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A STUDY OF AUTHENTIC LEADERSHIP ADOPTING THE JOB DEMANDS
AND RESOURCES APPROACH IN PREDICTING WORK-RELATED FLOW
AND JOB PERFORMANCE

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MPHIL

LINGNAN UNIVERSITY

2014

A STUDY OF AUTHENTIC LEADERSHIP ADOPTING THE JOB DEMANDS
AND RESOURCES APPROACH IN PREDICTING WORK-RELATED FLOW
AND JOB PERFORMANCE

by
WANG Yiqing

A thesis
submitted in partial fulfillment
of the requirements for the Degree of
Master of Philosophy in Psychology

Lingnan University

2014

ABSTRACT

A Study of Authentic Leadership Adopting the Job Demands and Resources Approach in Predicting Work-related Flow and Job Performance

by

WANG Yiqing

Master of Philosophy

The authentic leadership model posits that authentic leaders can foster personal development of their subordinates in order to produce better job outcomes. The current study has investigated authentic leadership using the job demands and resources (JD-R) approach to examine how leaders' authenticity can empower employees in terms of resources-building (e.g. PsyCap, supervisor support); and to examine how these resources can offset negative stressors (e.g. work overload, emotional demands) so that employees may achieve a peak psychological state of flow (Bakker, 2005, 2008) and better job performances. To date, very few studies have tried to explain authentic leader behaviors in the JD-R model which is posited to be widely applicable to different work contexts, let alone studies of such type conducted in Chinese organizations. The current study consists of Study One and Study Two. The major purpose of Study One is to examine the reliability and validity of the authentic leadership and the work-related flow scale in Chinese organizational settings. The major purpose of Study Two is to test the hypotheses of the overall research model using Chinese working samples.

Study One was conducted among Chinese workers in Shanghai (N=135). Confirmatory factor analysis was carried out for the reliability and validity of the authentic leadership and the work-related flow scale. Results confirmed that authentic leadership is best to be depicted as a second-order construct and the Cronbach's alpha is .94 for the overall instrument. In addition, results also demonstrated that work-related flow has good reliability (Cronbach's alpha is .96) and construct validity as a three-factor construct.

Study Two aimed to test the proposed research model of the current study. 869 self-reported questionnaires were successfully collected from organizations in Shanghai. Performance was rated by employees' supervisors to avoid common method bias. Structural equation modeling methods were adopted for data analyses. Results supported most of the hypotheses. Supervisor support (job resource) and PsyCap (personal resource) mediate the relationships between authentic leadership and two job outcomes (work-related flow, performance). Work overload and emotional demands moderate the positive indirect effects of authentic leadership on the job outcomes through supervisor support and PsyCap.

This study has several contributions. First, it has provided a more comprehensive explanation of leadership and the consequent followers' work behaviors via the JD-R approach. Second, it has linked the similarities in the JD-R model and the flow literature, which were previously studied in separate fields, demonstrating that high flow experience can be obtained only when resources

become salient under high demands. Last but not least, the study has provided practical implications on leadership trainings and employee development programs, by pointing out several solutions of organizational improvement for the top management teams.

DECLARATION

I declare that this is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.

(WANG Yi Qing)

Date

CERTIFICATE OF APPROVAL OF THESIS

A STUDY OF AUTHENTIC LEADERSHIP ADOPTING THE JOB DEMANDS
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by

WANG Yi Qing

Master of Philosophy

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CONTENTS

LIST OF TABLES.....	iv
LIST OF FIGURES.....	v
ACKNOWLEDGEMENT.....	vi
CHAPTER 1 INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.1.1 Leadership Crisis.....	1
1.1.2 A Need for Good Leadership.....	2
1.1.3 Authentic Leadership in the Job Demands-Resources (JD-R) Model.....	3
1.2 Rationale for the Study.....	4
1.2.1 Authentic Leadership: A New Hope for Modern Organizations.....	4
1.2.2 The Job Demands and Resources Model.....	5
1.3 Research questions and Objectives.....	11
1.4 Significance of the Study.....	12
1.5 Organization of the Thesis.....	13
CHAPTER 2 LITERATURE REVIEW.....	15
2.1 Authentic Leadership.....	15
2.1.1 Authenticity.....	15
2.1.2 Authentic Leadership.....	16
2.1.3 Authentic Leadership as a Second-Order Construct.....	23
2.1.4 Differentiating Authentic Leadership from Transformational Leadership.....	24

2.2	Psychological Capital.....	28
2.2.1	State-like Versus Trait-like Debate.....	31
2.2.2	PsyCap as a Developable Construct.....	32
2.2.3	PsyCap and Positive Work Outcomes.....	36
2.2.4	PsyCap as a Core Construct.....	36
2.3	Supervisory Support.....	39
2.4	Emotional Demands.....	40
2.5	Work Overload.....	42
2.6	Work-related Flow.....	43
2.7	Job Performance.....	45
CHAPTER 3 THEORETICAL FRAMEWORKS AND HYPOTHESES.....		47
3.1	Authentic Leadership and Work outcomes.....	47
3.2	Flow and In-role Job Performance	50
3.3	The Mediating Role of PsyCap between Authentic Leadership and Work Outcomes.....	51
3.3.1	Authentic Leadership and PsyCap.....	51
3.3.2	PsyCap and Work Outcomes.....	53
3.4	The Mediating Role of Supervisor Support between Authentic Leadership and Work Outcomes.....	55
3.5	The Moderating Roles of Work Overload and Emotional Demands.....	56
3.6	Summary.....	58
CHAPTER 4 STUDY ONE.....		60
4.1	Methodology.....	60
4.1.1	Pilot Study (1)	60
4.1.2	Pilot Study (2)	61
4.1.3	Pilot Sample.....	61
4.1.4	Fit Indices Chosen for Reference.....	62
4.1.5	Data Analysis for Study One.....	63

4.2	Results.....	63
4.2.1	Assessment of the Psychometric Properties of the Measurements.....	63
CHAPTER 5 STUDY TWO.....		68
5.1	Methodology.....	68
5.1.1	Sample of Study Two.....	68
5.1.2	Data Analysis for Study Two.....	70
5.2	Results.....	70
5.2.1	Assessment of the Psychometric Properties of the Measurements.....	70
5.2.2	Testing of Hypotheses.....	71
5.3	Measurements.....	81
5.3.1	Authentic Leadership.....	81
5.3.2	Psychological Capital.....	81
5.3.3	Supervisory Support.....	82
5.3.4	Work Overload.....	82
5.3.5	Emotional Demands.....	82
5.3.6	Work-related Flow.....	83
5.3.7	In-role Job Performance.....	83
CHAPTER 6 DISCUSSION.....		84
6.1	Summary of Findings.....	84
6.2	Limitation.....	86
6.3	Avenues for Future Research	89
6.4	Practical Implications.....	91
6.5	Conclusion.....	92
APPENDIX I.....		93
REFERENCES.....		101

List of Tables

Table1	Comparisons between Authentic Leadership and Transformational Leadership.....	26
Table2	Descriptive Statistics for Demographic Variables of the Pilot Study (N=135).....	62
Table3	Comparison of Measurement Models of Authentic Leadership.....	64
Table4	Work-related Flow Confirmatory Factor Analysis Fit Statistics Comparing One, Two and Three First-order Factor Models.....	65
Table5	Range of Factor Loadings for the Indicators of the Constructs.....	67
Table6	Descriptive Statistics for Demographic Variables of Study Two (N=869).....	69
Table7	Means, Standard Deviations, Correlations, and Cronbach's Alphas of the Variables in Study Two (N=869).....	72
Table8	Summary of Indirect Effects of Authentic Leadership on In-role Performance and Work-related Flow via Supervisor Support and PsyCap.....	75

List of Figures

Figure 1 The Proposed Research Model of the Study.....	58
Figure 2 One- factor and Three-factor Models of Work-related Flow.....	66
Figure 3 Structural Model (Mediation Only) with Study Variables.....	73
Figure 4 Structural Model (Moderated Mediation) with Study Variables.....	76
Figure 5 Moderating Effect of Work Overload on the Relation between Supervisor Support and Work-related Flow.....	78
Figure 6 Moderating Effect of Emotional Demands on the Relation between Supervisor Support and In-role Performance.....	79
Figure 7 Moderating Effect of Emotional Demands on the Relation between Supervisor Support and Work-related Flow.....	79
Figure 8 Moderating Effect of Emotional Demands on the Relation between PsyCap and In-role Performance.....	80
Figure 9 Moderating Effect of Emotional Demands on the Relation between PsyCap and Work-related Flow.....	80

Acknowledgement

I would like to take this opportunity to convey my most heartfelt gratitude to all the people who have helped me during my two-year MPhil study. I would probably be unable to finish the thesis without their help.

First of all, I would like to express my deepest gratitude to my chief supervisor, Professor Cheung Yue Lok, who has inspired me with his broad knowledge on different research topics, and has given me helpful feedback concerning my thesis. He mentored me in a way that allowed for a great freedom in doing research on my own, which I appreciated the most. I regard his mentoring very critical because he has taught me the most important essence of being an independent research student.

I also like to thank my co-supervisor, Professor Siu Oil Ling. She is more than a mentor to me. More accurately, she is my life mentor who has shown her support, apathy, and care when I encounter hardships, which makes me more resilient and efficacious today.

In addition, I would like to thank Professor, Arnold B. Bakker, who has provided insightful comments on my thesis framework.

Last but not least, I thank my parents, friends, and colleagues who have provided great support during my MPhil study.

CHAPTER 1 INTRODUCTION

1.1 Background of the Study

1.1.1 Leadership Crisis

The start of the last decade witnessed the notorious fraud of world-class CEOs and the collapse of giant companies which caused a widespread turmoil around the globe. When the scandals of Enron, WorldCom, and Anderson became public, trust in business leaders was severely eroded. Luthans, Norman, and Hughes (2006) pointed out that the widely known scandals are, in fact, just the tip of the iceberg. There are far more leaders who are vulnerable to ethical wrongdoings, as they are immersed in an era suffused with fast-paced changes and intensifying market demands. In order to keep the leader hat and impress the shareholders, they try to maximize the short-term earnings at the expense of their people and organization. The aftermath of these unethical conducts is so deeply rooted, and exerting its far-reaching influence in today's marketplace, heightening a sense of instability and vulnerability that has generated heated discussions on the potential leadership remedy in times of crisis (Avolio & Gardner, 2005). In his book titled "True North", Bill George (2007) pointed out that there has been a severe shortage of leaders who are guided by the internal compass that indicates the true personal character and inner value systems. Indeed, many leaders nowadays, although with great capacity to lead, have a wrong notion of what constitutes a leader, and what values are most important for being an effective leader in modern organizations. In the current climate of crisis, leadership researchers have reached some consensus that in such a turbulent and competitive marketplace, leaders who can be trusted, who are guided by a strong sense of true-self and moral values, and more importantly, who can foster the survival capacities (e.g., PsyCap) of employees are most wanted. Therefore, Avolio and Gardner (2005) advocated that a new focus on such positive leadership is of urgent importance.

