions:

RQ1:   Do job resources (i.e. perceived organisational support, immediate superior support, colleague support, autonomy, recognition, job prestige and perceived external prestige) have a significant influence on work engagement?

RQ2:   Do work-life life enrichment (i.e. work-to personal life enrichment and personal life-to-work enrichment) significantly influence the academics' work engagement?

RQ3:   Does core self-evaluations significantly influence the level of work engagement among the academics?

RQ4:   Do job demands moderate the relationship between job resources (i.e. perceived organisational support, immediate superior support, colleague support, autonomy, job prestige, and perceived external prestige), work-life enrichment (i.e. work-to-personal life enrichment and personal life-to-work enrichment), and core self-evaluations on work engagement among the academics?

1.6   Research Objectives

The general objective of this study is to extend the knowledge on work engagement by elucidating an empirical investigation on the influence of job resources, personal resources (i.e. core self-evaluations), and work-life enrichment on work engagement among the academics in public universities in Malaysia.

Consistent with the above research questions, the specific objectives of this research are listed as follows.

1. To determine the influence of job resources (i.e. perceived organisational support, immediate superior support, colleague support, autonomy, job prestige, and perceived external prestige) and work engagement among the academics.

2. To examine the influence of work-life enrichment (i.e. work-to-personal life enrichment and personal life-to-work enrichment) on work engagement among the academics.

3. To examine the influence of individual's core self-evaluations on academics' work engagement.

4. To examine the moderating effects of job demands on the relationship between job resources (i.e. perceived organisational support, immediate superior support, colleague support, autonomy, job prestige, and perceived external prestige), work-life enrichment (i.e. work-to-personal life enrichment and personal life-to-work enrichment), and core self-evaluations on work engagement.

1.7 Research Scope

This study examines the work engagement of academic staff in Malaysian public universities. The public higher education sector is chosen for several reasons. Firstly, literature reviews pertaining to HEIs study have addressed numerous concerns of the increased challenges encountered by academics in many parts of the world. The trend is influenced by globalisation and internationalisation process (Bentley, Coates, Dobson,

Goedegebuure, & Meek, 2013; Langford, 2010; Pienaar & Bester, 2009; Ngui, Hong, Gan, Usop, & Mustafa, 2010). Significant changes in Malaysian public universities were observed through the implementation of National Higher Education Action Plan (2007 – 2010) and NHESP beyond 2020 as explained earlier (Ahmad *et al*., 2012; Morshidi Sirat, 2010). The transformation process has inevitably affected the working environment of HEIs, which has resulted in the rise of job demands and has affected job outcomes (Houston *et al*., 2006; Pienaar & Bester, 2009). The changes are viewed as unabated and irreversible for HEIs (Pienaar & Bester, 2009).

Next, both the practitioners and academic literatures consistently reveal the benefits of work engagement in the competitive and dynamic environment (e.g. Koyuncu *et al*., 2006; Lockwood, 2007; Gallup, 2013). Besides, employees with high work engagement are instrumental to ensure an organisation can maintain its competitive advantage (Lockwood, 2007). Hence, public universities would need engaged academics to achieve the organisational objectives and to realise the national goals of becoming an excellent higher education hub. The adoption of positive psychology and positive organisational behaviour (Hobfoll, 1989, 2002) that emphasise on developing employees' strength would benefit the public universities.

1.8   Significance of the Study

This study will be able to contribute to the knowledge of human resource management and positive organisational behaviour by providing more in-depth understanding on the

extent to which different forms of resources might influence employees' work engagement. As stated earlier, empirical studies on the impact of perceived external prestige, core self-evaluations, work-life enrichment on work engagement are still limited thus far, hence this study would add value to the existing literatures. Present study provides a more comprehensive theoretical framework to understand resources-work engagement relationship. Hakanen and Roodt (2010) clearly addressed the needs for future research to examine the antecedents and consequences of work engagement in different occupational groups by utilizing the JD-R model. Moreover, this study attempts to gain deeper understanding on whether resources are important when academics encounter with stress or high job demands based on the Conservation of Resources theory and JD-R model of work engagement (Bakker & Demerouti, 2008; Hobfoll, 1989, 2002). Specifically, the interaction effects between job demands and other resources (such as core self-evaluations, job prestige, perceived external prestige and work-to-personal life enrichment and personal life-to-work enrichment) have yet to be examined. The results would provide additional knowledge in the work engagement literatures as not only job resources (Bakker *et al.*, 2007) might gain their salience in the context of stressful environment; other non-work resources may exert similar influence.

In addition, several changes in today society have raised the concerns toward work/non-work interaction by the management, practitioners and academics. The changes include the influx of women into the workforce, increased number of dual-income families, single parent and different attitudes towards other aspects of life, such as leisure and general quality of life (Choi & Kim, 2012). The analysis of bi-direction of work-life

enrichment enables the management to develop intervention techniques that might be able to enhance or facilitate the generation of positive energy and resources across different domains (Masuda, McNall, Allen, & Nicklin, 2012). This would be helpful in heightening employees' work engagement. The expansion of the meaning from work-family to work-life is consistent with the development in scarcity hypotheses (i.e. work-life conflict) (Aziz & Zickar, 2006; Ng, Kuar, & Lai, 2013), and it is more suitable to be applied to both married as well as those who are still single (Bonebright, Clay, & Ankenmann, 2000). Moreover, this study also responds to the call for greater focus on the positive side of work-family interface rather than focusing merely on the negative perspectives (Odle-Dusseau, Britt, & Green-Shortridge, 2012).

Doyle and Hind (1998) found that academics viewed their job as intrinsically motivated and enjoyable despite experiencing burnout. Furthermore, Harman (2001, 2003) also found that academics in Australia reported high job satisfaction on the academic component of their jobs even though they were suffering from stress and lower salaries as compared to those outside of academe (Harman, 2001). Such results indicate that there are critical needs to examine the positive experience (i.e. work engagement) of the academics.

The more in-depth understanding about the antecedents of work engagement is important to every organisation inclusive of HEIs. This is because prior studies have shown that engaged employees would lead to better performance and positive work outcomes (Harter *et al.*, 2002; Kanste, 2011; Babcock-Roberson & Strickland, 2010,; Schaufeli *et*

al., 2008). The quality of HEIs is always one of the major concerns among the general public, government and even private sector in most countries. Academics are required to be involved in teaching, research, consultation as well as administrative work (Taris *et al*., 2001). All of these activities consumed substantial time and efforts of the academics. Research activities by the academics are often viewed as among the major activities that contribute to the reputation of HEIs as well as continuous improvement for individuals. In addition, the engaged academics also will benefit the students and help in producing graduates with better quality. Thus, understanding the resources that provide meaningful contribution towards work engagement are essential to ensure that individuals are able to devote their time and efforts in fulfilling organisational goals.

Local public universities that wish to compete effectively in international arena must be able to inspire the academic staff to apply their full capabilities to their work. As such, this study assists the management to better understand factors that would significantly influence employees' level of work engagement. This enables the management to formulate or adjust its current policy to match the objectives of the institutions with the needs of the employees. Besides, the management needs to allocate scare resources available wisely in order to achieve the greatest positive impact to the university (Bentley *et al*., 2013). Engaged employees are valuable to any organisation as they are willing to take initiative and responsibility for their own professional development (Salanova & Schaufeli, 2008; Sonnentag, 2003). Besides, they feel compelled to strive towards a challenging goal and accept personal commitment to attain these goals (Bakker & Schaufeli, 2008).

1.9 Definitions of Key Terms

Work engagement is defined as a "positive, fulfilling, work-related state of mind that is characterised by vigor, dedication, and absorption" (Schaufeli *et al*., 2002, p. 74). Absorption describes individuals who are very focus, immerse and happy with what they are doing till they forgot about the time, and it is not easy for them to detach themselves from their work. Vigor mainly refers to the characteristics of individuals who are energetic, strong mentally, always put the best efforts in their work, and remain perseverant despite of obstacles. On the other hand, dedication explains the phenomenon whereby individuals are enthusiastic about their jobs; they view their works as challenging and inspiring (Schaufeli *et al*., 2002).

Job demands cover "those physical, psychological, social, or organisational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills. As a result, employees will suffer from certain physiological and/or psychological costs " (Bakker & Demerouti, 2007, p. 312).

Perceived organisational support (POS) is defined as "employees' global beliefs about the extent to which the organisation values their contributions and cares about their well-being" (Eisenberger, Huntington, Hutchinson & Sowa, 1986, p.501).

Immediate superior support refers to the degree to which immediate superior offers employees with support, encouragement and concern (Burke, Borucki & Hurley, 1992). These supports may include both the instrumental and emotional supports (Caplan, Cobb, French, Van Harrison, & Pinneau, 1975).

Colleagues support describe the degree to which employees can depend on their colleagues for assistance and support when needed (Haynes, Wall, Bolden, Stride, & Rick, 1999; Liao, Joshi, & Chuang, 2004).

Autonomy explains the degree of leeway given to the employees in deciding for job related matter, such as the types of tasks that they need to perform, scheduling of work, as well as the ways and procedures to carry out work (Hackman & Oldham, 1975; Zhou, 1998).

Recognition refers to non-monetary rewards that are given to the employees as an appreciation of their performance and achievement (Paré & Tremblay, 2007; Javed, Rafiq, Ahmed, & Khan, 2012).

Job prestige reflects the regard for and/or value placed on an achievement, possession or personal attributed by a community (Blackmore & Kandiko, 2011).

Perceived external prestige is concerned with individuals' interpretation and assessments of organisations' prestige based on their own exposure to information about the company (Smidts, Pruyn & Van Riel, 2001).

Work-life enrichment

Work-life enrichment provides a broader meaning than the traditional work-family enrichment concept. Work-life enrichment is defined as "the extent to which experiences

in one role enhances the quality of life in another role" (Greenhaus & Powell, 2006, p. 73). The bi-directionality of work-life enrichment is well recognised. Work-to-personal life enrichment refers to the extent to which the "psychological resources, positive emotion or attitude, and development resources (e.g. opportunities, knowledge and skill)" that individuals developed or obtained through involvement in work roles that is beneficial to their roles in personal life (Carlson *et al.*, 2006, p.140). Likewise, personal life-to-work enrichment refers to the extent to which the "positive emotion or attitude, development resources and efficiency" that individuals developed or gained through involvement in personal life roles benefit their roles in work (Carlson *et al.*, 2006, p.140).

Core self-evaluations refer to "the fundamental assessments that individuals make about themselves and their self-worth" (Judge, Bono, & Locke, 2000, p. 237). Such evaluation might be positive or negative.

1.10   Organisation of Dissertation

Chapter one starts with brief introduction of the present study then proceeds with research background, problem statement, research questions, and research objectives of the present study. The subsequent part discusses the research scope and the significance of the present study. Next, the definition of the key terms associated with this research is presented. Lastly, this chapter describes the layout for different chapters in this dissertation.

Chapter two consists of literature reviews of the key variables of the present study. Relevant concepts, theoretical models, prior empirical findings and hypotheses are included in this chapter.

On the other hand, research design and research methodology are addressed in chapter three. This chapter describes the sampling design, research instrument, data collection, measuring scales and statistical analyses to be conducted in this study.

Chapter four presents the findings of the study. Chapter five covers the discussions of the results of the study. This is followed by the theoretical and practical implications of the findings, limitations of the present study and suggestions for future research and lastly the chapter ends with a conclusion.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter focuses on the literature reviews of the key variables in the present study. The first part of the chapter begins with the development and definition of work engagement. The next part moves on to the underpinning theories or predominant models that explain the phenomenon of work engagement. The subsequent part comprises of the explanation about the independent variables and their relationship with work engagement. In addition, the literature review on the function of job demands as the moderator between resources and work engagement will be presented as well. The next part covers the summary of hypotheses and conceptual framework of the present study. Lastly, this chapter ends with a summary.

2.2 Work Engagement: Introduction and the Background of the Concept

Tracing back the academic and practitioner literatures on engagement at work from year 1990 to 2013, there are different streams or categories of researches on engagement at work. For instance, Simpson (2009) divided the researches pertaining to engagement at work into four categories: personal engagement, burnout/engagement, work engagement and employee engagement.

Kahn (1990) was the first to introduce the concept of personal engagement in academic research. Kahn (1990, p. 694) conceptualized personal engagement as "the harnessing of

organisation members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively and emotionally during role performance". On the other hand, employees who are personally disengage are those who "disconnect themselves from work role; they withdraw themselves physically, cognitively or emotionally during role performances" (Kahn, 1990, p. 694). In Kahn's (1990) qualitative studies, he concluded that there are three psychological conditions that influenced individual's personal engagement and disengagement. The three conditions are meaningfulness (i.e. individuals feel that their involvement in certain role are worthwhile and valuable), safety (i.e. secure and predictable situations reduce individuals' fear of adverse impact that might affect their self-image, status or career), and psychological availability (i.e. individuals' performance in work role may affected by the level of physical resources, emotional resources, self-confidence, and experiences in non-work activities). Despite Kahn's (1990) contribution towards the conceptual model of personal engagement and disengagement, he did not operationalise the concept. May, Gilson, and Harter (2004) developed a 13-item psychological engagement construct that represented the three distinct dimensions of personal engagement as explained by Kahn (1990). Consistent with Kahn's proposition described earlier, their findings indicated that there was significant positive relationship between meaningfulness, safety, availability and engagement. Among the three dimensions, meaningfulness has the most influence on engagement (May *et al*., 2004).

The second and third categories of engagement research described by Simpson (2009) have been widely referred in various academic writings related to burnout and work

engagement in recent years. The "burnout/engagement" view (Simpson, 2009, p. 1018) mainly refers to the study by Maslach and Leiter (1997), while the research fall under "work engagement" category is dominated by the findings of Schaufeli and his colleagues (e.g. Schaufeli *et al.*, 2002). These two groups of researchers lead to two distinct points of view pertaining to the relationship between burnout and work engagement (Bakker, Demerouti, & Schaufeli, 2005).

In recent years, various burnout researchers had extended their interest towards the work engagement concept due to the realisation of the importance of studying positive psychology that affect employees' performance. The first school of thought advocated by Maslach and Leiter (1997) argued that work engagement is the direct opposite of burnout. This line of research viewed that burnout and work engagement represents the two opposite poles of a continuum (Leiter & Maslach, 2004). As such, work engagement can be measured via the opposite pattern of scores on the three burnout dimensions (i.e. exhaustion, cynicism and inefficacy) (Bakker *et al.*, 2008; Schaufeli *et al.*, 2002). The three dimensions reflect the psychological syndrome experienced by individuals when they are facing with severe interpersonal stressors on the job (Leiter & Maslach, 2004). According to them, burnout will cause erosion of employees' work engagement. High energy, strong involvement, and efficacy will eventually turn into exhaustion, cynicism, and ineffectiveness or lack of personal accomplishment (Leiter & Maslach, 2004; Maslach & Leiter, 1997). Thus, Maslach Burnout Inventory-General Survey (MBI-GS) was deployed to measure both work engagement and burnout. High scores on

professional efficacy and low scores on the other two dimensions (i.e. exhaustion and cynicism) reflect high engagement (Maslach & Leiter, 1997).

The subsequent researchers such as Schaufeli *et al*. (2002) argued that although work engagement is the positive antithesis of burnout, they are two distinct constructs that should be measured separately. Similar to burnout, work engagement is also a multi-dimensional construct. The three major components of work engagement are vigor, dedication, and absorption, which represent a "positive, fulfilling, work-related state of mind" (Schaufeli *et al*., 2002, p.74). Absorption means "being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work" (Schaufeli *et al*., 2002, p.74). Dedication means strong involvement at work and employees "experience a sense of significance, enthusiasm, inspiration, pride and challenge" (Schaufeli *et al*., 2002, p.74). Vigor has the characteristic of "high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties" (Schaufeli *et al*., 2002, p.74). These definitions reflect that work engagement entails three major components, which are behavioural-energetic (vigor), emotional (dedication) and cognitive (absorption) (Schaufeli & Bakker, 2010). In short, engaged workers exhibit high energy and enthusiasm in their work (Bakker & Demerouti, 2008).

In order to assess individual's work engagement, Schaufeli *et al*. (2002) came up with Utrecht Work Engagement Scale (UWES), which comprise of 17 items. It is a self-reporting instrument that is comprised of three sub-scales: vigor, dedication, and

absorption (Schaufeli *et al*., 2002; Schaufeli & Bakker, 2004). In addition, a shorter version of UWES, which consist of nine items, is available as well (Schaufeli, Bakker, & Salanova, 2006). Based on the review of literatures, UWES becomes the most commonly used instrument by various researchers to measure work engagement in recent years as it has been proven to be a reliable and valid instrument to measure work engagement (Bakker & Schaufeli, 2006; Mostert & Rathbone, 2007; Sonnentag, 2003; Koyuncu *et al*., 2006). The UWES has been validated in different countries across the world, such as Greece (Xanthopoulou, Bakker, Kantas, & Demerouti, 2012), South Africa (Storm & Rothmann, 2003), Japan (Shimazu *et al*., 2008), China (Yi-Wen & Yi-Qun, 2005), Italy (Balducci, Fraccaroli, & Schaufeli, 2010), The Netherlands (Schaufeli & Bakker, 2004; Xanthopoulou *et al*., 2012), and Sweden (Hallberg & Schaufeli, 2006).

On the other hand, the term employee engagement was coined by Gallup researchers (Endres & Mancheno-Smoak, 2008). Their work had contributed to the development of another line of research (e.g. Harter *et al*., 2002; Harter, Schmidt, & Keyes, 2003). Engaged employees are defined by Gallup (2013) as "those who are involved in, enthusiastic about, and committed to their work and contribute to their organisation in a positive manner" (p.12). On the other hand, Harter *et al*. (2002) defined employee engagement as "the individual's involvement and satisfaction as well as enthusiasm for work" (p. 269). Harter *et al*. (2002) further explained that engagement occurs when individuals are "emotionally connected to others and cognitively vigilant" (p. 269). However, Gallup's engagement definition was criticised by scholars as it overlapped with other well-known concepts, such as job satisfaction (Schaufeli & Bakker, 2010). In this

line of research, employee engagement is operationalised by using a 12-item Gallup Workplace Audit (GWA) (Harter *et al*., 2002).

2.2.1 Distinction of Work Engagement from Other Concepts

Among the arguments emerged in relation to the concept of work engagement is its similarity with some other concepts, like job involvement, organisational commitment, job satisfaction and workaholism. However, Hallberg and Schaufeli's (2006) findings showed that work engagement, job involvement and organisational commitment are three distinct concepts, which represent different aspects of work attachment. Maslach *et al*. (2001) explained that job satisfaction and organisational commitment are dissimilar with work engagement. Work engagement provides a more complex and thorough perspective on the relation between the individual and work (Maslach *et al*., 2001). Job satisfaction reflects the positive emotional state resulting from the pleasure that an employee derive from the job (Locke, 1976). Schaufeli and Bakker (2010) described that work engagement denotes activation, which characterised by enthusiasm, excitement and alertness. On the other hand, job satisfaction denotes satiation, such as calmness and contentment (Schaufeli & Bakker, 2010). Carmeli and Freund (2004) explained that job satisfaction is a reflection of a more fragile and changeable employee attitude. In contrast, work engagement is relatively stable over the time (Schaufeli & Bakker, 2010; Hallberg & Schaufeli, 2006). This argument was further proven through a two years longitudinal study conducted by Mauno, Kinnunen, and Roukolainen (2007). Their results support the notion that work engagement is a relatively stable phenomenon as there is not much fluctuation of the mean values of work engagement within the two-year follow up study.

Organisational commitment was described as "a state in which an employee identifies with a particular organisation and its goals, and wishes to maintain membership in the organisation" (Miller, 2003, p. 73). In contrast to organisational commitment that reflects the individual's psychological state of attachment and identification to the organisation; the concept of work engagement emphasises more on the work itself (Schaufeli & Bakker, 2010).

In relation to job involvement, confirmatory factor analysis performed by Hallberg and Schaufeli (2006) clearly showed that the two were distinct concepts and they were weakly related to each other. Job involvement is defined as "the degree to which a person is identified psychologically with his work or the importance of work in his total self-image" (Lodahl & Kejner, 1965). While organisational commitment concerns individual's attachment to a particular organisation; job involvement is more related to individual's identification with his work activities (Brown, 1996). Moreover, Hallberg and Schaufeli (2006) demonstrated that work engagement could be significantly predicted by job resources and was negatively related to health complaints. However, job involvement was not related to health complaints in their study (Hallberg & Schaufeli, 2006).

Work engagement also differs from workaholism. Workaholism refers to those individuals who are too occupied with their work and they incline to work excessively hard and even work beyond what their work required (Schaufeli *et al*., 2008a; Schaufeli, Taris, & Bakker, 2008b; Scott, Moore, & Miceli, 1997). Workaholics possess a strong

44

inner drive to work that cannot be resisted (Schaufeli *et al*., 2008a). As a result, workaholics spend too much of their time in work activities when they have the discretion to do so, and neglect their personal life (Scott *et al*., 1997). They were found to frequently and persistently ponder on their work when they are not working. They can do their work anytime, such as at home, weekend and even during vacation (Gini, 1998; Shimazu, Demerouti, Bakker, Shimada, & Kawakami, 2011; Scott *et al*., 1997). Unlike workaholics, engaged workers do not work hard because of a strong and irresistible inner drive or compulsive drive (McMillan, O'Driscoll, & Burke, 2003). They work hard as working is challenging and fun for them (Bakker & Demerouti, 2008; Schaufeli & Bakker 2010; Taris, Schaufeli & Shimazu, 2010). Engaged employees are not addictive in their work and they enjoy doing other activities besides their work (Bakker & Demerouti, 2008). In contrast to workaholics who would have a sense of guilt when they are not working, engaged workers do not share the same feeling (Schaufeli *et al*., 2008a). Bakker and Demerouti (2008) described that engaged workers enjoy their work due to the feeling of positive accomplishments in their work even though they feel tired. Shimazu, Schaufeli, Kubota and Kawakami (2012) further distinguish the two concepts in their recent publication. They conducted a longitudinal study of seven months on 1,967 Japanese employees from different types of occupations. The results revealed that work engagement increases job performance and life satisfaction and it decreases ill-health. In contrast, workaholism increases the risk of ill-health, and has adversely impact on life satisfaction, and it did not improve the employee performance (Shimazu *et al*., 2012). The results were corroborated with earlier findings by Schaufeli *et al*. (2008a) as

workaholics were related to negative well-being in contrast to engaged managers and executives who reported good mental health.

2.2.2 Antecedents and Consequences of Work Engagement

Majority of the prior studies on work engagement focus on its antecedents and consequences. Besides, the mediating impact of work engagement between job resources and organisational outcomes are widely investigated as well. Empirically, high work engagement among the employees has been found to bring a number of positive implications to the organisation, such as improved extra-role performance (e.g. organisation citizenship behaviour) as well as better in-role performance (e.g. Saks, 2006; Xanthopoulou *et al.*, 2008), reduce the duration and frequency of sickness absent or involuntary absence (Schaufeli, Bakker, & Van Rhenen, 2009), and lower employees' intention of turnover (Saks, 2006; Takawira, Coetzee, & Schreuder, 2014). In addition, several studies support the positive impact of work engagement on career satisfaction (Burke & El-Kot, 2010), organisational commitment and job satisfaction (e.g. Hakanen *et al.*, 2006; Kanste, 2011; Koyuncu *et al.*, 2006; Saks, 2006; Schaufeli *et al.*, 2008a).

Meanwhile, a considerable amount of literatures reported that job resources have significant influence on work engagement. For instance, Schaufeli and Bakker (2004) in their multi-sample study concluded that work engagement could be predicted exclusively by the available job resources (i.e. support from colleagues, performance feedback and supervisory coaching). Their finding was based on four different independent samples, involving a total of 1,698 employees from insurance company (sample 1), occupational

health and safety service (sample 2), pension fund (sample 3), and home-care institution (sample 4). In addition, Schaufeli and Bakker (2004) found that high work engagement reduced turnover intention among the employees. Meanwhile, job demands induced burnout and resulted to health problems (Schaufeli & Bakker, 2004). Subsequent studies by Bakker *et al*. (2005) and Mauno *et al*. (2007) also demonstrated that work engagement was influenced largely by the available resources in the organisation.

Salanova, Agut, and Peiro´ (2005) noted that work engagement among the hotel front desks and restaurant employees increases when they perceived that job resources (i.e. autonomy, technology and training) were available within the organisation. The availability of job resources are important to the employees as it minimises the obstacles that employees faced in their work, which in turn generate positive service climate. This situation is beneficial to the organisation as it can improve both the employee performance as well as customer loyalty (Salanova *et al*., 2005). Besides, the aspects of work that is stimulating (e.g. doing well towards all patients, treatment results, and the joy of manual-technical work) were found to be important job resources that engaged dental health professional in Northern Ireland (Gorter & Freeman, 2011). Engaged employees are important as they are energetic and enthusiastic about their work (Bakker & Demerouti, 2008).

Apart from job resources discussed above, leadership styles are found to be an important antecedent for work engagement as well. A few empirical studies showed that work engagement serves as a mediator between leadership styles and positive organisational

outcomes. Babcock-Roberson and Strickland (2010) discovered that work engagement mediated the relationship between charismatic leadership and organisational citizenship behaviour. Wang, Li, and Shi (2010) conducted a study among 510 full time workers in China and their results demonstrated that transformational leadership predicted work engagement indirectly through deep action. Deep action is a form of emotional labour, it occurs when employees adjust their inner feelings to fit with the emotional expressions expected by the company (Wang *et al.*, 2010). The relationship between transformational leadership and work engagement was further proven by Song, Kolb, Lee, and Kim (2012) in a Korean sample. Moreover, engaged workforce showed greater knowledge creation practices in the organisation (Song *et al*., 2012).

Chungtai and Buckley (2008) argued that situational/state trust (i.e. trust in the management team, supervisor, and co-worker) and propensity to trust promote work engagement. In the subsequent study, Arif Hassan and Ahmed (2011) found that interpersonal trust and authentic leadership style have direct positive impact on work engagement. Besides, interpersonal trust was found to partially mediate the relationship between authentic leadership style and work engagement. Their study was based on a sample of 395 employees from seven banks around Kuala Lumpur, Malaysia. Using a sample of 323 managers who work with Indian manufacturing and pharmaceutical firms, Agarwal (2014) demonstrated that work engagement is important predictor of innovative work behaviour. At the meantime, trust mediated the relationship between perception of justice and work engagement (Agarwal, 2014).

Another driver that considers as important in creating more engaged workforce is emotional intelligence. By using a sample of 193 Australian police officers, Brunetto, Teo, Shacklock, and Farr-Wharton (2012) showed that emotional intelligence was a major contributing factor of improved job satisfaction and well-being, which in turn promote greater organisational commitment and employee engagement. Apart from that, engaged police was found to report lower turnover intentions (Brunetto *et al*., 2012). Earlier study performed by Ravichandran, Arasu, and Kumar (2011) among 119 employees from information technology industry in India showed the positive impact of emotional intelligence on work engagement as well.

Furthermore, Sonnentag (2003) found that recovery attained during leisure work time significantly predict work engagement. Consequently, engaged employees were found to be more proactive at work. The results were based on a five-day daily survey among 147 employees among the public service organisations (Sonnentag, 2003). Similarly, finding by Salanova and Schaufeli (2008) also supported the significant relationship between work engagement and proactive behaviour.

Vecina, Chacón, Sueiro and Barrón (2012) recently conducted a survey among volunteers of a non-profit organisation. They divided the samples into two groups. The first group consisted of new volunteers who had worked for less than 10 months, while the second group comprised of veteran volunteers who have served the organisation for more than 11 months. Results obtained from the analysis among the new volunteers showed that work engagement positively influenced their level of satisfaction, and this is important in

49

explaining their willingness to stay with the organisation for the next two years. For veteran volunteers, Vecina *et al*., (2012) identified that organisational commitment of this group of volunteers increased as they are more engaged in their roles. Besides, the intention to stay with the organisation among the veteran volunteers was higher when organisational commitment improved (Vecina *et al*., 2012). The mean score of work engagement among the two samples are high (Vecina *et al*., 2012).

2.3   Underpinning Theories: Conservation of Resources Theory and Job Demands-Resources Model

The Conservation of Resources (COR) theory and the revised model of Job Demands-Resources (JD-R) serve as major underpinning theories in explaining the phenomenon of work engagement.

2.3.1   Conservation of Resources Theory

Hobfoll's (1989) Conservation of Resources (COR) is one of the widely cited theories to explain about stress and motivational process. COR theory (Hobfoll, 1989) identifies four different types of resources, namely object resources (e.g. house, car), conditions (e.g. a steady job, status), personal characteristics (e.g. self-esteem) and energy (e.g. money, time, knowlege). The basic tenet of COR theory is that people try their best to obtain, retain, foster and protect the resources they valued (Hobfoll, 2002, 2010). Individuals encounter with stress when they lost those resources, threatened with a loss of resources or fail to obtain the expected returns from their investments (Hobfoll, 2001). Resources loss may occur due to excessive job demands, role ambiguity, role conflict, role overload

or not having sufficient resources to carry out the job (Cooper, Dewe, & O'Driscoll, 2001). Ongoing draining of one's resources, such as exhaustion of one's energy to meet high job demands would result to chronic strain or burnout (Cooper *et al*., 2001).

COR theory provides an insight that various resources can act as salient factors in gaining new resources and improving individual's well-being (Hobfoll, 2001, 2002). COR theory posits that individuals need to invest in resources that can prevent the loss of resources, as well as to accumulate more new resources, which will create better outcomes, such as better coping (Hobfoll, 2002). People strive to minimize net loss of resources when confronted with stress (Hobfoll, Johnson, Ennis & Jackson, 2003). In adverse condition, people tend to mobilize remaining resources or to develop additional resources to hedge against the possibility of future loss and to improve their situations (Hobfoll, 1989). Meanwhile, individuals try hard to gain more resources when there is an absent of taxing stressors (Hobfoll, 1989). Individuals with more resources are able to avoid problematic situations, thus allow them to make investments that can create more resources. Besides, they possess more ability to solve problems in stressful event and are capable of seeking opportunities to increase resource gains. Such accumulation of resources is known as gain spiral (Hobfoll, 1989). In contrast, those who are lacking of resources have higher probability to end up with increased loss (loss spiral) (Hobfoll, 1989, 2001). Despite resource gain is viewed to have less impact than resources loss, COR theory stress that resource gain and the accompanying positive emotion are particularly important when one encountered with resources loss (Hobfoll, 2002). Besides, COR theory contends that resources not only serve as a buffer to cushion the effect of job demands on strain, but

resources become more salient in the case of resource loss (e.g. high job demands or stressful situations) (Hobfoll, 1989, 2002).

2.3.2   The Job Demands-Resources (JD-R) Model of Work Engagement

Demerouti *et al*., (2001) introduced the JD-R model that is applicable to a variety of occupations. It is a parsimonious model that can integrate the potential job demands and job resources (Demerouti *et al*., 2001). This model is widely referred by various scholars in the studies on burnout. As indicated in chapter one, Bakker and Demerouti (2008) modified the existing JD-R model (Demerouti *et al*., 2001) into an integrated model of work engagement (see Figure 2.2). The development of JD-R model of work engagement (Bakker & Demerouti, 2008) was based on the supports from numerous prior empirical evidences.

The JD–R model (Bakker & Demerouti, 2008 Deremouti, Bakker, Nachreiner, & Schaufeli, 2001) explained that, across occupations, work environment can be divided into two general categories, which are job demands and job resources (Bakker & Demerouti, 2007; Deremouti *et al*., 2001; Schaufeli & Bakker, 2004,; Xanthoupolou *et al*., 2007). Job demands are "those physical, psychological, social, or organisational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs" (Bakker & Demerouti, 2007, p. 312). Job demands may emerge as stressors that evoke strain when such demands are beyond the ability of the employees to cope with (Bakker & Demerouti, 2007). Employees would suffer from chronic fatigue

and burnout if great deal of efforts is required in order to sustain an expected performance level (Hakanen & Roodt, 2010).

On the other hand, job resources refer to "those physical, psychological, social, or organisational aspects of the job that are: (i) functional in achieving work goals, (ii) reduce job demands and the associated physiological and psychological costs, and (iii) stimulate personal growth, learning, and development" (Bakker & Demerouti, 2007, p. 312). Bakker *et al*., (2004) described that job resources can be found at the organisation level (e.g. working environment, job security, and salary); social and interpersonal relationship (e.g. support from supervisor and team members); job characteristics (e.g. autonomy, feedback, skill variety, task significance, and task identify); and the allocation or organisation of work (e.g. participation in decision making and role clarity).

As illustrated in Figure 2.1, JD-R model (Demerouti *et al*., 2001) posits that job demands and resources induce two relatively independent processes, namely health impairment process and motivational process (Llorens, Bakker, Schaufeli, & Salanova, 2006). The dual pathways of JD-R model have been empirically tested in a number of studies, such as Bakker *et al*. (2004), Demerouti *et al*. (2001), Hakanen *et al*. (2006), and Llorens *et al*. (2006).

Health impairment process occurs when individuals experience depletion in energy and health problem due to high job demands. This is because job demands require employees' continous efforts, thus may cause exhaustion of the workers' mental and physical

resources (Bakker & Demerouti, 2007; Bakker & Demerouti, 2006; Xanthopoulou *et al*., 2007b). Prior studies proved that burnout resulted to various negative organisational and individual outcomes, such as turnover intention (Schaufeli & Bakker, 2004), health complaints and depression (Hakanen, Schaufeli, & Ahola, 2008b).

On the contrary, motivational process exists when there are job resources available in the workplace (Schaufeli & Bakker, 2004) as every employee needs such resources to handle various job demands. Job resources can play either an intrinsic or extrinsic motivational roles. As intrinsic motivator, job resources would foster personal growth, learning and development, while the extrinsic motivational potential of job resources promotes employees' willingness for goal accomplishment (Schaufeli & Bakker, 2004; Bakker & Demerouti, 2007). As such, JD-R model of work engagement (Bakker & Demerouti, 2008) viewed that motivational process generated through job resources would be able to improve work engagement, and eventually lead to desirable performance as shown in Figure 2.2.

In addition to job demands and job resources, non-work related factors (i.e. personal resources) were included in the JD-R of work engagement (Bakker & Demerouti, 2008) by drawing on the work of Xanthopoulou *et al*. (2007a). As shown in Figure 2.2, both job and personal resources are important antecedents of work engagement. Personal resources are "aspects of self that are generally linked to resiliency" and it reflects "individuals' sense of ability to control and influence their environment successfully" (Hobfoll, Johnson, Ennis, & Jackson, 2003, p.632). Personal resources may include

active coping strategy and personal characteristics, like optimisms, resilience, self-efficacy, and organisational-based self-esteem. These factors were found to have positive effect on work engagement (Bakker & Demerouti, 2008; Bakker & Leiter, 2010).

Another assumption in JD-R model of work engagement is that job and personal resources exhibited greater impact on work engagement when job demands were high. This notion is consistent with COR theory, which explain that resource gains become more salient with the threat of possible loss of resources (Hobfoll, 1989, 2002). Further, well performed and engaged employees have the ability in building their own resources, which subsequently promote engagement again from time to time (Bakker, 2009).
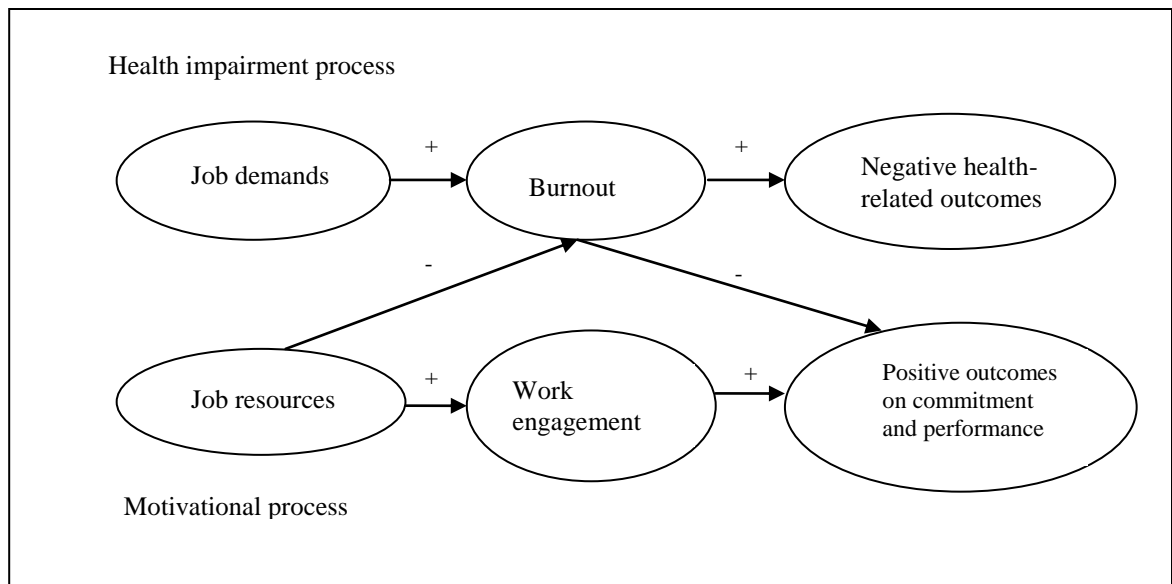
Figure 2.1
Dual process of JD-R model

Source: Hakanen & Roodt (2010)
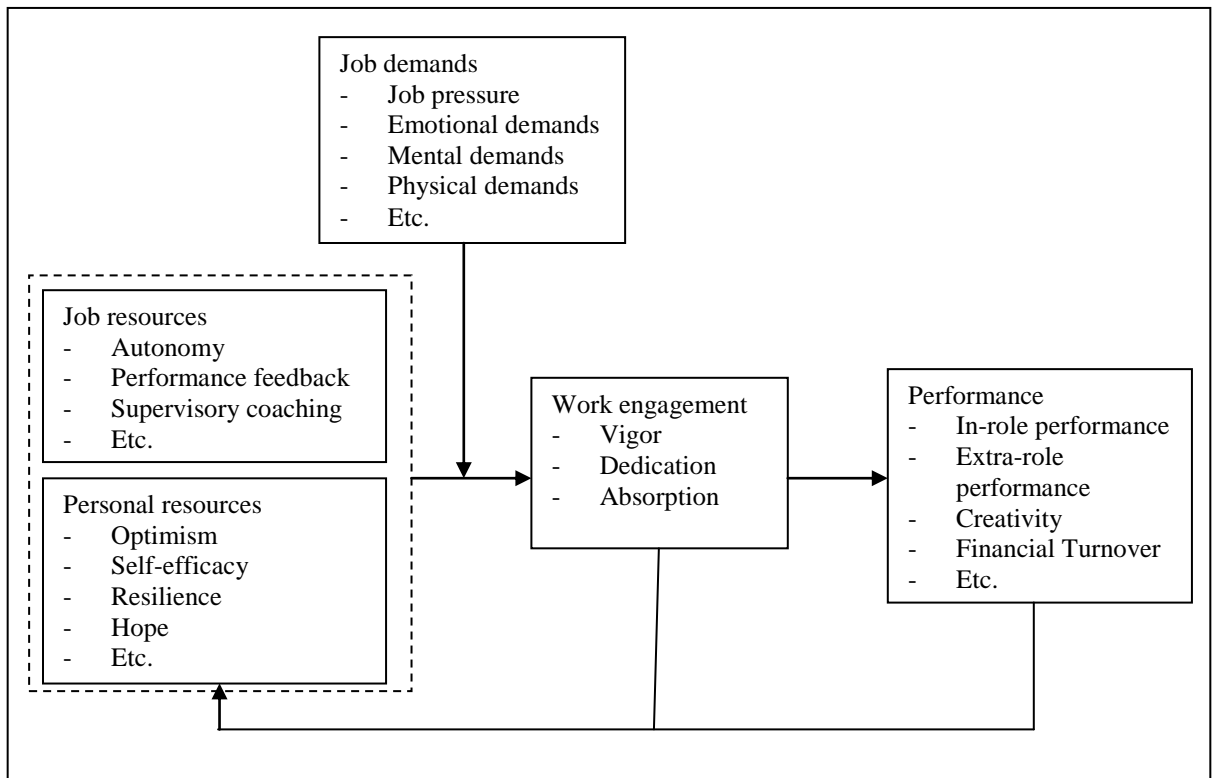
Figure 2.2
The JD-R model of work engagement

Source: Bakker & Demerouti (2008)

2.4   Overview of the Functions of Job Resources in Predicting Work Engagement

In general, job resources have consistently emerged as important predictor of work engagement. Findings by Demerouti *et al*. (2001) demonstrated that job resources manifested by participation in decision making, feedback on performance, rewards, job control, job security, and supervisor support were important predictors of work engagement. Similarly, Koyuncu, Burke, and Fiksenbaum (2006) concluded that job control, value fit, rewards and recognition were positively related to work engagement. Their results were based on a survey that has been carried out among 286 Turkish female

professionals and managers who work with a bank in the country. Recently, meta-analysis performed by Crawford *et al*., (2010) demonstrated that variety in the job, rewards and recognition, chances for further development, feedback from management, positive organisational climate, time for recovery, autonomy, and work role fit have significant positive relationships with work engagement. In a similar vein, Halbesleben (2010) who analysed a total of 53 academic papers, covering 74 samples about work engagement also found that job resources (i.e. organisational climate, control/autonomy and feedback) significantly influence work engagement.

Collectively, these studies outline a critical role for the management to provide employees with adequate job resources so that they are more engaged in their work roles. The subsequent parts provide more detailed explanations on the roles of each job resource specified in this study and their relationships with work engagement.

2.4.1 Perceived Organisational Support

Perceived organisational support (POS) is known as the general beliefs or perception among the organisational members on the extent to which the company concerns about their well-being and whether their efforts and contributions are being appreciated by the company (Eisenberger *et al*., 1986). This organisation support theory is developed from the social exchange theory (Blau, 1964) that explains the reciprocal norm of relationship among individuals. In the organisation context, employees are expected to feel obligated to contribute and to help the organisation to achieve its objectives in return of the favourable treatment received (Eder & Eisenberger, 2008; Rhoades & Eisenberg, 2002).

POS is viewed as an important resource in the workplace as the availability of supports and assistance from the organisation enable employees to perform their jobs and can handle stressful work conditions more effectively (George, Reed, Ballard, Colin, & Fielding, 1993). As such, POS may positively influence employees' behaviours and attitudes (Eisenberg *et al*., 1986). Given the above notion, desirable work outcomes are expected from employees with high POS, such that they are expected to possess greater job satisfaction, more committed to the organisation, show better job performance, lesser withdrawal behaviour (i.e. absenteeism and tardiness), and reduced turnover (Eisenberger *et al*., 1986; Rhoades & Eisenberg, 2002).

The POS theory (Eisenberger *et al*., 1986) was further supported by the findings of Arshadi (2011). In his study among the Iranian full time employees, favourable POS was found to increase employees' felling of being obliged to the organisation, which eventually affect turnover intention, organisational commitment, and in-role performance. Besides, Arshadi (2011) also tested the direct effects of POS on the three organisational outcomes mentioned above and significant results were found.

Numerous empirical studies supported the positive implications of POS, which generate favourable work-related outcomes. The evidences of the linkage between POS and organisational commitment, particularly affective commitment was well established (e.g. Casper, Martin, Buffardi, & Erdwins, 2002; Dawley, Andrews & Bucklew, 2008; Eisenberg *et al*., 1986,; O'Driscoll & Randall, 1999; Rhoades, Eisenberger & Armeli, 2001; Stinglhamber & Vandenberghe, 2003; Wayne, Shore, & Liden, 1997). POS was

found to be positively connected to job involvement (O'Driscoll & Randall, 1999), and was negatively related to work-family conflict and burnout (Kang, Twigg, & Hertzman, 2010). Besides, Casper *et al.* (2002) reported that POS enhanced continuance commitment of Brazilian professionals. Furthermore, Yahya, Mansor, and Warokka (2012) found that POS can positively influence organisational commitment based on a sample of 93 foreign academic staff (expatriates) from a public university in Malaysia.

In addition, Rhoades and Eisenberger (2002) as well as Riggle, Edmondson, and Hanson (2009) had carried out meta-analyses related to POS on about 70 and 167 studies respectively. Their findings further confirmed the POS improved job satisfaction, affective commitment, positive mood, and employee performance. Moreover, POS was found to be negatively related with strain, withdrawal behaviour (i.e. absenteeism and tardiness), and intention to leave (Rhoades & Eisenberger, 2002; Riggle *et al.*, 2009). Recent study by Bilgin and Demirer (2012) among hotel workers in Turkey also revealed that POS can significantly predict affective commitment and job satisfaction. In the case of Malaysia, Chew and Wong (2008) stated that POS reduce turnover intention among the employees of a few luxury hotels in the country.

Despite vast majority of the findings supports the contention of organisational supports theory, mixed results were observed. For example, Karatepe (2012) conducted a survey among the full time frontline employees of four-and-five hotels in Cameroon, the results demonstrated that POS was found to be positively related to in-role performance, but no significant relationship was found between POS and turnover intention. In a sample of

boundary spanning salespeople, Stamper and Johlke (2003) found that POS reduce role ambiguity and role conflict. Their study indicated that POS was positively linked to job satisfaction and the intention to remain with the organisation. However, no significant relationship was found between POS and task performance (Stamper & Johlke, 2003).