1.1.2 A Need for Good Leadership

Facing such a vacuum of good leaders, we are desperately looking for one kind of leadership which includes all the positive qualities that are best suited in this era. From the depth of the heart, we know that a good leadership is very desirable. A meta-analysis of experimental and quasi-experimental studies revealed that leadership has a causal effect on attitudes (e.g., trust, a feeling of belongingness, commitment) and work behaviors (job performance, OCBs) of followers. These studies further indicated that a good leadership doubles the likelihood of having positive work outcomes on employees (Avolio et al., 2009). Therefore, a good form of leadership is able to develop the good qualities of followers, which in turn lead to desired organizational outcomes.

Although quite a few leadership styles have been posited to be good, for example, transformational leadership (Bass, 1990; Bass & Avolio, 1994), servant leadership (Graham, 1991; Greenleaf, 1977), and inspirational leadership (Bass, 1988), this study focuses on one form of good leadership, namely, authentic leadership. Just as suggested by Avolio and Gardner (2005), authentic leadership forms the root construct of all other positive leaderships. In this sense, authentic leadership can be a very broad topic which comprises most of the good qualities of other leadership styles. Authentic leaders are true to themselves and transparent to their followers, which leads to the mutual trust and the willingness of open communications between leader and follower (see Wang & Hsieh, 2013; Wang & Cummings, 2009). Besides, authentic leaders are those who have a strong sense of moral values, and seldom bow to financial pressures by sacrificing their employees' wellbeing. More importantly, authentic leaders can foster the development of themselves as well as their followers, by passing down all the good qualities on their people. Therefore, authentic leadership, as contended by Bill George (2003), is a very promising remedy for today's leadership crisis.

1.1.3 Authentic Leadership in the Framework of Job Demands-Resources (JD-R) Model

Authentic leadership, without a doubt, plays a preeminent role in organizations. Ample research studies support that authentic leadership explains workers' attitudes, and behaviors at work (e.g., see Wang, Sui, Luthans, Wang, & Wu, 2014; Wong & Laschinger, 2013; Wang & Hsieh, 2013). However, modern organizations are far more complex than expected. Studying authentic leadership alone may not help to effectively understand and explain what happens in the black box between the leadership--outcome relationship. Moderating and mediating variables in leadership are therefore necessary to be included, such that a clear picture of the complex organizational mechanism can be obtained through the effects of mediators, or the boundary conditions (moderators) which strengthen or weaken the leadership impact on work outcomes. The Job Demands-Resources (JD-R) Model, as postulated by Bakker and Demerouti (2007), is characterized by various resource x demand interactions. Incorporating authentic leadership in the JD-R framework is a good way to solve the black box puzzle, in which organizational mechanisms can be understood in a way that (1) job demands deplete employees' energy and lead to job strains and burnout, (2) job and personal resources activate employee's energy and lead to work engagement, and (3) resources mitigate the negative effects of demands (buffering effects) on employees' health (e.g., sleeping quality, headache), work attitudes (e.g., commitment, satisfaction), and work behaviors (e.g., turn over, OCBs). More specifically, this study tries to solve the black box puzzle by revealing (1) how authentic leadership associates with employees' perceived supervisory support and PsyCap, (2) how supervisory support buffers the negative effects of emotional demands and work overload in order to achieve the optimal experience of flow at work and better in-role performance, (3) and how PsyCap functions as the psychological protection factor that mitigates the negative effects of emotional demands and work overload of the employee to boost their flow experience and job performance.

1.2 Rationale for the Study

1.2.1 Authentic Leadership: a New Hope for Modern Organizations

As previously discussed, the increasingly turbulent work environment has called for a new thinking on leadership (Avolio & Gardner, 2005). Authentic leadership, which is inspired by the idea of positive psychology, has become a new hope for modern organizations, as it not only deals with ethical meltdowns, but also fosters employees' competence and resilience to survive in fast-changing organizations, especially when restructuring and downsizing occur.

Financial scandals of the world-class corporations have given a heavy blow to the world economy (Luthans, Norman, & Hughes, 2006). Only organizations which are featured in sustainable growth and stable profitability can survive in such a worsening market environment. Under this circumstance, authentic leadership seems of critical importance, because it is asserted to have developable properties in a way that authentic leader behaviors can be learned through trainings and interventions (e.g., see Leroy et al., 2012; Avolio & Gardner, 2005). Indeed, researchers found ample evidence to support the argumentation that leadership has the developable ability over time (see Avolio et al., 2008; Avolio & Hannah, 2008; Avey, Rotundo, Johnson, Zhang, & McGue, 2006; Avolio & Gardner, 2005). With the help of specific training programs, leaders can learn to remain true to the self, true to others, and behave in a way that reflects their internalized moral values (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). In fact, there has been a growing trend of leader trainings and workshops which aim at developing the positive qualities of leaders. Bill George has started authentic leadership training programs in Harvard Business School for top executives, as from his perspective, authentic leadership can be made, and one is not necessarily born with it. These leadership trainings have profound values, as a great number of leaders can be cultivated. With more and more authentic leaders in organizations, employees are empowered to work with their optimal potentials, and organizations are boosted to the fullest growth. Authentic leaders are actually developing the protection factors in their people and organization in order to combat the fierce competition in the fast-changing marketplace. Therefore, these training programs become extremely valuable as they can help to fulfill the increasing demands for the authentic leader in today's market.

Furthermore, Gardner et al. (2005) contended that followership is an integral part of authentic leadership. In other words, authentic leaders serve as a positive role model for the development of authentic followers, such that the followers can obtain good qualities, such as a strong sense of moral values, true to the self and others, from their leaders (Gardner et al., 2005). In regard to the word of followership, it implies that followers are not passive recipients of the leader's influence, but rather they take active roles in the leader-follower relationship (Shamir, 2007). They model their leaders and learn to have a strong sense of ownership, openness, and non-defensiveness (Gardner et al., 2005), and therefore possess a higher level of autonomous work motivation which consequently leads to a more sustainable performance in today's challenging and turbulent work environment (Gagne & Deci, 2005; Griffin, Neal, & Parker, 2007).

1.2.2 The Job Demands and Resources Model

The Job Demands-Resources (JD-R) Model (Bakker & Demerouti, 2007) is the leading job stress model which is developed on the basis of Karasek's (1979) Job Demands Control (DCM) Model and Siegrist's (1996) Effort Reward Imbalance (ERI) Model. According to Bakker and Demerouti (2007), both the DCM and the ERI model are posited to depict a simplified work situation where certain job demands lead to job strain, when certain job resources are lacking. However, such simplicity is also viewed as a limitation, since complex organizations can hardly be reduced to a handful of variables. For example, it is questionable why autonomy is the most important resource in the DCM? It is very likely that for different work situations, totally different resources prevail. In the same vein, the ERI model postulates that salary, esteem reward, and status control as the most valuable resources to combat negative effects of job stressors on strain. Again, it is unclear why these resources are more important in this model than some other alternative resources that might be even more salient under certain work situations? Therefore, the static character of the two models leaves little room for the integration of other work-related factors that can be related to work well-being (Bakker & Demerouti, 2007). Like the JD-C and the ERI model, the JD-R model assumes that a balance between positive (i.e., resources) and negative (i.e., demands) job characteristics

contributes to a better health and a happier life of the employee. Yet, the JD-R model also differentiates itself from the two models, as it assumes that any demand and any resource may affect employees' well-being. In other words, the JD-R model incorporates the dynamic character which allows for the inclusion of potentially all job characteristics, such that it can be applied to a variety of work settings (Schaufeli & Taris, 2014).

One of the main propositions of the JD-R model is that job characteristics of the organization can be divided into job demands and job resources (Bakker, Demerouti, De Boer, & Schaufeli, 2003; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job demands refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological efforts and are therefore associated with certain physiological and/or psychological costs, while job resources refer to those physical, psychological, social, or organizational aspects of the job that are either/or: (1) functional in achieving work goals, (2) reducing job demands and the associated physiological and psychological costs, (3) stimulating personal growth, learning, and development (Bakker & Demerouti, 2007, p.312). According to the conservation of resources (COR) theory, Hobfoll (2001) contended that the primary motivation of humans is directed towards the maintenance and accumulation of resources, with which other valued resources can be protected and achieved. In addition, Hackman and Oldham (1980) suggested that job resources, due to their motivational potential, can facilitate the goal achievement and foster a feeling of commitment to the job. For example, multiple research studies revealed that job resources (e.g. social support, autonomy, feedback) can lead to engagement and other positive work outcomes, such as job performance and satisfaction (e.g., see Hakanen et al., 2006; Bakker, Demerouti, & Verbeke, 2004; Bakker, Demerouti, De Boer, & Schaufeli, 2003).

A related assumption regarding the motivational potential of job resources is the dual-process mechanism of the JD-R model. Suggested by Bakker et al. (2007, p. 313), the JD-R model has “two different underlying psychological processes”. One is called “motivational in nature”, which describes how the motivational potential of job resources mitigates the employee's cynicism, reduces job strain, and enhances work engagement. The other is called “health impairment process”, which depicts a

process in which poorly designed jobs or chronic job demands deplete the employee's resources, and may therefore impair work well-being (Demerouti et al., 2000; Leiter, 1993).

In addition, the JD-R model proposes that job resources also serve as buffers to mitigate the negative effects of job demands (e.g., see Bakker & Demerouti, 2007; Bakker, Demerouti, & Euwema, 2005). This buffering assumption is actually consistent with the demand-control model (DCM; Karasek, 1979, 1998), but expands the scope of the model by providing a laundry list of potential resources and their corresponding demands. Just as suggested by Bakker and colleagues (2007, p314), "which job demands and resources play a role in a certain organization depends upon the specific job characteristics that prevail". Bakker et al. (2005) tested out the buffering hypothesis in a large institute for higher education. They found that the combination of high demands and low resources significantly added to the prediction of burnout. Xanthopoulou et al. (2006) found additional evidence for the JD-R buffering hypothesis from two home care organizations. However, Bakker and Demerouti (2007, p.315) pointed out that "the reason why job resources can act as buffers is different for different resources". For example, leaders' support may aid the employee in coping with workloads, such that the physical job demands are reduced. Similarly, job autonomy provides freedom to the employee by embedding a sense of control (in the employee) over the work tasks so that he may feel less stressed out.

Moreover, as suggested by the JD-R model, job resources are particularly salient under conditions of high job demands (e.g., see Bakker & Demerouti, 2007). It can be explained by Hobfoll's (2001) COR theory: resources only exert a modest effect on work outcomes when demands are absent, but they become salient in the context of resource loss. This implies that job resources gain their motivational potential particularly when job demands are high (Hobfoll, 2002). Indeed, a growing body of studies has showed the evidence that job resources gain their saliency under the condition of high demands. For example, Hakanen et al. (2005) found variability in professional skills enhanced work engagement when qualitative workload was particularly high, and such job resource mitigated the negative effect of qualitative workload on work engagement.

Since its first appearance about a decade ago, the JD-R model has elicited a fast-growing body of research on it. Recently, it has been used by many researchers as an overall conceptual framework to integrate many other research topics (Schaufeli & Taris, 2014). In the present study, the JD-R model is used as a framework for the investigation of the emerging and yet very important topic of authentic leadership. Besides, supervisory support (job resource), PsyCap (personal resource), work overload and emotional demands (job demands), work-related flow and performance (job outcomes) are also included in this JD-R framework.

PsyCap as the Personal Resource in the JD-R Model

So far, most of the studies on the JD-R model have been restricted to work characteristics (i.e., job demands and job resources). Employees' personal resources, however, have been neglected until recently, when they were included in the JD-R model for investigation (see Bakker, Albrecht, & Leiter, 2011; Bakker, Schaufeli, Leiter, & Taris, 2008; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Similar to job resources, personal resources also possess the motivational potential to combat negative work stressors, sustain physical and emotional well-being, and foster personal growth and development (Schaufeli & Taris, 2014; Chen et al., 2001; Scheier & Carver, 1992; Pierce et al., 1989). Furthermore, according to Schaufeli and Taris (2014), personal resources conceptualized as psychological aspects of the self are highly developable across a time span, possibly, through trainings and interventions in order to achieve better organizational outcomes (Luthans, Youssef, & Avolio, 2007). Therefore, some researchers asserted that studying job resources and personal resources is of equal importance, and thus the JD-R model can be further broadened for predicting more complex organizational mechanisms (Bakker, Schaufeli, Leiter, & Taris, 2008).

In this study, PsyCap is included as the personal resource. Avolio (2005) pointed out that most of the organizations today do not fully realize the potential of human resources and thus neither invest enough effort to develop and manage these resources. Luthans, Youssef, and Avolio (2007, p.7) argued that "most of today's recognized human resource practices may be adequate for attracting talent but not for creating unique, new paradigm thinking for how to develop and manage human

resources for competitive advantage over the long-term”. Especially in today’s turbulent working environment, employees’ psychological resources, like resilience, optimism, hope, and self-efficacy, become particularly salient to buffer the negative occupational stressors in a long term perspective. PsyCap which is the combination of the aforementioned psychological resources is found to have significant influence on individual’s work well-being, attitudes, and behaviors, and hence is included in this study as a vital personal resource (see Luthans et al., 2005).

Supervisory Support as the Job Resource in the JD-R Model

Job resources, as previously mentioned, are effective buffers on job demands to foster work engagement and other desirable work outcomes. Specifically, they acquire resiliency when job demands are high (see Bakker & Demerouti, 2007). Bakker et al. (2005) found in their study that the combination of high demands and low resources leads to burnout. However, they also found that when resources are available (e.g., perceived autonomy, social support), the negative impacts of job demands causing burnout are significantly reduced. Moreover, Bakker et al. (2006) found that job resources particularly influence work engagement when teachers are confronted with high levels of pupil misconduct. Therefore, job resources are perceived as very critical job characteristics in a way that they activate the protection mechanisms of the employee to mitigate the harms from job demands, and more importantly, they equip the individual with more resources to proactively deal with the problems encountered.

Supervisory support is a vital job resource which is positively related to work engagement (Mauno et al., 2007), job satisfaction (Lu et al., 2009), and also mitigates the negative effects of job demands (e.g., work overload, emotional demands) on job strains (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Lu et al. (2013, p. 443) agreed by explaining: “supervisor support may satisfy employees’ needs to belong, to be cared for and valued, which vitalizes their resilience to cope with hardship”, and hence results in a higher level of work engagement (Brough et al., 2013), which further leads to better job performance and satisfaction (Bakker, 2011). According to Van der Doef and Maes (1999), instrumental support from colleagues can help the employee to complete the work in

time, and therefore it is a resource likely to alleviate work overload. In the same vein, instrumental support from supervisors may also function as a buffer on work overload. In addition, a good relationship with one's supervisor may also alleviate the negative influence of demands (e.g. work overload, emotional and physical demands) on job strain, since supervisor's appreciation and emotional support may boost the task completion, and facilitate high quality performance. Therefore, supervisory support is included in this study as the job resource.

Emotional Demands and Work Overload as the Job Demands in the JD-R Model

According to Meijman and Mulder (1998), job demands may not necessarily be negative. However, they may turn into negative stressors if these demands require high effort from the employee who, unluckily, does not have adequate resources at hand. Indeed, evidence from the JD-R research reveals that job demands lead to high risks of burnout (exhaustion, cynicism) and disengagement (less vigor) when resources are inadequate or simply absent (Van den Broeck, De Cuyper, De witte, and Vansteenkiste, 2010; Bakker & Demerouti, 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

As suggested by the JD-R researchers, poorly designed jobs or chronic job demands, specifically emotional demands and work overload, lead to the depletion of energy, thus resulting in poor health (Demerouti, Bakker, Jonge, Janssen, & Schaufeli, 2001; Demerouti, Bakker, Nachreiner, & schaufely, 2001). Emotional demands are considered to be an important source of job strain, which pertain to emotionally involved interactions at work (Totterdell & Holman, 2003). Indeed, previous studies demonstrate a negative association between emotional demands and work well-being (e.g., Xanthopoulou, Bakker, & Fischbach, 2013; Bakker, Veldhoven, & Xanthopoulou, 2010; Llorens, Bakker, Schaufeli, & Salanova, 2006). In this study, working people who are emotionally involved with their routine tasks have been targeted. Therefore, emotional demands become a very important study variable to be included for investigation. According to Bakker and colleagues (Bakker & Demerouti, 2007; Humphrey et al., 2007), work overload is a crucial risk factor for the majority of the people at work settings, due to the fact that it prevails in most of the organizational cultures. Bakker and Demerouti (2007) asserted that work

overload has been frequently examined by the JD-R researchers, as it is a major factor causing the depletion of energy, and the increasing magnitude of cynicism and burnout. Therefore, work overload is also included as one of the job demands in the study.

Flow and In-role Performance as the Work Outcomes in the JD-R Model

According to Schaufeli, Bakker, and Rhenen (2009), the most frequently studied positive outcome in the JD-R model is work engagement. Work engagement is conceptualized as a composite of vigor, dedication, and absorption (Bakker & Schaufeli, 2008). However, recent research has revealed that only vigor and dedication constitute the core of engagement. Salanova and colleagues (2003) found that absorption plays a different role when compared to the other two component of work engagement. In fact, absorption appears to be more related to the concept of flow which is defined by Csikszentmihalyi (1990) as a psychological state of well-being characterized with sharp concentration, distortion of time, mind and body unison, and intrinsic enjoyment. Inspired by the work of Csikszentmihalyi (1990), Bakker (2008) extended the flow idea to work settings. His work-related flow concept describes the psychological state of a short-term peak experience featured with a combination of absorption, work enjoyment, and intrinsic work motivation. There has been a growing body of flow studies at the workplace, indicating the beneficial effects of flow on the accumulation of resources (Marisa, Bakker, & Llorens, 2006), and performance (Bakker, Oerlemans, Demerouti, Slot, & Ali, 2011). In this study, flow has replaced work engagement as a positive work outcome in the JD-R framework. In-role performance is another indicator included in the study, as it has been widely used in previous organizational studies due to its simplicity and effectiveness to demonstrate employees' productivity and quality of output.

1.3 Research questions and Objectives

The main purpose of the present study is to investigate how authentic leadership can empower employees in terms of resources-building (e.g., PsyCap, supervisory support) by adopting the JD-R approach (Bakker, & Demerouti, 2006); and to examine how these resources can offset negative stressors (e.g., work

overload, emotional demands) in order to achieve a peak psychological state of flow (Bakker, 2005, 2008) and better job performance. Specifically, the study aims to analyze the influences of specific resource-demand pairs (i.e., PsyCap-work overload, PsyCap-emotional demands, supervisory support-work overload, supervisory support-emotional demands) on job outcomes. In addition, previous research on the JD-R model suggests that personal resources should be included to expand the scope of resources at work (e.g., see Xanthopoulou et al., 2007). For example, Xanthopoulou et al. (2007) included self-efficacy, optimism, and organizational-based self-esteem as the three personal resources for investigation. In this study, PsyCap, which constitutes self-efficacy, optimism, hope, and resilience, is selected as the personal resource. The purpose of this study is to test whether PsyCap is a salient personal resource in the JD-R framework, while being an effective mediator linking authentic leadership to job outcomes, specifically, work-related flow and in-role performance. Due to the fact that flow and work engagement have been conceptualized with great similarities in work psychology, and work engagement has been extensively researched as the outcome in the JD-R framework (e.g., see Demerouti et al., 2012; Makikangas et al., 2010), this study incorporates work-related flow instead of work engagement as the work outcome of the resource x demand interactions (e.g., see Bakker & Demerouti, 2008). Besides, there have been no studies on work-related flow, and there are only a few studies on authentic leadership among the Chinese population. Thus, this study also aims to develop and validate the Chinese instruments for these two constructs.

1.4 Significance of the Study

There are several contributions of the present study. (1) To date, very few studies have tried to explain authentic leader behaviors in the JD-R framework. Leadership studies are still on the way of exploration for boundary effects and mediated mechanisms that can be counted in for the explanation of complex work situation. The combination of authentic leadership with the moderated mediation feature of the JD-R model answers the call from leadership researchers by adding one more piece of knowledge to the working mechanism of modern organizations. (2) This study expands the JD-R model by including PsyCap as a personal resource. This is the first attempt that tries to examine PsyCap in the JD-R literature. (3) Further,

replacing work engagement by flow has rarely been done before. The attempt of linking the similarities between the JD-R model and the flow literature, which were previously studied in separate fields (Csikszentmihalyi, 1991, 1993; Bakker, et al., 2007), provides additive values by demonstrating that high flow experience can be obtained only when resources become salient under high demands. (4) Moreover, this study develops and validates the authentic leadership and the work-related flow scale in Chinese organizational contexts.