2.4.1.1 Perceived Organisational Support and Work Engagement

In addition to social exchange theory (Blau, 1964) that was used frequently by some researchers in explaining the relationship between POS and work outcomes, JD-R model clearly indicates that resources that employees obtained from job-related activities in the organisation have motivational and wellness-promoting potential (Bakker & Demerouti, 2008). Thus, POS is important to inspire employees to remain engaged in their work. Zacher and Winter (2011) used a POS measure that emphasize on eldercare support. Their results indicated that the relationship between perceived organisational eldercare support and work engagement was positive and significant. Saks's (2006) analysis showed that POS demonstrated significant positive association with job engagement and organisational engagement among 102 employees who work in different jobs and organisations. Likewise, study performed by Rich, Lepine, and Crawford (2010) revealed that POS was positively related to work engagement of fire fighters. Apart from that, Pati and Kumar (2010) also found a positive linkage between POS and employee engagement among Indian software engineers. The following hypothesis is advanced from the above theoretical and empirical evidences:

H1: Perceived organisational support is positively related to work engagement.

2.4.2 Immediate Superior Support

Immediate superior support and colleagues/co-workers are the most widely discussed work-based sources of social support in the literatures (Wei, Shujuan, Qibo, 2011). Generally, both sources of supports were found to minimise the negative implication of job stressors, thus promoting positive health and well being among employees, such as reducing the risks of insomnia (Nakata, Haratani, Takahashi, Kawakami, Aritoa, Kobayashic, & Araki, 2004) and lessening the intention to leave (Lee, 2004; Sundin, Hochwälder, Bildt, & Lisspers, 2007).

Immediate superior/supervisor is a person who has the closest link with the employees in the organisation (Dawley, Andrews, & Bucklew, 2008). There are different ways how the immediate superior can provide supports. For example, they can concern about the subordinates well-being and valuing their contribution, offer help when they have job-related problems and try to develop employees' skills (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Oldham & Cummings, 1996). In general, immediate superior may provide instrumental support or tangible assistance as well as emotional support by expressing his/her concern to the subordinates (Swanberg, McKechnie, Ojha, & James, 2011).

Burke *et al*. (1992) described that supportive supervisor concerns about employees, provide them supports and encouragements. Unsupportive Supervisors may fail to clearly communicate the goal and performance expectations of the organisation to their subordinates (Burke *et al*., 1992). In contrast, supportive supervisors are important in

enhancing individual's confidence in performing a particular task. A supportive supervisor tends to provide assistance, constructive feedback in addition to care about the feelings and needs of the employees (Van der Heijden, Kümmerling, Van Dam, Van der Schoot, Estryn-Béhar, & Hasselhorn, 2010). As such, the extent to which supervisor provides his support to the employee can affect individual's work-related outcomes. For instance, supervisor support has inverse relationship with burnout (Sundin *et al*., 2007). Moreover, supervisor support also was found to improve job satisfaction (Babin & Boles, 1996, Lee, 2004; Munn, Barber, & Fritz, 1996; Stinglhamber & Vandenberghe, 2004) and organisational commitment (Dawley *et al*., 2008; Kidd & Smewing, 2001; Rossseau & Aubé, 2010; Stinglhamber & Vandenberghe, 2004). Edmondson and Boyer (2013) conducted a meta-analysis involving 61 studies prior to the year 2007; their results demonstrated that perceived supervisor support contributed significantly to greater organisational commitment, job satisfaction and performance. Besides, supervisor support was found to reduce turnover intention (Edmondson & Boyer, 2013; Lee, 2004). Van der Heijden *et al*. (2010) found that supervisor supports were negatively related to turnover intention in a sample of 17,524 female nurses from a few countries in Europe (Belgium, Germany, Finland, France, Italy, The Netherlands, Poland, and Slovakia).

2.4.2.1   Immediate Superior Support and Work Engagement

Evidence from prior studies (Bakker *et al*., 2007; Demerouti *et al*., 2001; Schaufeli & Bakker, 2004) showed that supervisor support is instrumental in the creation of higher work engagement. Hakanen *et al*., (2006) carried out a large scale survey, involving 2,038 teachers from elementary, lower secondary and upper secondary or vocational

schools in Finland, their result showed that supervisory support is essential in promoting higher work engagement. Nevertheless, inconsistent findings between immediate superior support and work engagement were observed. For instance, Karatepe and Olugbade (2009) as well as Schaufeli *et al.* (2008a) indicated that supervisor support has no effect on all the dimensions of work engagement. In addition, study by Saks (2006) also failed to empirically support the significant relationship between perceived supervisor support with both job and organisation engagement. Similarly, Montgomery *et al.* (2003) drew a conclusion that supervisor support was not significantly related to work engagement.

Despite the inconsistent findings as described above, immediate superior supports are viewed as one of the major resources in the organisation that may enhance positive feelings and emotion of individual in a particular job. Support from the immediate superior indicates the potential aids that are available to the employees in the work place. Immediate superior may provide tangible resources and information to resolve problem, and to take care of the employees (Langford, Bowsher, Maloney, & Lillis, 1997). These actions will influence the level of work engagement among the employees. From this perspective, the support from the immediate superior is a critical factor to motivate and energize employees to excel in their work. As such, the following hypothesis is proposed:

H2:   There is a positive relationship between immediate superior support and work engagement.

2.4.3   Colleague Support

Colleague/co-worker support refers to the degree employees can depend on their colleagues for assistance and support when required (Haynes *et al*., 1999; Liao *et al*., 2004). Colleagues in the workplace that can provide emotional supports, give constructive suggestions, share information, experience and knowledge or task-related supports would have a positive impact on employees (Caplan *et al*., 1975; Ducharme & Martin, 2000). Prior studies have indicated that co-worker support may reduce job stress and work-family conflict that are confronted by focal employees as the colleagues spend time to sympathize, understand and listen to their problems (Mesmer-Magnus & Viswevaran, 2009).

In addition, supportive colleagues facilitate the workers towards their work goals and reduce tension (Bakker *et al*., 2005). In the similar vein, Sundin *et al*., (2007) indicated that co-worker support was a significant predictor of burnout dimensions (i.e. emotional exhaustion, depersonalisation and personal accomplishment) based on the results of their survey among registered and assistant nurses in Sweden. In a sample of computer professionals, Lee's (2004) findings showed that social support from colleagues enhanced job satisfaction, which in turn reduce leaving intention. On the other hand, Chiaburu and Harrison (2008) performed meta-analytic tests based on 161 independents samples and about 78,000 employees; they reported that co-worker support was negatively related with individuals' role perception (i.e. role stressors) and withdrawal behaviors (i.e. absenteeism, effort reduction, intention to quit and actual quitting). Moreover, their findings also revealed that co-worker support positively predict employees' work attitudes, such as job involvement and organisational commitment

(Chiaburu & Harrison, 2008). Apart from that, the linkage between co-worker support and individual effectiveness was generally supported; specifically co-worker support was found to be negatively related to counter-productive work behaviour and was positively related to organisational citizenship behavior as well as job performance (Chiaburu & Harrison, 2008). Moreover, co-worker support exhibited significant negative relationship with turnover intention among the frontline hotel employees (Karatepe, 2012). However, supports from colleagues do not always portray similar outcomes across different countries or cultural settings. For instance, in a study involving nurses from six European countries, co-worker or colleagues support only found to exhibit significant relationship with turnover intention for Belgium and Germany sample (Van der Heijden *et al*., 2010).

2.4.3.1 Colleague Support and Work Engagement

The association between colleague support and work engagement are corroborated by several studies as well. Llorens *et al*. (2006) indicated that support from colleagues has positive significant relationship with work engagement. Likewise, co-worker support was significantly associated with work engagement in the case of middle level management and executives for a telecommunication firm in the Netherland (Schaufeli *et al*., 2008).

On the other hand, Xanthopoulou *et al*. (2008) conducted a diary study among 83 flight attendants of a European Airline company. Their survey required the participants to respond to the questionnaires and subsequently participate in a diary survey. The cabin crews need to provide the required data in a diary booklet for "three consecutive trips to

three intercontinental destinations" (Xanthopoulou *et al*., 2008, p. 348). At the end of the survey, only 44 completed questionnaires and diary booklets could be utilised and the analyses by Xanthopoulou *et al*. (2008) demonstrated that work engagement was significantly predicted by colleague support, which in turn was positively related to in-role performance of the flight attendants. Nevertheless, Richardsen, Burke, and Martinussen (2007) reported a contradicting result as co-worker support was not related to work engagement in a sample of Norwegian police officers.

Despite the inconsistency finding as discussed above, majority studies support that colleague/co-worker support heighten work engagement. Desirable encouragements and concerns from colleagues would augment the positive feeling and experience of the employees. The supports obtained make the employees feel that they are being accepted and cared for, thus satisfying their sense of belongingness that is important to initiate motivation (Chughtai & Buckley, 2008) and thus exhibiting greater level of work engagement. The following hypothesis was formulated from this line of reasoning:

H3:   There is a positive relationship between colleague support and work engagement

2.4.4   Autonomy

Based on job characteristic model, autonomy means the extent to which employees are given freedom, independence and discretion in work scheduling and procedure in carrying out their tasks (Hackman & Oldham, 1975). In another word, job autonomy

reflects the discretion and control that individuals possess in deciding how to perform their jobs with minimum constraint (Attree, 2005; Lait & Wallace, 2002; Langfred & Moye, 2004). Individuals with high autonomy in their jobs enjoy greater freedom in deciding the methods and procedures to perform and complete the work (Zhou, 1998). Some authors used the term job control (i.e. autonomy) to describe the decision latitude that individuals' possess in their jobs; such that job control was defined as the the level of control that a worker has in relation to the decisions that affect his/her job (Karasek, Baker, Marxer, Ahlbom, & Theorell, 1981). Lack of sufficient autonomy was found to be a factor that influenced the level of innovativeness and creativeness of individuals (Ramamoorthy, Flood, Slattery, & Sardessai, 2005). Zhou (1998) found that individuals who work in a high autonomy environment and received positive feedback produced the most creative ideas. Besides, autonomy was usually related to greater motivation, satisfaction, job involvement and job performance (Cuyper, Mauno, Kinnunen, Witte, Mäkikangas, & Nätti, 2010; Dwyer, Schwartz, & Fox, 1992; Loher, Noe, Moeller, & Fitzgerald, 1985; Spector, 1986).

2.4.4.1 Autonomy and Work Engagement

Academic staff who possess different knowledge and expertise expect that they have autonomy and discretion to do what is best in their teaching as well as their involvement in the research activities. The elements in job characteristics or contextual factors, such as job autonomy is recognised to have motivational potential that drive positive energy, absorption in work and dedication among the employees as described in JD-R model of work engagement (Bakker & Demerouti, 2008). In nursing studies, autonomy was

identified as an important intrinsic motivator (Manion, 2009) and it was ranked as the most important aspect of the job by the Australian nurses (Finn, 2001).

Besides, job control/autonomy was proved to be a significant predictor of work engagement in several studies (e.g. Hakanen *et al*., 2005; Hakanen *et al*., 2006; Hallberg, Johansson, & Schaufeli, 2007; Mauno *et al*., 2007). Likewise, Mostert and Rathbone (2007) found that autonomy was a significant predictor of high work engagement. Mauno *et al*. (2007) performed a two-year longitudinal study and found that job control was among the major job resources that consistently predicted the three dimensions of work engagement over time. In a large scale study that performed by Taipale, Selander, and Anttila (2011), work autonomy was found to augment work engagement among the employees in eight European countries (i.e. Finland, Sweden, the United Kingdom, The Netherlands, Germany, Portugal, Hungary, and Bulgaria).

Autonomy was one of the job resources that were found to be significantly related to work engagement in the meta-analysis performed by Crawford, LePine, & Rich (2010). The provision of job autonomy reflects the trust that organisation has on employees. With the autonomy given, employees are allowed to use their discretion in making decision related to their jobs (James, Mckechnie, & Swanberg, 2011). As such, autonomy is expected to stimulate intrinsic motivation of the employees and play a pivotal role in augmenting work engagement among the employees. Based on the above literature review, the following hypothesis is formulated:

H4: There is a positive relationship between autonomy and work engagement.

2.4.5 Recognition

Recognition refers to non-monetary rewards that were provided to the employees as an appreciation of employees' achievement and performance (Paré & Tremblay, 2007; Javed *et al*., 2012). Recognition had been acknowledged as a fundamental driver of human behaviour by scholars in motivation studies (Appelbaum & Kamal 2000, Paré, & Tremblay, 2007). Hence, it is not surprising to find that high-performance organisations are often characterised by continuous efforts in recognising and reinforcing valuable contributions by their employees (Paré & Tremblay, 2007). Paré and Tremblay (2007) further argued that job recognition is one of the main sources of motivation among highly skilled professionals and this make them feel that they are essential part of the company.

Recognition in the workplace was found to have positive impact on job satisfaction (Applebaum & Kamal 2000; Khowaja, Merchant, & Hirani, 2005), which in turn contribute to better job performance and higher productivity (Applebaum & Kamal 2000). Similar arguments were put forward by Kouzes and Posner (1999) who stated that encouragement and recognition were valuable in improving employees' productivity and work performance. Danish and Usman (2010) also found that recognition was positively correlated with job satisfaction and motivation in a study conducted among employees from various sectors in Pakistan. Besides, Brun and Dugas (2008) stressed that job recognition is important in maintaining mental health. In the studies that involved nurses as participants, recognition for performance and achievement were found to reduce job stress (Abualrub & Al-Zaru, 2008) and beneficial for staff retention (Wilson, 2006). However, recent study conducted by Bentley *et al*. (2013) demonstrated that the

relationship between recognition and job satisfaction were insignificant. The results were based on the data of 1,097 academics from Australian public universities. Moreover, achievement in publications and advancement were not significantly related to job satisfaction as well (Bentley *et al*., 2013).

2.4.5.1   Recognition and Work Engagement

Brun and Dugas (2008) argued that there is increased expectation for recognition in the work place as a result of modernisation and changes in the social context; many people viewed that work is essential in fulfilling individuals' need for personal fulfilment and aspirations. Recognition is viewed as an important human resource management tool that has motivational potential to promote work engagement among employees in the work place (Brun & Dugas, 2008). Moreover, several prior studies support the existing of significant positive relationship between job recognition and work engagement (e.g. Bakker & Schaufeli, 2008; Crawford *et al*., 2010; Koyoncu *et al*., 2006; James, Mckechnie, & Swanberg, 2011). Based on the above literature reviews, the following hypothesis is formulated:

H5: Recognition is positively related to work engagement.

2.4.6   Job Prestige

The studies related to job prestige is very scant, except in the work values studies (e.g. Leuty & Hansen, 2011). Similar with other aspects of the work, such as autonomy, supervision, co-workers, security and achievement; prestige was characterised as one of

the important work values that are emphasized by the employees (Leuty & Hansen, 2011). Work values are those aspects in the work that are desirable in the work place (Lyons, Higgins, & Duxbury, 2010). Nevertheless, the prestige component in the job seems to receive less attention among the researchers.

Blackmore and Kandiko (2011) argued that academic motivation is not primarily driven by "monetary economy" (or financial rewards) as a number of academic tasks are either poorly paid or not paid at all, such as committee work and review of journal articles. Many interviewees in their study claimed that they can earn money elsewhere if they want to do so (Balckmore & Kandiko, 2011). Thus, they explored the relationship between "prestige economy" and "monetary economy" on the motivation of academic community in higher education institutions. Prestige was described as "the regard for and/or value placed on an achievement, possession or personal attributed by a community" (Blackmore & Kandiko, 2011). Prestige derived from one's work or job reflects the widespread respect, influence, reputation and admiration felt for someone or something arising from their achievements (Hargreaves, 2009; O'Connor & Kinnane, 1961). Wayne, Grzywacz, Carlson, and Kacmar (2007) viewed job prestige as one of the environment resources which promote positive gains that are beneficial for family functioning. In a sample of Australian volunteers, Lewig *et al*. (2007) empirically proved that connectedness, which was defined as level of perceived appreciation and respect by the organisation and community was related to the determination to continue as volunteer. Sanders and Walters (1985) explained that job prestige has positive implications on mental and physical health and generate better life satisfaction.

2.4.6.1 Job Prestige and Work Engagement

Wayne *et al.* (2007) claimed that employees with more prestigious jobs have more chance to learn new things and to develop themselves. Besides, prestigious jobs provide workers with sense of achievement, self-esteem, positive mindset and financial stability (Wayne *et al.*, 2007). Blackmore and Kandiko (2011) claimed that both prestige and peer recognition played an important role in academics' career path. Therefore, the motivation potential of job prestige is anticipated to generate greater work engagement among the employees. Based on these arguments, the following hypothesis is formulated:

H6: Job prestige is positively related to work engagement.

2.4.7 Perceived External Prestige

Perceived external prestige (PEP) is concerned with individuals' interpretation and evaluations of the prestige of an organisations based on the information about the company that they possessed (Smidts, Pruyn, & Van Riel, 2001). The sources of information that may influence an employee's PEP can come from the opinions of reference groups, words of mouth, publicity as well as internal communication related to public's perception on the company (Smidts *et al.*, 2001). In the present study, PEP is concerned with the ways how academics think outsiders view his or her university. The members of the organisation may feel honour to work with highly regarded organisation (Carmeli, 2004).

The researches related to PEP still remain scant. There are some evidences showed that PEP is related to a few workplace constructs. For example, Mael and Ashforth (1992) and Pratt (1998) found the significant positive relationship between PEP on organisational identification. In addition, PEP was positively associated with affective commitment (Mayer & Schoorman, 1998; Carmeli, 2005). Herrbach, Mignonac, and Gatignon (2004) conducted a survey among a group of French managers; their findings revealed that PEP was significantly related to job attitudes (i.e. job satisfaction and organisational commitment). And, the more positive job attitudes reported by these managers reflect less possibility of turnover intention (Herrbach *et al*., 2004). This indicated that strong PEP stimulate positive perception of one's own organisation, meanwhile it may create negative view on the working environment of other organisations, which in turn resulted in higher job satisfaction (Herrbach *et al*., 2004). In addition, Herrbach *et al*. (2004) also hypothesized that PEP moderated the relationship between job attitudes and turnover intention, but hierarchical regression analysis result failed to support their second theoretical model.

Based on a sample that consist of 75 high tech firm's top executives, Carmeli (2004) found that favourable PEP foster organisation performance. In another study, Carmeli (2005) divided PEP into two forms, namely perceived external economic prestige (e.g. financial ability) and social prestige (e.g. environment responsibilities and product/service quality). Carmeli's (2005) study involved 228 social workers from small and medium size hospital and medical centres. Regression analysis results demonstrated that both perceived external prestige (i.e. economic and social) were positively related to

employees' affective commitment. However, perceived social prestige exhibited greater impact on affective commitment (Carmeli, 2005).

Mignonac, Herrback and Guerrero (2006) utilising three samples in a longitudinal study further confirmed that PEP was negatively related with turnover intentions. The three samples consists of 1,500 university alumni (sample one), 664 auditors (sample two), and 1,200 managers graduated from four business schools (sample three). Their findings also indicated that the relationship between PEP and turnover intentions were stronger when organisation members have high need for organisational identification (Mignonac *et al*., 2006). Fuller *et al*. (2006) demonstrated that perceived organisational support and PEP both contribute to organisational attachment/affective commitment among employees in a university in southern United States. In addition, the relationship between PEP and organisational attachment is greater on faculty members as compared to staff and administrators.

2.4.7.1 Perceived External Prestige and Work Engagement

The earlier discussion on JD-R model of work engagement has clearly indicated that the resources that are based on individual characteristics (e.g. personality traits) and resources obtained from one's job and organisation may augment work engagement through motivational process. Similarly, PEP can be regarded as job and socio-emotional resource that employees obtain indirectly from their organisation, which will affect their

self-esteem based on their organisational membership (Fuller, Hester, Barnett, Frey, & Relyea, 2006).

Several authors (e.g. Carmeli *et al*., 2004; Fuller *et al*., 2006) have similar views that a favourable perception of the prestige of an organisation will not only fulfils individual self-esteem, it will also enhance positive feelings and self-image as well. This positive feeling thus would be able to generate more personal energy that employees can bring to their work (Leiter & Bakker, 2010). Based on the explanation put forward by Fuller *et al*. (2006), professionals, such as academics are more likely to have greater desire to get recognition and approval from peers (inside or outside) or external reference group. Besides, Herrbach *et al*. (2004) argued that PEP not only expresses the overall judgement about the organisation by the employees, it also reflects the way how individuals perceive working within the organisation.

Dutton, Dukerich, and Harquail (1994) also proposed that employees' positive perception of organisation improve self-esteem and organisational identification. They further argued that negative perception of one's organisation would lead to depression and stress, disengagement of organisational roles as explained by Kahn (1990), and reduced efforts in long-term tasks (Dutton, *et al*., 1994, p.240). Further, COR theory (Hobfoll, 1989) explains that positive experiences or the availability of resources can lead to further accumulation of resources (i.e. positive spiral of resources). This phenomenon reflects a virtuous circle, which, in turn, is likely to have positive health promoting or motivational

effects (Hobfoll, 1989). Thus, it is expected that favourable PEP would be able to bolster employees' work engagement.

The following hypothesis was formed in line with the above discussion:

H7:   Perceived external prestige is positively related to work engagement.

2.5   Work-Life Enrichment: Introduction and the Development of the Concept

.

The negative perspective or scarcity hypothesis of role theory (Goode, 1960) had dominated the research related to work-non-work or personal life interface for decades. As a result, earlier work-family researches tend to focus exclusively on work-family conflict due to the beliefs that both work and non-work (e.g. family) domains are competing for the resources (e.g. time and energy) that owned by individuals (Carlson & Grzywacz, 2008). Nevertheless, merely focuses on the conflicting views between work and non-work or personal life have ignored the truth that the involvement in different roles may be advantageous to individuals (Barnett & Hyde, 2001). The introduction of the enhancement or expansion hypothesis provides an insight that involvement in multiple life roles create more social and economic resources that are capable in improving one's well-being, such as better mental, physical, and relationship health for both men and women (Barnett & Hyde, 2001; Marks, 1977; Sieber, 1974). Barnett and Hyde (2011) argued that the benefits obtained from the multiple roles participation outweigh the stress level experienced by individuals. In recent years, the positive side of the work and non-work domains begin to receive more attention from various researchers

in respond to the call for a more wholesome understanding of the work and non-work interface (Carlson & Grzywacz, 2008).

Thus far, studies on the interaction of work-personal life interface place most emphasis on work and family domain (Allis & O'Driscoll, 2008; Eby, Wendy, Lockwood, Bordeaux, & Brinley, 2005). In respond to the urge to investigate the interaction between work and personal life beyond family domain, some studies started to look into either specific domain or the global perception between work and personal life interaction (Keeney, Boyd, Sinha, Westring & Ryan, 2013). There are many types of activities that can be performed by employees outside of work, such as time with family, volunteering, leisure (Hecht & Boies, 2009). Parallel with the development in work-life conflict studies (e.g. Aziz & Zickar, 2006; Boonebright, Clay, & Ankenmann, 2000; Fisher, Bulger & Smith, 2009; Grant-Vallone & Ensher, 2001; O'Driscoll, Ilgen, & Hildreth, 1992), this study use the term work-life enrichment (WLE) as it provides broader meaning to the aspects of personal life. Moreover, the term is viewed as more relevant to employees who are single and married with no kids (Grant-Vallone & Ensher, 2001). Grant-Vallone and Ensher (2001) defined personal life as "activities with spouse/partner, family responsibilities, volunteer activities, sports, and/or hobbies" (p. 268).

Similar to work-family/life conflict literatures, varying terms have been used to describe the domain outside of one's work in the study of positive inter domains interaction (e.g. work-family, work-non-work, work-home and work-life/personal life), thus existing term found in the literature will be used whenever the work of other scholars is referred to.

Traditionally, researchers viewed work-family/work-life interaction as a uni-directional, in which individual involvement in work interfere with one's personal life (Fu & Shaffer, 2001). However, as the research paradigm began to shift, many researchers started to rethink about this conceptualization. As a result, bi-directional nature of work-family conflict has emerged (e.g. Gutek, Searle & Klepa, 1991, Frone, Russell, & Cooper, 1992; Fu & Shaffer, 2001). The same applied to positive side of work-family interface; that is enrichment between work and family or personal roles can happen in mutual directions consist of work-to-family enrichment and family-to-work enrichment.

There are different conceptualisations for the positive side of the work and personal life interface that can be found in the literatures, such as positive spillover (Crouter, 1984; Hanson, Hammer, & Colton, 2006; Kirchmeyer,1992), enhancement (Rudderman, Ohlott, Panzer, & King, 2002), facilitation (Allis & O'Driscoll, 2008; Frone, 2003; Wayne *et al*., 2007) and enrichment (Greenhaus & Powell, 2006). These concepts were often been used simultaneously and resulted to confusion (Greenhaus & Powell, 2006). Despite related, each of these concepts is distinct from one another and different measures are used. Greenhaus and Powell (2006) claimed that work–family enrichment best captured the mechanism of the positive work–family interface. WFE explains "the extent to which experiences in one role enhances the quality of life in another role" (Greenhaus & Powell, 2006, p. 73). The resources (e.g. skills and perspectives, material resources, social capital resources, and flexibility) generated from one domain may either directly (i.e. instrumental path) or indirectly (i.e. affective path) enhance the performance in another domain (Greenhaus & Powell, 2006).

Prior to the development of work–family enrichment measures by Carlson, Kacmar, Wayne, and Grzywacz (2006), one of the major issues confronted the study of positive work-family interaction was the lack of empirically validated measures (Rantanen, 2008; Shein & Chen, 2011). The bi-directional measure of work–family enrichment developed by Carlson *et al*. (2006) was based on the enrichment definition by Greenhaus and Powel (2006). Shein and Chen (2011) commented that Carlson *et al*.'s (2006) enrichment scale is the most well validated and strongest measure found in positive work-family interface literatures. The three components of work-to-family enrichment that identified by Carlson *et al*. (2006) are work-family capital (psychological resources, such as security, confidence, accomplishment and self-fulfilment), work-family affect (positive emotional state or attitude), and work-family development (acquisition of skills, knowledge, behaviours, and gain new perspective). The components for family-to-work enrichment are similar to work-to-family enrichment, except the "capital" is replaced with "efficiency". The three components of family-to-work enrichment (Carlson *et a*l., 2006) are "family-work development (skills, knowledge, and perspective), family-work affect (positive mood or attitude), and family-work efficiency (resource gains of time and efficiency). Adapted from Carlson *et al*.'s (2006) definition, work-to-personal life enrichment (WPLE) refers to how individuals can play better roles in their personal life with the benefits they gained from their work roles, such as through "developmental resources, positive affect, and psychosocial capital that derived from their involvement in work" (p. 140). In the same way, personal life-to-work enrichment (PLWE) described "how individuals' work roles can benefit from personal life roles through developmental

resources, positive affect, and gains in efficiency derived from involvement" in personal life activities (Carlson *et al*., 2006, p. 140).

The global or general approach in measuring work-personal life interface (i.e. work-life/non-work conflict) can be found in several studies, such as Boonebright *et al*., (2000); Fisher *et al*. (2009), Kopelman, Greenhaus, and Connolly (1983); Gutek *et al*. (1991), and O'Driscoll *et al*. (1992). Work-family interface measures have been modified to cover the work and general personal life domain (e.g. Grant-Vallone & Ensher, 2001). In addition to work-personal life interference, Fisher *et al*.'s (2009) also used a general approach in measuring work-non-work/personal life enhancement with three items representing each direction. Fisher *et al*. (2009) found that work-personal life enhancement significantly predict job satisfaction. Fisher *et al*. (2009) stressed that using a general approach in measuring non-work domain beyond family is appropriate and desirable. This is because being narrowly focus on family might not be relevant to some respondents. Meanwhile, employees who are married also have different commitments outside the family life (Fisher *et al*., 2009).

The evidences that involvement in non-work roles (marital, parental, community, and friendship) enhance the performance of another domain (i.e. work roles) can be found in the work of Ruderman, Ohlott, Panzer, and King (2002). Based on the information gathered via interview, Ruderman *et al*. (2002) concluded that the inter-domain synergies enjoyed by the women managers can be grouped into five categories, namely opportunities to enrich interpersonal skills, psychological benefits (e.g. overcoming

obstacles, build confidence and develop new perspective), emotional support and advice, handling multiple tasks, personal interest and background (e.g. interests, previous experience, and other roles provide skills and new perspectives to the work domain), and leadership (Ruderman *et al*., 2002). Meanwhile, Ruderman *et al*. (2002) also conducted a quantitative survey and the results demonstrated that multiple roles participation of women managers significantly explained life satisfaction. On the other hand, Hecht and Boies (2009) who performed an empirical study among 293 staff and faculty members of a university in Canada found that non-work activities, such as volunteer activities, fitness, as well as sports and recreation were positively connected with better emotion and well-being (i.e. higher life satisfaction and less somatic complaints).

2.5.1 Implications of Work-Life Enrichment

With regards to the outcomes of positive work-personal life interface, prior studies found that work-to-family enrichment has positive impact on job satisfaction (Aryee, Srinivas & Tan, 2005; Beutell & Witting-Berman, 2008; Lu, 2011; Masuda, McNall, Allen, & Nicklin, 2012; Michel & Michel, 2012; Ng, Ahmad & Omar, 2014), team project satisfaction (Hunter, Perry, Carlson, & Smith, 2010), organisational commitment (Aryee *et al*., 2005), and life satisfaction (Masuda *et al*., 2012). Meanwhile, employees with high work-to-family enrichment showed lower depression and emotional exhaustion (Jaga, Bagraim, & Williams, 2013). On the other hand, family-to-work enrichment was related to greater family satisfaction (Hunter *et al*., 2010; Lu, 2011), job efforts (Wayne, Musisca, & Fleeson, 2004), subjective well-being (Jaga *et al*., 2013), lower turnover intention

(Wayne, Randel, & Stevens, 2006) and depression (Grzywacz & Bass, 2003). Results from some empirical studies revealed that both directions of work-family enrichment were positively related to affective commitment (Balmforth & Gardner 2006; Wayne, Randel, & Stevens 2006). In addition, employees who believed that involvement in multiple roles would bring benefits in their lives show greater initiative and exhibit organisational citizenship behaviour (Thompson & Weiner, 1997).

Based on a survey among 245 workers from four Indian organisations that involved in information technology and manufacturing industry, Bhargava and Baral's (2009) found that bi-direction of work–family enrichment significantly predict affective commitment, job satisfaction, and organisational citizenship behaviour. In addition, they also found that family-to-work enrichment was positively related to family satisfaction (Bhargava & Baral, 2009). Choi and Kim (2012) conducted a study among frontline employees from 10 five stars hotels in Seoul; their results demonstrated job satisfaction was predicted by family-to-work facilitation, but not work-to-family facilitation. McNall, Masuda, and Nicklin (2010) conducted meta-analyses which involved 21 studies on work-to-family enrichment and 25 studies on family-to-work enrichment. Their results demonstrated that both directions of work–family enrichment were positively linked to two work-related outcomes in their study, namely job satisfaction and affective commitment. But, neither work-to-family enrichment nor family-to-work enrichment significantly predict turnover intention. In addition, they also found that the two directions of work–family enrichment not only improved physical health, mental health, but also lead to higher family and life satisfaction (McNall *et al*., 2010).

Allis and O'Driscoll (2008) pointed out that high psychological involvement in non-work domain was positively correlated with facilitation in work-domain. The non-work domains include family and personal benefits activities, such as leisure (e.g. physical activities, sport and hobbies), personal development (e.g. private study, new challenges), spiritual involvement (e.g. religious activities, meditation), and voluntary work. They further analysed the impact of work and non-work facilitation on positive well-being among 938 government employees in New Zealand. Their finding showed that non-work-to-work facilitation was positively associated with greater well-being (Allis & O'Driscoll, 2008).

2.5.2   Work-Life Enrichment and Work Engagement

There are only a handful of studies tested the relationship of work-life enrichment and work engagement. Based on the data from 69 newspaper managers who attended a management training workshop, Montgomery *et al*. (2003) found that single measure of positive work-home/home-work interference promote work engagement (especially dedication) and reduce burnout (exhaustion and cynicism). On the other hand, Mostert and Rathbone (2007) analysed the impacts of job resources, positive and negative work-home interaction on work engagement among mining employees in South Africa. In their analysis, the employees were divided into two groups (i.e. with low or high work engagement). They envisaged that job resources and positive work-home interaction would lead to high work engagement, while job demands and negative work-home interaction resulted to low work engagement. Results from logistic regression analysis

showed that major significant predictors of high work engagement were autonomy, tasks characteristics and positive home-work interaction. Nevertheless, their findings showed that there is no positive relationship between positive work-home interaction and high level of work engagement, while negative work-home and home-work interaction were not related to low level of work engagement (Mostert & Rathbone, 2007).

Taken together, prior empirical findings indicated that the dual directions of work-life enrichment may generate positive emotions, pleasures and rewards that potentially contributed to desirable job outcomes, such as job satisfaction, affective commitment, organisational citizenship behaviour and well-being (Allis & O'Driscoll, 2008; Bhagaval & Baral, 2009; Greenhaus & Powell, 2006; Grzywacz, 2000; McNall *et al*., 2010). Schaufeli and Salanova (2007) stated that work engagement is regarded as a sign of positive psychological well being. Employees who experienced high work-life enrichment may enjoy frequent positive emotion and feelings (Bhargava & Baral, 2009; Hecht & Boies, 2009) that can induce work engagement. Resources generated through inter-domain enrichment enable employees to build more resources as explained in COR theory (Hobfoll, 1989) that would eventually lead to improved well-being and performance. The above phenomenon can also be supported through social exchange theory (Blau, 1964). Wayne *et al*. (2006) explained that employees felt obliged to demonstrate desire attitude and behaviour in view of the benefits they received from their work which enriched their personal life. In light of the above evidences, the following hypotheses are formed:

84

H8a: There is a positive relationship between work-to-personal life enrichment and
         work engagement

H8b: There is a positive relationship between personal life-to-work enrichment and
         work engagement.

2.6   Core Self-Evaluations: Definition and Background

The concept of core self-evaluations (CSE) surfaced from the work of Judge, Locke, and

Durham (1997). CSE can be described as the basic appraisals or evaluations that people

make about their competency, effectiveness and worthiness (Judge *et al*., 2005). The CSE

model comprises of four dispositional traits, namely self-esteem, generalized self-

efficacy, locus of control, and emotional stability (Judge, Erez, & Bono, 1998). CSE

reflect the positive and negative evaluation that individuals make about their capabilities,

strength, and contribution (Judge *et al*., 2005). Kacmar, Harris, Collins, and Judge (2009)

argued that the widely used personality taxonomy – "The Big Five Personality Model"

which comprise of conscientiousness, extraversion, neuroticism (emotional stability),

openness to experience and agreeableness (Digman, 1990) were unable to reflect on how

individuals making self-assessments on themselves. Individuals with positive CSE regard

themselves positively in different scenario inclusive of viewing themselves to have full

control of their life and they believe themselves to have capability and competency

(Judge *et al*., 2004).

Before the development of core self-evaluation scale (CSES) by Judge, Erez, Bono, and Thoresen (2003), there is no direct measure for this concept. This means that CSE was measured by summing the scores of the four personality traits composed of CSE into a single score (Erez & Judge, 2001; Judge *et al*., 1998; Judge, Bono & Locke, 2000; Judge *et al*., 2003). In order to obtain a more valid result through direct measurement of the underlying concept itself and reduce the length of the existing scales, Judge *et al*. (2003) developed a 12-item CSES. Judge and colleagues argued that CSE is a higher order construct after performing rigorous confirmatory factor analyses (e.g. Judge *et al*., 1997; Erez & Judge, 2001; Judge, Erez, Bono, & Thoresen, 2002).

Judge *et al*. (2004) further explained that studying the four traits separately would lead to an incomplete and confusing picture. Moreover, study of Judge *et al*.'s (2002) using the methodology of meta-analysis demonstrated that the measures of the four traits were highly correlated to one another and display relatively poor discriminant validity, thus confirmed the existence of a single factor that can explained the relationships of the four traits. In addition, the composite of the four traits was proven to be a more consistent predictor of performance, life and job satisfaction as compared to when each trait was analysed in isolation (Erez & Judge, 2001; Judge *et al*., 2002; Judge *et al*., 2003). The validity and reliability of CSES was tested by using four different samples (Judge *et al*, 2003). Subsequently, further validation of CSES was performed by Judge, Van Vianen, and Pater (2004) in cross-cultural context. The Spanish and Dutch version of CSES was found to corroborate with the original English version (Judge *et al*., 2004).

2.6.1 Implications of Core Self-Evaluations

CSE that advocated by Judge and colleagues consistently demonstrated that this personality traits were related with several work related outcomes. For instance, CSE was found to be associated with job satisfaction (Best, Stapleton, & Downey, 2005; Judge, *et al*., 1998; Judge *et al*., 2000; Judge & Bono, 2001; Erez & Judge, 2001; Judge *et al.,* 2003, 2004, 2005), life satisfaction (Judge *et al*., 1998, 2003, 2005), job performance (Erez & Judge, 2001; Judge & Bono, 2001; Judge *el al*., 2003), goal self-concordance (Judge *et al*., 2005), job stress (Brunborg, 2008) and burnout (Best *et al*., 2005).

Moreover, Kacmar, Collins, Harris and Judge (2009) found support for the view that CSE is an antecedent for better job performance, especially when the employees perceived favourable work environment, which was characterised by low organisational politics and effective leadership. The study performed by Kacmar *et al*. (2009) was based on multi source data collection; employees' performance was rated by their respective supervisors, while CSE, perceived organisational politics and leader effectiveness were rated by the employees.

In addition, Judge *et al*., (2000) found that CSE was related to job satisfaction over time. Individuals who showed positive CSE during childhood and in early adulthood reported higher job satisfaction when they entered into middle adulthood (Judge *et al*., 2000). Subsequently, Erez and Judge (2001) conducted three separate studies, which involved undergraduates students (study one and two) and insurance agents (study three) to examine consequences of CSE. Results from the first study confirmed that the four

dispositions traits loaded on one higher order factor. The second study was carried out in a laboratory setting and 112 undergraduate students were involved. Their findings revealed that CSE was positively related to task motivation and performance. Apart from that, findings from the third study demonstrated that the broad personality trait (i.e. CSE) was related to goal-setting behaviour (Erez & Judge 2001).

Based on an investigation that was carried out among 212 employees from various industries, Brunborg (2008) found that CSE was negatively associated with perceived job stress and CSE is the most important predictor of job stress in his study. On the other hand, Best *et al*., (2005) tested five different models using structural equation modelling (SEM) in predicting burnout and its consequences (i.e. job satisfaction). The model with CSE and perceived organisational constraints as direct predictors of burnout appeared to be the most plausible model (Best *et al*., 2005). In addition, CSE was found to influence job satisfaction indirectly through job burnout (Best *et al*., 2005). In another words, employees with low CSE were exposed to burnout and becoming dissatisfied on the job (Best *et al*., 2005).

Boyar and Mosley (2007) reported that CSE was negatively related to bi-direction of work-family conflict; however no significant relationship was found between CSE and work-family facilitation. Meta-analysis review by Kammeyer-Mueller, Judge, and Scott's (2009) noted that high CSE individuals perceived less stressor and tend to experience lower strain. Those who exhibit high CSE will incline to have lower strain via reduction of the impact of stressors (i.e. more problem-solving coping ability), meanwhile they are

less likely to use avoidance coping method, such as drinking or stayed away from the problems (Kammeyer-Mueller *et al.*, 2009). Further evidences on the relationship between CSE and various outcomes discussed earlier (e.g. job satisfaction, life satisfaction, affective commitment, motivation, task performance and organisational citizenship behaviour and stress) can be obtained from the recent meta-analysis by Chang, Ferris, Johnson, Rosen, and Tan (2012).

2.6.2   Core Self-Evaluations and Work Engagement

According to Hobfoll's COR theory (1989), personal characteristics are viewed as an important resource as many personality traits and skills aid stress resistance. Personal resources represent the aspects of oneself that are generally linked to resiliency (Hobfoll, 1989, Hobfoll *et. al*, 2003). Individuals with personal resources are able to withstand challenges as they can control the environment in a better way (Hobfoll *et. al*, 2003). Personal resources, such as self-efficacy and optimism ease in offsetting the adverse impact of resource loss (Hobfoll & Schumm, 2002). Moreover, Hakanen and Lindbohm (2008) found that personal resource (i.e. optimism) has a stronger impact on the work engagement of cancer survivors as compared to job resources.

Individuals with high CSE possess a better coping strategy to deal with stressful events (Cooper, Dewe & O'Driscoll, 2001). The findings by Judge *et al.* (1998, 2000, 2001) indeed support that individual's positive self-evaluations would contribute to the favourable work outcomes and improve well-being. An empirical study conducted by Rich, Lepine, and Crawford (2010) found significant positive relationship between CSE

and job engagement in a case of 245 fire fighters. Nevertheless, no significant relationship between CSE and intrinsic motivation was found in their study. Rich *et al*. (2010) developed a new job engagement measure based on Kahn's (1997) conceptualisation. Despite only one study was found to support the link between the concept of CSE (Judge *et al*., 2001) and work engagement thus far, the influence of personality (i.e. personal resources) on work engagement was widely recognised (e.g. Mauno *et al*., 2007; Xanthopoulou *et al*., 2007; Karatepe & Olugbade, 2009).

Some studies have investigated a single personality trait of CSE rather than all the four personal traits in predicting work engagement. Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007a) conducted a field study among Dutch employees working in six divisions of electrical engineering and electronic company. Their findings confirmed that self-efficacy, organisational-based self-esteem, and optimism were positively related to work engagement and negatively related to exhaustion (Xanthopoulou *et al*., 2007a). Employees who have positive views (i.e. optimistic) on their future and capabilities would lead to better goal attainment (Xanthopoulou *et al*., 2007a). These findings confirmed the earlier notion of the motivational role of personal resources as found in JD-R model of work engagement.

Pati and Kumar (2010) pointed out that occupational self-efficacy was a significant determinant of work engagement based on a sample of 200 software programmers who worked with a large Indian software organisation for two years or more. Furthermore, Xanthopoulou *et al*. (2008) demonstrated that self-efficacy was positively related to work

engagement. Meanwhile, work engagement mediated the relationship between self-efficacy and performance (in-role and extra-role performance) among the flight attendants. On the other hand, Halbersleben's (2010) meta-analysis results showed that among the different resources examined in the study, autonomy/control and self-efficacy showed particularly high correlation with work engagement.

Recently, Kim, Shin and Swanger (2009) found that among the Big Five personality, conscientiousness and neuroticism were the most prominent traits in predicting work engagement. Apart from the above studies, other personal resources that have been associated with work engagement include high extraversion, low neuroticism (Langelaan, Bakker, Van Doornen, & Schaufeli, 2006), and achievement-striving aspect of Type A personality (Hallberg, Johansson, & Schaufeli, 2007). Further, longitudinal study performed by Mauno *et al*. (2007) found that organisation-based self-esteem was associated with every dimension of work engagement. Individual's psychological capital (Sweetman & Luthans, 2007), which encompass efficacy (confidence in successfully perform a particular task in a specific context), optimism (positive expectation of what will happen), hope (people's belief in their ability to generate possible pathways to a goal, take actions and be successful in goal attainment) and resiliency (ability adapt to adverse situation, and move beyond significant changes) have been identified as personal resources that generate work engagement (Bakker & Leiter, 2010; Sweetman & Luthans, 2010).

Since individual with higher CSE view life events positively, this personality trait would influence employees' perceptions, attitudes, and actions in the work place. Higher CSE employees would most likely view work as challenges, thus they became more motivated in the performing particular tasks. Judge *et al*. (1997) explained that CSE influence employees' job satisfaction through the generation of positive emotion and feelings that spill over onto their jobs. High CSE employees might see work as a challenge which may stimulate his/her motivation to engage in the work. The above arguments give rise to the following hypothesis:

H9:   There is a positive relationship between core self-evaluations and work engagement.

2.7   Job Demands and Outcomes

Job demands are often been viewed as stressor that result to certain physiological and psychological costs (Bakker *et al*., 2004). Evidences from prior studies demonstrated job demands were related to lower individual well-being and unfavourable work outcomes, particularly burnout (Demerouti *et al*., 2001; Schaufeli & Bakker, 2004; Xanthopoulou *et al*., 2007b), health complaints (Demerouti *et al*., 2001; Hakanen *et al*., 2008b) and turnover intention (Schaufeli & Bakker, 2004) among the employees. Similarly, Lewig *et al.* (2007) found that high job demands led to burnout, which adversely affected the Australian volunteer ambulance officers' health (e.g. depression, strain and happiness). The results showed that non-paid or volunteer workers experienced similar deteriorating well-being as paid workers when they were confronting with demanding work situations.