In terms of practical contributions, (1) the present study provides directions for designing authentic leadership trainings and PsyCap intervention programs for leaders and employees, so that they can be more confident, hopeful, optimistic and resilient when facing adversities and challenges without bowing to pressures and losing the sense of true self. As suggested by Schaufeli and Taris (2014), the JD-R model is a heuristic model rather than a specific model with predetermined demands and resources. Hence, the research model presented in this study also enjoys the flexibility to include job characteristics according to the nature of organizations under investigation, and therefore is generalizable to a wide range of work settings (e.g., service-based industry, information-based industry). In that case, tailor-made interventions are possible for the research model of the present study to determine the list of employees' resources that the authentic leader can foster in order to combat the corresponding job demands that prevail in their organizations (e.g., OCBs, performance, and productivity).

1.5 Organization of the Thesis

Six chapters are included in this thesis. Chapter one provides an overview for the background information of key variables, the rationale, and the significance of the study. Chapter two is the literature review where all the studied variables are discussed in a great detail. For a quick glance, chapter two emphasizes the discussion on the theoretical formation and empirical evidence of the studied variables. Specifically, it provides a comprehensive review on the multi-dimensional and high-order properties of certain key variables (e.g., authentic leadership). In chapter three, the theoretical framework of the present study as well as the hypothesis formation are presented. Chapter four mainly deals with the research methodology and reports

the results of study one. Chapter five reports the research methodology together with the results of study two. Finally, Chapter six briefly summarizes the key findings, and discusses in depth the theoretical and practical implications of these findings, as well as the limitation, and the avenue for further research investigations.

CHAPTER 2 LITERATURE REVIEW

2.1 Authentic Leadership

2.1.1 Authenticity

The theory of authentic leadership has been advanced over the last few years, incorporating ideas from leadership, ethics, and positive organizational behaviors as well as scholarship literatures (Walumbwa et al., 2008; Avolio et al., 2004; Cameron, Dutton, & Quinn, 2003; Cooper & Nelson, 2006; Luthans, 2002; Luthans & Avolio, 2003). Suggested by the former head of Medtronic, Bill George (2003, p.9), authentic leaders fill in the vacuum of the existing leadership style in a way that “they lead with purpose, values, and integrity; they build enduring organizations, motivate their employees to provide superior customer service, and create long-term value for shareholders”. In the eye of many scholars, Authentic leadership is the good remedy for the ethical meltdown of leaders’ decision making (Luthans, et al., 2006), and is effective for fostering organizational development by improving the working culture to produce enduring and positive outcomes (Walumbwa et al., 2008).

To be an authentic leader, the individual shall possess authenticity as one of the core personality attributes in him. Deeply rooted in Ancient Greek philosophy, the concept of authenticity has evolved over the past 80 years (Erickson, 1995). Most relevant to our discussion are the writings from Rogers (1959, 1963) and Maslow (1968, 1971). They considered authentic persons as “individuals who are in tune with their basic nature and clearly and accurately see themselves and their lives” (also see Avolio & Gardner, 2005, p. 319). The working definition of authenticity is “owning one’s personal experiences, be they thoughts, emotions, needs, preferences, or beliefs, processes captured by the injunction to know one-self ” (Gardner, Avolio, et al., 2005, p. 344). In other words, authenticity involves acting in line with the true self (Halter, 2002). Moreover, according to Erickson (1995), authenticity can be better posited on a continuum that measures people who are neither completely authentic, nor completely inauthentic; all individuals can be authentic and the difference only lies in the degree of authenticity of the individual.

One common mistake is that we are too often confused by the distinction between authenticity and sincerity (Erickson, 1995). Trilling (1972, p.4) defined sincerity as “a congruence between avowal and actual feeling”. Thus, sincerity simply refers to the extent to which an individual’s expressed thoughts and feelings go in line with the reality he experiences. Therefore, the main differentiation is that sincerity “is judged by the extent to which the self is represented accurately and honestly to others, rather than the extent to which one is true to the self” (Avolio, et al., 2005, p.320; Erickson, 1995; Trilling, 1972). On the other hand, authenticity always requires “to thine own self be true” (Shakespeare, 1901, Act I, Scene iii), meaning that authentic persons feel the priority to align their behaviors, emotions, and feelings to their inner core of self. As Avolio and his colleagues (2005, p.319) suggested, these “fully functioning persons are unencumbered by others’ expectations for them”. Therefore, it is reasonable to consider authenticity focuses more on “one’s relationship with oneself” (Erickson, 1995, p.124). Although, as social beings, the reflection on self, more or less, will be shaped by the reflected appraisals of others (Cooley, 1902), the authentic person experiences all these (self) contents as if they are embedded within an autonomous self, as Erickson (1995) pointed out.

The concept of authenticity discussed here are heavily based on Kernis (2003)’s theory of optimal self-esteem. He pointed out four key components of authenticity, namely, self-awareness, unbiased processing, authentic action, and relational transparency, which formed the fertile ground for later development of authentic leadership literature.

2.1.2 Authentic Leadership

The current conceptualization of authentic leadership is rooted in positive psychology; meanwhile it has shed light on what constitutes the authentic leadership development (Avolio, et al., 2005; Luthasn & Avolio, 2003). According to Avolio and his colleagues (2004, p.4), authentic leaders are “those who are deeply aware of how they think and behave and are perceived by others as being aware of their own and other’s values/ moral perspectives, knowledge, and strengths; aware of the context in which they operate; and who are confident, hopeful, optimistic, resilient,

and of high moral character” (as cited in Avolio et al., 2004; Avolio & Gardner, 2005). Building on the previous research by Avolio and other scholars (Kernis, 2003; Avolio & Gardner, 2005; Gardner, Avolio, & Luthans, et al., 2005; Gardner, Avolio, & Walumbwa, 2005; Ilies et al., 2005), the current conceptualization of authentic leadership consists of four substantive components. They are (1) self-awareness, (2) internalized moral perspective, (3) balanced processing, and (4) relational transparency. Self-awareness refers to the extent of how well the leader understands his own strengths and motives, and others’ perception of his leadership. Internalized moral perspective refers to the leader who embeds a consistent value system in his heart and is always navigated by these values despite external pressures. Balanced processing refers to the leader’s behavior to assess all relevant information before making important decisions. Finally, relational transparency refers to the leader’s behavior to promote trust among his followers through self-disclosure and information sharing (Walumbwa, Luthans, Avey, & Oke, 2009). To summarize the multi-dimensional construct of authentic leadership by quoting Avolio et al., (2004, p.806), the authentic leaders “act in accordance with deep personal values and convictions to build credibility and win the respect and trust of followers. By encouraging diverse viewpoints and building networks of collaborative relationships with followers, they lead in a manner that followers perceive and describe as authentic”.

Self-awareness

As supported by many previous research studies, self-awareness forms the central part in the development of authentic leadership (Luthans, et al., 2006; Avolio & Luthans, 2005; Gardner et al., 2005; Luthans & Avolio, 2003). Avolio and Gardner (2005, p.324) pointed out that self-awareness “is not a destination point, but rather an emerging process where one continually comes to understand his or her unique talents, strengths, sense of purpose, core values, beliefs and desires”. This is a process that Sartre (1943) called a personal search for true self. For leaders, being true to themselves is particularly important, such that they know exactly how to align their behaviors, emotions, and feelings with their inner self (Luthans & Avolio, 2003). But what is the true self of authentic leaders? Various researchers provided similar but not identical suggestions in relation to values (Bass & Steidlmeier, 1999),

purpose (George, 2003), voice (Kouzes & Posner, 2002), and positive psychological states (Luthans & Avolio, 2003). Bass and his colleague (1999) described the true self in terms of the values or ethics that shapes leaders' idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. George (2003) suggested that the true self of authentic leaders is to find the purpose...understand the self, the inner passions, and the underlying motivations. In addition, Kouzes and Posner (2002) posited that discovering the true self is a journey to find one's voice. They suggested that leaders should speak out their own voices, not to echo the words of others, in order to gain credibility of their followers. Finally, Luthans and Avolio (2003), who took a positive psychology perspective, insisted that the true self embedded in authentic leaders is confident, hopeful, optimistic, and resilient in nature.

Some of the leading researchers identified four elements of self-awareness in authentic leadership literature, namely, values, identity, emotions, and goals (Gardner et al., 2005). Authentic leaders who are high in self-awareness usually regulate their behaviors in accordance with their core values. These values, as defined by Schwartz (1999, p.24), are "conceptions of the desirable that guide the way social actors (e.g. organizational leaders, policy-makers, individuals) select actions, evaluate people and events, and explain their actions and evaluations". Values are socially constructed, which means they can be learned through observation and socialization within a cultural context. Once internalized, these values could become an integral part as making up for one's moral standards for behavioral regulation purposes. Gardner et al. (2005) proposed two types of identities in the context of authentic leadership. They are personal and social identities. Personal identities simply refer to self-categorizations based on one's unique characteristics (Bananji and Prentice, 1994), while social identities are self-perceptions based on reciprocal interactions with others in different social groups (Erickson, 1995). For authentic leaders, they have a clear understanding about both self-identities and social identities. For instance, they know very well about their personal strengths and weaknesses, or how competent they are as a leader in order to lead their followers during a financial crisis. In addition, authentic leaders are also emotionally self-aware. In the Book: *True North*, George (2007) suggested that emotional intelligence may be a more desirable attribute of leaders than intellectual

intelligence. He additionally argued that leaders with a higher level of emotional self-awareness know the influences of emotions on their mental capacities well, particularly with regards to decision making. Meanwhile, authentic leaders are also aware of the potential contagion effect of emotions (Schoenewolf, 1990) on their followers because a leader who is emotionally self-aware knows that he may influence the emotions or behaviors of the subordinates through both implicit or explicit presentation of emotional states and behavioral attitudes. Therefore, emotional self-awareness is a crucial component for leaders to develop authenticity during their career (Avolio, 2004; George, 2000). Lastly, authentic leaders are posited as goal-oriented persons (Gardner, et al., 2005). Goals are “contextualized schema that directs current information processing” (Lord et al., 1999, p. 180). Particularly important to the understanding of goals and motives is the discussion of self-views and possible selves in leaders (Lord & Brown, 2001, 2004; Lord et al., 1999). Authentic leaders treat their hoped-for selves as an agent/ goal for positive changes in themselves and in their followers. Sometimes, these leaders may also try to alert and motivate themselves with a feared self that is an imagined self who fails to live up to the expectation of followers by compromising organization’s missions and core values when external pressures exist (Lord, 1999). Agreed by Gardner and his colleagues (2005), authentic leaders are at least partially motivated by these self-images in order to pursue pro-social goals, and therefore achieve self-development as well as their followers’ development. In addition, Higgins (1987) pointed out only when goals are aligned with possible selves, self-verification motives are activated, as people seek out accurate information to detect and decrease the potential discrepancies between their self-images (e.g. the discrepancies between actual self and ideal self) (Higgins, 1987). According to Swann et al., (2004), people, who are embedded with self-verification motives, understand that it is very crucial to maintain some level of stability and integrity for self-images; therefore they seek out external reflections on their self-images, and work hard to make others understand and verify their authentic self. Suggested by Luthans and Avolio (2003), authentic leaders, who are goal-oriented individuals, are also expected to be driven by self-verification motives (Luthans, et al., 2006; Avolio, 2003). Such leaders solicit ideas and opinions from others (e.g. subordinates, shareholders, and stakeholders) in order to have a clear understanding of self-views and possible selves that have been

posited “to motivate and guide people’s pursuit of goals and typically promote self-improvement” (Hoyle et al., 1999, p. 133).