92

In addition, job demands were found to affect the determination to continue as volunteer through burnout indirectly (Lewig *et al*., 2007).

There were several studies examining the direct effects of job demands on work engagement, but the results were relatively inconsistent and unclear (Sawang, 2012). Some studies revealed that job demands are the major cause of burnout, but job demands do not have any significant influence on work engagement (Bakker *et al*., 2008; Schaufeli & Bakker, 2004). Taipale *et al*. (2011) found that job demands reduce work engagement in the samples of employees from Finland, Sweden, Germany and Hungary, but the relationships were quite weak. On the other hand, no significant relationship was found between these two variables in the samples from the Netherland, Portugal, Bulgaria and the United Kingdom. Nevertheless, Mauno *et al*. (2007) and Schaufeli *et al*. (2008a) discovered that the relationship between time pressure demands and work engagement were positive and significant. This suggests that job demands can operate as a motivator as long as it is not excessive. Crawford *et al*. (2010) explained that the relationship between job demands and work engagement depend on the nature of job demands (hindrance demands vs. challenge demands). Challenges demands (e.g. time pressure and high job responsibilities) were found to be positively associated with work engagement. This scenario is influenced by the general believes among the employees that challenging job demands is good for self-enhancement as they are given chances to learn more things that are related to their jobs. In contrast, negative associations were found between hindrance demands (e.g. politics in organisation, role stressors, and situational constraints) and work engagement.

Recently, Sawang (2012) revealed an interesting finding, job demands were found to have curvilinear (i.e. inverted U-shape) relationship with work engagement. The result was obtained based on a survey among 500 Australian full time technical and information technology managers. This phenomenon revealed that certain degree of job demands engaged employees in their work. Low or undemanding job indicated that the job is too bored and hamper work engagement (Sawang, 2012).

2.8   Job Demands as Moderator

Among the arguments that put forward by Hobfoll's (1989, 2002) COR theory was that the influences of resources on well-being are moderate, in contrast resources attain their saliency when people face with the threat of losing resources. Individuals are expected to use resources to cope with stressful environment. Thus, Hobfoll's (2002) proposition of the saliency of resources under the demanding circumstances is a new challenge and provided a new insight to the work engagement research. While the buffering effects of different resources on stressor-strain relationship are widely found in the literatures, there are relatively less studies focus on the boosting effect of varying resources on work engagement in the context of demanding work conditions.

Based on the recently emerged motivational or coping hypothesis (Hakanen & Roodt, 2010), present study envisage that job demands moderate the resources-engagement relationship. This is congruent with proposition found in JD-R model of work engagement (Bakker & Demerouti, 2008) and COR theory (Hobfoll, 1989).

2.8.1   Job Demands as Moderator between Job Resources and Work Engagement

Empirical evidences that supported the influence of job resources on work engagement, especially when job demands are high or in a stressful condition, can be found in the work of a few researchers, like Bakker *et al.* (2007) and Hakanen *et al.* (2005). The results on the interaction effects between job demands and job resources were mixed, nevertheless the argument of the saliency effects of resources (Hobfoll, 1989) were generally supported.

Hakanen *et al.* (2005) conducted a study to analyse the interaction effects among five job resources (e.g. job control, innovativeness, variability in the required professional skill, positive patient contacts, and peer contacts) and four job demands (e.g. qualitative workload, physical work environment, emotional dissonance, and negative changes) on a composite scale of work engagement. Hakanen *et al.* (2005) split the samples of their study, which comprise of about 2000 Finnish dentists into two groups so that cross validation of results were possible. Their study evaluated both the buffering effects and boosting effects of job resources. The buffering hypotheses anticipated that the presence of job resources will mitigate the negative impact of job demands on work engagement. On the other hand, the boosting hypotheses expect that the motivational potential of the job resources (i.e. positive peer and patient contact, variety in professional skill, innovativeness, as well as job control) will be augmented when the dentists encounter with high job demands. After performing a set of hierarchical regression analyses, Hakanen *et al.* (2005) found that 17 out of 40 interactions were significant. Their findings demonstrated that significant interaction effects can be found on combination of different job demands and job resources. Cross validations of two sets of data revealed that

positive patient contacts, peer contacts and variability in the professional skills enhanced work engagement when qualitative job demands were high. Meanwhile, the influences of job control and positive patient contacts on work engagement were moderated by adverse physical work environment. On the other hand, innovativeness particularly boosted work engagement when dentists were confronted with high emotional dissonance (Hakanen *et al.*, 2005).

With the exception of job control and information, Bakker *et al.* (2007) found that majority of the job resources in their study (e.g. supervisor support, organisational climate, innovativeness, and appreciation) exhibited stronger relationship with the dimensions of work engagement when teachers are confronted with serious pupil misbehaviour (i.e. job demands). These job resources were also found to mitigate the negative impact of pupil misbehaviour and dimensions of work engagement. Study by Bakker *et al.* (2007) conducted a study involved a sample of 805 teachers in Finland who work in elementary, secondary and vocational schools. Based on their findings, Bakker *et al.* (2007) concluded that one might be less concern with job resources if they are not working under demanding or stressful work condition.

Based on the proposition of JD-R model of work engagement, the maximum level of motivation can be generated through the combination of high resources and high demands (Bakker & Demerouti, 2008). Therefore, it is assumed that specific job resources cover in the present study would interact significantly with job demands in predicting work engagement.

2.8.2 Job Demands as Moderator between Work-Life Enrichment and Work Engagement

The positive interaction between work and personal life (i.e. work-life enrichment) are important resources for individuals to cope with stressors (Greenhaus & Powell, 2006). Coherent with the COR theory (Hobfoll, 2002), resourceful individuals are less likely to be exposed to negative impacts as a result of stressful conditions since they are more capable in handling and solving the problems. Nevertheless, empirical studies that investigate the boosting effects of positive work-personal life interaction on work outcomes in the face of high job demands was relatively limited. Among others, Lu, Siu, Chen, and Wang (2011) demonstrated that resources generated from family domain, which is beneficial for an individual to perform work role (e.g. family-to-work enrichment) has significant impact on work engagement among female nurses, especially when they were confronted with stressful work condition.

In a large sample, which consisted of 2,810 employees, Beutell (2010) found that job demands (i.e. range of work schedules – day, evening/night, rotating/spit, flexi/variable) significantly moderated the relationship between work-family synergy and job satisfaction. On the other hand, Boz, Martínez, and Munduate (2009) found that the influence of work-to-family enrichment on job satisfaction was moderated by relationship conflict. Boz *et al.*'s (2009) result was based on a survey among 288 Spanish employees who work in small and medium size organisations. This means that the negative impact of relationship conflict on job satisfaction is less when work-to-family enrichment is high.

The above findings showed that work-to-personal life enrichment and personal life-to-work enrichment are two important resources that may act as buffers against adverse impact of a stressor (Greenhaus & Powell, 2006). Put differently, individuals who own greater resources through work and personal life interaction process should be able to deal with more demanding situations. Bakker *et al*. (2007) argued that the distinction between buffer and coping hypotheses (boosting effect of job resources) is merely on the pattern of the interaction predicted. As such, coherent with the assumptions found in JD-R model and COR theory as discussed earlier, this study postulated that the dual directions of work-life enrichment will be more strongly related to work engagement when job demands are high.

2.8.3 Job Demands as Moderator between Core Self-Evaluations and Work Engagement

Xanthopoulou *et al*. (2009) argued that personal resources, such as CSE has similar function as job resources in boosting work engagement when job demands are high. This is because personal resources protect one from demanding situation and reduce the costs associated with it. Besides, personal resources are critical in goal attainment as well as foster growth and development (Xanthopoulou *et al*., 2009). Prior empirical evidences showed that individuals with certain dispositional variables are more capable in protecting themselves from negative consequences of stressors, such as job demands (Ganster, Schaubroeck, Sime, & Mayes, 1991). CSE theory posits that people who see themselves as capable and competent exert more positive reaction towards job responsibilities (Erez & Judge, 2001). This indicates that individuals with high CSE can

better handle various job demands. Erez and Judge (2001) found that salespersons with high CSE are more persistent in performing their tasks and are willing to devote more time and efforts toward achieving success. Moreover, dispositional variables, such as self-efficacy and self-esteem, which are related to CSE, are often been viewed as two cognitive resources that are important in dealing with stressors, such as job demands (Hobfoll, 2001). Recent study by Xanthoupoulou, Bakker, and Fischbach (2013) supported the boosting effect of job demands between personal resources and work engagement. Their result demonstrated self-efficacy was positively related to work engagement, particularly when emotion demands and emotion-rule dissonance were high (Xanthoupoulou *et al*., 2013). However, emotion demands and dissonance did not moderate the relationship between optimism and work engagement. Emotion-rule dissonance refers to the conflict between a person's true emotion and the emotion that he needs to express at work (Holman, Martinez-Iñdigo, & Totterdell, 2008).

Employees who indicate high CSE tend to perceive their jobs in a positive manner and they are more motivated in pursuing the available opportunities (Bono & Judge, 2003). Hence, they are believed to have a greater capacity to absorb the resource loss associated with job demands, and subsequently enhance work engagement. In addition, Harris, Harvey, and Kacmar (2009) argued that higher CSE individuals experience less emotional costs associated with the stressors in view of their positive self-perceptions. Based on the assumption in COR theory (Hobfoll, 1989), it is expected that higher CSE not only provide buffer for the negative effects of different job demands on work

engagement (e.g. Hakanen *et al*., 2005; Bakker *et al*., 2007), but it may influence work engagement when individuals confronted with stressor (e.g. high job demands).

The entire arguments as discussed in this section (i.e. Section 2.8) give rise to the following hypotheses:

H10a: Job demands moderate the relationship between perceived organisational support and work engagement.

H10b: Job demands moderate the relationship between immediate superior support and work engagement.

H10c: Job demands moderate the relationship between colleague support and work engagement.

H10d: Job demands moderate the relationship between autonomy and work engagement.

H10e: Job demands moderate the relationship between recognition and work engagement.

H10f: Job demands moderate the relationship between job prestige and work engagement.

H10g: Job demands moderate the relationship between perceived external prestige and work engagement.

H10h: Job demands moderate the relationship between work-to-personal life enrichment and work engagement.

H10i: Job demands moderate the relationship between personal life-to-work enrichment and work engagement.

H10j: Job demands moderate the relationship between core self-evaluations and work engagement.

2.9   Summary of Hypotheses Development

The following part lists all the hypotheses that have been developed for the present study:

H1:   Perceived organisational support is positively related to work engagement.

H2:   There is a positive relationship between immediate superior support and work engagement.

H3:   There is a positive relationship between colleague support and work engagement

H4:   There is a positive relationship between autonomy and work engagement.

H5:   Recognition is positively related to work engagement.

H6:   Job prestige is positively related to work engagement.

H7:   Perceived external prestige is positively related to work engagement.

H8a: There is a positive relationship between work-to-personal life enrichment and work engagement

H8b: There is a positive relationship between personal life-to-work enrichment and work engagement.

H9:   There is a positive relationship between core self-evaluations and work engagement.

H10a: Job demands moderate the relationship between perceived organisational support and work engagement.

H10b: Job demands moderate the relationship between immediate superior support and work engagement.

H10c: Job demands moderate the relationship between colleague support and work engagement.

H10d: Job demands moderate the relationship between autonomy and work engagement.

H10e: Job demands moderate the relationship between recognition and work engagement.

H10f: Job demands moderate the relationship between job prestige and work engagement.

H10g: Job demands moderate the relationship between perceived external prestige and work engagement.

H10h: Job demands moderate the relationship between work-to-personal life enrichment and work engagement.

H10i: Job demands moderate the relationship between personal life-to-work enrichment and work engagement.

H10j: Job demands moderate the relationship between core self-evaluations and work engagement.

2.10   Theoretical Framework

Based on the theories and review of the previous literatures, the following diagram represents the theoretical framework for the current study.
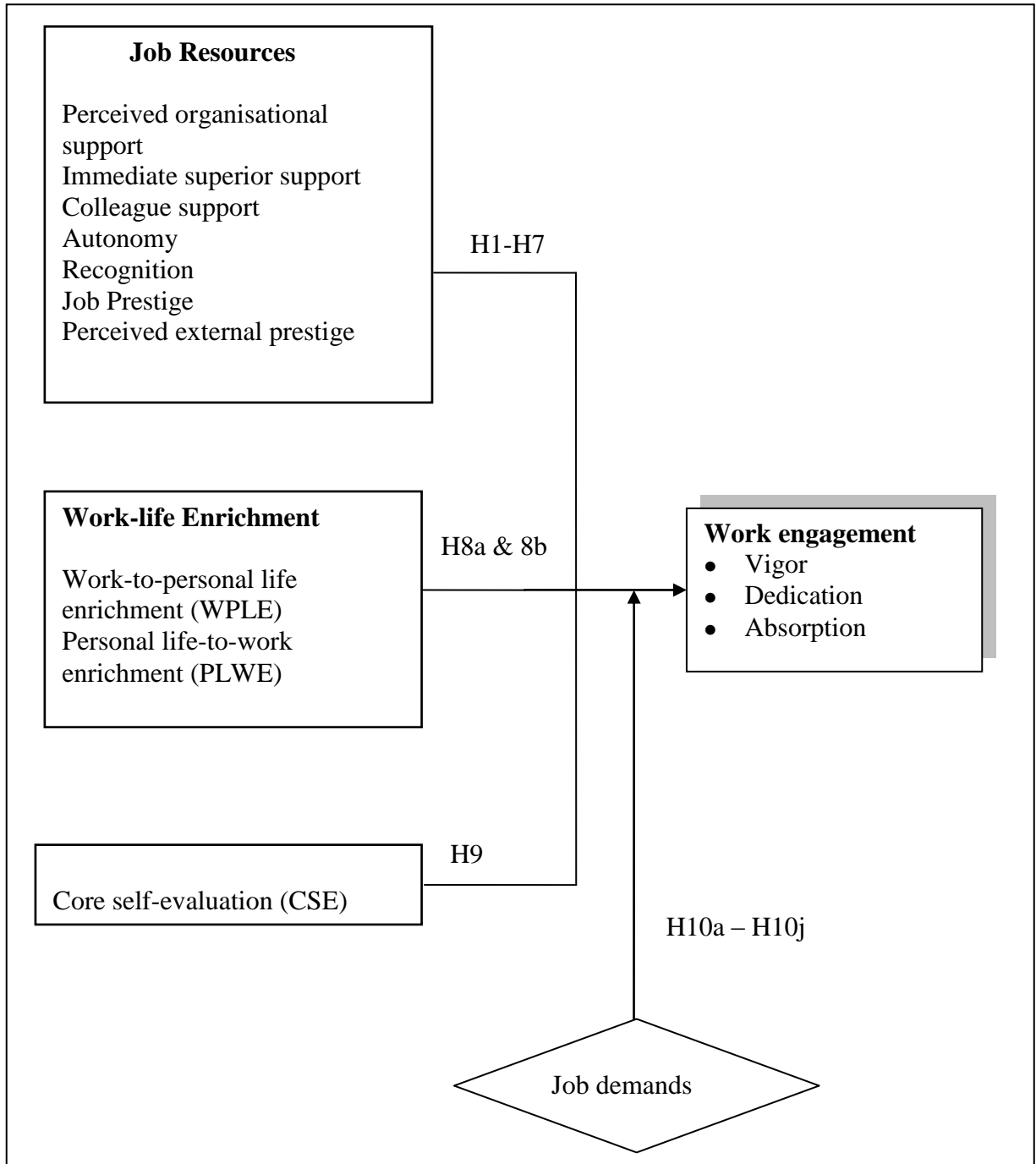
Figure 2.3
 Proposed theoretical framework

The theoretical framework model of present study as shown in Figure 2.3 was developed mainly based on the premise of JD-R model of work engagement (Bakker & Demerouti, 2008) and COR theory (Hobfoll, 1989, 2002). The detailed explanations of these two theories have been provided in the earlier parts of this chapter (refer section 2.3). Furthermore, a table displaying the summary of some major work engagement literatures is provided in Appendix 14. As depicted in the above diagram (i.e. Figure 2.3), this study examined the direct effects of job resources, personal resources (i.e. core self-evaluations), and work-life enrichment on work engagement. Apart from that, the present study also hypothesized that the relationship between the key resources specified earlier (i.e. job resources, core self-evaluations, work-life enrichment) and work engagement are moderated by job demands.

As the assumption entailed in JD-R model of work engagement, job resources play essential roles in stimulating individual's work engagement via a motivational process (Bakker & Demerouti, 2008; Demerouti & Bakker, 2011). The past cross-sectional studies (e.g. Crawford *et al*., 2010; Karetepe & Olugbade, 2009; Salanova *et al*., 2005) as well as longitudinal studies (e.g.; Hakanen *et al*., 2005; Hakanen *et al*., 2008b; Mauno *et al*., 2007) furnished the facts of the roles job resources in explaining the variance of work engagement. Besides, support for the influence of job resources (e.g. social support from coworkers and supervisor, transformational leadership, autonomy as well as other job characteristics) on work engagement can be found in the meta-analysis by Christian, Garza, and Slaughter (2011).

With the theoretical and prior empirical supports, present study envisages that job resources (i.e. POS, immediate superior support, colleague support, autonomy, recognition, job prestige, and PEP) will be positively related to work engagement. The key job resources in this study, inclusive of job prestige and PEP can be categorised as condition resources in COR theory (Hobfoll, 1989, 2002). Favourable job prestige and PEP have the capability in fulfilling one's self-esteem needs (Fuller *et al*., 2006) and generate positive feelings (Wayne *et al*., 2007), thus these job resources have their motivational potential that can influence work engagement. PEP was proven to be valuable resource as it plays a significant role in predicting organisational commitment and pleasant affective state in the workplace (Carmeli, 2005; Herrbach, *et al*., 2004). Moreover, social comparison theory argued that people tend to make social comparison as a way of self-motivation (Yzerbyt, Dumont, Mathieu, Gordijn, & Wigboldus, 2006). In the comments on the application of COR theory in work engagement studies, Hobfoll (2011) emphasized that successful organisation need to provide employees with relevant resources and enable them to access to these resources at different levels. It is impossible for organisations to have engaged and productive employees if they failed to do so (Hobfoll, 2011).

CSE (Judge *et al*., 1997) is a form of personal resources that has emerged in recent years, and its linkage with work engagement need more investigations. Recent development in JD-R model recognised that personal resources (e.g. dispositional characteristics) are another major antecedent of work engagement (Bakker, Demerouti, & Sanz-Vergel, 2014). The positive link between CSE and job engagement as per Kahn's (1990)

conceptualisation can be found in the work of Rich *et al*. (2010). Moreover, prior studies showed that several personality traits, such as organisational self-esteem (Pati & Kumar, 2010), optimism (Xanthoupolou *et al*., 2007a), conscientiousness, and proactively personality (Christian *et al*., 2011) are positively related to work engagement.

Besides contextual/situational factor (job resources) and individual factor (personal resources), present study incorporated the both directions of work-life enrichment (i.e. WPLE and PLWE) into the model. Work and personal life interface is the reality that working adult have to face with. The interaction between work and personal life is no longer narrowly seen as merely a source of conflict and stress. Instead, the bi-directions of positive work-personal life interaction were found to generate positive job outcomes, just as affective commitment and job satisfaction (Fisher *et al*., 2009; McNall *et al*., 2010). Previous researchers (Montgomery *et al*., 2003; Mostert & Rathbone, 2007) who analysed on positive work-home/family interactions and work engagement found that these two variables were related. Gorgievski and Hobfoll (2008) stressed that time for private or personal life is important to ensure ongoing employees' work engagement. COR theory explains that individuals' ability in orchestrating resource gain is relied on the pool of resources they possessed (Gorgievski & Hobfoll, 2008). As such, employees' work engagement is expected to improve as they are able to generate more resources through work and personal life role interaction.

Guided by the assumption in COR theory that "resources would acquire its saliency in the context of resource loss" (high demands context) (Hobfoll, 2002). It is expected that

106

motivational potential of job resources, core self-evaluations and work-life enrichment (i.e. PLWE and WPLE) will be amplified when the academics have to deal with demanding job requirements. The recent development in motivational hypothesis, which analyse the boosting effects of job related and non-job related resources in high job demands (versus low job demands) situation become a valuable addition to the existing buffering hypothesis that are widely found in the burnout and stress literatures (Bakker & Demerouti, 2008). Job demands, as illustrated in JD-R model resulted to depletion of energy, escalate physical and psychological costs (Bakker & Demerouti, 2008). Hence, resources are needed for individuals to cope with the demanding environment, otherwise one will experience maladaptive coping, which eventually lead to burnout (Alarcon, 2011). High job demands can impede work engagement without the presence of resources. Bakker, Veldhoven, and Xanthopolou (2010) explained that interactions (or combinations) of high demands and high resources can generate the highest levels of motivation process, which enhance individual's work engagement. As several writings demonstrated that the academics in local state-owned universities are experiencing more challenging environment these days (Hariati Azizan *et al*. 2012; Lee, 2015), the academics who are able to make the maximum use of the resources they have in handling increasing job demands will exhibit high work engagement.

2.11 Summary

The writings of this chapter provide an extensive reviews on the key variables and the discussion of two major theoretical models, namely JD-R model of work engagement (Bakker & Demerouti, 2008) and COR theory (Hobfoll, 2002). Throughout the writings, the prior empirical findings are disclosed and several additional supporting theories, such as social exchange theory, perceived organisational support theory and work-life enrichment theory have been critically discussed in order to establish their direct relationship with work engagement as hypothesized in this study. Prior empirical findings showed that the investigation on the specific job resources (POS, immediate superior support, colleague support, autonomy, recognition, job prestige, and perceived external prestige) together with personal resources (i.e. core self-evaluations), and work-life enrichment among the academics of Malaysian public universities have yet to be explored. Likewise, supporting evidences and theories of the saliency of resources in the presence of high demands are furnished to establish the motivation hypotheses (i.e. job demands as moderator between resources-work engagement relationships). The subsequent chapter covers the description of the methodology that will be used in order to answer the research questions of the present study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Introduction

This chapter explains the research methodology of the present study. The first part elaborates on the research design employed in this study, then followed by the description about research instrument and operational definitions of the key variables. The subsequent parts describe about the population, sampling design, pilot test, data collection process, and data analysis techniques. Lastly, this chapter ends with a summary.

3.2   Research Design and Research Philosophy

The positivist perspective that emphasizes on quantitative research techniques with deductive approach is adopted in this study in order to achieve the research objectives as indicated in chapter one (refer page 28). Self-administered questionnaires are the major survey instrument for data collection in the present study. Large amount of data from a sizeable population can be obtained by using questionnaire (Zikmund, Babin, Carr, & Griffin, 2010). In addition, large sample size makes the generalisation of the results to the population possible (Saunders, Lewis, & Thornhill, 2012). This is a cross-sectional design as the data only collected at one point in time. The following diagram (Figure 3.1) summarise the elements of research process for the current study:

Epistemology	Objectivism
Theoretical perspective	Positivism
Research approach	Deductive
Research Strategy/Methodology	Survey
Time Frame	Cross-sectional
Data collection method	Self-administered quationnaires
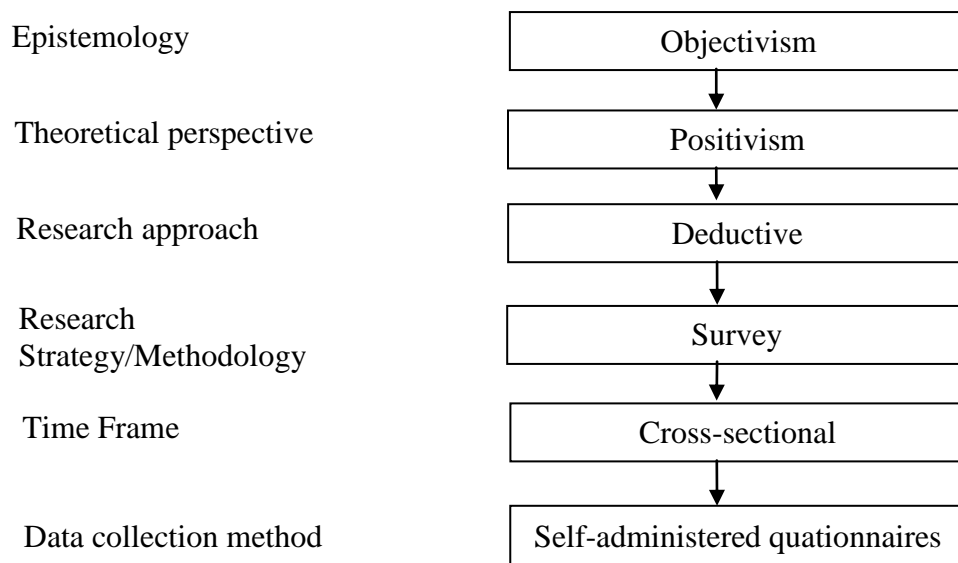
Figure 3.1
Elements of Research Process

Source: Adapted from Gray (2014) and Saunders *et al*., (2012)

Epistemology explains what can be regarded as acceptable knowledge in a particular field or discipline (Bryman & Bell, 2011; Saunders *et al*., 2012). Specifically, this stream of research philosophy looks at the nature, the source and the validity of knowledge (Mukherji & Albon, 2010). The epistemological stance of a researcher will influence the theoretical perspective employed, which subsequently affect the choice of methodology and methods used (Crotty, 1998). Positivism is the dominant epistemological research paradigm that supports the application of natural science methods to social science (Bryman & Bell, 2011; Gray, 2014). Gray (2014) explained that positivism is the theoretical perspective that is closely linked to objectivist epistemology, which stress that research is about discovering the objective truth. Positivist studies are purely based on the facts that gathered through observable experience, systematic empirical measures, and statistical tests (Gray, 2014). As such, scientific approach or quantitative methodology,

such as survey and experiment are typically employed in positivist studies (Mukherji & Albon, 2010). This approach allows the researcher to locate causal relationship between variables (Sauders *et al*., 2012).

There are two major research approaches or research choices in scientific study, namely deductive and inductive reasoning (Bryman & Bell, 2011; Gray, 2014; Saunders *et al*., 2012). Positivist studies generally adopt the deductive approach, which involve the formulation and testing of hypothesis (Gray, 2014). Hart (1998) identifies five steps in deductive approach: (1) the researcher test a theory, (2) hypothesis are derived from the theory, (3) concepts and variables are operationalised, (4) an instrument is used to measure the variables in the theory, and (5) verification of the hypothesis.

The deductive research is in contrast to the inductive approach that normally linked to phenomenology philosophy (Crowther & Lancaster, 2008). Phenomenological paradigm believes that the world is socially constructed and subjective, and the researcher is part of the research process rather than independence of what being research as in the case of positivity. Besides, phenomenological studies are driven by human interest, focus on meanings instead of fact, and try to understand what is happening and construct theories/models from the data (inductive approach) (Gray, 2014; Saunders *et al*., 2012). Phenomenological research tends to adopt qualitative methods (e.g. interview), and the sample size is small and is less concerned with the need to generalise the results (Gray, 2014).

3.3   Research Instrument

The self-administered questionnaire for this study was divided into seven sections and there were a total of 103 questions (inclusive of socio-demographic information) in six pages. In view of the length of the questionnaire, the questions were divided into a few sections in accordance to the suggestions by Cohen, Manion and Morrison (2007). In addition, short and clear instructions were provided in each section of the questionnaire. Section A comprises of items that measure different types of job resources in an organisation. Section B contains questions that intend to capture the perceptions of the respondents on the prestige of the university. Section C composes of items that measure job demands. Section D consists of items that measure individual's core self evaluation, followed by items on work-life enrichment in section E. Section F consists of items measuring work engagement among the academics. Socio-demographic information was placed on the last section (i.e. Section G), which capture the information about gender, ethnic origin, marital status, age, position, highest academic qualification, citizenship, name of university that respondent currently attached with, years of experience in the present university, years of experience in higher education institution, and administrative position held currently.

Coloured cover letter and questionnaires were used as a way to make the questionnaire more attractive, and to capture respondents' attention. The cover letter was placed before the questionnaire and it served to inform the respondents of the purpose of the survey. It also meant to provide the assurance on the confidentiality and anonymity of the survey. Besides, the respondents were reminded that there were no right or wrong answers in

responding to the items in the questionnaire. This is to minimize the possible social desirable responses, which refers to the tendency of the participants to provide answer that is favorable to others, instead of expressing their real feelings or thoughts about an issue (Podsakoff, MacKenzie & Podsakoff, 2003). Moreover, the respondents were informed that their participation in the survey was on voluntary basis; the details of the institution in which the respondent is affiliated with and the estimated time to complete the questionnaire were also included in the cover letter. In addition, the name, email addresses and contact numbers of the researcher and supervisor were provided in case the respondents have any inquiries pertaining to the survey.

Seven-point Likert scales ranged from strongly disagree (1) to strongly agree (7) was used for all the items in Section A to E as described above. For the measures of work engagement in Section F, 7-point Likert scale, ranged from never (1) to always (7) was used. Respondents would be able to indicate their feeling, perception, evaluations, and insight on the statement asked by using Likert scale (Pedhazur & Schmelkin, 1991). Though there is discrepancy on whether to adopt a neutral point or midpoint; several authors (e.g. Burns & Grove, 1997; Krosnick & Presser, 2010) stressed that removing a neutral point force the respondents to rate either on the positive or negative side of a particular statement and this would result to irritation among the respondents and increase non-response bias. Furthermore, survey conducted by O'Muircheartaigh, Krosnick, and Helic (2000) found that the inclusion of midpoint was useful in improving reliability and validity of the rating scales.

There is continuous debate on the number of point on rating scale. Seven-point scale was used for all the key variables in this study so that the respondents are allowed to provide greater differentiation in their judgement (Krosnick & Presser, 2010), such that he/she can rate either strongly agree, agree, slightly agree, neutral, slightly disagree, disagree or strongly disagree for a given statement. Korsnick and Presser (2010) explained that rating scale with too few options restricts respondents from expressing their moderate position. On the other hand, for rating scales beyond 7-point, respondents have to choose between too many options given and they might encountered with difficulty in interpreting the meaning of each point, such scale point ambiguity consequently affect the reliability and validity of the measurement (Krosnick & Presser, 2010). Krosnick and Presser (2010) argued that there are difficulties in assigning meaning of points with words for scales exceed seven points. Furthermore, findings by Givon and Shapira (1984) showed that there were obvious improvements in reliability when the scales increase from 2-point scales toward 7-point scales. However, once the scales are above seven points, there is no significant improvement in reliability (Givon & Shapira, 1984). Extensive reviews by Krosnick and Presser (2010) also found that 7-point scales are the optimal number of scale points in many cases.

Demographic information is important in understanding the profile of the respondents in a study. Nominal scales were used in measuring variables such as gender, education qualification, position, marital status, and area of expertise. On the other hand, age, respondents' tenure in the present university and years of respondents' involvement in the

education industry are measured by using ordinal scales. Open ended question was used for the respondents to indicate the university that they attached with.

3.4 Measurement of Independent Variables, Moderator and Dependent Variable: Operational Definitions

3.4.1 Work Engagement

Work engagement was operationalised by using a 17-item Utrecht Work Engagement Scale (UWES) developed by Schaufeli *et al*., (2002). Work engagement is a three-dimensional construct, comprising of vigor, dedication and absorption. Vigor comprised of six items, sample items are "I can continue working for very long periods at a time," and "At my job, I am very resilient, mentally". Dedication comprised of five items, sample items are "I am proud of the work that I do," and "I am enthusiastic about my job". Lastly, absorption was measured by using six items, sample items include "When I am working, I forget everything else around me," and "Time flies when I'm working". Respondents indicated their agreement with each item on a seven-point Likert scale anchored from never (1) to always (7). Higher overall scores reflect higher work engagement. In the previous studies, high reliability or internal consistency have been reported for overall work engagement and its subscales, the coefficient alpha ranged from 0.70 to 0.93 (Schaufeli *et al*., 2002; Schaufeli & Bakker, 2004; Schaufeli *et al*., 2008a, Zacher & Winter, 2011).

3.4.2   Job Resources

The key job resources in the present study include:

Perceived Organisational Support

Perceived organisational support (POS) was assessed by using the shorter version of POS scale, which comprised of eight items as recommended by Eisenberger, Cummings, Armeli, and Lynch (1997) as well as Rhoades and Eisenberger (2002). Two items of this measure required reversed coding so that the higher score indicates more positive perception of organisational support. Slight modification was done by replacing the term "the organisation" to "my university" in order to better relate to academic staff. Sample items include "My university cares about my well being," and "My university shows little concern for me". A seven-point Likert scale, ranged from strongly disagree (1) to strongly agree (7) was used. Higher scores denote higher perceived university support. The internal reliability for the eight-item measure of POS was high as reported in a number of previous studies, the coefficient alpha for the scale ranging from 0.80 to 0.91 (Baranik, Roling, & Eby, 2010; Eisenberger *et al*.,1997; Lynch, Eisenberger, & Armeli, 1999; Rhoades, Eisenberger, & Armeli, 2001).

Immediate Superior Support

Immediate superior support was measured by using four-item scale. This measure was adapted from Caplan, Cobb, French, Harrison, and Pinneau (1975a). The items were modified so that the respondents can indicate their agreement or disagreement with each statement. Such modification can be found in other studies, such as Lee (2004) and Miller, Elis and Lyles (1990). The term immediate supervisor was replaced with immediate

superior. Sample items include "My immediate superior is willing to listen to my personal problems," and "My immediate superior can be relied upon when things get tough at work". The response option ranged from strongly disagree (1) to strongly agree (7). Higher scores reflect higher level of perceived immediate superior support. The measure showed high reliability in the previous studies, the coefficient alpha values ranging from 0.86 to 0.93 (Lee, 2004; Lee & Ashforth, 1993).

Colleague Support

Colleague support was measured with four items, adapted from Caplan *et al*. (1975a). Some modifications were performed on the items so that respondents can indicate their agreement or disagreement with each statement. The term "other people at work" was replaced with "my colleagues". Sample items include "My colleagues are easy to talk to." and "My colleagues are willing to help when I have job related problems". The response option ranged from strongly disagree (1) to strongly agree (7). Higher scores denote greater perceived support from colleagues. The scale showed high reliability in the previous studies, the coefficient alpha values ranged from 0.79 to 0.93 (Repeti & Cosmas, 1991; Lee, 2004).

Autonomy

Autonomy was assessed with a four-item scale, adapted from Beehr (1976). Sample items are "My job allows me to make a lot of decisions on my own," and "I have enough freedom as to how I do my work". The scale anchored from strongly disagree (1) to strongly agree (7). Higher scores indicate greater perceived autonomy. The measure

showed high reliability in the previous studies, the coefficient alpha values ranged from 0.74 to 0.93 (Beehr, 1976; Hall, Royle, Brymer, Perrewe´, Ferris, & Hochwarter, 2006).

Recognition

The measure of recognition consisted of six items, adapted from Gmelch, Wilke, and Lovrich (1986) and Paré and Tremblay (2007). Sample item include "My achievements in the job are recognised in different ways (e.g. praise/ public recognition/written recognition)". Respondents were asked to indicate their option from strongly disagree (1) to strongly agree (7). Higher scores mean respondents view that the recognition provided by the university is favourable.

Job Prestige

The measure of job prestige comprised of four items, adapted from Super (1970, as cited in Lyons, 2003) and O'Connor and Kinnane (1961). A sample item is "Generally, my job makes people look up to me". The measure was assessed on a 7-point scale, ranging from strongly disagree (1) to strongly agree (7). Higher score reflect higher perceived job prestige by the respondents.

Perceived External Prestige

Perceived external prestige (PEP) was assessed by using six-item scale from Herrbach, Mignonac, and Gatignon (2004), which was originally developed by Mael and Ashforth (1992). Minor adaptation had been made by modifying the term "organisation" to "university". Two items of this measure required reversed coding in which the higher

score indicates more positive perceived university prestige. A seven-point Likert scale, ranged from strongly disagree (1) to strongly agree (7) was used. A sample item includes "Employees of other universities would be proud to work in my university". High reliability was reported in previous studies for this scale, the coefficient alpha values ranged from 0.73 to 0.86 (Herrback *et al.*, 2004, Mignonac *et al.*, 2006; Smidts, Pruyn, & van Riel, 2001).

3.4.3 Core Self-evaluations

Core self-evaluations scale (CSES) consists of 12 items, adopted from Judge *et al.* (2003). Six items of this measure required reversed coding so that the higher score reflects positive core self-evaluations. Respondents indicate their agreement with the statement by using the option from strongly disagree (1) to strongly agree (7). Sample items include "I am capable of coping with most of my problems" and "Sometimes, I feel depressed." It has been proven that CSES has good psychometric support (Judge *et al.*, 2003). CSES displayed high reliability across different samples in the previous studies, the coefficient alpha values ranged from 0.83 to 0.87 (Brunborg, 2008; Judge *et al.*, 2004; Gardner & Pierce, 2010).

3.4.4 Work-Life Enrichment

Work-life enrichment is measured by adapting the scales developed by Carlson *et al.*'s (2006) work-family enrichment scale, which comprised of 18 items. Consistent with the bi-directional nature of work and personal life or non-work interaction, work-to-personal life enrichment (WPLE) and personal life to work enrichment (PLWE) are examined

separately. The term "work-life" is used rather than "work-family" to cover wider scope of personal life. Personal life encompasses both the time with family members and other aspects, such as time for personal interests, individual relationship with friends, holidays, sports and volunteer activities (Bonebright *et al*., 2000). This also allowed the measure to be equally appropriate for respondents who are married, married without minor, and those who are still single (e.g. Fisher *et al*., 2009; Grant-Vallone & Ensher, 2001).

Nine of the eighteen items measures WPLE, a sample item include "My involvement in my work provides me with a sense of accomplishment and this helps me be a better person." Slight modification was made by replacing the term "worker" to "person." The remaining nine items measure PLWE, a sample item includes "My involvement in my personal activities put me in a good mood and this helps me be a better employee". Minor modification was made by replacing the term "family" to "personal activities." All the items were rated on a 7-point Likert scale with response choices ranged from strongly disagree (1) to strongly agree (7). Higher scores signify higher WPLE and PLWE. The original measures showed high reliability in the previous studies, in which the coefficient alpha values for work-to-non-work enrichment ranged from 0.88 to 0.94 (Bhargava & Baral, 2009; Michel & Clark, 2009), and for non-work-to-work enrichment the alpha values vary from 0.84 to 0.95 (Bhargava & Baral, 2009; Michel & Clark, 2009).

3.4.5   Job Demands

Job demands were adapted from Rothman and Joubert (2007), which comprised of eight items, indicating workload and emotional demands in the job. Sample items include "My

job requires all of my attention" and "My work put me in emotionally upsetting situations." The response option ranged from strongly disagree (1) to strongly agree (7). Higher scores show that the job is more demanding. The measure has high alpha coefficient of reliability, which is of 0.80 as reported in previous study (Rothman & Joubert, 2007).

Table 3.1
Summary of Measures Used for Present Study

Variables	Adapted/adopted from:	Scale
Work engagement	17-item Utrecht Work Engagement Scale (UWES) developed by Schaufeli *et al*., (2002)	Never (1) to always (7)
Perceived organizational support	8-item, Eisenberger, Cummings, Armeli, and Lynch (1997)	
Immediate superior support	4-item, Caplan, Cobb, French, Harrison, and Pinneau (1975a).	
Colleague support	4-item, Caplan *et al*. (1975a)	
Autonomy	4-item, Beehr (1976)	
Recognition	6-item, Gmelch, Wilke, & Lovrich (1986), and Paré & Tremblay (2007)	
Job prestige	4-item, Super (1970, as cited in Lyons, 2003), and O'Connor & Kinnane (1961)	Strongly disagree (1) to strongly agree (7)
Perceived external prestige	6-item, Herrbach, Mignonac, and Gatignon (2004)	
Immediate superior support	6-item, Herrbach, Mignonac, and Gatignon (2004)	
Core self-evaluations	12-item, Judge *et al*. (2003)	
Work-life enrichment	Carlson *et al*. (2006) 9-item work-to-personal life enrichment 9-item personal life-to-work enrichment	
Job demands	8 items, Rothman and Joubert (2007)	

3.5   Population

Population refers to the total number of elements that share common set of characteristics (Hair, Money, Samouel & Page, 2007) while sample is the subgroup of the population (Sekaran & Bougie, 2009). Population of this study comprised of 24,276 academics from 18 public universities in West Malaysia. Two universities from East Malaysia (i.e. Universiti Malaysia Sarawak and Universiti Malaysia Sabah) are excluded from the study in view of majority of universities are located in Peninsular Malaysia. As such, this pool of universities is representative enough to be generalised onto the population of this study. The list of 18 public universities and the number of academic staff for each university are provided in Table 3.2. The information was obtained from the official website of Ministry of Higher Education in year 2012.

The rationales for excluding private universities in Malaysia are due to several considerations. Firstly, public universities are mainly funded by the federal government, and they have relatively similar remuneration package, salary adjustment mechanism, fringe benefits, and job security. In contrast, private universities have a lot of differences in term of the above mentioned aspects due to differences in financial resources, size, corporate culture, and countries of origin (in the case of branch campuses). When the survey was conducted in the early of 2012, there were 29 private HEIs with university status (MoHE, 2012b). The numbers are inclusive of online distance learning universities (i.e. Open University Malaysia, Wawasan Open University, Asia e-University, Al-Madinah International University, University Tun Abdul Razak and International Centre of Education and Islamic Finance). Furthermore, there are another five private

universities, which are the branches from foreign universities, namely University of Nottingham Malaysia, Monash University Malaysia, Curtin University of Technology Sarawak campus, Swinburne University of Technology Sarawak campus, and Newcastle University Medicine Malaysia. Secondly, present study did not aim at performing a comparative study between academics from private and public university. Besides, it is relatively difficult to perform a large scale study in view of the costs involved and time constraint.

Both local and foreign academics are included in this study. Despite expatriate academic staff composed only around 8% of the total population of academic staff in local public universities (MoHE, 2012a), they are absolutely a critical human asset of the university. The presence of expatriate academics helps to foster the standard and quality of higher education in Malaysia as it encourages the transfer of knowledge (Yahya *et al*., 2012). The transformation process of higher education system in the country has lead to the increased appointment of expatriate academic staff. In fact, it is expected that there will be a rising international competition for academic talent in the coming years (Sanderson, 2012). Both the local and expatriates academics shared the similar job responsibilities. Work engagement among the academics is critical for the overall performance of the university regardless of their nationality.

3.6   Sampling Design

The use of cross-sectional design in this study required careful consideration in sampling design (Hair *et al*., 2007). The sampling frame is the list of all elements that can be found in the population, from which the sample may be selected (Babbie, 2007; Zikmund *et al*., 2010). The sampling frame for this study consists of academic staff that can be found through the staff directory of each university's website. The academics, from lecturers to professors are the sampling elements or the suitable respondents that will take part in this study. As such, unit of the analysis for the present study is the individual academic staff.

The staff directory of the university provides the name list of staff based on faculty/institution that the academics belong to. The information of each academic staff, such as email address, office contact number and positions can be found from the directory, thus this allows probability sampling to be used for the present study. The population of academic staff in the 18 universities was presented in Table 3.2. Probability sampling methods are based on the premise that each element or every member of the target population has an equal and non-zero chance of being selected, thus reducing the selection bias (Hair *et al*., 2007). In addition, findings based on probability sampling can be generalized to the target population with a specified level of confidence (Hair *et al*., 2007).

Table 3.2

Population and Sample Size of Academic Staff from Different Universities Based on Stratified Random Sampling

University	Number of academic staff	Proportionate sampling	%
Universiti Malaya (UM)	2,565	40	10.6
Universiti Sains Malaysia (USM)	1,999	31	8.2
Universiti Kebangsaan Malaysia (UKM)	2,328	36	9.6
Universitie Putra Malaysia (UPM)	1,654	26	6.8
Universiti Technologi Malaysia (UTM)	2,164	34	8.9
Universiti Islam Antarabangsa Malaysia (UIAM)	2,193	34	9.0
Universiti Utara Malaysia(UUM)	1,284	20	5.3
Universiti Pendidikan Sultan Idris (UPSI)	768	12	3.2
Universiti Sains Islam Malaysia (USIM)	554	9	2.3
Universiti Teknologi MARA Malaysia (UiTM)	4,308	67	17.7
Universiti Malaysia Terengganu (UMT)	484	8	2.0
Universiti Tun Hussein Onn University Malaysia (UTHM)	976	15	4.0
Universiti Teknikal Melaka Malaysia (UTeM)	770	12	3.2
Universiti Malaysia Pahang (UMP)	570	9	2.3
Universiti Malaysia Perlis (UniMAP)	713	11	2.9
Universiti Sultan Zainal Abidin (UniSZA)	532	8	2.2
Universiti Malaysia Kelantan (UMK)	201	3	0.8
Universiti Perthananan Nasional Malaysia (UPNM)	213	3	0.9
Total	24,276	378	100

% = percentage

In this study, proportionate stratified random sampling was used. There are several steps involved in this sampling approach. First of all, a list of all the public universities in Peninsula Malaysia was identified. Secondly, the population of academic staff of each university involved were determined. The total population was obtained through the summation of the number of academic staff in each university (refer Table 3.2).