In summary, to achieve self-awareness, leaders should always be true to their core values, understand their identities under different situations, experience positive emotions and grow such emotions in their followers, and finally, be future-centered, and goal-driven.

Internalized Moral Perspective

According to Ryan and Deci (2003), internalized moral perspective is an internalized and integrated form of self-regulation. Such self-regulation is guided with internalized moral standards and values; therefore it functions as a moral framework in which people make decisions that can hardly go beyond the moral boundaries (Avolio & Gardner, 2005; Gardner, Avolio, Luthans, et al., 2005). In Stajkovic and Luthans paper (1998), self-regulation is postulated as processes that involve the exertion of self-control through (a) the setting of internal standards, which can be existing standards or newly formulated ones, (b) the evaluation of discrepancies between these standards and actual or potential outcomes, and (c) the identification of intended actions for resolving these discrepancies (cited in Gander et al., 2005; Avolio & Gardner, 2005; Luthans et al., 2006). As previously discussed, once leaders become aware of their true self by internalizing their identities, values, emotions, and goals into their schema, they are more likely to be authentic. In the same vein, regulatory processes which guide the behavioral decisions of leaders are also regarded as an essential element for leaders to be authentic (Gardner et al., 2005).

Self-regulation is heavily drawn on Deci and Ryan’s (1995) self-determination theory. Four types of regulations are postulated (Deci & Ryan, 1995); they are external regulation, introjected regulation, identified regulation, and integrated regulation. External regulation occurs when the individual act in order to gain reward and avoid punishment. Introjected regulation involves behaviors that are driven by a sense of guilt or obligation. Identified regulation occurs when the individual perceives the importance and underlying values of the activity; therefore he moves to

the direction of self-determination to accomplish such activity. Finally, integrated regulation, the highest and most autonomous form of regulation, arises from the full integration of identified goals and values into the schema of the individual without any inconsistency between newly formulated standards and existing ones. Gardner et al., (2005) suggested that integrated regulation is what guides authentic leaders on the right track without losing the true self. It is an extrinsic regulation process that is fully integrated to be coherent with the actor's sense of self, and hence authentic. Therefore, behaviors of authentic leaders are expected to be primarily driven by internalized regulatory processes (or integrated regulation) as opposed to the external, introjected, and even identified regulation, because authentic leaders are striving for goals that reflect their personal standards of conduct (Deci & Ryan 1995; Deci & Ryan, 2000; Gardner et al., 2005). To summarize by quoting Gardner et al., (2005, p.356), "as authentic leaders develop increased knowledge of their true self, they are more likely to achieve self-concordant identities and display a deep commitment to their internalized values, identity, and goals".

Balanced Processing

In the discussion of authenticity and optimal self-esteem, Kernis (2003) proposed that unbiased processing is a basic component of authenticity. He defined unbiased processing as an absence of denials, exaggerations, distortions, or ignorance of internal experiences, private knowledge, and external evaluations of the self. Gardner et al. (2005), however, used a new term balanced processing for authentic leadership, since ample research in social psychology suggested that human beings are hardly unbiased information processors, and in fact they are very likely to be biased when processing self-relevant information (Tice & Wallace, 2003). Balanced processing is best understood in the context of self-esteem. According to Kernis (2003), people with low or fragile high self-esteem are more inclined to hide or neglect their shortcomings, such as a lack of skills, negative emotions, and undesirable personal attributes, etc. Researchers who conducted studies on ego defense mechanisms held that the behavior of withhold and belittle the negative information about oneself is an immature and maladaptive defense style that involves information distortion or failure to handle negative emotions (Ungerer, Waters, Barnett, & Dolby, 1997; Vaillant, 1992). By contrast, Kernis suggested that people

with optimal self-esteem can process information more objectively. Luthans et al., (2006) proposed that authentic leaders are able to process information objectively with little tendency to be biased towards negative outcomes, because such leaders are not ego-centered persons who are vulnerable to self-esteem relevant information. To summarize, authentic leaders who are goal-driven and who actively seek out feedback from different parties can make balanced self-assessments, as well as social comparisons (Swann, 1983; Swann et al., 2003). In addition, they can use the ability of balanced processing to foster the detection and correction of personal bias before making important decisions. Such ability also helps to activate the feedback network among followers because these people are given a supportive environment where they feel that they can take risks, make mistakes, and create dialogue... with their authentic leaders (Berson et al., 2006).

Relational Transparency

Relational transparency is another critical component in authenticity. As proposed by Kernis (2003), it is defined as “relational in nature, inasmuch as it involves valuing and achieving openness and truthfulness in one’s close relationships”. In the emerging body of leadership literature, Gardner et al. (2005, p.358) included the component in the construct of authentic leadership, positing that “authentic leaders will be relevant transparent in expressing their true emotions and feelings to followers, while simultaneously regulating such emotions to minimize displays of inappropriate or potentially damaging emotions”. Thus, relational transparency requires continuous effort of self-control and emotional regulation from the leaders who are determined to reveal the true self, rather than a faked self in front of their followers. As suggested by some researchers, the need for transparency to openly share information is a very crucial part in authentic leadership development (Avolio, 2005; Luthans & avolio, 2003; May et al., 2003). So far, authentic leadership literature has indicated that transparency in relationships effectively enhances interpersonal cooperation and teamwork, because unconditional trust is built up during the process of information sharing between leader and follower (Jones & George, 1998; Gardner, et al., 2005). However, information sharing, though openly, is selective for authentic leaders. It is true that disclosure of information is an effective way to build bonds of intimacy and mutual trust among team members in

the organization, but the disclosure without proper and careful selections might incur negative and damaging consequences on followers.

2.1.3 Authentic Leadership as a Second-Order Construct

As previously discussed, authentic leadership is a multidimensional construct that is composed of self-awareness, internalized moral perspective, balanced processing, and relational transparency. Despite past studies supporting the similarities among them, these four components were studied in rather separate fields, and thus received relatively little discussion of the possibility to be incorporated under a common core construct (Walumbwa, et al., 2010). However, some studies showed evidence to support these four individual components to form a single construct, namely authentic leadership. According to Kernis and Goldman (2005), the four components of authenticity (self-awareness, unbiased processing, authentic behavior, and relational orientation) combined are positively related to psychological wellbeing, life satisfaction, and high self-esteem, and negatively related to contingent self-esteem. Subscale analyses indicated that self-awareness is positively related to three of the four measures of psychological wellbeing, authentic behavior is positively related to only two measures of psychological wellbeing, unbiased processing (also termed “balanced processing”) is marginally related to life satisfaction, and relational orientation (also termed “relational transparency”) is related to life satisfaction only (Kernis, 2003; Kernis & Goldman, 2005). Walumbwa and his colleagues (2008) provided more empirical evidence to support the higher-order characteristic of authentic leadership by using two independent samples from the USA and China. In their study, both the US and the Chinese sample indicated that authentic leadership as a second-order construct achieves the best model fit when compared with the alternative models (the USA sample: CFI=.97, RMSEA=.05, $\chi^2=234.70$, the China sample: CFI=.95, RMSEA=.06, $\chi^2=176.03$). In addition, the average correlation among the four measures is .67 for the USA, and .69 for China. Hence, Walumbwa et al. (2008, p. 101) concluded that “there is substantial convergent validity among the four measures and that self-awareness, relational transparency, internalized moral perspective, and balanced processing converge to form a higher-order factor that is indicated by and explains the relationships among the lower-level measures in both USA and Chinese samples”.

Recently, some other studies have revealed additional evidence to support the second-order premise of authentic leadership (Peterson et al., 2012; Wong, et al., 2010; Walumbwa, et al., 2010; Clapp-Smith et al., 2009). For example, in the paper of Walumbwa, et al. (2010), evidence indicated that authentic leadership is indeed a higher-order construct using samples from two telecom companies in China.

It is important to note that the four substantive components of authentic leadership are not redundant. Each of the components is crucial in its own right to explain the variances attributable to the latent factor, although there is a great overlap among these components. Therefore, the latent higher-order construct of authentic leadership can be a better option to explain the conceptual and empirical overlaps when compared with authentic leadership as a multidimensional aggregate construct where the underlying components may or may not be related (Walumbwa, 2010).

2.1.4 Differentiating Authentic Leadership from Transformational Leadership

Authentic leadership scholars stressed the importance of differentiating the authentic leadership construct from other related constructs since all of their initial writings on this topic (Avolio & Gardner, 2005; Avolio, Luthans et al., 2004; Luthans & Avolio, 2003; May et al., 2003). Suggested by these leading scholars, authentic leadership is a “root construct” (Avolio, Luthans et al., 2004; May et al., 2003) which is generic in a way that it forms the basis for other forms of positive leadership, namely, transformational leadership, ethical leadership, spiritual leadership, charismatic leadership, etc. (Avolio, Gardner et al., 2004; Gardner et al., 2005). Especially, these scholars put great effort to clarify the similarities and differences between authentic leadership and transformational leadership, as they share a great portion of conceptual overlaps (Walumbwa et al., 2008; Cooper et al., 2005; Avolio & Gardner, 2005).

Transformational leadership contains five underlying components of attributed charisma, idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Avolio, 1999; Bass, 1998). However, according to Yukl (2006), attributed charisma is considered as the leader’s influence on followers’ attribution, and is not necessarily as the leader’s behaviors. Thus, it is not counted as

one of the dimensions of transformational leadership here, since the focus is more on the behavioral dimensions as a starting point for authentic –transformational leadership-comparisons (Walumbwa et al., 2008). Bass and Steidlmeier (1999) posited that idealized influence is envisioning, confident, and sets high standards for emulation. Leaders with idealized influence tend to prioritize followers' needs; they share risks and burdens with their subordinates; meanwhile, they behave as a role model by demonstrating a set of deep rooted moral standards to their followers. Consequently, followers want to identify with such leaders, because they show great confidence and trust in them (Walumbwa et al., 2008). Inspirational motivation provides followers with clear instructions of shared goals and the intrinsic motivation to handle challenges. Leaders with inspirational motivation tend to see the best in their followers, such that they can grow strengths in them, and then transform them to leading positions (Bass & Steidlmeier, 1999). Intellectual stimulation, suggested by Walumbwa et al. (1999, p. 34), entails “stimulating followers to question assumptions, reframe problems, and approach old situations in completely new ways”. Intellectually stimulating leaders are able to show their followers the new perspectives of old problems, and teach them to approach alternative solutions in a rational way. Last but not least, according to Bass (1985), leaders with individualized consideration treat each of their followers as a unique individual by providing coaching, mentoring, creating learning opportunities, and fostering a healthy working environment for their development (Walumbwa et al., 2008; Bass & Steidlmeier, 1999; Bass, 1998).