Third, the desired sample size was determined based on the given population. The sample size was determined by referring to the sample size table developed by Krejcie and Morgan's (1970). The accurate sample size can be calculated through the Excel spreadsheet provided by The Research Advisor (2006), in which the formula used is based on the work of Krejcie and Morgan's (1970). This table provides the information of the appropriate sample size in accordance to the size of the population and the margin of error. The common degree of confidence that used in determining the sample size is 95% with margin of error equivalent to 5%. Thus, the effective sampling size for population of 24,276 is 378 respondents. Next, the number of sample which needs to be drawn from each stratum or subgroup was determined. The number of academic staff drawn from each university was proportional to the relative size of that stratum in the target population. Finally, the samples were drawn randomly according to the proportion depicted in Table 3.2.

The sample size of 378 is considered adequate and it is supported by the sample size guidelines by various researchers. For example, Roscoe (1975) explained that sample size between 30 and 500 is appropriate for most researches. Others had suggested sample size in the range of 100 to 300 as appropriate for different types of statistical analysis, such as correlation, factor analysis and multiple regression analysis (Cattell, 1978; Gorsuch, 1983; Kline 1979; Norušis, 2005).

3.7   Pilot Study

Prior to the mass distribution of questionnaires to the target sample, a pilot study was conducted to ensure the reliability and validity of the instrument used in this research (Cohen, Manion, & Marrison, 2007; Saunders, Lewis, & Thornhill, 2012). Pilot study can be applied to different types of researches. It is a small scale test of the methods and procedures to be used in a particular study. It helps to test the feasibility of an approach before undertaking a large scale study (Leon, Davis, & Kraemer, 2011). Furthermore, a pilot test permits the researcher to rectify any possible shortcomings of the instrument, such as unclear questionnaire items and instructions, ambiguous wording, omissions, inappropriate and redundant items (Cohen *et al*., 2007).

Prior to the conduct of pilot test among the public universities' academic staff, the research instrument was reviewed by two academics from two public universities. In this pilot study, a total of 45 questionnaires were distributed to the academic staff from four public universities, and 33 completed questionnaires were returned. The pilot study was conducted from 15th December, 2011 to 20th January, 2012. The pilot test questionnaires were distributed to the respondents based the convenience basis. The same approach was employed by other researcher, such as Akbaba (as cited in Gursoy, Uysal, Sirakaya-Turk, Ekinci, & Baloglu, 2014) in the instrument development process. The number of returned questionnaires for the pilot study was shown in Table 3.3. The data obtained from the pilot study will be excluded from the actual study.

Table 3.3

Distribution of Respondents Based on University for Pilot Study

		Frequency	Percent
Universiti Islam Antarabangsa Malaysia (UIAM)		8	24.2
Universiti Teknologi MARA Malaysia (UiTM)		1	3.0
Universiti Malaya (UM)		11	33.3
Universiti Utara Malaysia (UUM)		13	39.4
	Total	33	100.0

Respondents were encouraged to provide their feedback on the questionnaire. A comment section was provided on the last page of the questionnaire for pilot study. As such, the pilot study served as a useful channel for the researcher to gather valuable feedback from different participants to improve the questionnaires. Moreover, pilot study is also important in establishing content validity, which is to ensure that the instrument covers the scale items that it is supposed to measure (Cohen *et al*., 2007). Content validity ensures that the research instrument adequately measures the concept (Sekaran & Bougie, 2009).

In response to the feedback from the respondents, some improvements and corrections had been made on the initial instrument. Among the improvements include: First, clarify the ambiguous statements, for example item 18 of section A "I have enough authority to do my best" was modified to "I have enough authority to do my best in my work" and item number one of work engagement in section F "At my work, I feel bursting with energy" changed to "At my work, I feel energetic." Second, changes were made on the choice of words used, for example the term "race" found in demographic section in the questionnaire was replaced with "ethnic origin."

The independent and dependent variables of this study were measured through multiple-items scales, thus Cronbach's alpha coefficient were computed to determine the internal consistency and reliability of the instrument developed for the present study (Hair *et al*., 2007). The general rule of thumb indicates that Cronbach's alpha value that is more than or equal to 0.9 is considered excellent, 0.8 to less than 0.9 is very good, 0.7 to less than 0.8 is good, 0.6 to less than 0.7 is moderate, and less than 0.6 is poor (Hair *et al*., 2007). Table 3.4 indicates the Cronbach's alpha for each variable based on the data from the 33 returned questionnaires. The Cronbach's alpha value for all the study variables as shown in Table 3.4 were beyond 0.7, indicate good reliability (Hair *et al*., 2006; Nunally, 1978).

Table 3.4
Summary of Reliability Results for the Study Variables for Pilot Study

Variables	Reliability Statistics	
	Cronbach's Alpha (α)	No. of Items
Perceived organisational support	0.840	8
Immediate superior support	0.836	4
Colleagues support	0.901	4
Autonomy	0.815	4
Recognition	0.898	6
Job prestige	0.898	4
Perceived external prestige	0.821	6
Job demands	0.839	8
Work-to-personal life enrichment	0.947	9
Personal life-to-work enrichment	0.948	9
Core self-evaluations	0.785	12
Work engagement	0.941	17

3.8   Data Collection Process for the Main Study

Primary data collection was used in present study as it is essential to answer the research questions and analyse the proposed hypotheses. As indicated in the earlier section, self-administered questionnaire is chosen as an instrument for data collection in this study. With this approach, required information can be obtained from large numbers of people (McIntyre, 2005). Besides, the questionnaire can be completed with or without the presence of the researcher (Cohen *et al.*, 2007).

The respondents were selected randomly from each university's online staff directory. The questionnaires were distributed to the respondents personally as well as with the help of a research assistant. The research assistant was briefed about the purpose of the research and the content of the questionnaires. In order to ensure that the minimum sample size can be obtained, the number of sample drawn from each university was at least doubled than the required number as specified in Table 3.2. Due to geographical dispersion of the universities involved and other constraints, such as semester break in many universities in between January to February of the year, the collection of the questionnaires took about four months, started from the end of January 2012 and completed in the end of May 2012.

The questionnaires were distributed to the respondents by personally visiting each public university together with the research assistant; the help from the research assistant shorten the duration of distribution and collection of the questionnaires. To increase the response rate, a token of appreciation was provided to the respondents during the visit in

order to encourage respondents to complete and return the questionnaire on the same day or the next day of visit. The respondents were explained about the purpose of the survey and their participation is on voluntary basis. Among the problems faced was some respondents were not in their office during the first visit, as such the questionnaire was placed inside their pigeon hole or by placing it in front of their room; a note was enclosed, followed by a reminder email. As present study is using an on-site data collection, a test of response bias by comparison of early and late respondents was not appropriate.

3.9 Data Analysis

In order to answer the research questions and testing the corresponding hypotheses, SPSS version 16 was used to perform the necessary analyses for the present study. Before formal analyses were taken place, data screening were conducted at the initial stage in order to identify possible missing data and outliers.

3.9.1 Factor Analysis

Factor analysis was used to identify the underlying structure among the variables in the analysis (Hair, Black, Babin, Anderson, & Tatham, 2006). Through this statistical technique, a large number of variables can be reduced into a set of factors which is meaningful, interpretable and manageable (Zikmund *et al*., 2010). Factor analysis helps to confirm the most appropriate dimensions of the concept that have been operationally defined. Factor analysis is very useful in determining the most appropriate items for each dimension, thus it is important for establishing construct validity (Sekaran & Bougie,

2009). Construct validity is "the degree to which a measure relates to other variables as expected within a system of theoretical relationship" (Babbie, 2007, p. 147).

In this study, exploratory factor analysis (EFA) using principal component analysis with maximum variance (varimax) rotation was employed to determine the interrelationship among variables (Rattary & Jones, 2007). Principal component analysis is the most popular factor extraction model (Conway & Huffcutt, 2003) and it is widely used among the education researchers (Cohen *et al*., 2007). As variance between different factors was maximised through varimax rotation, this enables the factors to be distinguished from one another (Cohen *et al*., 2007) and enables clearer interpretation for each factor (Hair *et al*., 2006). One of the important criteria in determining the application of factor analysis is by examining the degree of inter-correlation among the variables (Hair *et al*., 2006). Two statistical approaches that are commonly used for this purpose are Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA).

The Bartlett's test of sphericity examines the entire correlation matrix in determining the appropriateness of factor analysis for a particular study. Bartlett's test of sphericity with significant value less than 0.05 ($p < 0.05$) indicates that sufficient correlations exist among the variables (Hair *et al*, 2006). In another words, the correlation matrix is not an identity matrix and thus provides the support that factor analysis is a suitable analysis to be used for a particular study (DiLalla & Dollinger, 2006). Meanwhile, KMO MSA values must be above 0.50 to justify the appropriateness in performing factor analysis

132

(Ferguson & Cox, 1993; Hair *et al*., 2006; Kaiser, 1974). The KMO MSA index ranges from 0 to 1 (Hair *et al*., 2006).

On the other hand, the rule of thumb is that a factor is kept if the eigenvalue is more than 1.0 (Hair *et al*., 2006). An eigenvalue shows the amount of information captured by a factor (DeVellis, 2012). Details criteria for item retention in factor analysis and the results are presented in chapter four. Separate factor analyses are performed for different variables in this study, such as job resources (perceived organisation support, immediate superior supports, colleague support, autonomy, recognition, and job prestige), perceived external prestige, work-life enrichment, core self-evaluations and job demands.

3.9.1.1   Justifications for the Use of EFA

EFA and CFA are two broad categories of factor analysis. EFA has long been used in social science research, while the popularity of CFA is increasing in recent years (Furr & Bacharach, 2014). EFA and CFA are closely related as both are based on the common factor model (Harrington, 2008). To date, there are still continuous debates related to the appropriate use of EFA and CFA in social science research (Aguinis, Henle, & Ostroff, 2001; Wegener, & Fabrigar, 2004). EFA is not only useful during the initial development of an instrument for the purpose of data reduction and measure refinement; it is important in identifying the underlying dimensions of a scale and to validate a particular construct (Netemeyer, Bearden, & Sharma, 2003). In fact, EFA was found to be a commonly used technique to validate the dimensionality of well-established or existing measures in many studies (Conway & Huffcutt, 2003).

Ang (2014) argued that one may opt to run CFA without performing EFA if existing scale is used. Nevertheless, present study has modified the original work-family enrichment scale so that the non-work domain covers the personal life in general. Hence, EFA is necessary to further validate the measure to ensure that the data support the existence of the bi-direction nature of work-life enrichment, namely work-to-personal life enrichment, and personal life-to-work enrichment. Similarly, the measure for perceived organisation support has been modified to suit with the university context. In addition, some modifications also have been performed on colleague support, immediate superior support, and perceived external prestige (refer section 3.4 in this chapter for detail). Adaptation of well-established measures, especially those that develop in the West are common among the researchers in other regions (Yeh, Lin & Chen, 2014). The adaptation may involve modification of certain items; while other original items are remained (Yeh *et al*., 2014). Besides, researchers may adapt the survey instrument by modifying the response options, the content of the question, instructions or format in order to fit with the needs of the particular population, location, mode or combination of any of these (Harkness, Villar, & Edwards, 2010). Though adaptation is relatively less time consuming, extensive validation of the instrument is required (Yeh *et al*., 2014). Among the strengths of EFA over CFA is that it able to identify problematic item(s) due to cross factor loadings (Aguinis *et al*., 2001).

Despite that CFA is a useful technique when there is a very strong theoretical support or strong prior validity evidence of the instrument (Netemeyer *et al*., 2003; Thompson, 2004). In reality, many researchers (Aguinis *et al*., 2001; Hurley *et al*., 1997) have

commented that CFA has been used as 'exploratory" manner, rather than "confirmatory". This is because whenever the initial hypothesized model fails to confirm, modification will be performed again and again until the model achieve the required good fit based on modification indices (Hurley *et al*., 1997). On the other hand, some argued that EFA in fact can also be used in somewhat "hypothesis-driven way" or confirmatory way (Furr & Bacharach, 2014; Hopwood & Donnellan, 2010).

Hopwood and Donnellan (2010) compared the results of both EFA and CFA by examining the internal structure of seven well-established personality measures, which have substantial support for criterion validity in prior studies. Their findings generally showed poor model fit based on CFA technique; in contrast EFA performed well on several measures. They explained that it is indeed relatively hard to determine an 'exact' model of CFA despite the researcher has very good prior knowledge of an existing instrument. In fact, there's no consensus on the best criteria for goodness-of-fit indices (Hopwood & Donnellan, 2010; Hurley *et al*., 1997). EFA, on the other hand, allow the potential factor structures to emerge from data (Neumeister, 2007). Besides, researchers may compare the factor solution(s) emerged from EFA with prior findings (Neumeister, 2007). If the result mirrored the number of factors/dimensions as indicated in prior study, it provides powerful support for the accuracy of the theoretical model (Neumeister, 2007).

3.9.2 Reliability Analysis

Reliability analysis was not only performed to ensure the internal consistency of the instrument after the pilot study. Reliability test was conducted again for the items remained in a particular construct after the item purification process was performed through the factor analysis as explained earlier. When the items that represent a particular concept are correlated to each other in the multi-item scale, this shows that the instrument is reliable (Hair *et al*., 2007). In general, coefficient alpha of 0.70 and above indicates good reliability (Hair *et al*., 2007; Zikmund *et al*., 2010). Nevertheless, Cronbach's alpha of 0.60 is acceptable for exploratory study.

3.9.3 Descriptive Analysis

Descriptive statistics are used to produce respondents' profile that contained the frequency and percentage of the respondents based on university, gender, ethnic, age group, citizenship, marital status, education level, academic position, length of service in the present university and involvement in higher education sector. In addition, the means and standard deviations of each variable were determined as well.

3.9.4 Pearson Correlation Coefficient

Pearson-product Moment Correlation or Pearson Correlation Coefficient analysis was used to compute the correlation matrix, which allows the examination of the direction, strength and significance of the bivariate relationship among the variables in this study. This analysis was used to test the association between different independent variables (perceived organisational support, immediate superior support, colleague support,

autonomy, recognition, and job prestige, perceived external prestige, work-to-personal life enrichment, personal life-to-work enrichment and core self-evaluations); moderator (job demands) and dependent variable (work engagement). Correlation coefficient (r) ranged from -1.00 to +1.00. Correlation coefficient that is closer to 1.00 indicates strong associations between two variables (Hair *et al*., 2007).

Besides, forming correlation matrix is a simple way to check whether multicollinearity problem exists among the independent variables prior to multiple regression analysis (Hair *et al*., 2007). A general rule of thumb is if the absolute value of correlation coefficient of the two independent variables is 0.8 and above, the problem of multicollinearity exists (Beri, 2010; Katz, 2006).

3.9.5   Multiple Regression Analysis

Multiple regression analysis (MRA) is one of the most widely used data analysis technique to measure the linear relationship between several independent variables and single criterion or dependent variables (Hair *et al*., 2006). Hypothesis 1 to Hypothesis 9 tested the direct relationship between perceived organisational support, colleague support, immediate superior support, autonomy, recognition, job prestige, core self-evaluations, work-to-personal life enrichment, personal life-to-work enrichment and perceived external prestige on work engagement. Thus, MRA is a suitable technique in testing these hypotheses. The several independent variables as mentioned above were entered into the same type of regression equation and predict the value of dependent variable (Hair *et al*., 2006). Through MRA, the percentage of variance in the dependent variable that is

137

explained by the independent variables can be obtained through coefficient of determination (R^2).

3.9.6 Hierarchical Multiple Regression Analysis

Hierarchical multiple regressions analysis was used to test the interaction effects as specified in hypothesis 10a to 10j. The moderator analyses were performed in accordance with the procedure proposed by Sharma, Durand, and Gur-aire (1981) and Baron and Kenny (1986) in order to determine the moderating effect of job demands on resources - work engagement relationship. A three stage hierarchical MRA was carried out with work engagement as dependent variable. The procedure to determine the moderation effect includes by first entering the respective independent variables into the model, followed by the moderator and subsequently the interaction effects (independent variables multiply with the moderator variable).

Sharma, Durand, and Gur-aire (1981) explained that if significant relationship between the moderator variable and the predictor variable was found through hierarchical MRA, then the subsequent step is to determine the types of moderator. If moderator was found to be related to the criterion variable or dependent variable, then it is a quasi moderator. If no relationship was found, then it is considered as pure moderator. It is important to inspect the particular pattern or form of the relationship once the significant relationship was found (Frazier, Tix, & Barron, 2004). This process can be done by computing the predicted values of the outcome variables for representative groups (Frazier *et al.*, 2004).

Visual inspection of the pattern of interactions can be done through graphical presentation (Warner, 2012).

3.10 Summary

This chapter described the procedures and research method that was employed for the current study. Academics of public universities were the main target respondents of this study. Pilot test was carried out to ensure the reliability of the instrument used prior to the full scale study. Based on 33 completed questionnaires in the pilot study, Cronbach's alpha values showed that all key variables in the study showed good reliability. Minimum sample size required for full scale study is 385 respondents. The subsequent chapter, chapter four, will present the findings of the descriptive and inferential analysis. The analysis is crucial to answer to the research questions and the hypothesized statements presented in chapter one and chapter two respectively.

CHAPTER FOUR

FINDINGS

4.1   Introduction

This chapter covers the descriptive statistics by detailing the response rate and profile of respondents in this study. Exploratory factor analyses and reliability analysis are performed in order to ensure the validity and internal consistency of the instruments used for this study. Summary of the results from factor analyses and the value of Cronbach's alpha values of the key variables are presented. Besides, this chapter covers the correlations among the key variables. Results from multiple regression analysis and hierarchical multiple regression analysis can be found prior to the summary of the chapter.

4.2   Response Rate for the Survey

The sample of the present study comprised of academics from 18 public universities in the country. There were 756 questionnaires that have been distributed to the respondents of different public universities in Peninsular Malaysia. Out of these numbers, 398 questionnaires were returned by the respondents. Nevertheless, thirteen (13) questionnaires were discarded due to (i) incomplete information as the respondents fail to answer a large number of items; and (ii) the respondents provide single or same response for almost all the multiple scale items in the questionnaires. After the exclusion of the 13 questionnaires, a total of 385 questionnaires were usable, yielding a response rate of 50.9%. The response rate obtained in this study was comparable with other studies that

used academics from universities as the sample of their studies, such as Oshagemi (1997) and Okpara, Squillance and Erondu (2004). The respond rates reported for these few studies were 51.4%, and 51% respectively.

The data from the 385 usable questionnaires exceed the minimum required sample size of 378 specified by Krejie and Morgan (1970) for population about 25,000. Adequate sample size serves as an important condition for the use of factor analysis and other multivariate analyses technique. In addition, the sample size met the criteria proposed by Roscoe (1975). Roscoe (1975) indicated that sample sizes greater than 30 and less than 500 are appropriate for most researches.

4.3 Examining Construct Validity through Exploratory Factor Analysis

Ensuring validity of the instrument is essential in any studies and one of the important approaches is to examine the construct validity (Hair *et al*., 2007). A valid measure can reflect the meaning of the concept adequately (Babbie, 2007). In order to ensure the validity of the measurement, exploratory factor analysis (EFA) was performed to determine whether the theorized construct or dimension emerged (Sekaran & Bougie, 2009; Rattary & Jones, 2007). With factor analysis, related items will be clustered on the same factor (Cohen *et al*., 2007). Factor analysis is an important tool for researchers in different fields as it is useful in developing, validating and refining the scale of the instrument (Cohen *et al*., 2007; Conway & Huffcutt, 2003).

Having sufficient sample size is essential to ensure that EFA can be performed (Rattary & Jones, 2007). Present study contained 385 sets of data from the returned usable questionnaires. The number was adequate based on the minimum sample size guidelines found in the factor analysis literatures. For instance, minimum absolute sample size recommended by various researchers for factor analysis include: 100 by Ferguson and Cox (1993), Gorsuch (1983) and Kline (1979); 150 by Cohen *et al.* (2007); 200 by Comrey (1988); 250 by Cattell's (1978); and 300 by Norušis (2005). Some researchers suggested the use of minimum ratio of subjects to the number of variables as criterion for factor analysis. Hair *et al.* (2006) proposed a ratio of at least 5:1, but ratio of 10:1 was viewed as more acceptable sample size (Everitt, 1975; Hair *et al.*, 2006; Roscoe, 1975). The general guidelines of minimum 5 subjects or 10 subjects per variable being analysed are widely found in the literatures (Tinsley & Tinsley, 1987).

Principle component analysis with orthogonal varimax rotation procedure was used to explore the interrelationship of variables and obtain the underlying dimensions (Rattary & Jones, 2007). The results of Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA) were checked to ensure the appropriate application of EFA. Among the conditions are Bartlett's test of sphericity need to be significant ($p < 0.05$) and MSA values must exceed 0.5 (Hair *et al.*, 2006). Kaiser (1974) provided the guidelines for the interpretation of MSA: values in the range of 0.90s considered as "marvelous", in the 0.80s were "meritorious"; in the 0.70s were described as middling; in the 0.60s were "mediocre"; in the 0.50s were "miserable" and below 0.50 were "unacceptable".

The subsequent step is to determine the number of factors to be extracted after the rotation and latent root or eigenvalue (also known as Kaiser-Guttmon criterion) is one of the most commonly applied criteria (Hair *et al*., 2006; Cohen *et al*., 2007; Ferris, Treadway, Kolodinsky, Hochwarter, Kacmar, Douglas, & Frink, 2005; Kim, Ritchie, & McCormick, 2012; Lance, Butts, & Michels, 2006). Factors with eigenvalue exceeding 1.0 are considered significant; in contrast those factors below this cutoff point (i.e. eigenvalue less than 1.0) are insignificant and thus will be disregarded from further analysis (Hair *et al*., 2006).

Among the criteria employed in determining a preliminary factor structure include: (a) Items with factor loading at least 0.50 were retained for further analysis. According to Hair *et al*., (2006), despite factor loading in the range of 0.30 to 0.40 fulfill the requirement to meet the minimal level for interpretation of structure, item with loadings $\geq$ 0.50 are considered necessary for practical significance; (b) deleting items with cross-loading $\geq$ 0.50 after the rotation (Aubert & Kelsey, 2003; Huang & Chen, 2011; King & Teo, 1996); (c) retaining factors with at least three items per factor (Child, 2006; Cohen *et al*., 2007; Comrey, 1988; Costello & Osborne, 2005). Costello and Osborne (2005) explained that a factor with fewer than three items is considered as relatively weak and unstable.

4.3.1   Factor Analysis for Work Engagement (Dependent Variable)

The table below presents the details of factor extraction for 17 items of work engagement. As indicated earlier, principal component analysis with varimax rotation was computed to

143

determine the dimensions of the scale. In addition, mean and standard deviation for each item were reported in Table 4.1 as well.

Table 4.1
KMO Measure of Sampling Adequacy, Bartlett's Test, Eigenvalue, Variance Explained, Factor (Or Component) Loading, Means and Standard Deviation for Work Engagement Scale

	Items	Component			M	SD
		1	**2**	**3**	**M**	**SD**
1.	At my work, I feel energetic.	**.709**	.435		5.34	1.046
2.	When I get up in the morning, I feel like going to work.	**.624**	.388		5.29	1.144
3.	At my work I always persist, even when things do not go well.	**.774**			5.11	1.062
4.	I can continue working for very long periods at a time.	**.709**		.342	5.24	1.253
5.	At my job, I am very resilient, mentally.	**.745**		.324	5.04	1.108
6.	At my job, I feel strong and vigorous.	**.765**	.310		5.25	1.042
7.	To me, my job is challenging.		**.580**		5.61	1.115
8.	My job inspires me.	.379	**.779**		5.60	1.107
9.	I am enthusiastic about my job.	.428	**.689**		5.58	1.068
10.	I am proud on the work that I do.		**.829**		5.92	.992
11.	I find the work that I do full of meaning and purpose.		**.847**		5.90	.992
12.	When I am working, I forget everything else around me.			**.758**	4.71	1.393
13.	Time flies when I'm working.		.431	**.587**	5.68	1.116
14.	I get carried away when I'm working.			**.839**	4.96	1.301
15.	It is difficult to detach myself from my job.			**.727**	4.78	1.413
16.	I am immersed in my work.	.391		**.733**	5.02	1.221
17.	I feel happy when I am working intensely.	.327	.338	**.600**	5.26	1.237
	Eigenvalue	8.211	1.787	1.314		
	Total variance explained (%)	48.300	10.514	7.728		
	Cummulative variance explained (%)	48.300	58.814	66.542		
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.928			
	Bartlett's Test of Sphericity - Approx. Chi-Square		4150.505			
	- df		136			
	- Sig.		.000			

Note: Factor loadings >.50 are in boldface. F1 = Vigor; F2 = Dedication; F3 = Absorption. M = mean, SD = standard deviation. For simplicity, only factor loadings above 0.3 are shown.

Table 4.1 shows that the KMO measure of sampling adequacy yields a value of 0.928, exceeding the benchmark value of 0.50 (Hair *et al*., 2006) and it indicates that the data were marvelous (Kaiser, 1974).The Barlett's test of sphericity showed that it is statistically significant (χ^2= 4150.505, df = 136, p = 0.0001). This proves that factor analysis is appropriate to be used in analysing work engagement scale.

The EFA results indicate that three factors are extracted with eigenvalues greater than 1.0. The three components emerged from the factor analysis are consistent with the dimensionality of Utrecht Work Engagement Scale (UWES), adapted from Schaufeli *et al*. (2002). The first factor represents the vigor dimension of work engagement and comprises of six items, with factor loadings ranging from 0.624 to 0.774. The second factor is labeled as dedication, comprises of five items, with factor loadings ranging from 0.580 to 0.847. The third factor refers to absorption, with factor loadings reported to be in between 0.587 to 0.839. The three-factor structure accounts for 66.542% of the total variance. Factor one (vigor), factor two (dedication) and factor three (absorption) accounts for 48.3%, 10.514% and 7.728% of the total variance respectively. As the factor loadings for all items are above the threshold of 0.5 (Hair *et al*., 2006), none of the item reveals cross loading that exceed 0.5 and there are more than three items for each component, hence none of the 17 items of work engagement scale are dropped from further analysis.

Despite some earlier studies viewed that the three-factor model of UWES is superior to the single factor model (Scahufeli *et al*., 2002; Schaufeli *et al*., 2004 & Salanova *et al*.,

2005), subsequent studies by Schaufeli and colleagues found that the three dimensions constituting work engagement are very closely related. This is because confirmatory factor analysis indicated high correlations among the three latent factors of UWES in a number of cross national studies (e.g. Hallberg & Schaufeli, 2006; Schaufeli *et al*., 2002; Schaufeli & Bakker, 2004; Schaufeli *et al*., 2006; Schaufeli & Bakker, 2010). As such, UWES can be viewed as "a unitary construct that is constituted by three different yet closely related aspects" (Schaufeli & Bakker, 2010, p 17). Schaufeli *et al*. (2006) suggested that the total score of UWES can be used as an indicator rather than computing separate scores for its three subscales (i.e. vigor, dedication and absorption). The total scores for work engagement maybe equally or more useful in certain empirical studies (Schaufeli *et al*., 2010). Hallberg and Schaufeli (2006) as well as Christian and Slaughter (2007) had addressed the same issue in their writing. Hallberg and Schaufeli (2006) proposed that for researchers who intend to examine work engagement in a broader scope may use the composite measure for all the items as long as the scale exhibited good reliability. On the other hand, researchers who are interested in examining the detailed aspect of work engagement may evaluate each dimension of the construct (Hallberg & Schaufeli, 2006).

For present study, single composite score for overall work engagement is calculated by averaging all the item scores representing the construct. The use of overall work engagement composite score can be found in the study by Hakanen *et al*. (2005), Hallberg *et al*. (2007) and Sonnentag (2003). Composite measure is commonly used in multi-item instrument to measure a single concept (Zikmund, 2003). The composite scale

can be obtained by summing or averaging participants' response to multiple items that are assumed to represent the latent construct (Zikmund *et al*., 2010). The benefit of using mean scores rather than summation score is that the composite measure is expressed on the same scale (i.e. one to seven) used in the study (Zikmund *et al*., 2010).

4.3.2   Factor Analysis for Work-Life Enrichment (Independent Variable)

The subsequent factor analysis involves a work-life enrichment scale of 18 items. Similarly, principal component analysis with varimax rotation is used in determining the underlying factors. As presented in Table 4.2, the KMO measure of sampling adequacy yield a value of 0.936, which reflects marvelous sampling adequacy (Kaiser, 1974). On the other hand, the result of Barlett's test of sphericity showed that it is significant as p-value is less than 0.05 (χ^2 = 7857.505; df = 153, p = 0.0001), indicating that there are sufficient correlations in the item correlation matrix. As such, the results of both statistical tests support the adequacy of factor analysis for work-life enrichment scales.

As indicated in Table 4.2, the rotation matrix resulted in a three-factor structure with eigenvalue exceeds 1.0. Combined variance of the three factors accounted is 78.03%. The nine items in the first factor contributes the most in explaining the total variance of the data, which is 60.17%. There are six items in the second factor and explained an additional 12.14% of total variance. Lastly, the third factor comprises of three items and explained an additional of   4.73%. The factor loadings for 18 items ranged from 0.701 to

147

0.860; all above the required criteria (i.e. 0.5), and none of the item has cross loadings above 0.50. Hence, all the items are retained in the subsequent analysis.

The work-life enrichment scale used in present study is modified from Carlson *et al*.'s (2006) enrichment scale, which originally measures the bi-direction of work and family interface. The existing 18 items work-family enrichment scale comprise of six dimensions, with three items for each dimension. The three dimensions of work-to-family scale are work-to-family development, work-to-family affect and work-to-family capital; and the dimensions for family-to-work enrichment scale are family-to-work development, family-to-work affect and family-to-work efficiency (Carlson *et al*, 2006). In performing psychometric fit test on Korean version of work-family enrichment scale that was adopted from Carlson's (2006), Lim, Choi and Song (2012) pre-determined the number of components (i.e. six) in EFA; results showed that the items fell under the designated dimension. For the present study, though the six dimensions as specified by Carlson *et al*. (2006) can be obtained by defining the number of factors in EFA and results show loadings for all items are above 0.5, the eigenvalue fails to support the existence of the six components. As a result, the three-factor solution has been remained.

The three factors show an interpretable solution though it differs from the six-factor solution as indicated by Carlson *et al*. (2006). All the items related to personal life-to-work (PLWE) are loaded into the same factor, thus factor one was labeled as personal life-to-work enrichment. Resources gained from personal life activities can be achieved through skill and knowledge development (PLWE1 to PLWE3), positive mood and

attitude or affect (PLWE4 to PLWE6), and efficiency (PLWE7 to PLWE9). On the other

hand, the work-to-personal life enrichment (WPLE) composed of work-to-personal life

affect and capital (Factor 2) and work-to-personal life development (Factor 3).

In view of the bi-directional nature of work-life enrichment constructs, composite

measures for PWLE (factor one) and WPLE (factor two and factor three) are computed

by obtaining the mean scores of the total nine items measuring each direction. The use of

overall index of PLWE and WPLE are widely found in the literatures (e.g. Hunter *et al*.,

2010; Bhargava & Baral, 2009; Baral & Bhargava, 2010).

Table 4.2
KMO Measure of Sampling Adequacy, Bartlett's Test, Eigenvalue, Variance Explained, Factor (Or Component) Loading, Means and Standard Deviation for Work-Life Enrichment Scale

| Code | Item Description | Component | | | M | SD |
		1	2	3		
PLWE1	My involvement in my personal activities helps me to gain knowledge and this helps me be a better employee.	.733		.309	5.99	.816
PLWE 2	My involvement in my personal activities helps me acquire skills and this helps me be a better employee.	.717		.306	6.17	.749
PLWE 3	My involvement in my personal activities helps me expand my knowledge of new things and this helps me be a better employee.	.803			6.08	.806
PLWE 4	My involvement in my personal activities put me in a good mood and this helps me be a better employee.	.812			5.56	1.057
PLWE 5	My involvement in my personal activities makes me feel happy and this helps me be a better employee.	.800			5.65	1.025
PLWE 6	My involvement in my personal activities makes me cheerful and this helps me be a better employee.	.825			5.58	1.028
PLWE 7	My involvement in my personal activities requires me to avoid wasting time at work and this helps me be a better employee.	.772			5.81	.953
PLWE 8	My involvement in my personal activities encourages me to use my work time in a focused manner and this helps me be a better employee.	.797			5.85	.918

149

Table 4.2 (Continued)

		F1	F2	F3	M	SD
PLWE9	My involvement in my personal activities encourages me to be more focused at work and this helps me be a better employee.	**.817**			5.87	.919
WPLE1	My involvement in my work helps me to understand different viewpoints and this helps me be a better person.			**.852**	5.82	1.001
WPLE2	My involvement in my work helps me to gain knowledge and this helps me be a better person.		.365	**.823**	5.76	1.015
WPLE3	My involvement in my work helps me acquire skills and this helps me be a better person.		.394	**.769**	5.86	.968
WPLE4	My involvement in my work put me in a good mood and this helps me be a better person.	.327	**.793**		5.70	.966
WPLE5	My involvement in my work makes me feel happy and this helps me be a better person.		**.849**		5.76	.964
WPLE6	My involvement in my work makes me cheerful and this helps me be a better person.	.331	**.860**		5.72	.972
WPLE7	My involvement in my work helps me feel personally fulfilled and this helps me be a better person.		**.765**		5.55	1.145
WPLE8	My involvement in my work provides me with a sense of accomplishment and this helps me be a better person.	.309	**.724**	.410	5.56	1.126
WPLE9	My involvement in my work provides me with a sense of success and this helps me be a better person.	.319	**.701**	.453	5.65	1.073
	Eigenvalue	10.830	2.185	1.030		
	Total variance explained (%)	60.166	12.142	4.725		
	Cummulative variance explained (%)	60.166	73.308	78.033		
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.936			
	Bartlett's Test of Sphericity - Approx. Chi-Square(χ^2)		7857.505			
	- df		153			
	- Sig.		.000			

Note: Factor loadings >.50 are in boldface. F1 = personal life-to-work enrichment; F2 = work-to-personal life affect; F3 work-to-personal life development, M = mean, SD = standard deviation. For simplicity, only factor loadings above 0.3 are shown

4.3.3 Factor analysis for Core Self-Evaluations (Independent Variable)

Subsequently, a 12 items Core Self-Evaluations scale were factor analysed using principal component analysis with varimax rotation to determine its dimensionality. Six items (item 2, 4, 6, 8, 10, and 12) were negatively worded, thus these items were reverse coded of which higher scores denoting more positive core self-evaluations.

Table 4.3
KMO Measure of Sampling Adequacy, Bartlett's Test, Eigenvalue, Variance Explained, Factor (Or Component) Loading, Means and Standard Deviation for Core Self-Evaluations Scale

	Items	Component 1	M	SD
CSE1	I am confident I get the success I deserve in life.	**.542**	5.93	.897
CSE2	Sometimes, I feel depressed. (r)	.494	3.22	1.488
CSE3	Most of the time, I will be successful when I try a new task.	.412	5.46	.965
CSE4	Sometimes when I fail, I feel worthless.(r)	**.623**	4.12	1.661
CSE5	I complete task successfully.	**.510**	5.72	.744
CSE6	Sometimes, I do not feel in control at my work. (r)	**.552**	3.58	1.537
CSE7	Overall, I am satisfied with myself.	**.626**	5.74	1.036
CSE8	I am filled with doubts about my competence. (r)	**.692**	4.58	1.617
CSE9	I determine what will happen in my life.	.420	5.30	1.247
CSE10	I do not feel in control of my success in my career. (r)	**.662**	4.55	1.569
CSE11	I am capable of coping with most of my problems.	**.585**	5.52	1.033
CSE12	There are times when things look pretty bleak and hopeless to me. (r)	**.608**	3.81	1.519
	Eigenvalue	3.860		
	Total variance explained (%)	32.164		
	Cummulative variance explained (%)	32.164		
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.843		
	Bartlett's Test of Sphericity - Approx. Chi-Square(χ^2)	1228.170		
	- df	66		
	- Sig.	.000		

Note. Factor loadings >.50 are in boldface. F1 = Core self-evaluations, M = mean, SD = standard deviation, r = reverse coded item

KMO measure of sampling adequacy as presented in Table 4.3 reports a value of 0.843, which is greater than recommended value of 0.50 (Hair *et al*., 2006) and the data is

viewed as meritorious (Kaiser, 1974). Meanwhile, Barlett's test of sphericity showed that p-value is small, below 0.05 (χ^2= 1228.170; df = 66, p = 0.0001), thus it is statistically significant and the result provide the evidence that correlation among the variables exist. The results clearly reflect that factor analysis is appropriate for core self-evaluations scales.

The single factor of core self-evaluations explained 32.16% of the total variance with eigenvalue of 3.860, well above the 1.0 criterion. Examination of factor loadings showed that there were three items (item 2, 3, and 9) fall below the required value of 0.5 (Hair *et al*., 2006), thus the respective items were discarded in the next analysis. The mean scores for all the items were computed in order to form a composite measure for core self-evaluations.

4.3.4   Factor Analysis for Job Resources (Independent Variables)

The remaining 36 items of the present study measure job resources (i.e. perceived organisational support, immediate superior support, colleague support, autonomy, recognition, job prestige, and perceived external prestige). Similarly, these items were subjected to principle component factor analysis with varimax rotation. As illustrated in Table 4.4, the KMO measure of sampling adequacy was 0.903. This indicates that the data was meritorious (Kaiser, 1974). Bartlett's Test of Sphericity was significant since p-value was less than 0.05 (χ^2= 9255.543, df = 630, p = 0.0001). As such, there is sufficient support for the use of factor analysis.

The factor analysis as shown in Table 4.4 extracts an eight-factor structure with eigenvalues surpassing 1.0. However, only seven factors provide meaningful interpretation of the construct. In general, the items are clustered on the designated factors except a few items are deleted as they fail to fulfill the criterion for item retention criterion prescribed earlier for factor analysis. Despite there is an item (POS8) is loaded beyond 0.5 in factor eight, it fails to fulfill the criterion of minimum three items per factor. The eigenvalues for factor one to seven ranged from 1.244 to 11.499. Cumulative variance of the seven factors amounted to 67%.

The first factor refers to perceived organisational supports (POS). This factor constitutes 31.94% of the total variance. Two items (POS3 and POS8) with factor loadings below 0.5 are dropped from further analysis. The factor loadings for the remaining six items

vary from 0.512 to 0.776. Except the two deleted items, other items of POS, which was adapted from adapted from Eisenberger *et al*. (1997) are all fall in a single factor.

The second factor refers to colleague support and it constitutes 8.24% of the total variance. There are five items loaded on factor one and the loadings are ranged from 0.565 to 0.877, which are above the minimum required value of 0.5 (Hair *et al*., 2006). All the existing four items of colleague support adapted from Capland *et al*. (1975) are loaded on one dimension. However, an additional item, which then coded as CS5 is loaded in the same factor as well. As the item is interpretable which relate to the emotional support from colleague, thus the item has been retained and to be grouped in factor two.

The third factor is related to immediate superior support and it constitutes 7.55% of the total variance. All the four items of immediate superior support, adapted from Caplan *et al*. (1975) loaded nicely on one dimension. The four items measuring immediate superior support are loaded above 0.80 and no cross-loadings beyond 0.5 are found. Thus, none of the items is discarded in the subsequent analysis.

The fourth factor refers to perceived external prestige (PEP) and it explains an additional of 6.20% of the total variance. All the six items describing perceived external prestige, which adapted from Herrbach *et al*. (2004) are loaded in a single factor. Factor loadings for the items are ranged from 0.638 to 0.800, which is beyond the cutoff value of 0.5

(Hair *et al*., 2006). Moreover, no substantial cross-loadings are found. As such, none of the item is discarded from further analysis.

The fifth factor is labeled as perceived job prestige, accounting for 4.79% of the total variance. All the four items are retained for the subsequent analyses since the factor loadings fulfill the minimum criterion of 0.5 (Hair *et al*., 2006), which range from 0.606 to 0.884. Besides, no cross-loadings above 0.5 are detected.

The sixth factor is named as recognition, which constituted 4.53% of the total variance. As illustrated in Table 4.4, R6 with item loading less than threshold of 0.5 has been deleted for further analysis. The item loadings of the remaining four items ranged from 0.627 to 0.777.

The seventh factor relates to job autonomy, which constitutes 3.46% of the total variance. The factor analysis result is generally consistent with the original construct adopted from Beehr (1976), with the exception one item (A1) is deleted from the construct due to factor loading below 0.5 cutoff value (Hair *et al*., 2006). The other three items are retained and the factor loadings range from 0.769 to 0.850. Separate composite scale for each factor is obtained by averaging the total item scores in each component.

Table 4.4

KMO Measure of Sampling Adequacy, Bartlett's Test, Eigenvalue, Variance Explained, Items, Factor (Or Component) Loading, Means and Standard Deviation for Job Resources

CODE	Item description	Component								M	SD
		1	2	3	4	5	6	7	8		
POS1	My university really cares about my well-being.	**.766**								5.05	1.294
POS2	My university strongly considers my goals and values.	**.776**								5.07	1.245
POS3	My university shows little concern for me. (r)	.375							.454	4.31	1.451
POS4	My university cares about my opinions.	**.702**								4.59	1.272
POS5	My university is willing to help if I need a special favour.	**.772**								4.66	1.248
POS6	My university would forgive an honest mistake on my part.	**.512**								4.46	1.172
POS7	Help is available from my university when I have a problem.	**.616**								4.92	1.140
POS8	If given the opportunity, my university would take advantage of me. (r)	.096							.829	3.81	1.504
SS1	My immediate superior is willing to listen to my personal problems.			**.818**						5.23	1.325
SS2	My immediate superior is easy to talk to.			**.875**						5.49	1.317
SS3	My immediate superior can be relied upon when things get tough at work.			**.869**						5.28	1.328
SS4	My immediate superior is willing to help when I have job related problems.			**.838**						5.43	1.203
CS1	My colleagues are willing to listen to my personal problems.		**.851**							5.62	1.054
CS2	My colleagues are easy to talk to.		**.861**							5.85	.906
CS3	My colleagues can be relied upon when things get tough at work.		**.872**							5.61	1.025
CS4	My colleagues are willing to help when I have job related problems.		**.877**							5.74	.924
CS5	When I perform good quality work, my colleagues regularly show me their appreciation.		**.565**			.337				5.30	1.09
A1	I have a lot of say over what happens on my job.	.342						**.292**		4.89	1.320
A2	I have enough authority to do my best in my work.							**.769**		5.24	1.306
A3	My job allows me to make a lot of decisions on my own.							**.850**		5.14	1.345
A4	I have enough freedom as to how I do my work.							**.832**		5.26	1.331

Table 4.4 (Continued)

		1	2	3	4	5	6	7	8	M	SD
R1	My contribution in teaching is recognized adequately by the university.	.402					**.627**			5.07	1.382
R2	My contributions in research and development activities are recognized adequately by the university.						**.694**			5.35	1.156
R3	My involvement in community services are recognized adequately by the university.						**.777**			4.99	1.227
R4	My achievements in the job are recognized in different ways (e.g. praise/ public recognition/written recognition).						**.758**			5.08	1.275
R6	In my job, my head of department or dean regularly congratulates me in recognition for my effort in the job.						.437			5.15	1.310
P1	In my job, I gain respect from my peers through my involvement in research or other relevant activities that relate to my area of expertise.					**.606**	.339			5.42	1.007
P2	Generally, my job is considered as prestigious and regarded highly by others.					**.712**	.306			5.24	1.170
P3	Generally, my job makes my friends respect me.					**.884**				5.34	1.119
P4	Generally, my job makes people look up to me.					**.857**				5.38	1.059
PEP1	People in my community think highly of my university.				**.800**						
PEP2	It is considered prestigious in my community to be an employee of my university.				**.718**						
PEP3	My university is considered one of the best in the country.				**.792**						
PEP4	People from other universities look down upon my university. (r)				**.638**						
PEP5	Employees of other universities would be proud to work in my university.				**.673**						
PEP6	My university does not have a good reputation in the community. (r)				**.659**			.352			
	Eigenvalue	11.499	2.967	2.718	2.230	1.724	1.629	1.244	1.186		
	Total variance explained (%)	31.942	8.240	7.550	6.195	4.788	4.526	3.455	3.295		
	Cumulative variance explained (%)	31.942	40.183	47.732	53.927	58.716	63.242	66.997	69.992		

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.903
Bartlett's Test of Sphericity - Approx. Chi-Square	9255.543
- df	630
- Sig.	.000

Note. Factor loadings >.50 are in boldface. F1: Perceived organisational support (POS); F2 = colleagues support (CS); 3= Immediate superior support (SS); 4 = autonomy; F6 = job prestige; M = mean, SD = standard deviation. For simplicity, only factor loadings above 0.3 are shown (except POS8 & A1).

4.3.5 Factor Analysis for Job Demands (Moderating Variable)

Table 4.5

KMO Measure of Sampling Adequacy, Bartlett's Test, Eigenvalue, Variance Explained, Items, Factor (or Component) Loading, Means and Standard Deviation for Job Demands

		Component	M	SD
JD1	I have too much work to do.	**.788**	5.51	1.263
JD2	I work under time pressure.	**.800**	5.13	1.391
JD3	I have to give attention to many things at the same time.	**.840**	5.62	1.169
JD4	My work requires continuous attention from me.	**.682**	5.88	0.881
JD5	I have to remember many things in my work.	**.777**	5.56	1.11
JD6	In my job, I am confronted with things that affect me personally.	**.711**	4.65	1.49
JD7	I have to deal with difficult people in my work.	**.649**	4.48	1.531
JD8	My work put me in emotionally upsetting situations.	**.634**	3.85	1.675
	Eigenvalue	4.363		
	Total variance explained (%)	54.544		
	Cummulative variance explained (%)	54.544		
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.857		
	Bartlett's Test of Sphericity - Approx. Chi-Square (χ^2)	1623.571		
	- df	28		
	- Sig.	.000		

Note. Factor loadings >.50 are in boldface. F1 = job demands, = M = mean, SD = standard deviation

Table 4.5 shows that KMO measure of sampling adequacy generates a value of 0.857, which indicates that the data is meritorious (Kaiser, 1974). Bartlett's Test of Sphericity is significant with p-value less than 0.05 (χ^2= 1623.571, df = 28, p = 0.0001). As such, there is sufficient support for the use of factor analysis for job demands scale. The single factor accounted for 54.54% of the total variance with eigenvalue of 4.363. All the items are loaded above the minimum cutoff point of 0.5 (Hair *et al*., 2006), ranging from 0.634 to 0.840. Hence, none of the item is dropped from further analysis. Overall mean score for the eight items were computed to form the composite scale of job demands.

4.4 Reliability Analysis

After the items purification using the EFA, reliabiltiy analysis is performed to assess the internal consistency of the variables. Cronbach's alpha (α) is widely used in the literatures as a measure to determine reliability (Sekaran & Bougie, 2009). Table 4.6 shows the Cronbach's alpha values for different variables in the present study. Cronbach's alpha range from 0 (no consistency) to 1 (complete consistency). Alpha value of 0.70 is considered adequate for basic research (Nunally, 1978). The general rules-of-thumb for alpha coefficient recommended by Hair *et al*. (2007) are as follow. If alpha value is less than 0.6, it is considered as poor; alpha value between 0.6 to less than 0.7 is regarded as moderate; 0.7 to less than 0.8 is considered as good; 0.8 to less 0.9 is viewed as very good, and 0.9 and above is considered as excellent. The Cronbach's alpha values as illustrated in Table 4.6 range from 0.788 to 0.951. This means all the measures used in this study have good reliability.

Table 4.6
Summary of Reliability Results for the Study Variables

Variables	Reliability Statistics	
	Cronbach's Alpha (α)	No. of Items
Perceived organisational support	0.858	6
Immediate superior support	0.931	4
Colleague support	0.902	5
Autonomy	0.892	3
Recognition	0.873	4
Perceived job prestige	0.891	4
Perceived external prestige	0.834	6
Job demands	0.870	8
Work-to-personal life enrichment	0.950	9
Personal life-to-work enrichment	0.951	9
Core self-evaluations	0.788	9
Work engagement	0.929	17

4.5 The Characteristics of the Sample

This section describes the characteristics of the respondents, inclusive of demographic, university and job-related information. Frequency analysis was performed to provide the detailed information about the characteristics of the sample population (Table 4.7).

Table 4.7
Respondents' Profile

Demographic variables	Description	Frequency	Percent (%)	Cumulative Percent (%)
Gender	Male	166	43.1	43.1
	Female	219	56.9	100.0
Citizenship	Malaysian	351	91.2	91.2
	Non-Malaysian	34	8.8	100.0
Ethnic	Malay	276	71.7	71.7
	Chinese	65	16.9	88.6
	Indian	12	3.1	91.7
	Others	32	8.3	100.0
Highest qualification	Bachelor degree	0	0	0
	Master degree or equivalent	167	44.2	44.2
	PhD or equivalent	215	55.8	100.0
Marital status	single	61	15.8	15.8
	married	320	83.1	99.0
	others	4	1.0	100.0
Age	21-25	6	1.6	1.6
	26-30	41	10.6	12.2
	31-35	94	24.4	36.6
	36-40	89	23.1	59.7
	41-45	54	14.0	73.8
	46-50	42	10.9	84.7
	51 years old or over	59	15.3	100.0
Position	Lecturer	161	41.8	41.8
	Senior Lecturer	162	42.1	83.9
	Assistant professor	13	3.4	87.3
	Associate professor	36	9.4	96.6
	Professor	13	3.4	100.0
Experience in present university (years)	Less than 5	136	35.3	35.3
	5-10	110	28.6	63.9
	11-15	76	19.7	83.6
	16-20	28	7.3	90.9
	More than 20	35	9.1	100.0
Experience in Higher education institutions (years)	Less than 5	93	24.2	24.2
	5-10	112	29.1	53.2
	11-15	93	24.2	77.4
	16-20	39	10.1	87.5
	More than 20	48	12.5	100.0

Table 4.7 (Continued)

Administrativ e position	Yes	138	35.8	35.8
	No	247	64.2	100.0
Title of administrative position	Coordinator	95	24.7	24.7
	Head of department	18	4.7	29.4
	Dean	3	0.8	30.1
	Director	2	0.5	30.6
	Deputy director	1	0.3	34.0
	Deputy dean	2	0.5	98.2
	Deputy Head of department	1	0.3	98.4
	Coordinator & director	1	0.3	98.7
	Coordinator & deputy director	1	0.3	99.2
	Head of department & deputy director	1	0.3	99.5
	Others	13	3.4	99.7
	No administrative position	247	64.2	100.0
University	Universiti Malaya (UM)	41	10.6	10.6
	Universiti Sains Malaysia (USM)	32	8.3	19.0
	Universiti Kebangsaan Malaysia (UKM)	36	9.4	28.3
	Universiti Putra Malaysia (UPM)	27	7.0	35.3
	UniversitiTeknologi Malaysia (UTM)	34	8.8	44.2
	Universiti Islam Antarabangsa Malaysia (UIAM)	35	9.1	53.2
	Universiti Utara Malaysia (UUM)	21	5.5	58.7
	Universiti Pendidikan Sultan Idris (UPSI)	12	3.1	61.8
	Universiti Sultan Zainal Abidin (UniSZA)	8		
	Universiti Islam Sains Malaysia (USIM)	9	2.1	63.9
	Universiti Teknologi MARA (UiTM)	67	2.3	66.2
	Universiti Malaysia Terengganu (UMT)	8	17.4	83.6
	Universiti Tun Hussein Onn Malaysia (UTHM)	15	2.1	85.7
			3.9	89.6
	Universiti Teknikal Malaysia Melaka (UTeM)	12	3.1	92.7
	Universiti Malaysia Pahang (UMP)	9	2.3	95.1
	Universiti Malaysia Perlis (UniMAP)	11	2.9	97.9
	Universiti Malaysia Kelantan (UMK)	5	1.3	99.2
	Universiti Pertahanan Nasional Malaysia (UPNM)	3	0.8	100.0

Table 4.7 provides a summary of the respondents' profile for this study. Out of the total

385 respondents, the number of female (56.9%) exceeded the male (43.1%). There are

more Malaysian (91.2%) participated in the survey as compared to non-Malaysian (8.8%).

In term of ethnic origination, Malay academics are the largest group (71.7%) followed by

Chinese (16.9%), Indian (3.1%) and other ethnic groups (8.3%). With regards to the

qualification of the academics, all of the respondents have at least master degree while there are 55.8% respondents with PhD qualification.

Most of the respondents are relatively young, as the largest group of respondents are with the age range from 31-35 (24.4%) and 36-40 (23.1%), followed by those with age range of 51 and above (15.3%), 41-45 (14%), 46-50 (10.9%), 26-30 (10.6%) and 21-25 (1.6%). And correspondingly, most of the respondents are lecturers (41.8%) and senior lecturers (42.1%), which are followed by higher ranks of assistant professor (3.4%), associate professor (9.4%), and professor (3.4%). In addition, most of the respondents are married (83.1%) while 16% of them are single with the remaining 1% respondents belong to other category.

The analyses of respondents' tenure in their present university showed that majority of them (35.3%) serve less than five years with their current institution. Rank second are those who have been serving the university between 5 to 10 years, which comprise of 28.6% of the total respondents. This is followed by 19.7% respondents who have been serving with their respective universities for 11 to 15 years. Those who have been servicing their present university between 16 to 20 years are the smallest group in the study, constituting only 7.3%. There are 9.1% respondents have been serving their current university for more than 20 years.

In general, more than 70% of the participants have less than 15 years of experiences in higher education. There are 29.1% of them with 5 to 10 years experience, followed by

less than 5 years (24.2%), 11 to 15 years (24.2%), 16-20 years (10.1%) and more than 20 years (12.5%).

Most of the respondents (64.2%) do not hold any administrative position. The remaining 35.8% of the respondents indicated that they hold certain administrative position. Out of this number, 24.7% are coordinators, 4.7% are heads of department while 0.8% are deans and 0.5% of the respondents are directors. Those who are holding the position as deputy dean, deputy director, and deputy head of department constitute a total of 1.1% of the total respondents. On the other hand, 0.9% respondents stated that they are holding two positions. Meanwhile, another 3.4% respondents are holding other administrative positions.

In term of university of which the participants are attached with, the largest group is from UiTM (67) and the smallest group is UPNM (3). Participants from UM, UKM, UIAM UTM, USM, UPM, UUM are 41, 36, 35, 34, 32, 27 and 21 persons respectively. Other universities such as UTHM, UTeM, UPSI, USIM, UMP, UMT, UniSZA, UMK and UniMAP contain 15 or less participants from each university.

4.6 Descriptive Analysis of Variables

Table 4.8 presents the mean (M), standard deviation (SD), maximum and minimum scores of the key variables in the study. The composite scores for every construct are obtained by averaging respective item scores representing each particular construct in the study. For all the independent variables, seven-point Likert scales, ranging from strongly agree (1) to strongly disagree (7) is used in the questionnaire.

Table 4.8
Summary of Descriptive Statistic for Key Variables in the Study

Variables	Mean	Standard Deviation	Minimum	Maximum
Perceived organisation support	4.79	0.94	1.17	6.83
Immediate superior support	5.36	1.18	1.00	7.00
Colleagues support	5.62	0.85	1.40	7.00
Autonomy	5.21	1.20	1.00	7.00
Recognition	5.12	1.07	1.00	7.00
Job prestige	5.34	0.95	1.00	7.00
Perceived external prestige	4.51	0.52	3.17	6.33
Work-to-personal life enrichment	5.84	0.78	2.11	7.00
Personal life-to-work enrichment	5.71	0.87	1.00	7.00
Core self-evaluations	4.84	0.81	2.44	7.00
Job demands	5.08	0.97	2.00	7.00
Work engagement	5.31	0.79	2.29	7.00

Overall, academics of public university agree that they possess job resources covered in this study, such as perceived organisation support (M =4.79, SD = 0.94), immediate superior support (M = 5.36, SD = 1.18), colleagues support (M = 5.62, SD = 0.85), autonomy (M = 5.21, SD = 1.20), recognition (M = 5.12, SD = 1.07) and job prestige (M = 5.34, SD = 0.95). Among these job resources, the mean score for perceived organisational support is the lowest and the highest is colleague support. On the other

hand, mean and standard deviation for perceived external prestige (PEP) is 4.51 and 0.52 respectively.

Work-to-personal life enrichment (M = 5.84, SD = 0.78) showed slightly higher mean score as compared to personal life-to-work enrichment (M = 5.71, SD = 0.87). Academic staff show relatively positive core self-evaluations (M = 4.84; SD = 0.81). Academic staff, however, are encounter with relatively high job demands (M = 5.08, SD = 0.97).

Dependent variables, work engagement was measured using 7-point Likert scale ranged from never (1) to 7 (always). As a whole, academics in public university somewhat agree that are often engage in their work (M = 5.31; SD = 0.79).

4.7   Assessing Statistical Assumptions

For the present study, multiple regression analysis (MRA) is used to examine the combined effects of different independent variables (i.e. job resources, perceived external prestige, core self-evaluations and work-life enrichment) on the dependent variable (work engagement). MRA is a set of statistical techniques that allow one to assess the relationship between numerous independent variables and one dependent variable (Tabachnick & Fidell, 2013). Prior to testing the relationship among variables via MRA, it is essential to ensure that relevant regression assumptions are met (Hair *et al*., 2006; Tabachnick & Fidell, 2013). The general rule of thumb for sample size is to have a ratio of at least 5:1 or five observations are made for each independent variable in the variate

(Hair *et al*., 2006). Given the minimum sample size formula for MRA provided in Tabachnick and Fidell (2007) and Cohen *et al*. (2007) as 50 + (8 x IVs), the present study requires at least 130 respondents [50 + (8 x 10)] for standard MRA. There are a total of 385 respondents in this study, which has met the minimum requirement.

The subsequent parts provide the explanations and results of regression assumptions, which begin with multicollinearity, then followed by normality, linearity, homoscedascity, and independence of error. In addition, the data was examined for multivariate outliers as well.

4.7.1 Multicollinearity

Multicollinearity problem is reflected through high correlations among the independent variables, this scenario would result to unreliable estimation of regression coefficient (Hair *et al*., 2007; Sekaran & Bougie, 2009). More precise statistical tests, such as tolerance value and variance inflation factor (VIF) are used to detect the presence of multicollinearity. As general rules of thumb, tolerance value less than 0.10 or VIF that is in access of 10 signifies severe multicollinearity problem (Ethington, Thomas & Pike, 2002; Sekaran & Bougie, 2009). Collinearity statistic as presented in Table 4.9 indicates the absence of multicollinearity problem since the tolerance values of all predictor variables are in the greater than 0.1 and VIF are in the range of 1.150 to 2.364.

Table 4.9
Tolerance Value and the Variance Inflation Factor (VIF)

Independent variables	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Perceived organisational support	.607	1.647
Immediate superior support	.664	1.507
Colleague support	.649	1.542
Autonomy	.694	1.441
Recognition	.543	1.843
Job prestige	.551	1.815
Core self-evaluations	.772	1.295
Perceived external prestige	.869	1.150
Work-to-personal life enrichment	.423	2.364
Personal life-to-work enrichment	.460	2.173

Source: Extract from multiple regression analysis

4.7.2   Linearity

The linearity in MRA refers to "the degree to which the change in dependent variable is associated with the independent variables" (Hair *et al*., 2006, p.205). As shown in Figure 4.1, there is no definite pattern of residual plot, indicating the assumption of linearity is met.
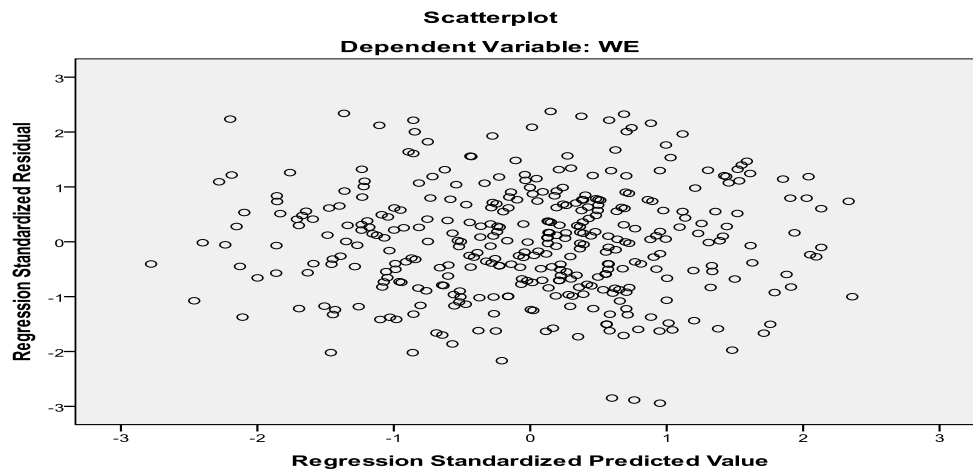
Figure 4.1
Scatter Plot

4.7.3 Normality Test

Multivariate normality is the assumption that each variable and all linear combinations of the variable are normally distributed (Tabachnick & Fidell, 2013). Visual inspection through histogram and cumulative normal probability plot (p-p) of regression standardized residual provide a preliminary picture in determining the normality of the residuals (Newton & Rudestam, 1999). Bell-shaped distribution of standardised residuals is observed in the histogram (Figure 4.3) and normal probability plot (Figure 4.2) shows that the points lie along the diagonal line. Further, Table 4.10 shows the statistical test for normality. Both Kolmogorov-Smirnov and Shapiro-Wilk tests report p-value at 0.20 and 0.612 respectively. As the significant value is greater than 0.05, the results further confirming the assumption of normality of residuals.
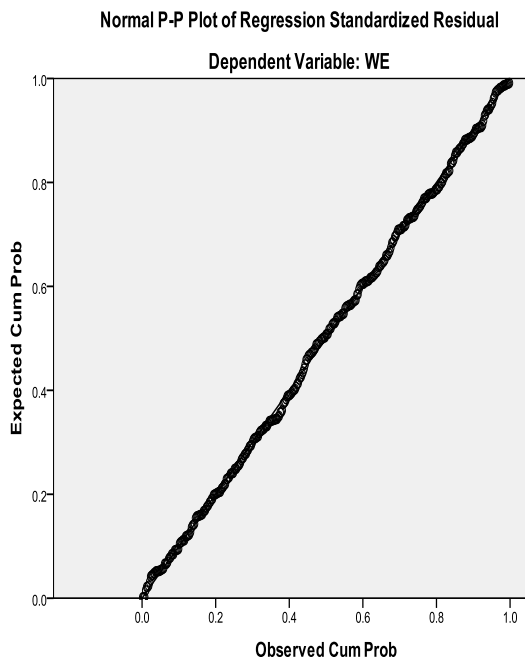
Figure 4.2
Normal P-P plot
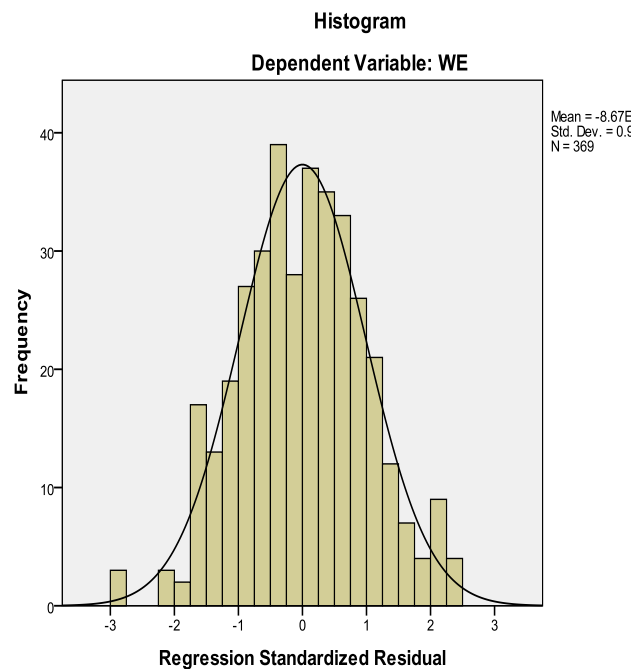
Figure 4.3
Histogram

Table 4.10
Test of Normality

Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Statistic	df	Sig.	Statistic	df	Sig.
.026	385	.200[*]	.997	385	.612

4.7.4 Homoscedasticity

Homoscedasticity refers to the assumption that "dependent variable(s) exhibit equal levels of variance across the range of predictor variables" (Hair *et al*., 2006). In contrast, heteroscedasticity reflects a situation where the variance is unequal across values of the independent variables (Hair, *et al*., 2006). Visual inspection of standardised residuals against predicted values scatter plot (Figure 4.1) shows that there is no obvious pattern of increasing or decreasing residuals, which indicates that assumption of homoscedasticity is supported.

Furthermore, Breusch-Pagan / Cook-Weisberg test was employed to further confirmed the above result. This statistical test is performed by using the data imported from SPSS 16.0 to Intercooled Stata 8.0. Null hypothesis assumes constant variance of residuals (homoskedastic); while alternative hypothesis is that the variance of the residuals increases (or decreases) as predicted values increase. Breusch-Pagan / Cook-Weisberg test for heteroskedasticity showed that Chi-square (χ^2) value equals to 0.42 and the statistical test is insignificant (p-value = 0.5152), which is greater than 0.05 as shown in Table 4.11. Hence, null hypothesis cannot be rejected and further confirm that the assumption of homoscedasticity is met.

169

Table 4.11
Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity

Ho: Constant variance
Variables: fitted values of WE

chi2(1)   =   0.42
Prob>chi2 = 0.5152(p-value > 0.05 – not significant, no problem of heteroscedasticity)

4.7.5   Independence of Errors

Independence of errors or residuals is another underlying assumption of regression analysis. Durbin-Watson test is used to determine the independence of errors (Norušis, 2005; Tabachnick & Fidell, 2013). Durbin-Watson values range from 0 to 4. As a general rule of thumb, the independence assumption is not violated if Durbin-Watson value falls between 1.50 and 2.50 (Vogt & Johnson, 2011). The Durbin-Watson value reported for this study is 1.978 (refer Table 4.13), thus independence of error term is assumed.

4.7.6   Outliers

Multivariate outliers were examined. Multivariate outliers were determined through Mahalanobis distance statistic (Tabanick & Fidell, 2013). Mahalanobis distance (D^2) is evaluated with a Chi-square (X^2) criterion with degrees of freedom equal to the number of independent variables (Meyers, Gamst, & Guarino, 2006). Based on the value of critical X^2 with p < 0.001, 19 cases had been detected as multivariate outliers. As a result, these 19 cases are omitted, hence leaving 366 cases to be used in regression analysis.

In short, the results from the above assumption tests suggests that MRA as is an appropriate statistical analysis for the present study.

4.8   Inter-correlation of Variables

Pearson correlation analysis was performed prior to MRA in order to understand the linear association between two metric variables in this study (Hair *et al.*, 2007). The strength of association between the variables can be determined through the correlation coefficient (r) value. General rules of thumb in interpreting r value can be found in Cohen's (1988): r = ± 0.10 (weak); r = ± 0.30 (moderate) r = ± 0.50 (strong). This guideline is widely cited in behavioural science and applied psychology research (Weinberg & Abramowitz, 2002).

Results depicted in Table 4.12 reveal that there are significant positive associations between perceived organisational support (POS), immediate superior support (SS), autonomy, perceived external prestige (PEP) and work engagement with the correlation coefficients (r) of 0.243, 0.272, 0.260, and 0.224, respectively. The p-values of all the pairs are below 0.01. The strength of associations between the variables is viewed as weak (Cohen, 1998).   Similarly, colleague support (CS) appears to have significant positive but weak relationship with work engagement (r = 0.108, p < 0.05). On the other hand, recognition (r = 0.304, p < 0.01) and job prestige (r = 0.339, p < 0.01) are positively correlated with work engagement at slightly moderate strength of association.

In addition, the bi-direction of work-life enrichment, which includes personal life-to-work enrichment (PLWE) (r = 0.491, p < 0.01) and work-to-personal life enrichment (WPLE) (r = 0.569, p < 0.01) exerts positive association with work engagement, at moderate and slightly strong correlation respectively.

However, in the case of job demand (JD), it is found to be not correlated with work engagement (r = 0.047, p > 0.05). There is no indication of multicollinearity problem since none of the independent variables correlated greater than 0.80 (Beri, 2010).

Table 4.12

Inter-correlation Matrix among Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. POS	1											
2. SS	.427**	1										
3. CS	.330**	.434**	1									
4. Autonomy	.413**	.319**	.305**	1								
5. Recognition	.542**	.380**	.417**	.399**	1							
6. Job prestige	.387**	.275**	.445**	.418**	539**	1						
7. PEP	.165**	0.029	.180**	.187**	.186**	.298**	1					
8. WPLE	.278**	.315**	.340**	.313**	.323**	.431**	.176**	1				
9. PLWE	.202**	.314**	.311**	.223**	.295**	.387**	.121*	.719**	1			
10. CSE	.132*	.225**	.057	.278**	.236**	.229**	-.055	.363**	.316**	1		
11. JD	-.163**	-.135**	-.092	-.078	-.104*	.025	.190**	-.076	-.085	-.288**	1	
12. WE	.243**	.272**	.108*	.260**	.304**	.339**	.224**	.569**	.491**	.388**	.047	1

Note. 1: Perceived organisational support (POS); 2 = Immediate superior support (SS); 3= colleagues support (CS); 4 = autonomy; 5 = job prestige; 6 = recognition;   7 = perceived external prestige (PEP); 8 = Work-to-personal life enrichment (WPLE); 9 = Personal life-to-work enrichment (PLWE); 10 = job demand; 11 = core self-evaluations (CSE); 12 = work engagement (WE).

** Correlation is significant at the 0.01 level; * Correlation is significant at the 0.05 level

4.9 Multiple Regression Analysis: Direct Effects

Table 4.13 presents the result from multiple regression analysis, which is conducted to test hypotheses H1 to H9.

Table 4.13

Result of the Multiple Regression Analysis for the Direct Relationship between the Independent Variables of the Study and Work Engagement

Dependent variable: Work engagement

	Unstandardized Coefficients		Standardized Coefficients		
	B	SE	Beta	t	Sig.
(Constant)	.478	.389		1.229	.220
POS	.021	.044	.025	.487	.626
SS	.072	.034	.103	2.104	.036
CS	-.199	.048	-.207	-4.152	.000
Autonomy	.003	.034	.005	.097	.923
Recognition	.065	.045	.079	1.460	.145
Job prestige	.049	.049	.054	.996	.320
PEP	.224	.063	.152	3.547	.000
WPLE	.381	.066	.356	5.786	.000
PLWE	.135	.056	.142	2.406	.017
CSE	.171	.044	.175	3.843	.000

F value	26.792
df $_1$, df $_2$	10, 355
p value	.0001
R	.656
R^2	.430
Adjusted R^2	.414
Durbin Watson	1.978

Note. N = 366, POS = Perceived organisational support, SS = Immediate superior support, CS = Colleague support, PEP = Perceived external prestige, WPLE = Work-to-personal life enrichment, PLWE = Personal life to work enrichment, CSE = Core self-evaluations

Table 4.13 depicts that the overall model of the present study is significant, F (10, 355) = 26.792 and p-value = 0.0001. As p-value is less than alpha value 0.01, thus F-statistic is significant. R square (R^2) is equivalent to 0.430, this means that the linear combination of

the independent variables significantly explain 43% of the variance in work engagement. On the other hand, the value of adjusted R^2 is 0.414.

Multiple regression analysis results as shown in Table 4.13 indicate that immediate superior support ($\beta = 0.103$, $t = 2.104$, $p = 0.036$), perceived external prestige ($\beta = 0.152$, $t = 3.547$, $p = 0.0001$) and core self-evaluations ($\beta = 0.175$, $t = 3.843$, $p = 0.0001$) are significantly related to work engagement. Similarly, bi-direction of work-life enrichment, which are work-to-personal life enrichment ($\beta = 0.356$, $t = 5.786$, $p = 0.0001$) and personal life-to-work enrichment ($\beta = 0.142$, $t = 2.406$, $p = 0.017$) exert significant and positive relationship with work engagement. As such, hypotheses 2, 7, 8a, 8b and H9 which posit the significant positive relationship between immediate superior support, core self-evaluations, perceived external prestige, work-to-personal life enrichment and personal life-to-work enrichment respectively were fully supported in the present study.

Contrary to expectation, colleague support exhibits significant inverse relationship with work engagement ($\beta = -0.207$, $t = -4.152$, $p = 0.0001$). Consequently, the result fails to fully support hypothesis 3 that predict positive relationship between support from colleague and work engagement among the academic staff. Other predictor variables in the study such as perceived organisational support, autonomy, prestige, perceived job prestige do not show any significant relationship with work engagement. As such, hypotheses 1, 4, 5 and 6 are not supported. Further discussions of the findings can be found in the subsequent chapter.

4.10 Hierarchical Multiple Regression Analysis: Moderating Effects of Job Demands

A hierarchical multiple regression analysis was performed to examine the possible moderating effects of job demands on the resources - work engagement model for the present study; key resources are job resources, core self-evaluations, and work-life enrichment. The results are presented in Table 4.14.

Table 4.14
Hierarchical Regression Results for the Moderating Effect of Job Demands between Job Resources, Work-life Enrichment, and Core Self-Evaluations on Work Engagement

Dependent variable: Work engagement			
Variables	**Std Beta Step 1**	**Std Beta Step 2**	**Std Beta Step 3**
Independent variables			
POS	.025	.050	.400
SS	.103*	.102*	-.165
CS	-.207**	-.189**	.109
Autonomy	.005	.003	-.137
Recognition	.079	.082	-.189
Job prestige	.054	.032	.471
PEP	.152**	.128**	.147
WPLE	.356**	.350**	-.367
PLWE	.142*	.147*	.414
CSE	.175**	.215**	.456
Moderator			
JD		. 136**	.361
Interactions			
POSXJD			-.464
SSXJD			.334
CSXJD			-.464
Autonomy X JD			.186
Job prestige X JD			-.708
Recognition X JD			.347
PEP X JD			-.052
WPLE X JD			1.301*
PLWE X JD			-.441
CSE X JD			-.330

Table 4.14 (Continued)

F value	26.792	25.880	14.045
df_1, df_2	10,355	11, 354	21, 344
p-value	.000	.000	.000
R	.656	.668	.679
R^2	.430	.446	.462
Adjusted R^2	.414	.429[a]	.429[b]
R^2 Change (ΔR^2)	.430	.016	.016
Sig. F change (ΔF)	.000	.002	.431
Durbin Watson	2.018	2.018	2.018

Note. N = 366, std beta = standard beta, POS = Perceived organisational support, SS = Immediate superior support, CS = Colleague support, PEP = Perceived external prestige, WPLE = Work-to-personal life enrichment, PLWE = Personal life-to work enrichment, CSE = Core self-evaluations, JD = Job demands

*** Correlation is significant at the 0.001 level ** Correlation is significant at the 0.01 level; * Correlation is significant at the 0.05 level
Adjusted R^2: a = 0.42851, b = 0.42873

Consistent with the guidelines provided by Cohen and Cohen (1983), different variables are entered in three steps. The independent variables, which comprise of job resources (i.e. perceived organisation support, immediate superior support, autonomy, recognition, job prestige, and perceived external prestige), core self-evaluations, work-to-personal life enrichment and personal life-to-work enrichment are first entered into the regression model, then followed by moderator variable (i.e. job demands) at step two. The third step involved the entry of interaction terms between the moderator and the independent variables in the regression model. Summary of the results for the hierarchical regression analysis are presented in Table 4.14, while the complete set of SPSS output can be found in Appendix 6.

Table 4.14 shows the standard regression coefficient (betas) for each variable in different steps. The independent variables entered in the first step account for 43% ($R^2 = 0.430$, adjusted $R^2 = 0.414$) of the variance of work engagement and the model is statistically

significant as F (10, 355) = 26.792 and p-value = 0.0001. The analysis of main effects between the independent variables and dependent variables reveal that immediate superior support (β = 0.103, t = 2.104, p = 0.036), perceived external prestige (β = 0.152, t= 3.547, p = 0.0001), core self-evaluations (β = 0.175, t = 3.843, p = 0.0001), work-to-personal life enrichment (β = 0.356, t = 5.786, p = 0.0001) and personal life-to-work enrichment (β = 0.142, t = 2.406, p= 0.017) have significant positive relationship with work engagement. On the other hand, colleague support is negatively related to work engagement (β = 0.207, t= - 4.152, p = 0.0001).

The moderator, job demands is entered into the regression equation in step two, the value of R^2 increases from 0.43 to 0.446. Thus, the variation of dependent variable explained by the independent variables has increased slightly from 43% to 44.6% with the inclusion of the moderator. This indicates that the change in percentage of variance accounted for is equal to 1.6% (ΔR^2 = 0.16, R^2 = 0.446, adjusted R^2 = 0.429). Model in step two is statistically significant as p-value = 0.0001 and F (11, 354) = 25.880. Job demands are significantly related to work engagement (β = 0.136, t = 3.159, p = 0.002).

In step three, the ten interaction terms of the moderator and predictors are entered into the model. The value of R^2 increase to from 0.446 to 0.462, which indicated that the change in variance accounted for (ΔR^2) is equal to 1.6% (ΔR^2 = 0.16, R^2 = 0.462, adjusted R^2 = 0.429). It accounted for approximately 46.2% of the variance in work engagement. This model is statistically significant as p-value = 0.0001 and F (21, 344) = 14.045. Results

depicted in Table 4.14 shows that only one interaction term (JD x WPLE) is found to be significant (β =1.301, p = 0.042) and the relationship is positive.

In accordance to the guidelines provided by Sharma, Durand and Gur-aire (1981), job demands appears to be a **quasi moderator variable** between work-to-personal life enrichment (WPLE) and work engagement. Table 4.14 indicates that job demands (JD) is significantly related to work engagement as shown in step 2, and the interaction effect of JD x WPLE is significant as indicated in step 3.

The nature of the interaction between job demands and work-to-personal life enrichment on work engagement can be illustrated graphically (Cohen, Cohen, West & Aiken, 2003). Figure 4.4 displays a graphical presentation of the relationship between WPLE and work engagement at different levels of job demands. In order to examine the pattern of interaction, JD and WPLE are split into two groups (low and high) based on the median scores (median of JD = 5.06; median of WPLE = 6.0). The approach used in this study to categorise the continuous variables into two groups by using median score is supported by other studies (e.g. Auerbarch, Martelli & Mercur, 1983; DeVellis & Blalock, 1992; Sharma *et al*., 1981; Yoon & Lim, 1999; Yoon & Thye, 2000).

Job demands are found to moderate the relationship between WPLE and work engagement. The positive relationship between WPLE and work engagement is stronger for those academics who perceived high job demands. When WPLE is high, the difference in work engagement between academics with high JD and low JD is greater

than in the case of low WPLE. In the situation where academics experienced low WPLE, those who have high JD experienced greater work engagement as compared to those with lower JD. Similarly, when academics experienced high WPLE, those with high JD exhibited more work engagement as compared to those with lower JD.
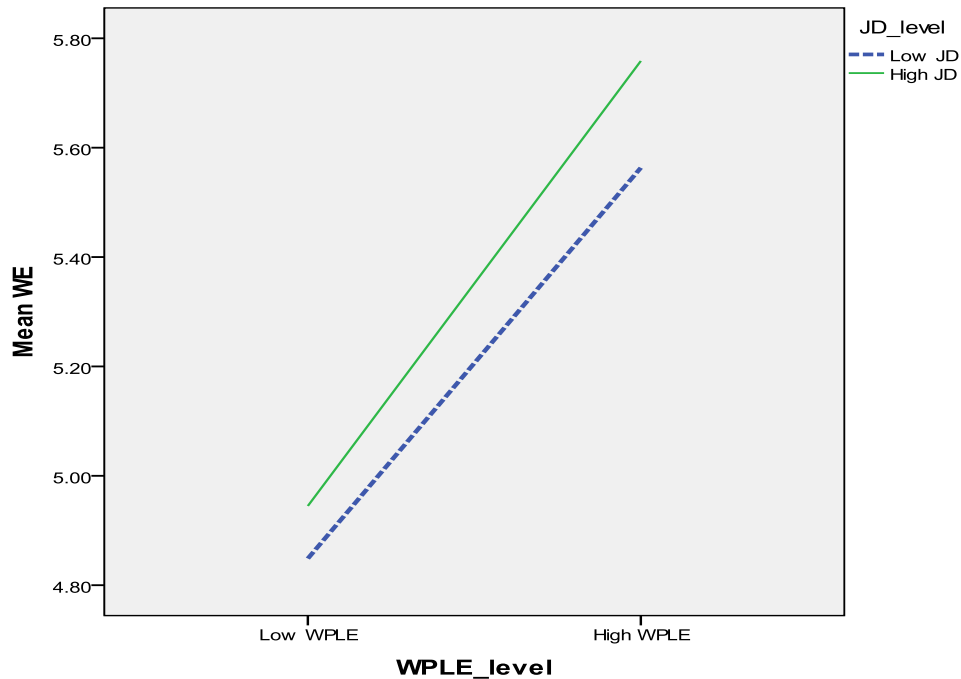
Figure 4.4
Plot of Interaction Effect between Job Demands and Work-to-Personal Life Enrichment on Work Engagement

In order to assess whether the regression slopes for different groups are statistically significant, additional regression analysis need to be performed (Warner, 2012). As such, separate regression analyses (refer Table 4.15 and Table 4.16) were conducted on two different groups (low JD and high JD). The results shows that there is a significant positive relationship between WPLE and work engagement at low JD ($\beta = 0.502$. t = 7.758, F = 30.142, p < 0.001). Similarly, for those with high JD, there is also a significant

positive relationship between WPLE and work engagement (β = 0.636. t = 11.184, F = 64.736, p < 0.001). This analysis reveals that the effect of WPLE on work engagement is especially pronounced for academics with high job demands.

Table 4.15
Results of the Multiple Regression Analysis on the Effect of Work-to-Personal Life Enrichment on Work Engagement When Job Demands are Low

Dependent variable: Work engagement

	Unstandardized Coefficients		Standardized Coefficients		
	B	SE	Beta	t	Sig.
(Constant)	2.134	.518		4.119	.000
JD	.015	.070	.014	.213	.832
WPLE	.522	.067	.502	7.758	**.000**
F value	30.142				
df $_1$, df $_2$	2,180				
p value	0.0001				
R	0.501				
R^2	0.251				
Adjusted R^2	0.243				

Note: Only cases indicated low demands were selected

Table 4.16
Results of the Multiple Regression Analysis on the Effect of Work-to-Personal Life Enrichment on Work Engagement When Job Demands are High

Dependent variable: Work engagement

	Unstandardized Coefficients		Standardized Coefficients		
	B	SE	Beta	t	Sig.
(Constant)	.470	.614		.766	.445
JD	.138	.088	.089	1.565	.119
WPLE	.700	.063	.636	11.184	**.000**
F value	64.736				
df $_1$, df $_2$	2, 180				
p value	.0001				
R	.647				
R^2	.418				
Adjusted R^2	.412				

Note: Only cases indicated high demands were selected

4.11   Summary of Type of Analysis Used for Each Research Question

Inferential statistics: The following table summarise the type of analysis used in order to answer the research questions as stated in chapter one:

Table 4.17
Research Questions and Type of Analysis

	Research Questions	Analysis
1.	Do job resources (i.e. perceived organisational support, immediate superior support, colleague support, autonomy, recognition, job prestige and perceived external prestige) have a significant influence on work engagement?	
2.	Do work-life life enrichment (i.e. work-to personal life enrichment and personal life-to-work enrichment) significantly influence the academics' work engagement?	Multiple Regression Analysis
3.	Do core self-evaluations significantly influence the level of work engagement among the academics?	
4.	Do job demands moderate the relationship between job resources (i.e. perceived organisational support, immediate superior support, colleague support, autonomy, job prestige, and perceived external prestige), work-life enrichment (i.e. work-to-personal life enrichment and personal life-to-work enrichment), and core self-evaluations on work engagement among the academics?	Hierarchical Regression Analysis

4.12 Additional Hierarchical Regression Analysis (Type of University as Control Variable)

At present, there are five research universities in the country, namely UM, USM, UKM, UPM and UTM. Other public universities are categorised as comprehensive universities (UiTM, UIAM, Universiti Malaysia Sabah, Universiti Malaysia Sarawak) and focused universities (UUM, UPSI, UTHM, UTeM, UniMAP, UMT, UMP, USIM, UniSZA, UMK, UPNM) (Ministry of Education Malaysia, 2015). Focused universities and comprehensive universities shared similar characteristics, except focus universities concentrate on specific field of study, such as education, management, and defence; while the later provide various field of study. The expected ratio for undergraduate to post-graduate students for both focused and comprehensive university is the same, which is 7:3 as compared to 1:1 for research universities (Ministry of Education Malaysia, 2015).

Despite teaching, research and development are among the core activities of the academics regardless of type of universities, much greater pressure and expectations are placed on the academics in research universities. The five public universities, which are selected as research universities by the government are aimed to facilitate the transformational process of national higher education (Ministry of Education Malaysia, 2015; Pilie, Sadeghi, & Elias, 2011). Academics in research universities need be in the front line for exploring new research ideas, innovation, and commercialisation activities. In view of some different characteristics and organisational culture between research universities versus non-research universities, additional hierarchical regression analysis is

used to examine the potential changes on the influence of independent variables (i.e. job resources, work-life enrichment, and core-self evaluations) on work engagement with the type of university as control variable.

Prior to the hierarchical regression analysis, additional coding process was performed by categorising the public universities in this study into two categories, namely research and non-research universities. Since type of universities are categorical variables, dummy coding was used (0 = research university; 1= non-research university). The used of dummy variable is necessary so that the categorical variable can be included in the regression analysis (Sekaran & Bougie, 2009). The universities were divided into two categories, instead of three mainly due to sample size consideration as two out of four focused universities (i.e. Universiti Malaysia Sabah and Universiti Malaysia Sarawak) are not included in this study. In accordance to the guideline by Pallant (2010), the first step involved the entry of control variable, which is type of university in the regression model. Next, the predictors of the present study were entered in the second block.

Table 4.18

Hierarchical Regression Results on the Influences of Job Resources, Work-Life Enrichment, and Core Self-Evaluations on Work Engagement (Type of University as Control Variable)

Dependent variable: Work engagement		
Variables	**Std Beta Step 1**	**Std Beta Step 2**
Control variable		
Type of University	-.025	.002
Independent variables		
POS		.025
SS		.103
CS		-.207**
Autonomy		.005
Recognition		.079
Job prestige		.054
PEP		.153**
WPLE		.357**
PLWE		.142*
CSE		.176**
F value	0.234	24.289
df $_1$, df $_2$	1,364	10, 354
p-value	.629	.000
R	.025	.656
R^2	.001	.430
Adjusted R^2	-.002	.412
R^2 Change (ΔR^2)	.001	.429
F change (ΔF)	.234	26.678
Durbin Watson	1.978	1.978

Note. N = 366, std beta = standard beta, POS = Perceived organisational support, SS= Immediate superior support, CS = Colleague support, PEP = Perceived external prestige, WPLE = Work-to-personal life enrichment, PLWE = Personal life-to work enrichment, CSE = Core self-evaluations, JD = Job demands

*** Correlation is significant at the 0.001 level ** Correlation is significant at the 0.01 level; * Correlation is significant at the 0.05 level

Results from the hierarchical regression analysis showed that the control variable (i.e. type of university) in the first block did not exert any significant impact on work engagement (β = - 0.025, t = - 0.483, p = 0.629). The control variable merely explained

about 0.1% ($R^2 = 0.001$) of the variance in work engagement. When all the antecedents of work engagement were entered simultaneously in step two or the second block (refer Table 4.18), a significant statistical model emerged (F = 24.289, p < 0.001, df = 10, 354). The independent variables explained additional 42.9% (R^2 Change, $\Delta R^2 = 0.429$) of the total variance in work engagement and the model as a whole explained 43% of the variance ($R^2 = 0.43$). As the control variable has not exert significant impact on the overall model, consequently the influence of independent variables on work engagement are quite similar with the output obtained in standard regression analysis (i.e. without controlling the type of university) (refer Table 4.13).

Immediate superior support ($\beta = 0.103$, t = 2.101, p = 0.036), colleague support ($\beta = -0.207$, t = - 4.145, p = 0.0001), perceived external prestige ($\beta = 0.153$, t = 3.495, p = 0.0001), core self-evaluations ($\beta = 0.176$, t = 3.793, p = 0.0001), work-to-personal life enrichment ($\beta = 0.357$, t = 5.770, p = 0.0001), personal life-to-work enrichment ($\beta = 0.142$, t = 2.381, p = 0.018) remained as significant predictors of work engagement. On the other hand, perceived organisational support, autonomy, recognition, and job prestige remain to be insignificantly related to work engagement.