Although authentic leadership is closely associated with the four underlying components of transformational leadership, still differences are exhibited in terms of construct conceptualization, as indicated by Table 1.

Table 1.***Comparisons between Authentic Leadership and Transformational Leadership***

Theoretical Components	Authentic Leadership	Transformational Leadership
Authentic leadership		
Self-awareness	✓	*
Relational transparency	✓	*
Internalized moral perspective	✓	*
Balanced processing	✓	*
Transformational leadership		
Idealized influence	*	✓
Inspirational motivation		✓
Intellectual stimulation		✓
Individualized consideration		✓

Notes: ✓ = focal component; * = implicit component.

It should be noted that transformational leadership is posited by Bass (1998) as being optimistic, hopeful, developmentally-oriented, and of high moral character, which are the crucial elements to necessitate the leader as being authentic. Indeed, the working definitions of transformational leadership from both Bass (1985) and Burns (1978) suggested that transformational leaders are mostly authentic. Nevertheless, although transformational leaders are authentic, authentic leaders are not necessarily transformational. For example, Avolio and Gardner (2005) suggested that authentic leaders may or may not actively seek for opportunities to develop their followers into leaders; contrarily, they care more about the empowerment effect of the leadership on individual growth, goal actualization, and moral development of their followers (Gardner, Avolio, Luthans et al., 2005; Luthans & Avolio, 2003; Avolio, 1999; Bass, 1998, 1985). Moreover, unlike transformation leaders, authentic leaders are not necessarily inspirational or charismatic. As noted by George (2003), authentic leaders are hardworking; they lead with purpose and they behave in accordance with their inner moral standards in order to create an enduring

organization, not through the influence of charismatic personality or motivating speech (Walumbwa et al., 2008; Avolio & Gardner, 2005; George, 2003).

A key distinction is that authentic leaders possess a heightened level of self-awareness (Luthans et al., 2006). They know well about their own merits and shortcomings; therefore they are striving to achieve self-improvement by seeking out feedback from different individuals. On the other hand, transformational leaders may or may not be motivated by self-verification purposes; hence they may not explicitly seek for opinions and suggestions from others. Moreover, according to Walumbwa and his colleagues (2008, p. 104), authentic leaders know “where they stand on important issues, values, and beliefs, and they are transparent with those they interact with and lead”. Although both authentic leadership and transformational leadership encompass moral elements, authentic leaders internalize moral standards to be in line with their existing value system via self-regulatory processes, such that they can stay in course during difficult challenges without deviating from their internal core beliefs, their identities, and their leader roles (Walumbwa et al., 2008; Avolio & Gardner, 2005).

Nunnally and Bernstein (1994) suggested that empirical test of discriminant validity is important to ascertain if the construct is redundant with other similar constructs. Doing so will eventually allow for empirical distinctions between authentic leadership and other forms of leaderships. In one of the recent studies from Walumbwa and his associates (2008), discriminant validity tests were carried out for authentic leadership and some related leadership constructs, namely transformational leadership, and ethical leadership. Results indicated that authentic leadership is distinct from the other two leadership constructs, though in a closer investigation, the four dimensions of authentic leadership positively correlate with ethical leadership and the dimensions of transformational leadership, yet not that high as to indicate construct redundancy.

2.2 Psychological Capital

Psychological capital is simply known as PsyCap. Like human and social capital, it is a derivative from the concept of economic capital (Luthans, et al., 2006)

which means “resources withdrawn from consumption that are invested for future anticipated returns” (Luthans, Luthans, & Luthans, 2004, p. 45). However, PsyCap even goes beyond economic (“what you have”), human (“what you know”) and social (“who you know”) capital, as human potentials for development are generally ignored in the three forms of capitals, whereas PsyCap depicts the possibility of growth in human. More specifically, PsyCap is more concerned with “who you are”, “who you are becoming”, and your “best self” (Luthans et al., 2006; Luthans et al., 2007). The conceptualization of PsyCap, according to Luthans et al. (Luthans & Yousseff, 2004; Luthans et al., 2007), is “an individual’s positive psychological state of development and is characterized by: (1) having confidence (i.e., self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (i.e., optimism) about succeeding now and in the future; (3) preserving toward goals and, when necessary, redirecting paths to goals (i.e., hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (i.e., resilience) to attain success” (Luthans et al., 2007, p.3). Based on ample theoretical and empirical evidence, PsyCap is posited as a multidimensional construct consisting of four substantive components, namely, self-efficacy, optimism, hope and resilience (Luthans Youssef, & Avolio, 2007; Luthans, Avolio, Norman, & Avey, 2006; Luthans et al., 2006, Luthans et al., 2005). These four components are the best to be included in PsyCap according to the aforementioned definition. More importantly, they also strictly meet the PsyCap inclusion criteria: theory and research based, amendable to valid measurement, state-like and hence malleable, and positive performance-oriented (Luthans, 2002; Luthans & Youssef, 2004; Luthans et al., 2006; Luthans et al., 2007).

Self-efficacy

According to Luthans, Avey, Avolio, and Peterson, (2010), self-efficacy is the most extensively researched topic among the four components of PsyCap (e.g., Bandura, 1997, 2005, 2008), and it is regarded as the best to meet the PsyCap inclusion criteria (Luthans, Yousseff, & Avolio, 2007). Heavily based on Bandura’s (1997, p.7) social cognitive theory, self-efficacy is defined as “people’s belief in their capacities to produce desired effects by their own actions”. However, one notable characteristic of self-efficacy is domain-specific, which means you may be

very confident in doing tasks in some areas of your life; nevertheless, you may still be unsure about some other areas. Just as explained by Luthans et al. (2007, p. 36), “previously built confidence in one domain may not be readily transferable to other domains that you are either familiar with or not familiar with”. When applied to the work domain, self-efficacy is suggested by Stajkovic and Luthans (1998, p. 66) as “the employee’s conviction or confidence about his or her ability to mobilize the motivation, cognitive resources or courses of action needed to successfully execute a specific task within a given context”. In this study, self-efficacy refers more generally to the efficacy in doing a variety of work tasks, which differentiates itself from the generalized self-efficacy (e.g., see also Sherer et al., 1982) which can be applied across all other life aspects (Luthans, Avolio, Avey, & Norman, 2007).

Optimism

Optimism is supported as another positive psychological resource included in PsyCap (e.g. Luthans, Youssef, & Avolio, 2007). There are two major theoretical streams by which optimism is conceptualized. According to Seligman’s (1998) attribution framework, optimists make internal, stable, and global causal attributions regarding positive events; while they make external, unstable, and specific attributions for negative events. In contrast, as suggested by Luthans and colleagues (2007, p.91), “pessimists do not give themselves credit for the positive events that occur in their lives...in addition, the attributional causes that pessimists use tend to be temporary and specific to the situation, and thus they believe that positive events hold little chance of happening again in the future”. The second main stream which is represented by Carver and Scheier (2002) describes optimism as a tendency to expect more positive outcomes to occur in the future than negative ones (see also Scheier & Carver, 1987). Carver and Scheier (2002) further argued that optimists and pessimists “differ in how they approach problems and challenges and differ in the manner and success with which they cope with adversity” (p.231). Despite that optimism is a desirable psychological quality of an individual, Luthans et al. (2007), however, pointed out an optimistic explanatory style may also bring about negative outcomes, because individuals with unrealistic optimism tend to underestimate potential risks (Peterson & Chang, 2002; Davidson & Prkachin, 1997; Kok, Ho, Heng, & Ong, 1990, Weinstein, 1989). Therefore, Peterson (2000) advocated that

people should be flexible optimists who try to make accurate appraisals for different situations and then decide to utilize optimistic or pessimistic explanatory styles. In addition, Schneider (2001) pointed out the need for realistic optimism. From her perspective, optimism is not an unchecked process of situational appraisal, rather it involves a realistic evaluation of what one can and cannot accomplish in a given situation. In this study, optimism is characterized with both flexible and realistic explanatory styles. As suggested by Luthans et al. (2007, p.96), “effective PsyCap optimism should not take extremes, either in internalizing success...or in externalizing all types of failure and thus shirking responsibilities”.

Hope

The construct of hope has received considerable research support and is argued as the crucial component contributing to the development of the integrative theoretical foundation for PsyCap (Luthans, Avolio, Avey, & Norman, 2007). According to Snyder (1994, p.2), hope is an “empowering way of thinking”, which is different from wishful thinking that is often confused with hope in daily language (Luthans, et al., 2007). Based on his hope theory, Snyder and colleagues (1991, p.287) defined hope as a “positive motivational state that is based on an interactively derived sense of successful (a) agency (goal directed energy) and (b) pathways (planning to meet goals)”. In other words, agency is the willpower which intrinsically motivates the individual to initiate and stick with the goal that he pursues; while pathways refer to the waypower that activates the individual’s capacity to generate alternative routes for goal accomplishment for fear that the given ones might be blocked (Snyder, Rand, & Sigmon, 2002; Snyder, Ilardi, Michael, & Cheavens, 2000; Snyder, 1994, 2000, 2002). Moreover, according to Snyder (1993, 2000, 2002), there are reciprocal influences between agency and pathways, meaning that the willpower motivates the search for new alternative pathways, and the pathways thinking which involves innovation, creativity and resourcefulness in turn strengthens the determination of goal accomplishment. When the willpower is combined with the waypower, the combined force will contribute to an upward spiral of hope.

Resilience

Resilience is contended as the fourth substantive component of PsyCap according to the inclusion criteria (e.g. Luthans, Youssef, & Avolio, 2007). Masten & Reed (2002, p.75) described resilience as “a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risks”. As an important protection factor, resilience allows people to bounce back from adverse events. Individuals with higher resilience bounce back quickly at levels, or even beyond the previous levels of equilibrium (Avolio & Luthans, 2006; Youssef & Luthans, 2005; Bonanno, 2004; Richardson, 2002). When extended to the work setting, resilience is conceptualized by Luthans (2002, p.702) as the “positive psychological capacity to rebound, to bounce back from adversity, uncertainty, conflict, failure, or even positive change, progress and increased responsibility”.