4.13 Additional Hierarchical Regression Analysis (Job Demands as Moderator and Type of University as Control Variable)

Table 4.19

Hierarchical Regression Results for the Moderating Effects of Job Demands between Job Resources, Work-life Enrichment, Core Self-Evaluations on Work Engagement (Type of University as Control Variable)

Dependent variable: Work engagement				
Variables	**Std Beta Step 1**	**Std Beta Step 2**	**Std Beta Step 3**	**Std Beta Step 4**
Control Variable				
Type of University	-.025	.002	.001	.001
Independent variables				
POS		.025	.050	.401
SS		.103*	.102*	-.164
CS		-.207**	-.190**	.110
Autonomy		.005	.003	-.137
Recognition		.079	.082	-.189
Job prestige		.054	.032	.471
PEP		.153**	.129**	.147
WPLE		.357**	.350**	-.367
PLWE		.142*	.147*	.413
CSE		.176**	.215**	.455
Moderator				
JD			. 136**	.360
Interactions				
POSXJD				-.465
SSXJD				.334
CSXJD				-.465
Autonomy X JD				.186
Job prestige X JD				-.707
Recognition X JD				.347
PEP X JD				-.053
WPLE X JD				1.302*
PLWE X JD				-.440
CSE X JD				-.329
F value	.234	24.289	23.657	13.367
df $_1$, df $_2$	1, 364	11,354	12, 353	22,343
p-value	.629	.000	.000	.000

Table 4.19 (Continued)

R	.025	.656	.668	.679
R^2	.001	.430	.446	.462
Adjusted R^2	-.002	.412	. 0.42689	.42707
R^2 Change (ΔR^2)	.001	.429	.016	.016
F change (ΔF)	.234	26.678	9.950	1.011
Durbin Watson	2.018	2.018	2.018	2.018

Note. N = 366, std beta = standard beta, POS = Perceived organisational support, SS= immediate superior support, CS = colleague support, PEP = Perceived external prestige, WPLE = work-to-personal life enrichment, PLWE = personal life-to work enrichment, CSE = Core self-evaluations, JD = job demands

*** Correlation is significant at the 0.001 level ** Correlation is significant at the 0.01 level; * Correlation is significant at the 0.05 level

The subsequent analysis examined the moderating effects of job demands on the relationship between job resources (i.e. perceived organisation support, immediate superior support, autonomy, recognition and job prestige, perceived external prestige), core self-evaluations, and work-life enrichment) and work engagement with type of university as control variable.

The first step involved the entry of the control variable (i.e. type of university) in the regression equation, and then followed by adding in the independent variables in the second step. Subsequently, the moderator (i.e. job demands) was entered in the third block, and lastly all the interaction terms were entered in last block (step four).

The results of the main effect (step two) showed that there is no changes on the relationship between the independent variables and work engagement as compared to the earlier analysis (refer Table 4.14) after type of university was controlled in step one. Type of university did not show any significant influence on work engagement in both step one (β = - 0.025, t = - 0.483, p = 0.629) and step two (β = 0.002, t = 0.054, p = 0.957) of the

188

hierarchical regression analysis. Model in step two showed that significant positive relationships were found between immediate superior support (β = 0.103, t = 2.101, p = 0.036), perceived external prestige (β = .153, t = 3.495, p = 0.0001), core self-evaluations (β = .176, t = 3.793, p = 0.0001), work-to-personal life enrichment (β = 0.357, t = 5.770, p = 0.0001) and personal life-to-work enrichment (β = 0.142, t = 2.381, p = 0.017) and work engagement. Meanwhile, there is adverse relationship between colleague support and work engagement (β = 0.207, t = - 4.145, p = 0.0001). After the moderator was entered in step three, total variance explained increase by 1.6% (ΔR^2 = 0.016) and become 44.6% (R^2 = 0.44.6, F = 23.657, p = 0.0001) as compared to 43% (R^2 = 0.43, F = 24.289, p = 0.0001) in step two.

The interaction terms were entered into the forth step, all the variables accounted for 46.2% of the total variance, further increase of 1.6% as compared to the amount in the third step. All the interactions were not significant, except for the interaction between WPLE and JD. This means that job demands moderate the relationship between work-to-personal life enrichment and work engagement. As such, there are no changes in the result before and after controlling the type of university. The complete set of SPSS outputs are provided in Appendix 12.

4.14 Additional Analyses: Independent Sample T-test - Compare Job Demands and Work Engagement between Academics from Research and Non-research Universities

As type of university does not cause significant impacts on the initial work engagement model in this study as presented in section 4.12 and 4.13, independent sample t-test was conducted to confirm that no significant differences in job demands and work engagement between the academics from research and non-research universities.

Table 4.20

Mean and Standard Deviation of Work Engagement and Job Demands for Academics from Research and Non-Research Universities

Type of University	Number of cases	Mean		Standard Deviation	
		Work engagement	Job demands	Work engagement	Job demands
Research University	159	5.3326	5.0613	.76571	.93350
Non-Research University	207	5.2941	5.0417	.74616	.95038

Table 4.21

Independent Sample T-test: Differences in Work Engagement and Job Demands based on Type of University

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Work engagement	Equal variances assumed	.315	.575	.483	364	.629
	Equal variances not assumed			.482	335.605	.630
Job demands	Equal variances assumed	.013	.908	.198	364	.843
	Equal variances not assumed			.198	342.986	.843

As indicated in Table 4.21, Levene's test for equality showed insignificant results for the analysis between type of university and work engagement (F = 0.315, p = 0.575). Levene's test result between type of university and job demands was insignificant as well

(F = 0.013, p = 0.908). The p-values exceeded 0.05, thus equal variances were assumed for both analyses. T-test results as shown in above table demonstrated that there were no significant differences between academics from research and non-research universities in term of work engagement (t = 0.483, p = 0.629) and job demands (t = 0.198, p= 0.843). As shown in Table 4.20, the mean for work engagement for academics from research and non-research universities were 5.33 and 5.29 respectively. On the other hand, mean for job demands between research and non-research universities' academics were 5.06 and 5.04 respectively.

4.15   Summary of Results and Chapter

Table 4.22
Summary of Results from Hypotheses Testing

	Hypotheses Statements	Result
H1:	Perceived organisational support is positively related to work engagement.	Not significant
H2:	There is a positive relationship between immediate superior support and work engagement.	Significant
H3:	There is a positive relationship between colleagues support and work engagement.	Significant but negative relationship
H4:	There is a significant positive relationship between autonomy and work engagement	Not significant
H5:	Recognition is positively related to work engagement.	Not significant
H6:	Job prestige significantly predicts work engagement.	Not significant
H7:	Perceived external prestige and work engagement is positively related to work engagement.	Significant
H8a:	There is a positive relationship between work-to-personal life enrichment and work engagement	Significant
H8b:	There a positive relationship between personal life-to-work enrichment and work engagement.	Significant
H9:	There is significant relationship between core self-evaluations and work engagement.	Significant

Table 4.22 (Continued)

H10a: Job demands moderate the relationship between perceived organisational support and work engagement.	
H10b: Job demands moderate the relationship between immediate superior support and work engagement.	
H10c: Job demands moderate the relationship between colleague support and work engagement.	Only interaction effect between work-to-personal life enrichment and job demands **(H10h)** is significant, others are not significant
H10d: Job demands moderate the relationship between autonomy and work engagement.	
H10e: Job demands moderate the relationship between recognition and work engagement.	
H10f: Job demands moderate the relationship between job prestige and work engagement.	
H10g: Job demands moderate the relationship between perceived external prestige and work engagement.	
H10h: Job demands moderate the relationship between work-to-personal life enrichment and work engagement.	
H10i: Job demands moderate the relationship between personal life-to-work enrichment enrichment and work engagement.	
H10j: Job demands moderate the relationship between core self-evaluations and work engagement.	

In general, factor analysis provides relatively consistent results with prior studies despite some modifications required. Result from reliability analysis denoted that all the items for the construct used in the present study have good reliabilities. Multiple regression analysis supports the direct relationship between several predictor variables, such as immediate superior support, colleague support, PEP, WPLE, PLWE and CSE and work engagement. The assumptions of the salience of resources in the situation of stressful or high job demands environment, however, gain limited support. The only significant interaction effect only found between job demands and WPLE. More detail discussions, implications and limitation of the study, as well as suggestions for future research can be found in the next chapter.

192

CHAPTER FIVE

DISCUSSION, IMPLICATIONS AND CONCLUSION

5.1 Introduction

This chapter begins with the discussion of the results obtained via statistical analysis in Chapter four, followed by elaborating the theoretical and practical implications of the present study. Some recommendations for future research as well as the limitations of this study are provided as well. Lastly, this chapter ends with a conclusion.

5.2 Discussions

The general objective of this study is to examine the impact of different resources, which encompass the variables that constituted job resources (i.e. perceived organisation support, immediate superior support, autonomy, recognition, job prestige, and perceived external prestige), core self-evaluation, work-to-personal life enrichment, personal life to work enrichment on work engagement among the Malaysian academics in public universities. Besides, this study also tests the moderating effects of job demands between the various resources and work engagement. More detailed discussions would be provided in the section as follow.

5.2.1 Direct Effects: The Relationship between Independent Variables and Work Engagement

The first research question aims to determine the impact of job resources on work engagement. Correlation matrix indicated positive associations between different job resources (i.e. perceived organisational support, immediate superior support, colleague support, autonomy, recognition, job prestige and perceived external prestige) and work engagement. However, when all variables are entered into the multiple regression analysis, the results show that only immediate superior support, co-worker support and perceived external prestige are significant predictors of work engagement. Besides, colleague support exerts negative relationship with work engagement instead of positive relationship as hypothesized. The results are to a certain extent contrary to the initial expectations that all types of job resources would significantly predict work engagement. As such, the present study fails to support the hypothesized statements which posit perceived organisational support, autonomy, recognition, and job prestige are positively related to work engagement (i.e. H1, H4, H5 and H6).

Despite the fact that different types of job resources are often been viewed as having a strong internal or external motivational potential to boost work engagement (Bakker & Schaufeli, 2008), the results of the present study revealed that not all components of job resources will act in the similar patterns in predicting work engagement. Moreover, dispositional variable (i.e. CSE) and work-life enrichment play more important roles than some job resources variables in explaining work engagement. Further discussions will be provided in the following subsections:

5.2.1.1   Perceived Organisational Support and Work Engagement

Perceived organisational support (POS) does not exert significant positive relationship with work engagement as anticipated in hypothesis one (H1). The result is contrary with the previous findings by Pati and Kumar (2010) and Rich *et al*. (2010). It is also possible that academics in general value their present job; which is either in teaching and/or research and they feel the psychological meaningfulness and the enjoyment of the job (Bakker & Schaufeli, 2008). As such, they are more likely to show positive engagement in their work regardless of the level of POS. Besides, a number of writings addressed the concern of declined job satisfaction and intensified job stress among the academics in recent years due to increased competition and work pressure (Schmidt & Langberg, 2008; Winefield & Jarrett, 2001). As such, the existing organisational level of support in public universities might not be sufficient to further stimulate work engagement among the academics.

5.2.1.2   Immediate Superior Support and Work Engagement

Hypothesis two (H2) positing the positive relationship between immediate superior support and work engagement was supported. The result is consistent with Demerouti *et al*. (2001), Schaufeli and Bakker (2004), and Hakanen *et al*. (2006). This further confirms the critical role of immediate superior as job resources that motivate individual to be dedicated and put the best efforts in performing a particular task. Although managing work-based social support can be quite complicated, absence of such supports would cause the subordinates to feel that they are disconnected with their immediate superiors. Immediate superior can influence employees' work engagement in several ways. For

example, immediate superior is instrumental in determining various aspects of the job that directly affect the subordinates, such as career advancement opportunity, emotional support, opportunity to get involved in specific tasks and salary increment (Wayne *et al.*, 1997). Thus, lack of adequate supports from immediate superiors would adversely affect the level of motivation and energy of the academic staff, which might eventually lead to lower job performance.

5.2.1.3   Colleague Support and Work Engagement

Next, the third hypothesis (H3) postulates that colleague support is positively related to work engagement. Despite significant relationship between colleague support and work engagement was found in this study, surprisingly the direction of the relationship appears to be negative rather than positive. Thus, the result contradicts with the empirical findings by Llorens *et al.* (2006) and Xanthopoulou *et al.* (2008). Present finding may suggest that the contact and interpersonal relationship among colleagues in the academia is indeed very complicated.

In fact, the complexity of support from colleague had been addressed in stress and burnout literatures. Inconsistency and contradicting results were found between the direct impacts of co-workers support and individuals' stress (Chiaburu & Harrison, 2008; Beehr, Farmer & Glazer, Gudanowski, & Nair, 2003). While many studies indicated that co-worker support reduces stress and burnout across different samples (e.g. Sundin *et al.*, 2007; Lait & Wallace, 2002; Lee & Ashforth, 1996; Kay-Eccles, 2012; Yildrim, 2008),

there are situations of which such support not only fail to alleviate individual's stress, instead resulted in intensified stress (Beehr, Bowling, & Bennett, 2010). In certain circumstances, it may have reversed buffering effect on stressor-strain relationship (Beehr *et al*., 2003; Cooper *et al*., 2001). This means that stressor-strain relationship is worsened with the presence of social support. For instance, greater co-worker support was also found to be positively associated with organisational and interpersonal deviance behaviour among restaurant workers (Liao *et al*., 2004). Besides, Gassman-Pines (2007) found that greater co-worker support exacerbated negative mood when there are less criticism from supervisor and the study is based on a sample of 61 working mothers.

Beehr *et al*. (2010) explained the three conditions in which work-based social support (e.g. instrumental and emotional supports from colleague) would have adverse impact on psychological and physical health. These conditions include (i) interactions that make the person focuses on how stressful the workplace is, (ii) help that makes the recipients feel inadequate or incompetent, and (iii) help that is unwanted. Individual perception about their working environment was largely influenced by the information they received via interaction process with others, such as colleagues (Beehr *et al*., 2010). The competition among universities in Malaysia either to sustain or improve its national and international ranking in recent years has resulted to more demanding requirement for publications, while at the meantime academics are loaded with teaching, consultation and administrative work. The conversation on job problems or work related complaints might worsen the unfavourable situation and lead to increased stress (Beehr *et al*., 2010). In this situation, social interaction that suppose to be supportive (e.g. colleagues show their

concerns and help to solve job-related problems) turn out to be ineffective (Beehr *et al*., 2010). Besides, job related help (i.e. instrumental support) offered by colleagues might affect or challenge the academic staff's self-esteem and make the person feel incompetent, which in turn induce stress. In addition, stress may arise when supports by colleagues were viewed as unnecessary or not needed by the academic staff. In this situation, the support recipient might perceive that the colleague who offered his/her help is trying to show off (Beehr *et al*., 2010). Based on the point of view as stated by Beehr *et al*. (2010), undesired social support could resulted to increased strain (e.g. emotional exhaustion and physical symptoms), and this would ultimately diminish the level of work engagement among the academic staff in the university. Beehr *et al*. (2010) supported their arguments through a survey among 403 non-academic staff of a university, and the results generally congruent with their arguments on failure of social supports.

Present study shows that colleague support exerts direct adverse relationship with work engagement. This is because positive influence of support might be hampered by undesired support and inappropriate content of communication (Beehr *et al*., 2010; Chen, Popovich & Kogan, 1999) that eventually reduce work engagement among the academics. In addition, it is also possible to surmise that high colleague support might result in some academics having the inclination to rely on others in solving problems or complete a particular piece of work (Liao *et al*., 2004), consequently they become less engaged in their work.

5.2.1.4   Autonomy, Recognition, Job Prestige and Work Engagement

The positive link between autonomy, recognition and work engagement as postulated in hypotheses four (H4) and five (H5) are not proven based on the multiple regression analysis. The results are contradicted with studies by Bakker and Bal (2010), Hakanen *et al*. (2005, 2006), and Mauno *et al*. (2007). Nonetheless, the failure of motivators and hygiene factors, such as recognition, achievement and advancement in predicting positive work outcome (i.e. job satisfaction) among the academics can be found in the work of Bentley *et al*. (2013). Apart from that, the absence of the predicted positive relationship between the variables might occur due to the fact that large proportions (87%) of the respondents in the present study are those with lecturer and senior lecturers/assistant professor position. Such individual differences might affect the results of the present study. Barkhuizen and Rothman (2006) conducted a study to analyse the impact of demographic factors on work engagement. They indicated that South African academics with higher academic position are more engaged in their work than those with lower ranking. This might due to fact that higher ranking academics tend to enjoy more autonomy and recognition. These differences may affect the level of intrinsic motivation, which can explain one's level of work absorption and dedication (Gilbert, 2001).

Another view is that though academic work is considered as highly self-regulated (Laffery & Fleming, 2000) and the academics used to view their autonomy as among the essential values in their profession (Schmidt & Langberg, 2008) and sources of job satisfaction (Moses, 1986). The issues of weakened professional autonomy at academia have been raised by a number of scholars in recent years (Johnsrud & Heck, 1998; Moses,

1986) and there are greater requirement for accountability and competitiveness in higher education institutions (Schmidt & Langberg, 2008). The same view was shared by earlier study by Johnsrud and Heck (1998) who pointed out that academics tend to enjoy freedom in teaching, research, and the nature of their service. However, increasing demand for faculty accountability by public and legislators might threaten such autonomy, in which academics are required to explain how they spend their time, the relevancy of their research and the amount of care they paid to undergraduate education and society needs (Johnsrud & Heck, 1998).

Despite traditionally academics have often been associated with high status and social position (Schmidt & Langberg, 2008). This study has been unable to demonstrate that job prestige is positively related to work engagement (H6). One plausible explanation is that job prestige to a certain extent is influenced by individual's position and status in the organisation (Leuty & Hansen, 2011). As such, the small percentage (13%) of respondents with associate professor and professor academic rank might not be representative enough to generate significant positive impact on work engagement. In this case, other factors appear to be more important determinants of work engagement.

5.2.1.5   Perceived External Prestige and Work Engagement

Hypothesis 7, which postulates that perceived external prestige (PEP) is positively related to work engagement is supported. The result is consistent with the revised JD-R model, which views resources as significant predictor of work engagement (Bakker & Schaufeli, 2008). Positive information about an organisation gives confidence and assurance to the employees that working in that particular organisation is worthwhile, thus individuals valued their work more positively (Herrbach *et al*., 2004). In addition, favourable PEP boosts individual self-worth, thus such positive feeling stimulates work engagement. On the other hand, employees might be depressed, stressed and disengaged to work if they perceived that outsiders viewed their organisation negatively (Dutton *et al*., 1994).

5.2.1.6   Work-Life Enrichment and Work Engagement

Hypothesis 8a and 8b assert that work-to-personal life enrichment (WPLE) and personal life-to work-enrichment (PLWE) are positively related to work engagement among the academic staff. These hypotheses are fully supported in this study. Present findings are in agreement with the enrichment theory, which suggest that the resource gains from one domain can improve the performance in another domain, and this process would eventually promote favourable work behaviour and attitudes (Carlson *et al*., 2006; Greenhaus & Powell, 2006). The patterns of outcomes of this study were in consonance with the study by Montogomery *et al*. (2003) on the positive relationship of the dual directions of positive work-non-work interaction and work engagement.

Moreover, findings by Allis and O'Driscoll (2008) revealed that spending time in family and personal activities did not exacerbate non-work-to-work conflict. In contrast, individual's participation in family and personal activities will enhance the roles of the academics in their work roles, which in turn promote well being (Allis & O'Driscoll, 2008). Further, the present study corroborates the ideas of Weer, Greenhaus, & Linnehan (2010) as well as Hecht and Boies (2009) that individuals acquire more resources through their commitment in multiple non-work roles, such as positive emotion, interpersonal skill and self-confidence. Such resources gains improve work engagement among the academics. The present finding demonstrated that impact of WPLE is more strongly related to work-related outcome (i.e. work engagement) as compared to PLWE. Such outcome is consistent with the findings by McNall *et al*. (2010) and Wayne *et al*. (2006). Work-personal life enrichment mainly leads to greater consequences on the originating domain than the receiving domain, which is contrary with work-non-work conflict literatures (McNall *et al*., 2010).

5.2.1.7   Core Self-Evaluations and Work Engagement

Hypothesis nine (H9) asserts that core self-evaluations (CSE) is positively related to work engagement. Results of the present study firmly support the hypothesis. Academic staff with more positive CSE shows greater tendency in engaging in their work. The finding is compatible to the notion that personal resources are an important predictor of work engagement as proposed in JD-R model of work engagement (Bakker & Demerouti, 2008). As such, the result further supports the finding by Rich *et al*. (2010) on the significant role of CSE in predicting job engagement. Similar pattern of relationships

202

were observed among the researchers who had examined the traits composed of CSE individually, such as occupational self-esteem, self-efficacy and emotional stability (Langelaan *et al*., 2006; Xanthoupoulou *et al*., 2007a). In addition, empirical findings from earlier studies showed that CSE has significant direct effect on job attitudes, motivation and occupational stress (Chang *et al*., 2012).

Individuals with positive CSE view job as more attractive; they are more willing to handle tasks with greater challenges and complexity since they are confident with their capability (Judge *et al*., 2000, Srivastava, Locke, Judge, & Adams, 2010). In contrast, individuals who score low in CSE are proned to view problems negatively (Judge *et al*., 1998) and are less capable in handling stress. In short, academic staff with higher CSE that is equipped with above characteristics is more optimistic in dealing with rising challenges and expectations in today higher learning institutions. Such positive self-regards in turn promote greater work engagement among the academics. In short, engaged academic staff are energetic and have the ability to bring their full capacity in their work.

5.2.2 Moderating Effects of Job Demands

The moderating effects of job demands (JD) between resources (job resources, core self-evaluations and work-life enrichment) and work engagement relationship is just partially supported. Present study only found evidence for one out of ten interactions. JD is only found to significantly moderate the relationship between WPLE and work engagement (H10h). WPLE shows stronger relationship with work engagement when academics are

facing with high JD as compared to the situation of low JD. However, the relationship between PLWE and work engagement is not influenced by the demanding work conditions, thus hypothesis H10i is not supported. As such, Malaysian public universities academics benefited most from WPLE when they experienced high job demands.

For the moderating effect between job resources-work engagement relationship (H10a to H10g), no significant interactions were found from the hierarchical regression results. As such, present findings are not consistent with prior studies by Bakker *et al*. (2007) and fail to support the assumption boosting effect of job resources as explained in the JD-R model of work engagement. Nevertheless, Bakker *et al*. (2007) did not find significant interaction effect between job control and students misbehaviour as well. Frese (1999) explained that it is relatively difficult to identify significant interaction effects. The results of the present study, however, were quite compatible with the results of Taipale *et al*., (2011). Taipale *et al*. (2011) concluded that the interactions between job resources (i.e. general social supports and autonomy) and work demand (i.e. pressure) were insignificant or weak. This was proven in their comparative studies among eight European countries, which cover 7,867 employees from four major sectors, namely banking, hospital, retail, and telecommunication. Out of these countries, only sample from Finland exhibited significant, albeit weak interaction effect between job demands and autonomy in predicting work engagement. Similarly, though interaction effect between global social supports (i.e. include both co-workers and supervisor supports in a single measure) and job demands were significant in a few countries (i.e. Sweden, Germany, Hungary, and Bulgaria), but the strength of such relationship was extremely

204

weak. On top of that, study by Korunka, Kubicek, Schaufeli, and Hoonakker (2009) also unable to demonstrate that job resources (i.e. supervisory support, co-worker support, and decision latitude) enhanced work engagement when the workers have to deal with high quantitative and qualitative workloads.

On the other hand, the interaction effect of CSE and JD as postulated in H10j is not statistically significant. This suggests that in predicting work engagement, the effect of CSE has not been exaggerated even though the academics have to handle great demands from their job. Job demands are not able to moderate the relationship between certain types of personal traits and work engagement as shown in the work of Xanthoupoulou *et al*., (2013). In their study, demanding conditions in job fail to moderate the relationship between optimism and work engagement. With regards to the findings of the present study, possible explanation is that academics with high CSE tend to view their job positively, thus they believe that demanding requirements in the job can be solved eventually without substantial personal efforts. As a result, high job demands are unable to heighten the use of personal resources among the academics in this situation, consequently did not lead to increased work engagement.

5.3   Overview of Discussions

To summarise, the ties between personal resources (i.e. core self-evaluations), job resources (particularly immediate superior support, colleague support, and perceived external prestige) and work engagement cannot be denied based on the results of the present study. Hence, this study maintains the general arguments of JD-R model (Bakker

& Demerouti, 2008) that job and personal resources are predictors of work engagement. COR theory emphasized that nonexistence of resources, such as conditions (e.g. parental roles and social relationship at work), personal (e.g. personality), energy (e.g. knowledge), and object resources (e.g. property) would inhibit work engagement process (Gorgievski & Hobfoll, 2008). Furthermore, the bi-direction of work-life enrichment was found to be significant indicator of work engagement. This is consistent with COR theory (Hobfoll, 2001) and showed that ability of individuals to deploy resources enhance resource gains in different domains, thus caused the academic staff to further engaged in their work. The generation of resources is important in enrichment process (Friedman & Greenhaus, 2000). According to COR theory, individuals have ongoing motivation to protect, secure, and gain resources. Those who are personally resource rich or come from resource rich environments will have more ability in sustaining work engagement (Gorgievski & Hobfoll, 2008).

Lastly, the assumption related to the exaggeration of resources in demanding context only yield some degree of support, as only interaction between job demands and WPLE was significant in predicting work engagement. Such assumption has been addressed in COR theory (Hobfoll, 2002), which had subsequently been applied in JD-R model of work engagement (Bakker & Demerouti, 2008). Further analyses did not support that the academics in research versus non-research universities differ significantly in term of job demands and work engagement. Thus, hierarchical regression analyses fail to portray any obvious variations of the results after the type of university was controlled.

5.4   Theoretical and Practical Implications

In relation to theoretical impacts, the present study contributes additional knowledge to positive organisational behaviour studies by integrating a number of variables encompass various types of job resources, personal disposition (i.e. CSE), positive work and non-work interface (i.e. WPLE and PLWE) into the model in predicting work engagement among academics in Malaysian public universities. Specifically, the positive linkage between CSE and work engagement as indicated in this study proved that CSE is an essential personal resource for both fire fighters (Rich *et al*., 2010) and professional group (i.e. academic staff). As compared to the work of Rich *et al.* (2010), the work engagement construct used in this study, which is adapted from Schaufeli *et al*.'s (2002) is well validated in various nations. Kahn's (1990) conceptualisation (as operationalised by Rich *et al*., 2010) is focus on the absorption and identification with one's role, which fail to capture the overall meaning of work engagement as per Schaufeli *et al*.'s (2002) definition. In addition, the current findings also advanced the prior studies by offering an evidence of significant influence of perceived external prestige on work engagement. The current study is also among the first attempt to evaluate the wider perspective of work and personal life enrichment in the context of Malaysia. Positive work-life interactions tend to grasp less attention than the inter-domain conflict in academic research, therefore this study will be a valuable addition to the existing literatures.

Moreover, the findings in the current study provide insight to work engagement literatures as WPLE becomes more salient when job demands of academic staff are high. To the best of my knowledge, this has not been found in previous studies. The analyses of

the interaction effects are in response to the call by Bakker and Demerouti (2007) to investigate the interaction effects of job demands and job resources as explained in the JD-R model. Bakker and Demerouti (2007) commented that majority of the researchers are more keen in analysing the main effects of JD and job resources on work engagement, rather than the interaction effects. This situation occurs mainly due to the difficulties in detecting significant interaction effects (Bakker & Demerouti, 2007). However, examining such interaction effects are theoretically important to understand the possible boosting potential of resources as explained in the JD-R model of work engagement and COR theory.

This research has several practical implications. Firstly, considering the importance of support from superior in improving work engagement, it is beneficial for higher education institutions to design and develop systematic training programs that would help to enhance more supportive supervisory practices. This is particularly important in the context of public higher education institutions as heads of department and deans are selected from a group of qualified academics who might be lack of leadership experience and quite often the appointment of the positions is on rotation basis. The respective superiors should be trained on various approaches that are useful in improving perception of supervisory supports, such as effective communication, empathizing on employees' needs; open door policy and flexible or adjustable work schedule (Edmondson & Boyer, 2013).

Secondly, with regards to the negative impact of colleague support on work engagement, employees at all levels should be exposed to some knowledge via training of effective supportive communication in the work place. This may apply to the superiors as well. It is essential to understand that communication content can have profound influence on both emotional and instrumental functions of different sources of support.

Thirdly, positive CSE academics were found to be more engaged in their works. Selection process of a university may place more attention on individuals who possess positive CSE since they are more engaged in their work. Moreover, employees who possess such personality trait are better performers (Erez & Judge, 2001), willing to take more challenging and complex works (Srivastava *et al*., 2010) and have lower turnover intention. Apart from this, the human resource development of the university should place emphasis on various efforts that can shape or develop positive CSE among the academics, such as providing adequate training, coaching and mentoring (Joo, Jeung, & Yoon, 2010).

Next, the results showed that PEP has significant positive influence on work engagement among the academic staff. This means the image and reputation of an organisation will affect not only its relationship with external stakeholders; it also will have significant influence on employee attitudes and behavior (Herrbach *et al*., 2004). In the case of universities that are comprised of many knowledge workers, the perception of organisation prestige can be enhanced by communicating various achievements of

individuals and university internally via email, university website, newsletter or other internal publications (Fuller *et al*., 2006).

Meanwhile, external communication of such accomplishments can be done through social media (e.g. Facebook and Youtube), printed media or other electronic media. Employees' pride would be enhanced when outsiders view the organisation favourably (Bartels, Douwes, De Jong, & Pruyn, 2006, Bartels *et al*., 2007). It is equally important to expose newcomers of the universities with such information through orientation, socialization process and training programmes (Fuller *et al*., 2006). In short, efforts to promote prestigious image of the universities are likely to bear fruitful results in enhancing the engagement of academics.

The result of this study shows that personal life-to-work enrichment and work-to-personal life enrichment can improve work engagement. This suggests that the management should provide flexibility and off-time that allow employees' to be involved in non-work activities such as time spent with family members and friends, leisure, sport, volunteering work as well as hobbies. Personal activities are useful in developing individual's knowledge and skill, improving efficiency, and develop good mood which will in turn make them to be more engaged in their work (Carlson *et al*., 2006; Weer *et al*., 2010). Hence, the university should assist employees in achieving greater balance in their work and personal life through work life policies and programmes, like flex-time and telecommunication, childcare and eldercare assistance (Andreassi & Thompson, 2008; Poelmans, Stepanova, & Masuda, 2008). Creation of work-family/personal life

culture (Andreassi & Thompson, 2008; Michel & Michel, 2012; Thompson, Beauvais, Laura, & Lyness, 1999) would enhance enrichment and stimulate work engagement. Work-life culture is the extent to which organisation has the shared believes and assumptions in valuing the integration of employees' work and personal life (Thompson *et al*., 1999). Lewis (1997) stressed that it is not sufficient for organisation to merely implement the surface change (e.g. set up on-site childcare centre). In contrast, deeper cultural changes, such as reducing the requirement of face time are needed and the management should emphasize more on output rather than input (e.g. number of working hours per week) (Lewis, 1997).

5.5   Limitations and Directions for Future Research

There are several limitations that need to be acknowledged in this study. Firstly, this study employs a cross-sectional design in which the data were collected at a single point in time (Zikmund *et al*., 2010). Such approach limits the ability of the researcher to infer causal relationship among the key variables of the current study. Cross-sectional designs, in contrast to longitudinal studies, do not measure the change in variables over a period of time; hence it is inappropriate for causal research (Cohen *et al*., 2007). Longitudinal studies, on the other hand, enable the researcher to establish causality and to make inferences (Cohen *et al*., 2007). While this study is constrained by the time limitation which makes longitudinal study impractical at the present point of research, future research should consider longitudinal study to obtain better insights on the causal effects of the hypothesized relationships in this study. This approach is particularly meaningful as there is relatively lack of longitudinal studies found in the work engagement studies in

211

Asian context as compared to the West (e.g. Hakanen *et al*., 2008b; Xanthopoulou *et al*., 2008).

Second, present study relied on self-report questionnaires as a single source of response, which might be subjected to the problem of common method variance (Podsakoff *et al*., 2003). All the items measuring the key variables in the present research were rated by the same person; it gives rise to the concern of possibility that the result might be biased or the correlations between the variables were inflated and consequently result to potentially misleading or inaccurate conclusion (Podsakoff *et al*., 2003). Despite being assured of confidentiality and anonymity of the survey, it is unlikely to eliminate the potential problems of social desirable tendency among respondents, which is one of the factors that contributes to common source variance (Podsakoff *et al*., 2003). Hence, future research may utilise multiple sources in the data collection process in their studies. Despite of the above limitations, the use of self-report data is considered acceptable when the purpose is to measure one's self-perception and attitudes (Spector, 1994; Schmitt, 1994). According to Spector (1994), cross-sectional design self-report methodology is very useful in organisational behaviour studies and it allows the researchers to understand the respondents' feelings and thoughts about their job. Hence, the use of self-report questionnaire by the academic staff in the present study is still considered as appropriate.

Third, present study found that colleague support and work engagement are negatively related. The possible adverse impacts of undesirable social supports have not been able to get much attention in the work engagement literatures as compared to the occupational

stress studies, as such further study should be carried out on this area. Chiaburu and Harrison (2008) emphasized that colleagues have profound impact on a focal employee work outcomes (e.g. job satisfaction, organisational commitment, absenteeism, and turnover intention), however thus far there are still limited systematic and detailed analysis examining such lateral impact in the workplace. Future research may examine the effects of specific nature of supports, such as appraisal support, instrumental support, and emotional support (Cohen & McKay, 1984) on work engagement. Anyway, the use of global colleague support (Caplan *et al*., 1975), which encompasses emotional and instrumental support in this study, is still appropriate as the measure is a well validated with high reliability, and is widely used in organisational behaviour related literatures. Besides, there is no clear definition of colleague support (Thoits, 1982), consequently different global measures of support can be found in the literatures (e.g. Beehr, King, & King, 1990; Rosseau & Aubé, 2010). Moreover, it is useful to conduct more in-depth evaluations on the social interaction process and communication content between the employees and the supporting sources (Beehr *et al*., 2010; Chen, Popovich, & Kogan, 1999). This will help the researchers to be able to assess the impact of colleague supports on work engagement more accurately.

Next, there are other predictors that may significantly explain the variance of work engagement. Future study may focus on other possible antecedents of work engagement, such as organisational politics and other personality traits. Byrne (2005) summarised that organisational politics, which are often perceived negatively appeared to have severe consequences to both individuals and organisations. Thus, it might have deteriorating

213

effects on work engagement among the employees. Finally, since the present study only applies to academic staff in local public universities, another avenue for future research is to extend this study to the academics in private HEIs as well as employees in other sectors.

5.6   Conclusion

In average, work engagement of academic staff in Malaysian public university is moderately high (mean = 5.31). Besides, one of the most obvious findings emerged from the present study is that immediate superior support and PEP are two major job resources variables that exhibit significant positive linkage with work engagement among the academics in Malaysian public universities. Unexpectedly, the findings revealed that colleague support has negative influence on work engagement. As such, the impacts of colleague support on work outcomes deserve more thorough analysis. POS, autonomy, recognition and job prestige fail to exhibit any significant relationship with work engagement. Hence, it is important to take note that the influence of various types of job resources on work engagement may differ, particularly after taking into consideration of non-job resources variables. Convincing result on the positive linkage between CSE and work engagement strengthen the idea that personal resources are closely connected to favourable outcomes (Xanthopoulou *et al*., 2007a). Furthermore, the present study adds values to the positivity studies as both WPLE and PLWE enhanced work engagement. Moreover, the relationship between WPLE and work engagement are strengthen when academics are encountered with intensified job demands. The results provide some useful

guidelines to the practitioners, specifically administrators of university to pay attention to create work-personal life friendly culture, to select and train academics with high CSE, to initiate more effective communication about the achievement of the university to the academics, and to provide training to entice more effective supervisory roles, and to expose academics with supportive behaviour among colleagues in the workplace.

REFERENCES

Abualrub, R. F., & Al-Zaru, I. M. (2008). Job stress, recognition, job performance and intention to stay at work among Jordanian hospital nurses. *Journal of Nursing Management*, 16(3), 227-236. doi:10.1111/j.1365-2834.2007.00810.x

Adams, D. (1998). Examining the fabric of academic life: An analysis of three decades of research on the perception of Australian academics about their roles. *Higher Education*, 36, 421-435. doi:10.1023/A:1003423628962

Agarwal, U. A. (2014). Linking justice, trust and innovative work behavior to work engagement. *Personnel Review*, 43 (1), 41 – 73. doi: 0.1108/PR-02-2012-0019

Aguinis, H., Henle, C.A., & Ostroff, C. (2001). Measurement in work in work and organisational psychology. In Anderson, N., Ones, D.S., Sinangil, H. K., & Viswesvaran,, C. (Eds.). *Handbook of Industrial, Work & organizational psychology: Volume 1: Personnel psychology* (pp. 10-26). Thousand Oaks, California: SAGE Publications

Ahmad, A. R., & Farley, A. (2013). Federal government funding reforms: Issues and challenges facing Malaysian public universities. *International Journal of Asian Social Science*, 3(1), 282-298.

Ahmad, A. R., Farley, A., & Naidoo, M. (2012). An examination of the implementation federal government strategic plans in Malaysian public universities. *International Journal of Business and Social Science*, 3(15), 290-301.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: SAGE Publications.

Alarcon, G. M. (2011). A meta-analysis of burnout with job demands, resources, and attitudes. *Journal of Vocational Behavior*, 79, 549-562. doi:10.1016/j.jvb.2011.03.007

Ali Jolaee, Khalil Md Nor, Naser Khani, & Rosman Md Yusoff (2014). Factors affecting knowledge sharing intention among academic staff. *International Journal of Educational Management*, 28(4), 413 - 431.doi:10.1108/IJEM-03-2013-0041

Allis, P., & O'Driscoll, M. (2008). Positive effects of non-work-to-work facilitation on well-being in work, family and personal domains. *Journal of Managerial Psychology*, 23(3), 273-291. doi:10.1108/02683940810861383

Aminuddin Hassan. Tymms, P. & Habsah Ismail (2008). Academic productivity as perceived by Malaysian academics. Journal *of Higher Education Policy and Management*, 30(3), 283-296. doi: 10.1080/13600800802155184

Anderson, D., Richard, J., & Saha, L. (2002). *Changes in Academic Work: Implications for Universities of the Changing age Distribution and Work roles of Academic Staff*. Retrieved from http://trove.nla.gov.au/work/153102143?q&versionId=166855630

Andreassi, J. K., & Thompson, C. A. (2008). Work-family culture: Current research and future direction. In Korabik, K., Lero, D. S. & Whitehead, D. L. (Eds.). *Handbook of work-family integration: Research, theory, and best practices* (pp. 331 – 351). Amsterdam: Academic Press.

Ang, S. H. (2014). *Research design for business & management*. Los Angeles: SAGE Publications.

Anisah, S. (2014, 13 May). In latest rankings, Malaysian public varsities lose out to Singapore, Hong Kong. Retrieved from http://www.themalaysianinsider.com

Aon Hewitt (2012). *Trends in global employee engagement*. Retrieved from http://www.aon.com/attachments/human-capital-consulting/2012_ TrendsInGlobalEngagement_Final_v11.pdf

Appelbaum, S. H., & Kamal, R. (2000). An analysis of the utilization and effectiveness of non-financial incentives in small business. *The Journal of Management Development.* 19(9/10), 733–763. doi:10.1108/02621710010378200

Arif Hassan & Ahmad, F. (2011). Authentic leadership, trust and work engagement. *International Journal of Human and Social Sciences*, 6(3), 164-170.

Arif Hassan & Junaidah Hashim (2011). Role of organizational justice in determining work outcomes of national and expatriate academic staff i n Malaysia. *International Journal of Commerce and Management*, 21(1), 82-93. doi: 10.1108/10569211111111711

Arokiasamy, A. R. A. (2010). *The impact of globalisation on higher education in Malaysia*. Retrieved from www.nyu.edu/classes/keefer/waoe/aroka.pdf

Arshadi, N. (2011). The relationships of perceived organizational support (POS) with organizational commitment, in-role performance, and turnover intention: Mediating role of felt obligation. *Procedia - Social and Behavioral Sciences,* 30, 1103 – 1108. doi:10.1016/j.sbspro.2011.10.215

Aryee, S., Srinivas, E. S., & Tan, H. H. (2005). Rhythms of life: Antecedents and outcomes of work-family balance in employed parents. *The Journal of Applied Psychology*, 90(1), 132-146. doi:10.1037/0021-9010.90.1.132

Asian Development Bank (2012). *Access without Equity? Finding a better balance in higher education in Asia*. Mandaluyong, Philipines: Asian Development Bank.

Attree, M. (2005). Nursing agency and governance: Registered nurses' perceptions. *Journal of Nursing Management*, 13(5), 387-396. doi:10.1111/j.1365-2834.2005.00553.x

Aubert, B. A., & Kelsey, B. L. (2003). Further understanding of trust and performance in virtual teams. *Small Group Research*, 34(5), 575–618. doi:10.1177/1046496403256011

Aubé, C., Rousseau, V., & Morin, E. M. (2007). Perceived organizational support and organizational commitment: The moderating effect of locus of control and work autonomy. *Journal of Managerial Psychology*, 22(5), 479-495. doi:1108/02683940710757209

Auerbach, S. M., Martelli, M. F., & Mercuri, L. G. (1983). Anxiety, information, interpersonal impacts, and adjustment to a stressful healthcare situation. *Journal of Personality and Social Psychology*, 44(6), 1284-1296. doi:10.1037//0022-3514.44.6.1284

Azeem, S. M., & Nazir, N. A. (2008). A study of job burnout among university teachers. *Psychology and Developing Societies*, 20(1), 51-64. doi:10.1177/097133360702000103

Aziz, S., & Zickar, M. J. (2006). A cluster analysis investigation of workaholism as a syndrome. *Journal of Occupational Health Psychology*, 11(1), 52-62. doi:10.1037/1076-8998.11.1.52

Babbie, E. (2007). *The practice of social research* (11th ed.). Belmont, CA: Thompson Learning.

Babcock-Roberson, M. E., & Strickland, O. J. (2010). The relationship between charismatic leadership, work engagement and organizational citizenship behavior. *The Journal of Psychology*, 144(3), 313-326. doi:10.1080/00223981003648336

Babin, B. J., & Boles, J. S., (1996). The effects of perceived co-worker involvement and supervisor support on service provider job stress, performance and job satisfaction. *Journal of Retailing*, 72(1), 57-75. doi:10.1016/S0022-4359(96)90005-6

Bakker, A. B. (2009). Building engagement in the workplace. In R.J. Burke & C.L. Cooper (Eds.), *The peak performing organization* (pp. 50 -72). Oxford: Routledge.

Bakker, A. B., & Bal, P.M. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of Occupational and Organizational Psychology*, 83, 189-206. doi:10.1348/096317909X402596.

Bakker, A. B., Deremouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, 43(1), 83-104. doi:10.1002/hrm

Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2005). The crossover of burnout and work engagement among working couples. *Human Relations*, 58(5), 661-689. doi: 10.1177/0018726705055967

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328. doi:10.1108/ 02683940710733115

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, 13(3), 209-223. doi: 10.1108/02683940910939313

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD-R Approach. *The Annual Review of Organizational Psychology and Organizational Behavior*. Doi:10.1146/annurev-orgpsych-031413-091235

Bakker, A. B., & Geurts, S. (2004). Toward a dual-process model of work–home interference. *Work & Occupations*, 31(3), 345−366. doi:10.1177/0730888404266349

Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement particularly when job demands are high. *Journal of Educational Psychology*, 99(2), 274-284. doi:10.1037/0022-0663.99.2.274

Bakker, A. B., & Leiter, M. P. (2010). Where to go from here: Integration and future research on work engagement, In Bakker, A. B. & Leiter, M. P. (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 181-196). New York: Psychology Press.

Bakker, A.B., & Schaufeli, W.B. (2008). Positive organizational behaviour: Engaged employees in flourishing organisations. *Journal of Organizational Behavior*, 29(2), 147-154. doi:10.1002/job.515

Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress*, 22(3), 187-200. doi:10.1108/13620430810870476

Bakker, A. B., Van Veldhoven, M., & Xanthopoulou, D. (2010). Beyond the demand-control model: Thriving on high job demands and resource. *Journal of Personnel Psychology*, 9 (1), 3 -16. doi: 10.1027/1866-5888/a0006

Balducci, C., Fraccaroli, F., & Schaufeli, W. B. (2010). Psychometric properties of the Italian version Utrecht Work Engagement Scales (UWES-9): A cross-cultural

analysis. *European Journal of Psychological Assessment*, 26(2), 143-149. doi: 10.1027/1015-5759/a000020

Balmforth, K., & Gardner, D. (2006). Conflict and facilitation between work and family: Realizing the outcomes for organizations. *New Zealand Journal of Psychology*, 35(2), 69-76.

Baral, R., & Bhargava, S. (2010). Work-family enrichment as a mediator between organizational interventions for work-life balance and job outcomes. *Journal of Managerial Psychology*, 25(3), 274-300. doi:10.1108/02683941011023749

Baranik, L. E., Roling, E. S., & Eby, L. T. (2010). Why does mentoring work? The role of perceived organizational support. *Journal of Vocational Behavior*, 76, 366–373. doi:10.1016/j.jvb.2009.07.004

Barkhuizen, N., & Rothmann, S. (2006). Work engagement of academic staff in South African higher education institutions. *Management Dynamics*, 15(1), 38-46. doi: 10.1002/smi.2520

Barnes, L. L. B., Agago, M. O., & Coombs, W. T. (1998). Effects of job-related stress on faculty intention to leave academia. *Research in Higher Education*, 39(4), 457-469. *doi*:10.1023/A:1018741404199

Barnett, R. C. (2008). On multiple roles: Past, present and future. In K. Korabik, D. S. Lero, & D. L. Whitehead (Eds.), *Handbook of work-family integration: Research, theory, and best practices* (pp.75-93). London: Elsevier.

Barnett, R. C., & Hyde, J. S. (2001). Women, men, work and family: An expansionist theory. *The American Psychologist*, 56(10), 781−796. doi:10.1037/ 0003066X56.10.781

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(6), 1173-1182. doi:10.1037/0033-295X.86.5.452

Bartels, J., Douwes, R., De Jong, M., & Pruyn, A. (2006). Organizational identification during a merger: Determinants of employees' expected identification with the new organization. *British Journal of Management*, 17(S1), s49–s67. doi:10.1111/j.1467-8551.2006.00478.x.

Bartels, J., Pruyn, A., De Jong, M., & Joustra, I. (2007). Multiple organizational identification levels and the impact of perceived external prestige and communication climate. *Journal of Organizational Behavior*, 28(2), 173-190. doi:10.1002/job.420

Beehr, T. A. (1976). Perceived situational moderators of the relationship between subjective role ambiguity and roles strain. *Journal of Applied Psychology*, 61(1), 35-40. doi:10.1037//0021-9010.61.1.35

Beehr, T. A., Bowling, N. A., & Bennet, M. M. (2010). Occupational stress and failures of social support: When helping hurts. *Journal of Occupational Health Psychology*, 15(1), 45-49. doi:10.1037/a0018234

Beehr, T. A., Farmer, S. J., Glazer, S., Gudanowski, D. M. & Nair, V. N. (2003). The enigma of social support and occupational stress: Source congruence and gender role effects. *Journal of Occupational Health Psychology*, 8(3), 220-231. doi:10.1037/1076-8998.8.3.220

Beehr, T. A., King, L. A., & King, D. W. (1990). Social support and occupational stress: Talking to supervisors. *Journal of Vocational Behavior*, 36, 61–81. doi:10.1016/0001-8791(90)90015-T

Bentley, P., Coates, H., Dobson, I., Goedegebuure, L. & Meek, V. L. (2013). Factors associated with job satisfaction amongst Australian university academics and future workforce implications. In P. J. Bently, H. Coates, I. Dobson, L. Goedegebuure, & V. L. Meek (Eds.), *Job satisfaction around the academic world* (pp. 29-54). Retrieved from http://www.lhmartininstitute.edu.au/documents/publications/pre-publicationintlacademicjobsatisfactionchapter3australia.pdf

Beri, G. C. (2010). *Business statistics* (3rd ed.). New Delhi: Tata McGraw Hill.

Best, R. G., Stapleton, L. M. & Downey, R. G. (2005). Core self-evaluations and job burnout: The test of alternative models. *Journal of Occupational Health Psychology*, 10(4), 441-451. doi:10.1037/1076-8998.10.4.441

Beutell, N. J. (2010). Work schedule, work schedule control and satisfaction in relation to work-family conflict, work-family synergy, and domain satisfaction. *Career Development International*, 15(5), 501-518. doi:10.1108/13620431011075358

Beutell, N. J., & Wittig-Berman, U. (2008). Work-family conflict and work-family synergy for generation X, baby boomers, and matures: Generational differences, predictors, and satisfaction outcomes. *Journal of Managerial Psychology*, 23(5), 507-523. doi:10.1108/02683940810884513

Bilgin, N., & Demirer, H. (2012). The examination of the relationship among organizational support, affective commitment and job satisfaction of hotel

employees. *Procedia - Social and Behavioral Sciences* 51, 470–473. doi:10.1016/ j.sbspro.2012.08.191

Bhargava, S., & Baral, R. (2009). Antecedents and consequences of work–family enrichment among Indian Managers. *Psychological Studies*, 54,213–225.

Blackmore, P., & Kandiko, C. B. (2011): Motivation in academic life: A prestige economy. *Research in Post-Compulsory Education*, 16(4), 399-411. doi:10.1080/ 13596748. 2011.626971

Blau, P. M. (1964*). Exchange and power in social life*. New York: Wiley.

Bonebright, C. A., Clay, D. L., & Ankenmann, R. D. (2000). The relationship of workaholism with work-life conflict, life satisfaction, and purpose in life. *Journal of Counseling Psychology*, 47(4), 467-477. doi:10.1O37//0022-0167.47.4.469

Bono, J. E., & Judge, T. A. (2003). Core self-evaluations: A review of the trait and its role in job satisfaction and job performance. *European Journal of Personality*, 17(S1), S5-S18. doi:10.1002/per.481

Boyar, S. L., & Mosley, D. C. Jr. (2007). The relationship between core self-evaluations and work and family satisfaction: The mediating role of work-family conflict and facilitation. *Journal of Vocational Behavior*, 71(2), 265-281. doi:10.1016/ j.jvb.2007.06.001

Boz, M., Martínez, I., & Munduate, L. (2009). Breaking negative consequences of relationship conflicts at work: The moderating role of work family enrichment and supervisor support. *Journal of Work and Organizational Psychology*, 25(2), 113-121. doi:10.4321/S1576-59622009000200002

Brake, T. H., Bouman, A. M., Gorter, R., Hoogstraten, J. & Eijkman, M. (2007). Professional burnout and work engagement among dentists. *European Journal of Oral Science*, 115 (3), 180 -185. doi: 10.1111/j.1600-0722.2007.00439.x

Bryman, A. & Bell, E. (2007). *Business research methods* (3rd ed.). Oxford: Oxford University Press.

Brown, S. P. (1996). A meta-analysis and review of organizational research on job involvement. *Psychological Bulletin*, 120(2), 235-255.

Brun, J. P. & Dugas, N. (2008). An analysis of employee recognition: Perspectives on human resources practices. *The International Journal of Human Resource Management*, 19(4), 716–730. doi**:**10.1080/09585190801953723

Brunborg, G. S. (2008). Core self-evaluations: A predictor variable for job stress. *European Psychologist*, 13(2), 96-102. doi:10.1027/1016-9040.13.2.96

Brunetto, Y., Teo, S. T. T., Shacklock, K., & Farr-Wharton, R. (2012). Emotional intelligence, job satisfaction, well-being and engagement: Explaining organisational commitment and turnover intentions in policing. *Human Resource Management Journal,* 22(4), 428-441.doi:10.1111/j.1748-8583.2012.00198.x

Burke, M. J., Borucki, C. C., & Hurley, A. E. (1992). Reconceptualizing psychological climate in a retail service environment: A multiple-stakeholder perspective. *Journal of Applied Psychology*, 77(5): 717-729. doi:10.1037/0021-9010.77.5.717

Burke, R. J., & El-Kot, G. (2010). Work engagement among managers and professionals in Egypt: Potential antecedents and consequences. *African Journal of Economic and Management Studies*, 1(1), 42-60. doi:10.1108/20400701011028158

Burns, N., & Grove, S. K. (1997). *The practice of nursing research conduct, critique & utilization* (3rd ed.). Philadeplphia: W.B.

Byrne, Z.S. (2005). Fairness reduces the negative effects of organizational politics on turnover intentions, citizenship behavior and job performance. *Journal of Business and Psychology*, 20(2), 175-200. doi: 10.1007/s10869-005-8258-0

Caplan, R. D., Cobb, S., French, J. R. P., van Harrison, R., & Pinneau, S. R. (1975). *Job demands and worker health*. Ann Arbor: University of Michigan, Institute for Social Research.

Carlson, D. S., Kacmar, K. M., Wayne, J. H., & Grzywacz, J. G. (2006). Measuring the positive side of the work-family interface: Development and validation of a work-family enrichment scale. *Journal of Vocational Behavior*, 68(1), 131-164. doi:10.1016/j.jvb.2005.02.002

Carlson, D. S., & Grzywacz, J. G. (2008). Reflections and future directions on measurement in work-family research. In K. Korabik, D. S. Lero, & D. L. Whitehead, (ed.), *Handbook of work-family integration: Research, theory, and best practices* (pp.57-73). Amsterdam: Elsevier.

Carmeli, A. (2004). The link between organizational elements, perceived external prestige and performance. *Corporate Reputation Review*, 6(4), 314-331. doi:10.1057/palgrave.crr.1540002

Carmeli, A. (2005). Perceived external prestige, affective commitment, and citizenship behaviours. *Organization Studies*, 26(3), 443-464. doi:10.1177/0170840605050875

Carmeli, A., & Freund, A. (2004). Work commitment, job satisfaction, and job performance: An empirical investigation. *International Journal of Organization Theory and Behavior*, 7(3), 289-309.

Casper, W. J., Martin, J. A., Buffardi, L. C., & Erdwins, C. J. (2002). Work-family conflict, perceived organizational support and organizational commitment among employed mothers. *Journal of Occupational Health Psychology*, 7(2), 99-108. *doi*:10.1037/ 1076-8998.7.2.99

Cattell, R. B. (1978). *The scientific use of factor analysis in behavioral and life sciences*. New York: Plenum.

Chang, C. H., Ferris, D. L., Johnson, R. E., Rosen, C. C., & Tan, J. A. (2012). Core self-evaluations: A review and evaluation of the literature. *Journal of Management*, 38 (1), 81-128. doi:10.1177/0149206311419661

Chapman, K. (2014a, October 5). Varsities not among top 400. *The Star Online*. Retrieved from http://www.thestar.com.my

Chapman, K. (2014b, March 9). Local unis not among top 100. *The Star Online*. Retrieved from http://www.thestar.com.my

Chen, J. C., & Silverthorne, C. (2008). The impact of locus of control on job stress, job performance and job satisfaction in Taiwan. *Leadership & Organization Development*, 29 (7), 572-582. doi:10.1108/01437730810906326

Chen, P. Y., Popovich, P. M., & Kogan, M. (1999). Let's talk: Patterns and correlates of social support among temporary employee. *Journal of Occupational Health Psychology,* 4(1), 55-62. doi:10.1037/1076-8998.4.1.55

Chen, S. H., Yang, C. C., Shiau, J. Y., & Wang, H. H. (2006). The development of an employee satisfaction model for higher education. *The TQM Magazine*, 18(5), 484-500. doi: 10.1108/09544780610685467.

Chew, Y. T., & Wong, S. K. (2008). Effects of career mentoring experience and perceived organisational support on employee commitment and intention to leave: A study among hotel workers in Malaysia. *International Journal of Management*, 25(3), 692-700.

Chiaburu, D.S., & Harrison, D.A. (2008). Do peers make the place? Conceptual synthesis and meta-analysis of coworker effects on perceptions, attitudes, OCBs, and performance. *Journal of Applied Psychology*, 93(5), 1082–1103. doi:10.1037/0021-9010.93.5.1082

Child, D. (2006). *The essential of factor analysis* (3rd ed.). New York: Continum International Publishing Group.

Chin, C. (2004, May 18). Overworked and underpaid USM specialists leaving for greener pastures. *The Star Online*. Retrieved from http://www.thestar.com.my

Choi, H. J., & Kim, Y.T. (2012). Work-family conflict, work-family facilitation, and job outcomes in the Korean hotel industry. *International Journal of Contemporary Hospitality Management*, 24 (7), 1011-1028. doi:10.1108/09596111211258892

Choi, S. L., Lee, Y., Wan Khairuzzaman Wan Ismail & Ahmad Jusoh (2012). Leadership styles and employees turnover: Exploratory study of academic staff in a Malaysian college. *World Applied Sciences Journal*, 19(4), 575-581.

Chong, C. W., Yuen, Y. Y., Gan, G. C. (2014). Knowledge sharing of academic staff. *Library Review*, 63 (3), 203 – 223. doi:10.1108/LR-08-2013-0109

Christian, M. S., Garza A. S., & Slaughter J. E. (2011). Work engagement: a quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64:89–136. doi: 10.1111/j.1744-6570.2010.01203.x

Christian, M. S., & Slaughter, J. E. (2007). Work engagement: A meta-analytic review and directions for research in an emerging area. *Academy of Management Proceedings*, Philadelphia, 1, 1-6. doi:10.5465/AMBPP.2007.26536346

Chung, N.G. & Angeline, T. (2010). Does work engagement mediate the relationship between job resources and job performance of employees? *African Journal of Business Management*, 4(9), 1837-1843.

Chughtai, A. A., & Buckley, F. (2008). Work engagement and its relationship with state and trait trust: A conceptual analysis. *Journal of Behavioral and Applied Management*, 10(1), 47-71. Retrieved from: http://www.ibam.com/pubs/jbam/articles/vol10/no1/JBAM_10_1_3.pdf

Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd Ed.). Hillsdale, NJ: Erlbaum.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/ correlation analysis for the behavioural sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Cohen, L., Manion, L. & Morrison, K. (2007). *Research methods in education* (6th ed.). Abingdon, Oxon: Routledge.

Cohen, S., & McKay, G. (1984). Social support, stress, and the buffering hypothesis: A theoretical analysis. In A. Baum, J. E. Singer, & S. E. Taylor (Eds.), *Handbook of psychology and health*, Volume IV (pp. 253-267). Hillsdale, NJ: Erlbaum.

Comrey, A. L. (1988). Factor-analytic methods of scale development in personality and clinical psychology. *Journal of Consulting and Clinical Psychology*, 56(5), 754-761.

Conway, J. M., & Huffcutt, A. I. (2003). A review and evaluation of exploratory factor analysis practices in organizational research. *Organizational Research Methods*, 6(2), 147-168. doi:10.1177/1094428103251541

Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. (2001). *Organizational stress: A review and critique of theory, research, and applications*. Thousand Oaks, California: SAGE Publications.

Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment Research & Evaluation*, 10(7), 1-9. Retrieved from: http://pareonline.net/getvn.asp?v=10&n=7

Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology*, 95(5), 834-848. doi:10.1037/a0019364

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. doi:10.1037/0021-9010.88.1.160

Crossman, A. & Abou-Zaki, B. (2003). Job satisfaction and employee performance of Lebanese banking staff. *Journal of Managerial Psychology*, 18(4): 368-376. doi: 10.1108/02683940310473118

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. London: SAGE Publications.

Crouter, A. C. (1984). Spillover from family to work: The neglected side of the work-family interface. *Human Relations*, 37(6), 425-441.

Crowther, D. & Lancaster, G. (2008). *Research methods: A concise introduction to research in management and business consultancy*. London: Butterworth-Heinemann.

Cuyper, N. D., Mauno, S., Kinnunen, U., Witte, H. D., Mäkikangas, A., & Nätti, J. (2010). Autonomy and workload in relation to temporary and permanent workers' job involvement: A test in Belgium and Finland. *Journal of Personnel Psychology*, 9(1), 40–49. doi:10.1027/1866-5888/a000004

Da, W. C. (2007). Public and private higher education institutions in Malaysia: Competing, complementary or crossbreeds as education providers. *Kajian Malaysia*, 25(1), 1-14.

Danish, R. Q., & Usman, A. (2010). Impact of reward and recognition on job satisfaction and motivation: An empirical study from Pakistan. *International Journal of Business and Managemnet*, 5(2), 159-167.

Dawley, D. D., Andrews, M. C. & Bucklew, N. S. (2008). Mentoring, supervisor support, and perceived organizational support: What matter most? *Leadership &*

Organization Development Journal, 29(3), 235-247. doi:10.1108/01437730810861290

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands–resources model of burnout. *Journal of Applied Psychology*, *86(3)*, 499–512. doi:10.1037/0021-9010.86.3.499

Demerouti E., & Bakker, A. B. (2011). The job demands-rsources model: Challenges for future research. *Journal of Industrial Psychology*, 37(2), 1- 9. doi: 10.4102/sajip.v37/974

Denton, D. A., Newton, J. T., & Bower, E. J. (2008). Occupational burnout and work engagement: a national survey of dentists in the United Kingdom. *British Dental Journal*, 205(7), 382-383. doi: 10.1038/sj.bdj.2008.890.

DeVellis, B. M., & Blalock, S. J. (1992). Illness attributions and hopelessness depression: The role of hopelessness expectancy. *Journal of Abnormal Psychology*, 101(2), 257-264. doi:10.1037/0021-843X.101.2.257

DeVellis, R. F. (2012). *Scale development: Theory and applications* (3rd ed.). Thousand Oaks, California: SAGE Publications.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review Psychology*, 41, 417-440. doi:10.1146/annurev.ps.41.020190.002221

DiLalla, D., & Dollinger, S. J. (2006). Cleaning up data and running preliminary analysis. In F. T. L. Leong & J. T. Austin (Eds.), *The psychology research handbook: A guide for graduate students and research assistants* (pp. 241-253). London: SAGE Publications.

Don: Many of us left because we feel unappreciated (2014, May 20). *The Star Online*. Retrieved from http://www.thestar.com.my

Dorio, J. M., Bryant, R. H., & Allen, T. D. (2008). Work related outcomes of the work-family interface: Why organizations should care. In K. Korabik, D. S. Lero, & D. L. Whitehead (Eds.), *Handbook of work-family integration: Research, theory, and best practices* (pp. 157-176). London: Elsevier.

Doyle, C., & Hind, P. (2002). Occupational stress, burnout and job status in female academics. *Gender, Work & Organization*, 5(2), 67-82. doi:10.1111/1468-0432.00047

Ducharme, L. J., & Martin, J. K. (2000). Unrewarding work, co-worker support, and job satisfaction. *Work and Occupation*, 27(2), 223-243. doi:10.1177/0730888400027002005

Dutton, J. E., Dukerich, J. M., & Harquail, C. V. (1994). Organizational images and member identification. *Administrative Science Quarterly*, 39(2), 239-263.

Dwyer, D. J., Schwartz, R. H., & Fox, M. L. (1992). Decision-making autonomy in nursing. *Journal of Nursing Administration*, 22(2), 17–23.

Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brindley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980-2002). *Journal of Vocational Behavior*, 66, 124-97. doi:10.1016/j.jvb.2003.11.003

Eder, P., & Eisenberger, R. (2008). Perceived organizational support: Reducing the negative influence of coworker withdrawal behavior. *Journal of Management*, 34(1), 55-68. doi:10.1177/0149206307309259

Edmondson, D. R., & Boyer, S. L. (2013). The moderating effect of the boundary spanning role on perceived supervisory support: A meta-analytic review. *Journal of Business Research*, 66(11), 2186-2192. doi:10.1016/j.jbusres.2012.01.010

Eisenberger, R., Cummings, J., Armeli., S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology*, 82(5), 812-820.

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D., (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500-507. doi:10.1037/0021-9010.71.3.500

Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I. L., & Rhoades, L. (2002). Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology*, *87*, 565–573. doi:10.1037//0021-9010.87.3.565

Elizabeth, Z. (2014, March 6). Malaysian varsities again fail to be placed in global higher education survey. *The Malaysian Insider*. Retrieved from http://www.themalaysianinsider.com/malaysia/article/malaysian-varsities-again-fail-to-enter-global-higher-education-survey#sthash.IuLTX0xi.dpuf

Endres, G. M., & Mancheno-Smoak, L. (2008). The human resource craze: Human performance improvement and employee engagement. *Organization Development Journal*, 26(1), 69-78.

Erez, A., & Judge, T. A. (2001). Relationship of core self-evaluations to goal setting, motivation and performance. *Journal of Applied Psychology*, 86(6), 1270-1279. doi:10.1037//0021-9010.86.6.1270.

Ethington, C. A., Thomas, S. L., & Pike, G. R. (2002). Back to the basics: Regression as it should be. In J. C. Smart (Eds.), *Higher education: Handbook of theory and research*, (Vol. XVII, pp. 263-294). Dordrecht: Kluwer Academic Publisher.

Everitt, B. S. (1975). Multivariate analysis: The need for data, and other problems. *British Journal of Psychiatry*, 126, 237-240.

Eyupoglua, S. Z., & Saner, T. (2009). The relationship between job satisfaction and academic rank: A study of academicians in Northern Cyprus. *Procedia Social and Behavioral Sciences*, 1, 686–691. doi:10.1016/j.sbspro.2009.01.120

Fauziah Noordin & Kamaruzaman Jusoff (2009). Levels of job satisfaction amongst Malaysian academic staff. *Asian Social Science*, 5(5), 122-128.

Ferguson, E. & Cox, T. (1993). Exploratory factor analysis: A user's guide. *International Journal of Selection and Assessment*, 1(2), 84–94.

Ferris, G. R., Treadway, D.C., Kolodinsky, R. W., Hochwarter, W.A., Kacmar, C.J., Douglas, C., & Frink, D.D. (2005). Development and validation of the political skill inventory. *Journal of Management*, 31(1), 126-152. doi:10.1177/0149206304271386

Finn, C.P. (2001) Autonomy: An important component for nurses' job satisfaction. *International Journal of Nursing Studies,* 38(3), 349–357.

Fisher, G. G., Bulger, C. A., & Smith, C. S. (2009). Beyond work and family: A measure of work/non-work interference and enhancement. *Journal of Occupational Health Psychology*, 14(4), 441–456. doi:10.1037/a0016737

Fowler, G. (2005). An analysis of higher education staff attitudes in a dynamic environment. *Tertiary Education and Management*, 11, 183-197. doi: 10.1007/s11233-005-0367-9

Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology*, 51(1), 115-134. doi: 10.1037/0022-0167.51.1.115

Frese, M. (1999). Social support as a moderator of the relationship between work stressors and psychological dysfunctioning: A longitudinal study with objective measures. *Journal of Occupational Health Psychology*, 4(3), 179–192. doi:10.1037/1076-8998.4.3.179

Friedman, S. D., & Greenhaus, J. H. (2000). *Work and family – allies or enemies? What happens when business professionals confront life choices.* New York: Oxford University Press. doi:10.1093/acprof:o so/9780195112757.001.0001

Frone, M. R. (2003). Work-family balance. In J. C. Quick & L. E. Tetric (Eds.), *Handbook of occupational health psychology* (pp. 143-162). Washington, DC: American Psychological Association.

Frone, M. R., Russell, M., & Cooper, M. L. (1992). Antecedents and outcomes of work family conflict: Testing a model of the work-family interface. *Journal of Applied Psychology*, 77(1), 65–78. doi:10.1037/0021-9010.77.1.65

Fu, C.K., & Shaffer, M.A. (2001). The tug of work and family: Direct and indirect domain-specific determinants of work-family conflict. *Personnel Review*, 30 (5), 502-522. doi: 10.1108/EUM0000000005936

Fuller, J.B., Hester, K., Barnett, T., Frey, L. & Relyea, L.F.C. (2006). Perceived organizational support and perceived external prestige: Predicting organizational attachment for university faculty, staff, and administrators. *The Journal of Social Psychology*, 146(3), 327-34.

Furr, R. M. & Bacharach, V. R. (2014). *Psychometrics: An introduction* (2nd ed.). Thousand Oaks, California: SAGE Publication.

Gallup (2013). State of the American workplace: Employee engagement insights for U.S. *Business Leaders*. Retrieved from http://www.gallup.com/strategicconsulting/163007 /state-american-workplace.aspx

Ganster, D. C., Schaubroeck, J., Sime, W. E., & Mayers, B. T. (1991). The nomological validity of the type A personality among employed adults. *Journal of Applied Psychology*, 76, 143-168.

Gardner, D. G., & Pierce, J. L. (2010). The core self-evaluation scale: Further construct validation evidence. *Educational and Psychological Measurement,* 70(2), 291–304. doi:10.1177/0013164409344505

Gassman-Pines, A. (2007). *The relationship between maternal job characteristics, maternal mood, mother-child interaction, and child behaviour in low income families: A daily diary study* (Doctoral dissertation). Available from ProQuest Dissertations and Thesis database. (UMI No. 3283354).

George, J. M., Reed, T. F., Ballard, K. A. Collin, J., & Feiding, J. (1993). Contact with AIDS patients as a source of work-related distress: Effects of organizational and social support. *Academy of Management Journal*, 36(1), 157-171.

Ghorpade, J., Lackritz, J., & Singh, G. (2007). Burnout and personality: Evidence from academia. *Journal of Career Assessment*, 15(2), 240-256. doi:10.1177/ 1069072706298156.

Gilbert, A. C. (2001). Work absorption: Causes among highly educated workers and consequences for their families (Unpublished doctoral thesis). University of California, Berkeley.

Gini, A. (1998). Working ourselves to death: Workaholism, stress, and fatigue. *Business and Society Review*, 100/101, 45-56.

Givon, M. M., & Shapira, Z. (1984). Response to rating scales: A theoretical model and its application to the number of categories problem. *Journal of Marketing Research*, 21, 410–419.

Gmelch, W. H., Wilke, P. K., & Lovrich, N. P. (1986). Dimensions of stress among university faculty: Factor-analytic results from a national study. *Research in Higher Education*, 24(3), 266-286. doi:10.1007/BF00992075

Goode, W. J. (1960). A theory of role strain. *American Sociological Review*, 25(4), 483−496.

Gomez, J. (2014, June 19). Malaysian public varsities fail to make top 100 Asian universities ranking. *The Malaysian Insider* Retrieved from http://www.themalaysianinsider.com/malaysia/article/malaysian-public-varsities-fail-to-make-top-100-asian-universities-ranking#sthash.I4boy8rU.dpuf

Gorsuch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdales, NJ: Lawrence Erlbaum Associates.

Gorter, R. C. & Freeman, R. (2011). Burnout and engagement in relation with job demands and resources among dental staff in Northern Ireland. *Community Dentistry and Oral Epidemiology*, 39(1), 87-95.

Gorgievski, M.J., & Hobfoll, S.E. (2008). Work can burn us out or fire us up: Conservation of resources in burnout and engagement. In Halbesleben, J.R.B. (Eds.) *Handbook of stress and burnout in health care* (pp.7-22). New York: Nova Science Publishers.

Grant-Vallone, E. J., & Ensher, E. A. (2001). An examination of work and personal life conflict, organizational support, and employee health among international expatriates. *Inernational Journal of Intercultural Relations*, 25, 261-278.

Gray, D. E. (2014). *Doing research in the real world*. London: SAGE Publications.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, 10(1), 76-88. doi*:*10.5465/ AMR.1985.4277352

Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, 31(1), 72-91. doi:10.5465/ AMR.2006.19379625

Gursoy, D., Uysal, M., Sirakaya-Turk, E., Ekinci, Y., & Baloglu, S. (2014). *Handbook of scales in tourism and hospitality research*. Oxfordshire: CABI.

Grzywacz, J. G. (2000). Work-family spillower and health during midlife: Is managing conflict everything? *American Journal of Health Promotion*, 14, 236-243. doi: 10.4278/0890-1171-14.4.236

Grzywacz, J. G., & Bass, B. L. (2003). Work, family, and mental health: Testing different models of work-family fit. *Journal of Marriage and Family*, 65(1), 248–261. doi:10.1111/j.1741-3737.2003.00248.x

Gutek, B. A., Searle, S., & Klepa, L. (1991). Rational versus gender role explanations for work-family conflict. *Journal of Applied Psychology*, 76(4), 560-568. doi:10.1037/0021-9010.76.4.560

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *The Journal of Applied Psychology*, 60, 159-170. doi:10.1037/h0076546

Hair, J., Money, A., Page, M., & Samouel, P. (2007). *Research methods for business*. West Sussex: John Wiley & Sons.

Hair, J. F. Jr., Black, W. C., Babin, B. J. Anderson, R. E., & Tatham, R.L. (2006). *Multivariate data analysis* (6th ed.). New Jersey: Prentice Hall.

Hairuddin Mohd Ali & Musah, M. B. (2012). Investigation of Malaysian higher education quality culture and workforce performance. *Quality Assurance in Education*, 20(3), 289 – 309. doi:10.1108/09684881211240330

Hakanen, J. J., Bakker, A. B., & Demerouti, E. (2005). How dentists cope with their job demands and stay engaged: The moderating role of job resources. *European Journal of Oral Sciences*, 113(6), 495-513. doi:10.1111/j.1600-0722.2005.00250.x

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43, 495-513. doi:10.1016/j.jsp.2005.11.001

Hakanen, J. J., & Lindbohm, M. L. (2008). Work engagement among breast cancer survivors and their referents: The importance of optimism and social resources at work. *Journal of Cancer Survivorship*, 2, 283-295. doi:10.1007/s11764-008-0071-0

Hakanen, J. J., Perhoniemi, R., & Toppinen-Tanner, S. (2008a). Positive gain spirals at work: From job resources to work engagement, personal initiative and work-unit innovativeness. *Journal of Vocational Behavior*, 73, 78-91. doi:10.1016/j.jvb.2008.01.003

Hakanen, J. J., & Roodt, G. (2010). Using the job demands-resources model to predict engagement: Analysing a conceptual model. In A. B. Bakker & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp.85-101). New York: Psychology Press.

Hakanen, J. J., Schaufeli, W. B., & Ahola, K. (2008b). The job demands-resources model: A three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work & Stress*, 22(3), 224-241. doi:10.1080/02678370802379432

Halbesleben, J. R. B. (2010). A meta-analysis of work engagement: Relationships with burnout, demands, resources and consequences. In A. B. Bakker & M. P. Leiter (Eds.). *Work engagement: A handbook of essential theory and research* (pp.103-117). New York: Psychology Press.

Hall, A. T., Royle, M. T., Brymer, B. A., Perrewe´, P. L., Ferris, G. R., & Hochwarter, W. A. (2006). Relationships between felt accountability as a stressor and strain reactions: The neutralizing role of autonomy across two studies. *Journal of Occupational Health Psychology*, 11(1), 87–99. doi:10.1037/1076-8998.11.1.87

Hallberg, U. E., Johansson, G., & Schaufeli, W. B. (2007). Type A behavior and work situation: Associations with burnout and work engagement. *Scandinavian Journal of Work, Environment and Health*, 48, 135-142. doi:10.1111/j.1467-9450.2007.00584.x

Hallberg, U. E., & Schaufeli, W. B. (2006). "Same same" but different? Can work engagement be discriminated from job involvement and organizational commitment. *European Psychologist*, 11(2), 119-127. doi:10.1027/1016-9040.11.2.119

Hamzah, B. A. (2015, January 4). The need for quality education. *The Star Online*. Retrieved from http://www.thestar.com.my

Hanson, G. C., Hammer, L. B., & Colton, C. L. (2006). Development and validation of a multidimenstional scale of perceived work-family positive spillover. *Journal of Occupational Health Psychology*, 11, 249-265.

Hargreaves, L. (2009). The status and prestige of teachers and teaching. In L. J. Saha & A. G. Dworkin (Eds.), *International Handbook of Research on Teachers and Teaching* (Vol. 1, pp. 217 – 229). New York: Springer.

Hariati Azizan, Lim, R., & Loh, J. (2012, November 30). The KPI dilemma, *The Star Online*. Retrieved from http://thestar.com.my

Harkness, J. A., Villar, A., & Edwards, B. (2010). Translation, adaptation, and design. In J. A. Harkness, M. Braun, B. Edwards, T. P. Johnson, L. E. Lyberg, P. Ph. Mohler, B-E. Pennell & T. W. Smith (Eds.), *Survey methods in multinational, multicultural and, multiregional contexts* (pp. 117-140). Hoboken, NJ: John Wiley & Sons.

Harman, G. (2001). Academics and institutional differentiation in Australian higher education. *Higher Education Policy*, 14, 325-342. doi:10.1016/S0952-8733(01)00023-X

Harman, G. (2003). Australian academics and prospective academics: Adjustment to a more commercial environment. *Higher Education Management and Policy*, 15(3), 105-177. doi:10.1787/hemp-v15-3-en

Harris, K. J., Harvey, P. & Kacmar, K. M. (2009). Do social stressors impact everyone equally? An examination of the moderating impact of core self-evaluations. *Journal of Business Psychology*, 24(2), 153-164.doi:10.1007/s10869-009-9096-2

Harrington, D. (2008). *Confirmatory factory analysis*. New York: Oxford University Press.

Hart, C. (1998). *Dong literature review: Releasing the social science research imagination*. London: SAGE Publications.

Harter, J. K., Schmidt, F. L., & Hayes, T. I. (2002). Business-unit relationship beween employee satisfaction, employee engagement and business outcomes: A meta-analysis. *Journal of Applied Psychology*, 87(2), 268-279. doi:10.1037//0021-9010.87.2.268

Harter, J. K., Schmidt, F. L., & Keyes, C. L. M. (2003). *Well-being in the workplace and its relationship to business outcomes: A review of the Gallup studies*. Retrieved from http://media.gallup.com/DOCUMENTS/whitePaper--Well-BeingInTheWorkplace.pdf

Haynes, C. E., Wall, T. D., Bolden, R. I., Stride, C., & Rick, J. E. (1999). Measures of perceived work characteristics for health services research: Test of a measurement model and normative data. *British Journal of Health Psychology, 4*, 257–275.

Hecht, T. D., & Boies, K. (2009). Structure and correlates of spillover from non-work to work: An examination of non-work activities, well-being, and work outcomes. *Journal of Occupational Health Psychology*, 14(4), 414-426. doi:10.1037/a0015981

Henkel, M. (2005). Academic identity and autonomy in a changing policy environment. *Higher Education*, 49, 155–176. doi**:**10.1007/s10734-004-2919-1

Henny, J., Anita, A.R., Hayati, K. S., & Rampal, L. (2014). Prevalence of burnout and its associated factors among faculty academicians. *Malaysian Journal of Medicine and Health Sciences*, 10(1), 51- 59.

Herrbach, O., Mignonac, K. & Gatignon, A. (2004). Exploring the role of perceived external prestige in managers' turnover intentions. *International Journal of Human Resource Management*, 15(8), 1390-1407. doi:10.1080/0958519042000257995

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513-524. doi:10.1037/0003-066X.44.3.513

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review*, 50, 337–370. doi:10.1111/1464-0597.00062

Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6(4), 307-324. doi:10.1037/1089-2680 .6.4.307

Hobfoll, S. E. (2010). Conservation of resources theory: Its implication for stress, health, and resilience. In S. Folkman & P. E. Nathan (Eds.), *The Oxford handbook of stress, health, and coping* (pp. 127–147). New York: Oxford.

Hobfoll, S. E. (2011). Conservation of resource caravans and engaged settings. Journal of *Occupational and Organizational Psychology*, 84, 116–122. doi:10.1111/j.2044-8325.2010.02016.x

Hobfoll, S. E., Johnson, R. J., Ennis, N., & Jackson, A. P. (2003). Resource loss, resource gain and emotional outcomes among inner city women. J*ournal of Personality and Social Psychology*, 84, 632-643. doi:10.1037/0022-3514.84.3.632

Holman, D., Martinez-Iñdigo, D., & Totterdell, P. (2008). Emotional labor, well-being, and performance. In C. L. Cooper & S. Cartwright (Eds.), *The Oxford handbook of organizational well-being* (pp. 331–355). New York, NY: Oxford University Press.

Hopwood, C.J., & Donnellan, M. B. (2010). How shouldthe internalstructure of personality inventories be evaluated? *Personality and Social Psychology Review*, 14(3), 332 – 346. doi: 10.1177/1088868310361240

Houston, D., Meyer, L. H., & Paewai, S. (2006). Academic staff workloads and job satisfaction: Expectations and values in academe. *Journal of Higher Education Policy and Management*, 28(1), 17-30. doi:10.1080/13600800500283734.

HrmAsia (2012, November 12). *Malaysia helping graduates to get job*. Retrieved from http://www.hrmasia.com

Huang, E., & Chen, F. (2011). *Electronic payment use and legal protection use and legal protection*. In Ariwa, E. & El-Qawasmeh, E. (Eds), Proceedings in Digital Enterprises and Information Systems: International Conference, DEIS 2011, London, UK July 20 - 22, 2011. London: Springer.

Hunter, E. M., Perry, S. J., Carlson, D. S., & Smith, S. A. (2010). Linking team resources to work-family enrichment and satisfaction. *Journal of Vocational Behavior*, 77, 304-312. doi:10.1016/j.jvb.2010.05.009

Hurley, A. E., Scandura, T. A., Schriesheim, C. A., Brannick, M. T., Seers, A.,…Williams, L. J.(1997). Exploratory and confirmatory factor analysis: Guidelines, issues, and alternatives. *Journal of Organizational Behavior*, 18, 667-683.

Ismail Hussein Amzat & Abdul Rahman Idris (2012). Structural equation models of management and decision-making styles with job satisfaction of academic staff in Malaysian research university. *International Journal of Educational Management*, 26 (7), 616 – 645. doi:10.1108/09513541211263700

Jaga, A., Bagraim, J., & Williams, Z. (2013). Work-family enrichment and psychological health. *SA Journal of Industrial Psychology*, 39(2), 1143-1153. doi:10.4102/sajip.v39i2.1143

James, J.B., Mckechnie, S., & Swanberg, J. (2011). Predicting employee engagement in an age-diverse retail workforce. *Journal of Organizational Behavior*, 32(2), 173–196. doi: 10.1002/job.681

Javed, M., Rafiq, M., Ahmed, M., & Khan, K. (2012). Impact of HR practices on employee job satisfaction in public sector organizations of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 4(1), 348-363. doi: 10.5829/idosi.mejsr.2013.16.01.11638

Ji, Y. (2013, July 13). Close to half of Malaysian graduates either jobless or employed in mismatched fields. *The Star Online*. Retrieved from http://www.thestar.com.my/

Johnsrud, L. K. & Heck, R. H. (1998). Faculty worklife: Establishing benchmarks across groups. *Research in Higher Education*, 39(5), 539-555. doi:10.1023/A:1018749606017

Joo, B.-K., Jeung, C.-W., & Yoon, H. J. (2010). Investigating the influences of core self-evaluations, job autonomy, and intrinsic motivation on in-role job performance. *Human Resource Development Quarterly*, 21(4), 353-371. doi:10.1002/hrdq.20053

Judge, T. A. & Bono, J. E. (2001). Relationship of core self-evaluations traits - self-esteem, generalized self-efficacy, locus of control, and emotional stability - with job satisfaction and job performance: A Meta-analysis. *Journal of Applied Psychology*, 86(1), 80-92. doi:10.1037//0021-9010.86.1.80

Judge, T. A., Bono, J. E., & Locke, E. A. (2000). Personality and job satisfaction: The mediating role of job characteristics. *Journal of Applied Psychology*, 85(2), 237-249. doi:10.1037//0021-9010.85.2.237

Judge, A. J., Bono, J. E., Erez, A., & Locke, E. A. (2005). Core self-evaluations and job and life satisfaction: The role of self- concordance and goal attainment. *Journal of Applied Psychology*, 90(2), 257-268. doi:10.1037/0021-9010.90.2.257

Judge, T. A., Erez, A., & Bono, J. E. (1998). The power of being positive: The relation between positive self-concept and job performance. *Human Performance*, 11, 167-187. doi:10.1080/08959285.1998.9668030

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, 83(3), 693-710. *doi*: 10.1037/0021-9010.62.4.446

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2003). The core self-evaluation scale: Development of a measure. *Personnel Psychology*, 56, 303-313. doi:10.1111/ j.1744-6570.2003.tb00152.x

Judge, T. A., Locke, E. A., & Durham, C. C. (1997). The dispositional causes of job satisfaction: A core evaluation approach. *Research in Organizational Behavior*, 19, 151-188.

Judge, T. A., Van Vianen, A. E. M., & De Pater, I. E. (2004). Emotional stability, core self-evaluations, and job outcomes: A review of the evidence and an agenda for future research. *Human Performance*, 17(3), 325-346. doi:10.1207/ s15327043hup1703_4.

Kacmar, K. M., Collins, B. J., Harris, K. J., & Judge, T. A. (2009). Core self-evaluations and job performance: The role of the perceived work environment. *Journal of Applied Psychology*, 94(6), 1572-1580. *doi*:10.1037/a0017498

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692-724.

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39*(1), 31-36.

Kammeyer-Mueller, J. D., Judge, T. A. & Scott, B .A. (2009). The role of core self-evaluations in the coping process. *Journal of Applied Psychology*, 4, 177-195. *doi*: 10.1037/a0013214

Kang, B., Twigg, N. W., & Hertzman, J. (2010). An examination of social support and social identify factors and their relationship to certified chefs' burnout. *International Journal of Hospitality Management*, 29, 168-176. doi:10.1016/j.ijhm.2009.08.004

Kanste, O. (2011). Work engagement, work commitment and their association with well-being in health care. *Scandinavian Journal of Caring Studies*, 25(4), 754-761. doi: 10.1111/j.1471-6712.2011.00888.x

Karasek, R., Baker, D., Marxer, F., Ahlbom, A., & Theorell, T. (1981). Job decision latitude, job demands, and cardiovascular disease: a prospective study of Swedish men. *American Journal of Public Health*, 71(7), 694-705. doi:10.2105/ AJPH.71.7.694

Karatepe, O. M. (2012). The effects of coworker and perceived organizational support on hotel employee outcomes: The moderating role of job embeddedness. *Journal of Hospitality & Tourism Research*, 36, 495-516. doi:10.1177/1096348011413592

Karatepe, O. M., & Olugbade, O. A. (2009). The effects of job and personal resources on hotel employees work engagement. *International Journal of Hospitality Management*, 28, 504-512. doi:10.1016/j.ijhm.2009.02.003

Katz, M. H. (2006). *Multivariable analysis: A practical guide for clinicians*. Cambridge: Cambridge University Press.

Kaur, S. (2009, September 6). Playing a numbers game. *The Star Online*, retrieved from http://thestar.com.my

Kay-Eccles, R. (2012). Meta-Analysis of the relationship between coworker social support and burnout using a two-level hierarchical linear model. *Western Journal of Nursing Research*, 34(8), 1062-1063. doi:10.1177/0193945912453684

Keeney, J., Boyd, E. M., Sinha, R., Westring, A., & Ryan, A. M. (2013). From "work-family" to "work-life": Broadening our conceptualization and measurement. *Journal of Vocational Behavior*, 82(3), 221-237. doi:10.1016/j.jvb.2013.01.005

250

Koen, C. (2003). Academics. *Human Resource Development Review*, 501-517. Retrieved from www.http://hrdwarehouse.hrsc.ac.za/hrd/academics/academics.pdf

Khairunneezam Mohd Noor (2011). Work-life balance and intention to leave among academics in Malaysian public higher education institutions. International *Journal of Business and Social Scienc*e, 2(11), 240-248.

Khowaja, K., Merchant, R. J., & Hirani, D. (2005). Registered nurses perception of work satisfaction at a Tertiary Care Univervisity Hospital. *Journal of Nursing Management*, 13(1), 32-39. doi:10.1111/j.1365-2834.2004.00507.x

Kidd, J. M., & Smewing, C. (2001). The role of supervisor in career and organizational commitment. *European Journal of Work and Organisational Psychology*, 10(1), 25-40. doi:10.1080/13594320042000016.

Kim, H. J., Shin, K. H., & Swanger, N. (2009). Burnout and engagement: A comparative analysis using the Big Five personality dimensions. *International Journal of Hospitality Management*, 28, 96-104. doi:10.1016/j.ijhm.2008.06.001

Kim, J. H., Ritchie, J. R. B., & McCormick, B. (2012). Development of a scale to measure memorable tourism experiences. *Journal of Travel Research,* 51(1),12-25. doi:10.1177/0047287510385467

King, W. R., & Teo, T. S. H. (1996). Key dimensions of facilitators and inhibitors for the strategic use of information technology. *Journal of Management Information Systems*, 12(4), 35-53. Retrieved from http://www.bschool.nus.edu.sg/staff/bizteosh/KingTeoJMIS1996.pdf

Kirchemeyer, C. (1992). Perceptions of non-work-to-work spillover: Challenging the common view of conflict-ridden domain relationships. *Basic and Applied Social Psychology*, 13, 231-249.

Kline, P. (1979). *Psychometrics and psychology*. London: Academic Press.

Koay, L. S. (2010). *HRM practices and employees turnover intention of private higher education institutions (PHEIs) in Penang: The mediating roles of workplace well-being* (Master's thesis). Retrieved from

http://eprints.usm.my/23982/1/HRM_PRACTICES_AND_EMPLOYEES_TURNO
VER_INTENTION_OF_PRIVATE_HIGHER_EDUCATION_INSTITUTES_PHEI
s_IN_PENANG_THE_MEDIATING_ROLES_OF_WORKPLACE_WELL_BEING
.pdf

Kopelman, R. E., Greenhaus, J. H., & Connolly, T. F. (1983). A model of work, family, and interrole conflict: A construct validation study. *Organizational Behavior and Human Performance*, 32, 198–215. doi:10.1016/0030-5073(83)90147-2

Korunka, C., Kubicek, B., Schaufeli, W. B., & Hoonakker, P. (2009). Work engagement and burnout: Testing the robustness of the job demands - resources model. *The Journal of Positive Psychology*, 4(3), 243-255. doi**:**10.1080/17439760902879976

Kouzes, J. M., & Posner, B. Z. (1999). *Encouraging the heart: A leader's guide to rewarding and recognizing others*. San Francisco, CA: Jossey-Bass Publishers.

Koyuncu, M., Burke, R. J., & Fiksenbaum, L. (2006). Work engagement among women managers and professionals in a Turkish bank: Potential antecedents and consequences. *Equal Opportunities International*, 25(4), 299-310. doi:10.1108/ 02610150610706276

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.

Krosnick, J. A., & Presser, S. (2010). Question and questionnaire design. In J. D. Wright & P. V. Marsden (Eds.), *Handbook of survey research* (2nd ed.). Wagon Lane, Bingley: Emerald Group.

Lackritz, J. R. (2004). Exploring burnout among university faculty: Incidence, performance, and demographic issues. *Teaching and Teacher Education*, 20, 713-729. doi:10.1016/j.tate.2004.07.002

Lacy, F. J., & Sheehan, B. A. (1997). Job Satisfaction among academic staff: An international perspective. *Higher Education*, 34(3), 305-322.