2.2.1 State-like Versus Trait-like Debate

The debate on the state versus trait distinction is deeply rooted in the history of psychology (see also Zuckerman, 1983; Allen & Potkay, 1981). Some scholars called for more investigations on the relative temporal distinction between states and traits in the field of positive organizational behavior (POB) (Wright, 2007; Cropanzano & Wright, 1999; Chamberlain & Zita, 1992). PsyCap, which is heavily based on the notion of positive organizational behavior, also receives great discussion regarding the state-like versus trait-like characteristics (e.g., Luthans, Youssef, & Avolio, 2007; Luthans et al., 2010). According to Luthans et al. (Luthans & Youssef, 2007; Luthans, Avey et al., 2006; also see Chen, Gully, Whiteman & Kilcullen, 2000), state and trait are not posited as independent, dichotomous constructs, but rather they are postulated as falling along a continuum, with the difference in the degree of malleability (easily developable or not). From their perspective, PsyCap and its four substantive components are all state-like, which means they are open to development, and therefore can be changed across time (Luthans, Youssef, & Avolio, 2007; Avolio & Luthans, 2006; Luthans & Avolio, 2003). Here is a heuristic explanation of the state-trait continuum provided by Avey, Luthans and Youssef (2010, p.436; also see Luthans, Avolio, Avey, & Norman, 2007):

1. “Pure positive traits: These are at one extreme of the continuum and are characterized by stability over time and across situations, including traits that are believed to be hardwired, such as intelligence or hereditary characteristics.”
2. “Trait-like constructs: These are closer to the trait end of the continuum and refer to relatively stable psychological characteristics such as conscientiousness, extroversion, and core self-evaluations (CSEs).”
3. “State-like psychological resources: These are closer to the opposite (state) end of the continuum and include PsyCap and its constituents of efficacy, hope, optimism, and resilience, which tend to be malleable and thus open to development and are particularly relevant to the workplace.”
4. “Positive states: These are at the other extreme of the continuum and include momentary and highly variable states such as moods and emotions.”

From the above description, PsyCap, which is conceptualized as a state-like construct, is less stable and is more malleable when compared with trait-like constructs such as intelligence. On the other hand, PsyCap is more fixed and less changeable than pure states such as moods and emotions. In addition, there has been empirical evidence supporting the state-like and trait-like distinctions between PsyCap and some other psychological qualities. Specifically, evidence supported that PsyCap falls into the state-like position on the continuum. For example, according to Luthans and colleagues (2007), the corrected test-retest reliabilities of conscientiousness (.76) and core self-evaluation (.87) demonstrate relatively high stability when compared with PsyCap (.52) and the positive emotions measure (.46).

2.2.2 PsyCap as a Developable Construct

As previously discussed, theoretical and empirical evidence support that PsyCap and its four substantive components (self-efficacy, optimism, hope, and resilience) are state-like, and thus open to development. In addition, Avey et al. (2010) pointed out that growing PsyCap in employees is of particular importance to the workplace. Therefore, researchers and practitioners, so far, have developed various interventions and training programs for the enhancement of these positive psychological qualities.

Developing Self-efficacy

Drawn from the work of Bandura (1997), self-efficacy training programs are possible to foster the growth of confidence in the individual (also see Bandura, 2000). The four approaches proposed by Bandura (1997) are mastery experience, vicarious experience and modeling, social persuasion and lastly emotional and physiological arousal. In addition, such efficacy-building approaches can also extend their applications to the workplace through highly-focused micro-interventions (Luthans, Avey, Avolio, Norman, & Combs, 2006). For example, Luthans and Youssef (2007) pointed out that mastery experience can be developed in the work setting through actual hands-on trainings with gradual increase in the difficulty and complexity of tasks to generate confidence and further success. Employees may also build up their efficacy by observing and role modeling the successful outcomes of the behaviors of those relevant others (Luthans & Youssef, 2007; Luthans et al., 2004). Social persuasion is another powerful approach. According to Luthans et al. (2004, p.48), “respected, competent individuals can help develop confidence as psychological capital in employees by persuading them that they have what it takes...as a can-do attitude”. For emotional and physiological arousal approach, the basic idea is that employees tend to lose confidence when they suffer from negative emotions (e.g., fatigue, depression) and poor physical conditions. However, by the same token, good physical and mental conditions may not necessarily direct to confidence-building, but at least may serve as a departure to build confidence at work (also see Luthans et al., 2004). In fact, there have been measurements to assess state-like self-efficacy before and after trainings (e.g. Maurer & Pierce, 1998).

Developing Optimism

Seligman (1998) proposed “learned optimism” in his well-recognized book by this title, emphasizing the state-like and developable properties of optimism through learning to adjust cognitive appraisals. Indeed, Luthans, Youssef and Avolio (2007, p.101) agreed that “PsyCap optimism can be developed by either altering a pessimistic explanatory style or enriching the dimensions of an optimistic explanatory style”. Hence, focused interventions may be a way to nurture and enhance optimism (Luthans, Avey et al., 2007; Luthans, Avey, et al., 2006; Carver &

Scheier, 2005). In fact, Schulman (1999) provided some useful guidelines for building PsyCap optimism, which, if properly applied to person-oriented interventions, may have positive influence on the change of attributional style from pessimistic to optimistic (also see Luthans et al., 2004). (1) The individual should first identify the self-defeating beliefs when he encounters challenging situations. (2) Then, he evaluates the accuracy of such beliefs. (3) Once dysfunctional beliefs are detected, he should try to replace them with more constructive and accurate beliefs. Indeed, specific training programs based on the above ideas have been emerging in industry to develop optimism in employees, for example, the American Express Financial Advisors (Luthans, et al., 2004). Shifren and Hooker (1995) have developed a measurement of state-like optimism to assess the developable characteristic.

Developing Hope

Snyder and colleagues (Snyder et al., 2002; Snyder, 2000) demonstrated that hope, as a state-like construct, is developable in their clinical studies. They developed a scale for state-like hope, and its validity and reliability have been established (see also Feldman & Snyder, 2000; Snyder, Sympton, Ybasco, Borders, Babyak, & Higgins, 1996). As previously mentioned, PsyCap hope, which differentiates itself from hope in everyday language, deals with goal achievement by using willpower and waypower. Drawn from the work of Snyder (2000), several approaches have been successful in developing hope. For example, the goal-setting method, which requires an individual to identify clear organizational and personal goals, not only influences the level of motivation, effort, and determination, but also influences the willingness and ability to use pathways thinking in order to achieve goals (Latham, 2000; also see Luthans, Youssef, & Avolio, 2007). Related to the goal-setting method is what Snyder (200) called stretch-goals which are those challenging enough to ignite excitement and effort and yet are still within one's ability to achieve (see Luthans, Youssef, & Avolio, 2007). In addition, stepping method is also effective in terms of hope development. According to Snyder (2000), stepping method involves breaking one's goals down into manageable subtasks which will mark the progress and create small victories every time he finishes the task, such that PsyCap hope may be nurtured and enhanced inside the individual

(also see Luthans et al., 2004). What's more, Luthans and Youssef (2007) stressed the important role of organizational culture (e.g., positive leadership, supportive colleagues, trust) plays in cultivating hope.

Developing Resilience

Many researchers supported that resilience as a state-like construct can be nurtured through trainings. Masten and Reed (2002) depicted three resilience development strategies, namely, asset-focused, risk-focused, and process-focused strategies. According to Masten and Reed (2002), asset-focused strategies aim at providing accessibility and availability of resources (e.g., human capitals, social capitals, and psychological capitals) in order to foster the competence of the individual, while risk-focused strategies aim at protecting the individual from being exposed to hazards. Finally, process-focused strategies are effective adaptational systems that allow the individual to utilize available resources in order to manage risk factors (also see Luthans, Youssef, and Avolio, 2007). Luthans and Youssef (2007) contended that these strategies would have great potential, if applied to the work setting. As a matter of fact, Luthans et al. (2004) pointed out that specific resilience programs for individuals and organizations have already been emerging. For example, Wolin and Wolin (2005) designed resilience assessment and training in various contexts. Reivich and Shatte (2002) conducted resilience development programs for companies. In addition, Conner (1993, 2003) tailored specific resilience programs for leadership development. There is even a state-like measurement for resilience developed by Wagnild and Young (1993).

Developing PsyCap

Preliminary intervention results showed that PsyCap can be effectively developed due to its state-like properties (Luthans, Avey, & Patera, 2008; Luthans, Avey, Avolio, Norman, & Combs, 2006). For example, Luthans et al. (2006) demonstrated that the on-line micro-intervention can effectively foster PsyCap among management students, and it is also effective among managers. In addition, Luthans and colleagues (2008) conducted a 2-hour on-line intervention. In this study, participants in the treatment group were assigned to PsyCap trainings, while the ones

in the control group were given other trainings that were unrelated to PsyCap development. Results demonstrated a significant increase of the PsyCap level in the treatment group; however, participants in the control group did not experience much growth in PsyCap.

2.2.3 PsyCap and Positive Work Outcomes

As previously mentioned, PsyCap inclusion criteria suggested that components of PsyCap have positive influence on work outcomes. For example, a meta-analysis of 114 studies demonstrated that self-efficacy has strong correlations with job performance (Stajkovic & Luthans, 1998). Peterson and Luthans (2003) conducted a study among restaurant managers, and found that hope is positively correlated with gross profitability, job satisfaction, and retention rates of employees. Besides, Luthans (2007) reported that optimism is related to both performance evaluation and job satisfaction. In the same year, Youssef and Luthans (2007) found positive correlations between resilience and commitment. Therefore, PsyCap which is postulated as a composite of these performance-oriented positive constructs has also been significantly related to desired employee behaviors (e.g., organizational citizenship behavior), attitudes (e.g., satisfaction), and performance (see Avey, Luthans, & Youssef, 2008). In addition, PsyCap was found to effectively combat stress (Avey, Luthans, & Youssef, 2008), and help foster the positive organizational change (Avey, Wernsing, & Luthans, 2008). There is also a growing body of literature supporting that PsyCap can effectively mediate the relationship between organizational climate (e.g., leadership) and employee performance (see Luthans, Norman, Avolio, & Avey, 2008).