Lafferty, G., & Fleming, J. (2000). The restructuring of academic work in Australia: Power, management and gender. *British Journal of Sociology of Education,* 21(2), 257-267. doi:10.1080/713655344

Lait, J., & Wallace, J. E. (2002). Stress at work: A study of organizational-professional conflict and unmet expectations. *Industrial Relations*, 57(3), 463-487.

Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods*, 9(2), 202-220. doi:10.1177/1094428105284919

Langelaan, S., Bakker, A. B., Van Doornen, I. J. P., & Schaufeli, W. B. (2006). Burnout and work engagement: Do individual differences make a difference? *Personality and Individual Differneces*, 40, 521-532. doi:10.1016/j.paid.2005.07.009

Langford, C. P., Bowsher, J., Maloney, J. P., & Lillis, P. P. (1997). Social support: A conceptual analysis. *Journal of Advanced Nursing*, 25(1), 95-100. doi: 10.1046/j.1365-2648.1997.1997025095.x

Langford, P. H. (2010). Benchmarking work practices and outcomes in Australian universities using an employee survey. *Journal of Higher Education Policy and Management, 32(1),* 41–53. doi:10.1080/13600800903440543

Langfred, C. W., & Moye, N. A. (2004). Effects of task autonomy on performance: An extended model considering motivational, informational, and structural mechanisms. *Journal of Applied Psychology*, 89(6), 934–945. doi:10.1037/0021-9010.89.6.934

Lee, M. N. N. (2000). The impacts of globalization on education in Malaysia. In N. P. Stromquist, & K. Monkman (Eds.), *Globalization and education: Integration and contestation across cultures* (pp. 315-332). Oxford: Rowman & Littlefield.

Lee, M. N. N. (2003). The academic profession in Malaysia and Singapore: Between bureaucratic and corporate culture. In Altbach, P. G. (Eds.), *The decline of the guru: The academic profession in developing and middle-income countries* (pp.135-166). New York: Palgrave Macmillan.

Lee, M. N. N. (2004). Global trends, national policies and institutional responses: Restructuring higher education in Malaysia. *Educational Research for Policy and Practice* (2004), 3(1), 31–46. doi:10.1007/s10671-004-6034-y

Lee, M. N. N. (2015). Educational reforms in Malaysia: Towards equity, quality and efficiency. In Weiss, M. L. (Eds.), *Routledge Handbook of Contemporary Malaysia* (pp. 302- 311). Oxon: Routledge.

Lee, P. C. B. (2004). Social support and leaving intention among computer professionals. *Information & Management*, 41(3), 323–334. doi:10.1016/S0378-7206(03)00077-6

Lee, R. T., & Ashforth, B. E. (1993). A further examination of managerial burnout: Toward an integrated model. *Journal of Organizational Behavior*, 14, 3-20.

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81, 123–133

Leiter, M. P., & Bakker, A. B. (2010). Work engagement: Introduction. In A. B. Bakker, & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp.1-9). New York: Psychology Press.

Leiter, M. P., & Maslach, C. (2004). Areas of worklife: A structured approach to organizational predictors of job burnout. In P. L. Perrewe & D. C. Ganster (Eds.), *Research in occupational stress and well-being,* (Vol. 3, pp. 91-134). Oxford: Elsevier.

Leon, A. C., Davis, L. L., & Kraemer, H. C. (2011). The role and interpretation of pilot studies in clinical research. *Journal of Psychiatric Research*, 45(5), 626-629. doi:10.1016/j.jpsychires.2010.10.008

Leuty, M. E. & Hansen, J. C. (2011). Evidence of construct validity for work values, *Journal of Vocational Behavior,* 79, 379–390. doi:10.1016/j.jvb.2011.04.008

Lew, T. Y. (2011). Understanding the antecedents of affective organizational commitment and turnover intention of academics in Malaysia: The organizational support theory perspectives. *African Journal of Business Management*, 5(7), 2551-2562.

Lewig, K. A., Xanthopoulou, D., Bakker, A. B., Dollard, M. F., & Metzer, J. C. (2007). Burnout and connectedness among Australian volunteers: A test of job demands-resources model. *Journal of Vocational Behavior*, 71(3), 429-445. doi:10.1016/j.jvb.2007.07.003

Lewis, S. (1997). Family friendly employment policies: a route to changing organizational culture or playing about at the margins? *Gender, Work and Organization*, 4 (1), 13-23.

Liao, H., Joshi, A., & Chuang, A. (2004). Sticking out like a sore thumb: Employee dissimilarity and deviance at work. *Personnel Psychology*, *57*, 969–1000. doi:10.1111/j.1744-6570.2004.00012.x

Lim, D. H., Choi, M., & Song, J. H. (2012). Work-family enrichment in Korea: Construct validation and status. *Leadership & Organization Development Journal*, 33(3), 282-299. doi:10.1108/01437731211216470

Llorens, S., Bakker, A. B., Schaufeli, W. B., & Salanova, M. (2006). Testing the robustness of the job demands-resources model. *International Journal of Stress Management*, 13, 378-391. doi:10.1037/1072-5245.13.3.378

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297-1349). Chicago: Rand-McNally.

Lockwood, N. R. (2007). Leveraging employee engagement for competitive advantage: HR's strategic role. *SHRM Research Quarterly*. Retrieved from http://www.shrm.org/Research/Articles/Articles/Documents/07MarResearchQuarterly.pdf

Lodahl, T. M., & Kejner, M. (1965). The definition and measurement of job involvement. *Journal of Applied Psychology*, *49*, 24-33.

Loher, B. T., Noe, R. A., Moeller, N. L., & Fitzgerald, M. P. (1985). A meta-analysis of the relation of job characteristics to job satisfaction. *Journal of Applied Psychology,* 70, 280–289. doi: 10.1037/0021-9010.70.2.280

Loehr, J. (2005). Become fully engaged. *Leadership Excellence*, 22(2), 14.

Lu, C. Q., Siu, O. L., Chen, W. Q., & Wang, H. J. (2011). Family mastery enhances work engagement in Chinese nurses: A cross lagged analysis. *Journal of Vocational Behavior*, 78, 100-109. doi:10.1016/j.jvb.2010.07.005

Lu, L. (2011). A Chinese longitudinal study on work/family enrichment. *Career Development International*, 16(4), 385 - 400. doi: 10.1108/13620431111158797

Luthans, F. (2002). Positive organizational behavior (POB): Developing and managing psychological strengths. *Academy of Management Executive*, 16(1), 57-72. doi: 10.1177/0149206307300814

Luthans, F., & Youssef, C. M. (2007). Emerging positive organizational behavior. *Journal of Management*, 33(3), 321-49. doi:10.1177/0149206307300814

Luxmi & Yodav, V. (2011). Perceived organizational support as a predictor of organizational commitment and role stress. *Paradigm (Institute of Management Technology)*, 15 (1/2), 39.

Lynch, P. D., Eisenberger, R., & Armeli, S. (1999). Perceived organizational support: Inferior versus superior perfromance by wary employees. *Journal of Applied Psychology*, 84(4), 467-483. doi:10.1037/0021-9010.84.4.467

Lyons, S. T. (2003). *An exploration of generational values in life and at work* (Doctoral thesis, Carleton University). Retrieved from http://disexpress.umi.com Catalogue #:AAT NQ94206.

Lyons, S. T., Higgins, C. A., & Duxbury, L. (2010). Work values: Development of a new three-dimensional structure based on confirmatiory smallest space analysis. *Journal of Organizational Behavior*, 31, 969-1002. doi:10.1002/job.658

Mael, F., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, 13, 103-123. doi:10.1002/job.4030130202

Maetz, C. P., & Boyar, S. L. (2011). Work-family conflict, enrichment, and balance under "Levels" and "Episodes" approaches. *Journal of Management*, 37(1), 68-98. doi:10.1177/0149206310382455.

Manion J. (2009). *Managing the multi-generational nursing workforce: Managerial and policy implications*. Jean-Marteau, Geneva: International Centre for Human Resources in Nursing (ICHRN). Retrieved from http://memberfiles.freewebs.com/67/27/85462767/documents/managing_nursing_workforce-2.pdf

Marks, S. P. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review*, 42, 921-936.

Maslach, C., & Leiter, M. P. (1997). *The truth about burnout*. San Francisco, CA: Jossey-Bass.

Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology*, 93(3), 498-512. doi:10.1037/0021-9010.93.3.498

Maslach, C., Schaufeli, W. B. & Leiter, M. P. (2001). Job burnout. A*nnual Review of Psychology*, 52, 397-422. doi:10.1146/annurev.psych.52.1.397

Masson, R. C., Royal, M. A., Agnew, T. G., & Fine, S. (2008). Leveraging employee engagement: The practical implications. *Industrial and Organizational Psychology*, 1, 56-59. doi:10.1111/j.1754-9434.2007.00009.x

Masuda, A. D., McNall, L. A., Allen, T. D., & Nicklin, J. M. (2012). Examining the constructs of work-to-family enrichment and positive spillover. *Journal of Vocational Behavior*, 80, 197–210. doi:10.1016/j.jvb.2011.06.002

Mauno, S., Kinnunen, U. & Roukolainen, M., (2007). Job demands and resources as antecedents of work engagement: A longitudinal study. *Journal of Vocational Behavior*, 70(1), 149-171. doi:10.1016/j.jvb.2006.09.002

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*, 11, 11-37.

Mayer, R. C. & Shoorman, F. D. (1998). Differentiating antecedents of organizational commitment: A test of March and Simon's model. *Journal of Organizational Behavior*, 19, 15-28. doi:10.1002/(SICI)1099-1379(199801)19:1<15::AID-JOB816>3.0.CO;2-C

McIntyre, L. J. (2005). *Need to know: Social science research methods*. Boston: McGraw-Hill.

McMillan, L. H. W., O'Driscoll, M. P., & Burke, R. J. (2003). Workaholism: a review of theory, research and new directions. In C. L. Cooper & I. T. Robertson (Eds.),

International review of industrial and organizational psychology (pp. 167–190). New York: John Wiley.

McNall, L. A., Masuda, A. D., & Nicklin, J. M. (2010). A Meta-analytic review of the consequences associated with work–family enrichment. *Journal of Business Psychology*, 25, 381–396. doi:10.1007/s10869-009-9141-1

Mesmer-Magnus, J., & Viswevaran, V. (2009). The role of the coworker in reducing work–family conflict: A review and directions for future research. *Pratiques Psychologiques*, 15 (2), 213–224. doi:10.1016/j.prps.2008.09.009

Meyers, L. S., Gamst, G. & Guarino, A. J. (2006). *Applied multivariate research: Design and interpretation*. Thousand Oaks, California: SAGE Publications.

Michel, R. D. J., & Michel, C. E. J. (2012). Faculty satisfaction and work-family enrichment: The moderating effect of human resource flexibility. *Procedia - Social and Behavioral Sciences,* 46, 5168 – 5172. doi:10.1016/j.sbspro.2012.06.402

Michel, J. S., & Clark, M. A. (2009). Has it been affect all along? A test of work-to-family and family-to-work models. *Personality and Individual Differences,* 47, 163–168. doi:10.1016/j.paid.2009.02.015

Mignonac, K., Herrbach, O., & Guerrero, S. (2006). The interactive effects of perceived external prestige and need for organisational identification on turnover intentions. *Journal of Vocational Behavior*, 69, 477-493. doi:10.1016/j.jvb.2006.05.006

Miller, J. (2003). Critical incident stress debriefing and social work: Expanding the frame. *Journal of Social Service Research*, 30(2), 7-25.

Miller, K. I., Elis, B. H. & Lyles, J. S. (1990). An integrated model of communication, stress and burnout in the workplace. *Communication Research*, 17(3), 300-326. doi: 10.1177/009365090017003002

Ministry of Higher Education Malaysia, MoHE (2012a). *Chapter 1: Public higher education institutions. Malaysia.* Retrieved from http://www.mohe.gov.my/web_statistik/perangkaan2011/BAB1-IPTA.pdf

Ministry of Higher Education Malaysia, MoHE (2012b). *Chapter 2: Private higher education institutions. Malaysia.* Retrieved from http://www.mohe.gov.my/web_statistik/perangkaan2011/BAB2-IPTS.pdf

Ministry of Higher Education Malaysia, MoHE (2013). *National Higher Education Strategic Plan (NHESP).* Retrieved from http://www.mohe.gov.my/portal/en/info-kementerian-pengajian-tinggi/pelan-strategik.html

Ministry of Education Malaysia (2015). *Public institutions of higher educations.* Retrieved from http://www.moe.gov.my/v/ipta

Mohd Kamel Idris (2011). Over Time Effects of Role Stress on Psychological Strain among Malaysian Public University Academics. *International Journal of Business and Social Science, 2(9), 154-161.*

Montgomery, A. J., Peeters, M. C. W., Schaufeli, W. B., & Ouden, M. D. (2003). Work-home interference among newspaper managers: Its relationship with burnout and engagement. *Anxiety, Stress and Coping*, 16(2), 195-211. doi:10.1080/1061580021000030535

Morshidi Sirat (2010). Strategic planning directions of Malaysia's higher education: university autonomy in the midst of political uncertainties. *Higher Education*, 59, 461-473. doi: 10.1007/s10734-009-9259-0

Moses, I. (1986). Promotion of academic staff: Reward and incentive. *Higher Education*, 15(1/2), 135-149. doi:10.1007/BF00138097

Mostert, K., & Rathbone, A. D. (2007). Work characteristic, work-home interaction and engagement of employees in the mining industry. *Management Dynamics*, 16(2), 36-52.

Munn, E. K., Barber, C. E. & Fritz, J. J. (1996). Factors affecting the professional well-being of child life specialists. *Children's Health Care*, 25(2), 71-91. doi: 10.1207/s15326888chc2502_1

Mukherji, P., & Albon, D. (2010). *Research methods in early childhood: An introductory guide*. London: SAGE Publications.

Nakata, A., Haratani, T., Takahashi, M., Kawakami, N., Aritoa, H., Kobayashic, F., & Araki, S. (2004). Job stress, social support, and prevalence of insomnia in a population of Japanese daytime workers. *Social Science & Medicine*, 59(8), 1719–1730. doi:10.1016/j.socscimed.2004.02.002

Nelson, D. L., & Simmons, B. L. (2003). Health psychology and work stress: A more positive approach. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 97-119). Washington, DC: American Psychological Association,

Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). Scaling procedures: Issues and applications. Thousand Oaks, CA: Sage Publications.

Neumeister, J. R. (2007). *This new whole: An exploration into the factors of self-authorship in college students* (Master's thesis). Available from ProQuest Dissertations & Theses database. (UMI No. 1448735).

Newton, R. R., & Rudestam, K. E. (1999). *Your statistical consultant: Answers to your data analysis questions*. Thousand Oaks, California: SAGE Publications.

Ng, L. P., Kuar, L. S., & Lai, K. F. (2013). *The impact of job demands, supervisor support and job control on work-to-personal life conflict among the employed workers*. Proceedings of the International Conference on Social Science Research (pp. 628-647). Penang, Malaysia.

Ng, M. L. Y., & See, C. M. (2012). The fundamental lifestyle of a university community: A case study of higher education in a Malaysian Institution. *The Professional Counselor*, 2(3), 178-191. doi:10.15241/mna.2.3.178

Ng, S. F., Ahmad, A., & Omar, Z. (2014). Role of work-family enrichment in improving job satisfaction. *American Journal of Applied Sciences*, 11(1), 96-104. doi:10.3844/ajassp.2014.96.104

Ng'ethe, J. M., Iravo, M. E., & Namusonge, G. S. (2012). Determinants of academic staff retention in public universities in Kenya: Empirical review. *International Journal of Humanities and Social Science,* 2 (13), 205-212.

Ngui, K. W., Hong, K. S., Gan, S. L., Usop, H. H., & Mustafa, R. (2010). Perception of senior executive leadership behaviour and effectiveness in Malaysian public universities. In M. Devlin, J. Nagy, & A. Lichtenberg, (Eds.), *Research and development in higher education: Reshaping higher education*, 33 (pp. 515-527). Melborne.

Nilufar Ahsan, Zaini Abdullah, Yong, D. G. F., & Syed Shah Alam (2009). A study of job stress on job satisfaction among university staff in Malaysia: Empirical study. *European Journal of Social Sciences, 8(1), 121-131.*

Norzaini Azman, Morshidi Bin Sirat and Mohd Ali Samsudin (2013). An academic life in Malaysia: A wonderful life or satisfaction not guaranteed? In Bentley, P. J., Coates, H., Dobson, I., Goedegebuure, L., & Meek, V. L. (Eds.). *Job satisfaction around the academic world* (pp. 166 -186).Dordrecht, New York: Springer.

Norušis, M. J. (2005). *SPSS 13.0 Statistical Procedures Companion*. Chicago: SPSS, Inc.

Nunally, J. C. (1978). *Psychometric Theory*. New York: McGraw Hill.

O'Connor, J. P., & Kinnane, J. F. (1961). *A factor analysis of work values*, 8(3), 263-267.

Odle-Dusseau, H. N., Britt, T. W., & Green-Shortridge, T. M. (2012). Organisational work-family resources as predictors of job performance and attitudes: The process of work-family conflict and enrichment. *Journal of Occupational Health Psychology*, 17(1), 28-40. doi:10.1037/a0026428

O' Driscoll, M. P., Ilgen, D. R., & Hildreth, K. (1992). Time devoted to job and off-job activities, interrole conflict, and affective experiences. *The Journal of Applied Psychology*, 77, 272–279. doi:10.1037/0021-9010.77.3.272

O'Driscoll, M. P., & Randall, D. M. (1999). Perceived organizational support, satisfaction with rewards, and employee job involvement and organizational commitment. *Applied Psychology: An International Review*, 48(2), 197-209. doi:10.1111/j.1464-0597.1999.tb00058.x

Okpara, J. O., Squillace, M., & Erondu, E. A. (2005). Gender differences and job satisfaction: A study of university teachers in the United States. *Women in Management Review*, 20(3), 177-190. doi: 10.1108/09649420510591852

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, 39(3), 607–634. *doi*:10.2307/256657

O'Muircheartaigh, C., Krosnick, J. A., & Helic, A. (2000). *Middle alternatives, acquiescence, and the quality of questionnaire data.* Working paper series of the Irving B. Harris Graduate School of Public Policy Studies. Retrieved from http://www.ukgeographics.co.uk/Doc/Middle_Alternatives_Acquiescence_and_The _Quality_of_Questionnaire_Data.pdf

Oshagbemi, T. (1997). Job satisfaction and dissatisfaction in higher education. *Education + Training*, 39(9), 354–359.

Pallant, J. (2013). *SPSS survival manual: A step by step guide to data analysis using SPSS* (4th ed.). Berkshire: Open University Press.

Paré, G., & Tremblay, M. (2007). The influence of high-involvement human resources practices, procedural justice, organizational commitment, and citizenship behaviors on information technology professionals' turnover intentions. *Group & Organization Management*, 32, 326-357. doi:10.1177/1059601106286875

Pati, S. P., & Kumar, P. (2010). Employee engagement: Role of self-efficacy, organizational support & supervisor support. *The Indian Journal of Industrial Relations,* 46(1), 126-37.

Pazy, A., & Ganzach, Y. (2008). Pay contigency and the effects of perceived organizational and supervisor support on performance and commitment. *Journal of Management*, 35(4), 1007-1025. doi: 10.1177/0149206307312505

Pedhazur, E. J., & Schemelkin, L.P. (1991). *Measurement, design, and analysis, An integrated approach*. New Jersey: Lawrence Erlbaum Associates.

Pienaar, C., & Bester, C. (2009). Addressing career obstacles within a changing higher education work environment: Perspectives of academics. *South African Journal of Psychology*, 39(3), 376-385.

Pienaar, J., & Willemse, S. A. (2008). Burnout, engagement, coping and general health of service employeesin the hospitality industry. *Tourism Management*, 29(6), 1053-1063. doi:10.1016/j.tourman.2008.01.006

Pilie, Z. A. L., Sadeghi, A. & Elias, H. (2011). Analysis of head of departments leadership styles: Implication for improving research university management practices. *Procedia - Social and Behavioral Sciences*, 29, 1081 – 1090. doi:10.1016/j.sbspro.2011.11.341

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. doi:10.1037/0021-9010.88.5.879

Poelmans, S., Stepanova, O., & Masuda, A. (2008). Positive spillover between personal and professional life: Definitions, antecedents, consequences and strategies. In K. Korabik, D.S. Lero, & D. L. Whitehead (ed.), *Handbook of work-family integration: Research, theory, and best practices*. Amsterdam: Academic Press.

Pratt, M. G. (1998). To be or not to be? Central questions in organizational identification. In D. A. Whetten & P. C. Godfrey (Eds.), *Identities in organizations: Building theory through conversations* (pp. 171-207). Thousand Oaks: SAGE Publications.

QS Quacquarelli Symonds University Rankings (2015). Retrieved from http://www.topuniversities.com/asian-rankings

Ramachandran, S. D., Siong, C. C., & Hishamuddin Ismail (2011). Organisational culture. *International Journal of Educational Management*, 25 (6), 615 - 634. doi:10.1108/09513541111159086

Ramamoorthy, N., Flood, P. C., Slattery, T., & Sardessai, R. (2005). Determinants of innovative work behaviour: Development and test of an integrated model. *Creativity & Innovation Management,* 14(2), 142-150. doi:10.1111/j.1467-8691.00337.x

Rantanen, J. (2008). *Work-family interface and psychological well-being: A personality and longitudinal perspective*. Marja-Leena Tynkkynen: University of Jyväskylä, Retrieved from https://jyx.jyu.fi/dspace/bitstream/handle/123456789/19200/9789513934255.pdf?sequence=1

Rashid Aziz , Sharif Mustaffa, Narina A.Samah, & Rosman Yusof (2014). Personality and happiness among academicians in Malaysia. *Procedia - Social and Behavioral Sciences 116*, 4209 – 4212. doi: 10.1016/j.sbspro.2014.01.918

Rattary, J., & Jones, M. C. (2007). Essential elements of questionnaire design and development. *Journal of Clinical Nursing*, 16(2), 234-243. doi: 10.1111/j.1365-2702.2006.01573.x

Ravichandran, K., Arasu, R., & Kumar, A. (2011). The impact of emotional intelligence on employee work engagement behavior: An empirical study. *International Journal of Business and Management*, 6(11), 157- 169. doi:10.5539/ijbm.v6n11p157

Repeti, R. L., & Cosmas, K. A. (1991). The quality of the social environment at work and job satisfaction. *Journal of Applied Social Psychology*, 21(10), 840-854. doi: 10.1111/j.1559-1816.1991.tb00446.x

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87(4), 698–714. doi:10.1037//0021-9010.87.4.698

Rhoades, L., Eisenberger, R., & Armeli, S. (2001). Affective commitment to the organization: The contribution of perceived organisation support. *Journal of Applied Psychology*, 86(5), 825-836. doi**:** 10.1037//0021-9010.86.5.825

Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53(3), 617-635. doi: 10.5465/AMJ.2010.51468988

Richardsen, A. M., Burke, R. J., & Martinussen, M. (2007). Work and health outcomes among police officers: The mediating role of police cynicism and engagement. *International Journal of Stress Management,* 13(4), 555–574. doi:10.1037/1072-5245.13.4.555

Riggle, R, J., Edmondson, D. R., & Hansen, J. D. (2009). A meta-analysis of the relationship between perceived organizational support and job outcomes: 20 years of research. *Journal of Business Research*, 62, 1027-1030. doi:10.1016/ j.jbusres.2008.05.003

Robbinson, D., Perryman, S., & Hayday, S. (2004). *The Drivers of Employee Engagement*. Brighton: Institte for Employment Studies (IES). Retrieved from http://www.employment-studies.co.uk/summary/summary.php?id=408&style=print

Romainville, M. (1996). Teaching and research at university: A difficult pairing. *Higher Education Management*, 8, 135–144.

Roscoe, J. T. (1975). *Fundamental research statistics for the behavioural sciences* (2nd ed.). New York: Holt Rinehart & Winston.

Ros Intan Safinah Munir, Ramlee Abdul Rahman, Ariff, Md. Ab. Malik, & Hairunnisa Ma'amor (2012). Relationship between transformational leadership and employees'job satisfaction among the academic staff. *Procedia - Social and Behavioral Sciences*, 65, 885 – 890.

Rosseau, V., & Aubé, C. (2010). Social support at work and affective commitment to the organization: The moderating effect of job resource adequacy and ambient condition. *The Journal of Social Psychology*, 150(4), 321-340. doi: 10.1080/ 00224540903365380.

Rothman, S., & Joubert, J. H. M. (2007). Job demands, job resources, burnout and work engagement of managers at a platinum mine in the North West Province. *South Africa Business Management*, 38(3), 49-61.

Rowley, J. (1996). Motivation and academic staff in higher education. *Quality Assurance in Education*, 4(3), 11-16. doi:10.1108/09684889610125814

Ruderman, M. N., Ohlott, P. J., Panzer, K., & King, S. N. (2002). Benefits of multiple roles for managerial women. *Academy of Management Journal*, 45, 369-386. doi:10.2307/3069352

Sabharwal, M., & Corley, E. A. (2009). Faculty job satisfaction across gender and discipline. *The Social Science Journal*, 46, 539-556. doi:10.1016/j.soscij.2009.04.015

Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21(7), 600-619. doi:10.1108/02683940610690169.

Salanova, M., Agut, S., & Peiro´, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology*, 90(6), 1217-1227. doi:10.1037/0021-9010.90.6.1217

Salanova, M., & Schaufeli, W. B (2008). A cross-national study of work engagement as a mediator between job resources and proactive behaviour. *The International Journal of Human Resource Management*, 19(1), 116-131. doi:10.1080/09585190701763982

Sanders, G. F. & Walters, J. (1985). Life satisfaction and family strengths of older couples. *Lifestyles*, 7(4), 194-206.

Sanderson, K. (2012). Academic expatriation: An investigation into the importance of connections when entering expatriate life. In N. Brown, S. M. Jones, & A. Adam (Eds.), *Research and development in higher education: Connections in higher education*, 35 (pp. 260 – 270). Hobart, Australia: Higher Education Research and Development Society of Australasia.

Santhapparaj, A. S. & Syed Shah Alam (2005). Job satisfaction among academic staff in private universities in Malaysia. *Journal of Social Science*, 1(2), 72 - 76. Retrieved from thescipub.com/PDF/jssp.2005.72.76.pdf

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students* (6th ed.). New Jersey: Prentice Hall.

Sawang, S. (2012). Is there an inverted U-shaped relationship between job demands and work engagement: The moderating role of social support? *International Journal of Manpower*, 33(2), 178-186. doi:10.1108/01437721211225426

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293-315. doi: 10.1002/job.248

Schaufeli., W. B., & Bakker, A. B. (2010). Defining and measuring work engagement: Bringing clarity to the concept. In A. B. Bakker & M. P. Leiter (Eds.). *Work engagement: A handbook of essential theory and research* (pp.10-24). New York: Psychology Press.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66, 701-716. doi:10.1177/0013164405282471

Schaufeli, W. B., Bakker, A. B., & Van Rhenen, W. (2009). How changes in job demands predict burnout, work engagement, and sickness absenteeism. *Journal of Organizational Behavio*, 30, 893-917. doi:10.1002/job.595

Schaufeli, W. B., & Salanova, M. (2011). Work engagement: On how to better catch a slippery concept. *European Journal of Work and Organizational Psychology*, 20(1), 39-46. doi:10.1080/1359432X.2010.515981

Schaufeli, W. B., Salanova, M., González-Romá, V. G., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies,* 3, 71-92. doi:10.1023/A:1015630930326

Schaufeli, W. B., Taris, T. W., & Van Rhenen, W. (2008a). Workaholism, burnout and engagement: Three of a kind or three different kinds of employee well-being? *Applied Psychology: An International Review*, 57, 173-203. doi:10.1111/j.1464-0597.2007.00285.x

Schaufeli, W. B., Taris, T. W., & Bakker, A. B. (2008b). It takes two to tango. Workaholism is working excessively and working compulsively. In R. J. Burke & C. L. Cooper (Eds.), *The long work hours culture: Causes, consequences and choices* (pp. 203–226). Bingley, UK: Emerald.

Schmitt, N. (1994). Method bias: The importance of theory and management. J*ournal of Organizational Behavior*, 15, 393-398. doi: 10.1037/0021-9010.88.5.879

Schmidt, E. K., & Langberg, K. (2008). Academic autonomy in a rapidly changing higher education framework: Academia on the Procrustean bed? *European Education*, 39(4), 80-94. doi:10.2753/EUE1056-4934390406

Scott, K. S., Moore, K. S., & Miceli, M. P. (1997). An exploration of the meaning and consequences of workaholism. *Human Relations*, 50(3), 287-314.

Sekaran, U., & Bougie, R. (2009). *Research methods for business: A skill building approach* (5th ed.). West Sussex: John Wiley & Sons.

Seligman, M. E. P. (2003). Positive psychology: Fundamental assumptions. *The Psychologist,* 16, 126–127.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: an introduction. *American Psychologist*, 55, 5-14. doi:10.1037//0003-066X.55.1.5

Sharma, S., Durand, R .M. & Gur-arie, O. (1981). Identification and analysis of moderator variables. *Journal of Marketing Research*, 18, 191-300.

Shein, J., & Chen, C. P. (2011). *Work-family enrichment: A research of positive Transfer*. Rotterdam: Sense Publishers.

Shimazu, A., Demerouti, E., Bakker, A., Shimada, K., & Kawakami, N. (2011). Workaholism and well-being among Japanese dual career earner couples: A spillover-crossover perspective. *Social Science & Medicine*, 73, 399-409. doi:10.1016/j.socscimed.2011.05.049

Shimazu, A., Schaufeli, W. B., Kosugi, S., Suzuki, A., Nashiwa, H., Kato, A., … Kitaoka-Higashiguchi, K. (2008). Work engagement in Japan: Development and validation of the Japanese version of the Utrecht Work Engagement Scale. *Applied Psychology: An International Review*, 57(3), 510-532. doi:10.1111/j.1464-0597.2008.00333.x

Shimazu, A., Schaufeli, W. B., Kubota, K., & Kawakami, N. (2012). Do wokaholism and work engagement predict employee well-being and performance in opposite directions? *Industrial Health*, 50, 316-321.

Sieber, S. (1974). Toward a theory of role accumulation. *American Sociological Review*, 39(4), 567−578.

Simpson, M. R. (2009). Engagement at work: A review of the literature. *International Journal of Nursing Studies*, 46(7), 1012-1024. doi:10.1016/j.ijnurstu.2008.05.003

Smidts, A., Pruyn, A. T. H., & van Riel, C. B. M. (2001). The impact of employee communication and perceived external prestige on organization identification. *The Academy of Management Journal*, 44(5), 1051-1062.

Song, J. H., Kolb, J. A., Lee, U. H., & Kim, H. K. (2012). Role of transformational leadership in effective organizational knowledge creation practices: Mediating effects of employees' work engagement. *Human Resource Development Quarterly*, 23(1), 65-101. doi: 10.1002/hrdq.21120

Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior: A new look at the interface between non-work and work. *Journal of Applied Psychology*, 88(3), 518-528.

Sonnentag, S., Dormann, C., & Deremouti, E. (2010). Not all days are created equal: The concept of state work engagement. In A. B. Bakker & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp.25-38). New York: Psychology Press.

Spector, P. E. (1986). Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. *Human Relations*, 39, 1005–1016. doi*:*10.1177/001872678603901104

Spector, P. E. (1994). Using self-report questionnaires in OB research: A comment on the use of a controversial method. *Journal of Organizational Behavior*, 15(5), 385-392. doi: 10.1002/*job*.4030150503

Srivastava, A., Locke, E. A., Judge, T. A., & Adams, J. W. (2010). Core self-evaluations as causes of satisfaction: The mediating role of seeking task complexity. *Journal of Vocational Behavior*, 77, 255−265. doi:10.1016/j.jvb.2010.04.008

Stairs, M. (2005). Work happy: Developing employee engagement to deliver competitive advantage. *Selection & Development Review*, 21(5), 7-11.

Stamper, C. L., & Johlke, M. C. (2003). The impact of perceived organizational support on the relationship between boundary spanner role stress and work outcomes. *Journal of Management,* 29(4), 569–588. doi:10.1016/S0149-2063(03)00025-4

Stinglhamber, F., & Vandenberghe, C. (2004). Favorable job conditions and perceived support: the role of organizations and supervisors. *Journal of Applied Social Psychology*, 34, 1470–1493. doi:10.1002/job.192

Storm, K., & Rothman, I. (2003). A psychometric analysis of the Utrecht Work Engagement Scale in the South African police service. *South African Journal of Industrial Psychology*, 29, 62-70. doi:10.4102/sajip.v29i4.129

Sundin L., Hochwälder, J., Bildt, C., & Lisspers, J. (2007). The relationship between different work-related sources of social support and burnout among registered and assistant nurses in Sweden: A questionnaire survey. *International Journal of Nursing Studies*, 44, 758-769. doi:10.1016/j.ijnurstu.2006.01.004

Super, D. E. (1970). *Work values inventory*. Boston: Houghton Mifflin.

Swanberg, J. E., McKechnie, S. P., Ojha, M. U., & James, J. B. (2011). Schedule control, supervisor support and work engagement: A winning combination for workers in hourly jobs? *Journal of Vocational Behavior*, 79, 613-624. doi:10.1016/j.jvb.2011.04.012

Sweetman, D., & Luthans, F. (2010). The power of positive psychology: Psychological capital and work engagement. In A. B. Bakker & M. P. Leiter (Eds.), *Work*

engagement: A handbook of essential theory and research (pp. 54-68). New York: Psychology Press.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Upper Saddle River, New Jersey: Pearson.

Takawira, N., Coetzee, M., & Schreuder, D. (2014). Job embeddedness, work engagement and turnover intention of staff in a higher education institution: An exploratory study. *SA Journal of Human Resource Management 12*(1), 1-10. http://dx.doi.org/10.4102/ sajhrm.v12i1.524

Taipale, S., Selander, K., Anttila, T., & Nätti, J. (2011). Work engagement in eight European countries: The role of job demands, autonomy, and social support. *International Journal of Sociology and Social Policy*, 31(7/8), 486-504, doi: 10.1108/01443331111149905

Taris, T. W., Schaufeli, W.B., & Shimazu, A. (2010). The push and pull of work: The differences between workaholism and work engagement. In A. B. Bakker & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp.39-53). New York; Psychology Press.

Taris, T. W., Schreurs, P. J. G., & Silfhout, I. J. V. (2001). Job stress, job strain, and psychological withdarawal among Dutch university staff: Towards a dual-process model for the effects of occupational stress. *Work & Stress*, 15(4), 283-296. doi:10.1080/02678370110084049

Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications*. Washington: American Psychological Association

Times Higher Education (2015). *World and Asia university rankings 2014*. Retrieved from http://www.timeshighereducation.co.uk/

Tinsley, H. E. A., & Tinsley, D. J. (1987). Uses of Factor Analysis in Counseling Psychology Research. *Journal of Counseling Psychology.* 34(4), 414-424.

Thoits, P. A. (1982). Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. *Journal of Health and Social Behavior*, 23, 145-159.

Thompson, H. B., & Weiner, J. M. (1997). The impact of role conflict/facilitation on core and discretionary behaviours: Testing a mediated model. *Journal of Management*, 23(4), 583-601. doi:10.1177/014920639702300405

Thompson, C. A., Beauvais, L. L., Laura, L. & Lyness, K. S. (1999). When work-family benefits are not enough: The influence of work-family culture on benefit utilization, organisational attachement and work-family conflict. *Journal of Vocational Behavior*, 54(3), 392-415. doi:10.1006/jvbe.1998.1681

The Research Advisors (2006). *The Sample Size Table*. Retrieved from http://research-advisors.com/tools/SampleSize.htm

Toker, B. (2011). Job satisfaction of academic staff: An empirical study on Turkey. *Quality Assurance in Education*, 19(2), 156-169. doi 10.1108/09684881111125050

Towers Perrin (2008). *2008 Towers Perrin global workforce study*. Retrieved from http://www.towersperrin.com/tp/getwebcachedoc?webc=HRS/USA/2008/200802/GWS_handout_web.pdf.

Universities UK (2007). *Talent wars: the international market for academic staff*. Retrieved from http://www.universitiesuk.ac.uk/highereducation/Documents/2007/TalentWars.pdf

Universities UK (2007). *Recruitment and retention of staff in higher education 2008*. Retrieved from http://www.universitiesuk.ac.uk/highereducation/Documents/2009/RecruitmentRetention.pdf

Van der Heijden, B. I. J. M., Kümmerling, A., Van Dam, K., Van der Schoot, E., Estryn-Béhar, M., & Hasselhorn, H. M. (2010). The impact of social support upon intention to leave among female nurses in Europe: Secondary analysis of data from the NEXT survey. *International Journal of Nursing Studies*, 47(4), 434-445. doi:10.1016/j.ijnurstu.2009.10.004

Vecina, M. L., Chacón, F., Sueiro, M., & Barrón, A. (2012). Volunteer Engagement: Does engagement predict the degree of satisfaction among new volunteers and the commitment of those who have been active longer? *Applied Psychology: An International Review*, 61(1), 130-148. doi:10.1111/j.1464-0597.2011.00460.x

Vogt, W. P., & Johnson, R. B. (2011). *Dictionary of Statistics & Methodology: A Nontechnical Guide for the Social Sciences* (4th ed.). Thousand Oaks, California: SAGE Publications.

Wainaina, L., Iravo, M., & Waititu, A. (2014). Workplace spirituality as a determinant of organizational commitment amongst academic staff in the private and public universities in Kenya. *International Journal of Academic Research in Business and Social Sciences*, 4(12), 280 – 293. doi: 10.6007/IJARBSS/v4-i12/1362

Wang, Z., Li, X., & Shi, K. (2010). The relationship among transformational leadership, work engagement and emotional labor strategy. *IEEE Symposium on Web Society Proceedings,* Beijing, China, 554-558. doi:10.1109/SWS.2010.5607387

Warner, R. M. (2012). *Applied statistics: From bivariate through multivariate technique* (2nd ed.). Thousand Oaks, California: SAGE Publications.

Wayne, J. H., Grzywacz, J. G., Carlson, D. S., & Kacmar, K. M. (2007). Work-family facilitation: A theoretical explanation nd model of primary antecedents and consequences. *Human Resource Management Review*, 17(1), 63-76. doi:10.1016/ j.hrmr.2007.01.002

Wayne, J. H., Musisca, N., & Fleeson, W. (2004). Considering the role of personality in the work-family experience: Relationships of the big five to work-family conflict and facilitation. *Journal of Vocational Behavior*, 64, 108-130. doi:10.1016/S0001-8791(03)00035-6

Wayne, J. H., Randel, A. E., & Stevens, J. (2006). The role of identity and work-to-family support in work-to-family enrichment and its work-related consequences. *Journal of Vocational Behavior*, 69(3), 445–461. doi:10.1016/j.jvb.2006.07.002

Wayne, S. J., Shore, L. M., & Liden, R. C. (1997). Perceived organizational support and leader–member exchange: A social exchange perspective. *Academy of Management Journal*, 40(1), 82–111. doi:10.2307/257021

Weer, C. H., Greenhaus, J. H., & Linnehan, F. (2010). Commitment to non-work roles and job performance: Enrichment and conflict perspectives. *Journal of Vocational Behavior*, 76, 306–316. doi:10.1016/j.jvb.2009.07.003

Wegener, D. T., & Fabrigar, L. R. (2004). Constructing and evaluating quantitative measures for social psychological research: Conceptual challenges and methodological solutions. In Sansone, C., Morf, C. C., & Panter, A. T. (Eds.), *The Sage Handbook of Methods in Social Psychology* (pp.145-172). Thousand Oaks, California: SAGE Publications.

Wei, S., Shujuan, Z., & Qibo, H. (2011). Resilience and social support as moderators of work stress of young teachers in engineering college. *Procedia Engineering*, 24, 856-860. doi: 10.1016/j.proeng.2011.12.415

Weimer, M. (2010). *Inspired college teaching: A career-long resource for professional growth*. San Francisco: John Wiley.

Weinberg, S. L. & Abramowitz, S. K. (2002). *Data Analysis for the Behavioral Sciences Using SPSS*. Cambridge: Cambridge University Press.

Welbourne, T. (2007). Employee engagement: Beyond the fad and into the executive suite. *Leader to Leader*, 44, 45-51.

Wilson C. (2006) Why stay in nursing. *Nursing Management*, 12(9), 24–32. doi:10.7748/nm2006.02.12.9.24.c2043

Winefield, A. H., Boyd, C. M., Saebel, J., & Pignata, S. (2008). *Job stress in university staff: An Australian research study*. Bowen Hills, Queensland: Australian Academic Press.

Winefield, A. H., Gillespie, N., Stough, C., Dua, J., Hapuarachchi, J., & Boyd, C. (2003). Occupational stress in Australian university staff: Results from a national survey. *International Journal of Stress Management*, 10(1), 51–63. doi:10.1037/1072-5245.10.1.51

Winefield, A. H. & Jarrett, R. (2001). Occupational stress in university staff. *International Journal of Stress Management*, 8(4), 285-298. doi:10.1023/A:1017513615819

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007a). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14, 121-41. doi:10.1037/1072-5245.14.2.121

Xanthopoulou, D., Bakker, A. B., Dollard, M. F., Demerouti, E., Schaufeli, W. B., Taris, T. W., & Schreurs, P. J. G. (2007b). When do job demands particularly predict burnout? The moderating role of job resources. *Journal of Managerial Psychology*, 22(8), 766-786.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationship between job resources, personal resources and work engagement. *Journal of Vocational Behavior*, 74(3), 235-244. doi:10.1016/j.jvb.2008.11.003

Xanthoupoulou, D., Bakker, A., & Fischbach, A. (2013). Work engagement among employees facing emotional demands: The role of personal resources. *Journal of Personnel Psychology*, 12(2), 74–84. doi:10.1027/1866-5888/a000085

Xanthopoulou, D., Bakker, A. B., Heuven, E., Demerouti, E., & Schaufeli, W. B. (2008). Working in the sky: A diary study on work engagement among flight attendants. *Journal of Occupational Health Psychology*, 13(4), 345–356. doi:10.1037/1076-8998.13.4.345

Xanthopoulou, D., Bakker, A. B., Kantas, A., & Demerouti, E. (2012). Measuring burnout and work engagement: Factor structure, invariance, and latent mean

differences across Greece and the Netherlands. *International Journal of Business Science and Applied Management,* 7(2), 40-52.

Yahya, K. K., Mansor, F. Z., & Warokka, A. (2012). An empirical study on the influence of perceived organisational support on academic expatriates' organizational commitment. *Journal of Organizational Management Studies*, 1-14. doi:10.5171/ 2012.565439

Yeh, C.-C. R., Lin, C.-Y., & Chen, S.-Y. (2014). From West to East: Adoption of Western measurement scales in Taiwan's organizational research. *Asia Pacific Management Review,* 19(3), 1- 19.

Yildrim, I. (2008). Relationships between burnout, sources of social support and sociodemographic variables. *Social Behaivor and Personality*, 36(5), 603-616. doi:10.2224/sbp.2008.36.5.603

Yi-Wen, Z. & Yi-Qun, C. (2005). The Chinese Version of the Utrecht Work Engagement Scale: An examination of reliability and validity. *Chinese Journal of Clinical Psychology, 13*, 268-270.

Yoon, J., & Lim, J. (1999). Organizational support in the workplace: The case of Korean hospital employees. *Human Relations*, 52(7), 923-945. doi:10.1023/ A:1016923306099

Yoon, J., & Thye, S. (2000). Supervisor support in the work place: Legitimacy and positive affectivity. *The Journal of Social Psychology*, 140(3), 295-316. doi**:**10.1080/ 00224540009600472

Yzerbyt, V. J., Dumont, M., Mathieu, B., Gordijn, E., & Wigboldus, D. (2006). Social comparison and group-based emotions. In Guimond, S. (Eds.) *Social comparison*

process and levels of analysis: Understanding cognition, intergroup relations and culture (pp. 174-205). Cambridge: Cambridge University Press.

Zacher, H., & Winter, G. (2011). Eldercare demands, strain, and work engagement: The moderating role of perceived organizational support, *Journal of Vocational Behavior*, 79(3), 667–680. doi:10.1016/j.jvb.2011.03.020

Zainudin Awang, & Junaidah Hanim Ahmad (2010). Modelling job satisfaction and work commitment among lecturers: A case of UiTM Kelantan. *Proceedings of the Regional Conference on Statistical Sciences 2010 (RCSS'10) June 2010, 241-255*

Zikmund, W. G. (2003). *Business research methods* (7th ed.). Mason, Ohio: Cengage Learning.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2010). *Business research methods* (8th ed.). Mason, Ohio: Cengage Learning.

Zhou, J. (1998). Feedback valence, feedback style, task autonomy, and achievement orientation: Interactive effects on creative performance. *Journal of Applied Psychology*, 83(2), 261-276. doi:10.1037/0021-9010.83.2.261