2.2.4 PsyCap as a Core Construct

PsyCap has been suggested by many researchers as a second-order, core construct (see Luthans, Youssef, & Avolio, 2007). First, it is important to mention evidence to support convergent and discriminant validity of psyCap as a core construct (Judge, Van Vianen, & Depater, 2004). Indeed, some evidence supported that PsyCap converge with other relevant constructs, specifically, core self-evaluation (CSEs). There are some conceptual overlaps between the two constructs,

such as general versus domain-specific self-efficacy, and emotional stability versus resilience. Apart from theoretical evidence, empirical findings demonstrated a strong correlation of .72 for convergent validity between PsyCap and CSEs (Avey, Luthans, & Youssef, 2010). Nevertheless, these two constructs are different from each other. Conceptually, PsyCap can be differentiated with other constructs drawn from positive psychology by focusing on the state-like and developable properties (Luthans, Avolio, Avey, Norman, 2007; Luthans, Avey, Avolio, & Peterson, 2010). Using such criteria, many relevant but trait-like constructs (e.g., character strengths and virtues (CSVs), positive affectivity, core self-evaluations) can be differentiated from PsyCap construct (Luthans, Avey, Avolio, & Peterson, 2010; Avey, Luthans, & Jensen, 2009; Luthans, Avolio, Avey, & Norman, 2007). There has been some empirical evidence. For example, Avey and colleagues (2010) pointed out that PsyCap has explained additional unique variance of cynicism, intention of quit, organizational citizenship behavior, and counter-productive work behavior when compared with core self-evaluation. Moreover, as suggested by Avey, Luthans, and Youssef (2008), PsyCap has predicted additional unique variance of work attitudes and behaviors beyond personality traits, and person-organization and person-job fit.

Drawn from psychological resource theory (Hobfoll, 2002), the four constituents of PsyCap are posited to share conceptual connections with each other (Avey, Reichard, Luthans, & Mhatre, 2011). For example, Bandura (1998, p.56) concluded that “evidence shows that human accomplishments and positive well-being require an optimistic sense of personal efficacy to override the numerous impediments to success”. He continued by adding: “it is resiliency of personal efficacy that counts” (p.62). Snyder (2000, p.39-p.40) suggested that hopeful people have higher level of confidence in task completion (self-efficacy), and they can quickly bounce back (resilience) from temporary hopelessness. He also realized the linkage between hope and optimism, stating that similar to hope, “optimism is a goal-based cognitive process that operates whenever an outcome is perceived as having substantial value” (Snyder, 2002, p. 257). To date, there has been some empirical evidence supporting the multidimensional nature of PsyCap. Luthans and colleagues (2007) found that the four components have relatively high correlation (.6-.7 range), and thus the convergent validity is supported. In addition, the constituents of PsyCap were found to be related at about the same level to

supervisor-rated performance (Luthans et al., 2005). However, the discriminant validity of the four constructs has also been supported by both theoretical and empirical evidence. For example, conceptually, both self-efficacy and hope contain mechanisms of intrinsic motivation. However, motivation generated from self-efficacy is more related to the perceived ability of task accomplishment, whereas hope elicits motivation through the will to find out best approach (pathway thinking) in order to achieve certain goals. As a matter of fact, pathways thinking, as a unique characteristic of the hope construct, can alone discriminate itself from other constituents of PsyCap (Also see Luthans, Youssef, & Avolio, 2007). In addition, according to Avey and colleagues (2010), both resilience and self-efficacy can foster perseverance in people when adversities occur. Nevertheless, unlike the proactive nature of self-efficacy, resilience adopts a reactive approach by utilizing available resources only when risk factors are perceived to cause potential damages. Moreover, unlike hope and self-efficacy which can only make attributions of positive events to internal factors, optimism is also able to attribute negative events to external factors. Empirical evidence from multiple research studies has demonstrated discriminant validity of the four components of PsyCap (Avey, Luthans, & Youssef, 2010; Youssef & Luthans, 2007; Bryant & Cvengros, 2004; Carifio & Rhodes, 2002; Magaletta and Oliver, 1999). For example, Magaletta and Oliver (1999) pointed out that hope can predict the additional unique variance of well-being beyond self-efficacy.

According to Hobfoll's (2002) psychological resource theory, the whole composite of resources is likely to exert greater beneficial influence than its individual components, because the interactions among these individual resources may bring in other useful resources to deal with stressful events. Hence, PsyCap is postulated to be a second –order construct comprised of the shared variance between the four positive psychological resources of efficacy, optimism, hope and resilience (see Avey, reichard, Luthans, and Mhatre, 2011). Luthans and colleagues (Luthans, Avolio, Avey, & Norman, 2007; Luthans, Avolio, Norman, & Avey, 2006; Luthans et al., 2005) found that PsyCap as a second-order construct can predict performance and satisfaction better than its substantive components individually. Moreover, research studies using the competing models comparison also empirically supported that PsyCap is best modeled as a second-order factor (Avey, Luthans, &

Youssef, 2010; Avey, Luthans, & Jensen, 2009; Gooty, Gavin, Johnson, Frazier, & Snow, 2009; Luthans, Avolio, Avey, & Norman, 2007).

2.3 Supervisory Support

Work social support is the concept derived from the broader social-support literature (Kossek et al., 2011). It is defined as an individual's belief that his well-being is valued in the social network embedded in the organization (Eisenberger, Singlhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Ford et al., 2007). Quick and Quick (1984) found that social support at workplace takes various forms. It can be informational when co-workers share information on critical issues; emotional when supervisors and colleagues provide care, love, and trust; instrumental when supervisors providing clear instructions to help the individual achieve work goals; and appraisal when supervisors give feedback and evaluations on the performance of the individual. Kossek et al. (2011) agreed with Quick's idea that work social support can take different forms and come from multiple sources (e.g. supervisors and colleagues). In addition, they suggested that work support can either be content general or content specific. For general work support, it refers to "the degree to which employees perceive that supervisors or employers care about their global well-being on the job through providing positive social interaction or resources", while for content-specific support, it involves "perceptions of care and provision of resources to reinforce a particular type of role demand" (Kossek et al., 2011, p. 292).

For the past few decades, ample evidence demonstrated that work social support is an important job resource to facilitate the psychological, physical, and overall wellbeing of individuals (La Rocco, House, & French, 1980; La Rocco & Jones, 1978). Among the different sources of work support (e.g. supervisors, colleagues, and employing organizations), support from supervisors is particularly crucial for employees' overall well-being (Brough & Pears, 2004; Yukl, 1989). Shanock and Eisenberger (2006) showed empirical evidence that supervisor support leads to greater organizational citizenship behavior. According to some other researchers (Galinsky, Bond, & Friedman, 1996; Repetti, 1987), support provided by the supervisor also helps the individual to solve work-family conflict. In addition, such supervisory support also mitigates the negative effect of burnout on nurses

(Kilfedder, Power, & Wells, 2001; Sullivan, 1993; Cronin-Stubbs & Brophy, 1985), on oncology caregivers (Le Blanc et al., 2007), and on staff working with mentally disabled persons (Van Dierendonck et al., 1998). Moreover, as suggested by Beehr and King (1995), supervisor support is also beneficial in the way that it helps to attain job satisfaction and to prevent depression. Given the critical importance of supervisor support in the work setting, it is therefore presented as the major job resource in this study.

2.4 Emotional Demands

Traditional research on occupational stress mainly centers on cognitive and physiological realms (e.g., Ulich, 1998). However, with the rise of service industry, “human work” becomes increasingly dominating in today’s marketplace. According to van Vegchel et al., (2004), emotional demands have increased, because the nature of work has changed to be more human-oriented. The emotional demands literature is heavily drawn from Hochschild’s (1979, 1983) emotional labor research. Hochschild (1983, P()) defined emotional labor as “the effort involved in displaying organizationally sanctioned emotions by those whose jobs require interaction with clients and customers”. So far, some other scholars have tried to conceptualize emotional labor, though they differ somewhat from Hochschild’s original version. For example, Ashforth and Humphrey (1993, p.90) defined emotional labor as “the act of displaying appropriate emotion”. Unlike Hochschild who was interested in “the management of feeling to create a publicly observable facial and bodily display” (Hochschild, 1983, p.7), Ashforth and Humphrey were more interested in the expressive behaviors because they perceive such behaviors to be organizationally desired and relevant (Morris & Feldman, 1996; Ashforth & Humphrey, 1993). Despite the different conceptualizations, the notable characteristic of emotional labor lies in the assumption that it taxes employees’ ability to deal with high level of emotional demands. According to the emotional labor literature, demands that involve emotional regulation are regarded as emotional demands. They can be rules and regulations that test employees’ ability of self-containment in certain situations at the workplace. De Jonge and Dormann (2003) defined the concept of emotional demands as aspects of the job that require efforts of proper emotional expressions during interactional contact with clients. This is particularly in line with the

Grandey's (2000) conceptual model of emotional labor, in which job-focused emotional labor denotes situational characteristics of the work (e.g. job demands) that cause employees to involve in employee-focused emotional labor. Job-focused emotional labor refers to the level of emotional job demands at work; while employee-focused emotional labor refers to the employees' effort to manage their own emotions (De Jonge et al., 2008).

Hochschild (1983) contended that emotional issues at workplace should be investigated because the expression of feelings prevails in today's customer-oriented occupations. In her book published in 1983, she investigated flight attendants and found convincing results that apart from physical, sensorimotor, and cognitive demands of the job, flight attendants spent most of their time doing emotionally involved tasks (e.g. dealing with unfriendly passengers). For a professional flight attendant, she is supposed to smile when interacting with passengers. However, sometimes, they would certainly not like to smile, for example, when dealing with unreasonable passengers or when having bad mood after a fierce quarrel with colleagues. However, knowing that emotional demands are part of their work nature, flight attendants have to put on desirable expressions in such situations. As suggested by Hochschild (1983), employees who are doing "human work" are supposed to have the ability of displaying a broad range of proper expressions which are appealing to their customers via emotion management. Drawing upon the work of Goffman (1959), Hochschild (1983) argued that in social interactions, people tend to play roles in order to create certain impressions which include the display of normative appropriate emotions following certain display rules. Therefore, employees are not only asked to engage in physical and mental work, but they are also required to regulate their emotions to be aligned with organizationally desirable outcomes (Zapf, 2002).

According to Bakker and his associates (Bakker et al., 2003; Demerouti et al., 2001), every occupation may have its own risk factors related to job stress. In the same vein, even within the "human work" domain, emotional demands may differ in accordance with the nature of the job, the work context, and the targeted group of clients. Therefore, employees' desirable expressions vary simply because their work involves different emotional demands. For example, emotional susceptibility is

considered as the protecting factor for employees when they deal with negative job stressors. On the other hand, emotional stability is a requirement for customer service clerks as it guarantees good communications with complaining customers, leading to cooperation and mutual understanding.

2.5 Work Overload

The life strain model posited by Pearlin and colleagues suggested that adverse work conditions or work strains may cause work pressure on employees; and in a long run, may elicit depression (Pearlin et al., 1981; Pearlin & schooler, 1978). Indeed, ample research supported that work strains, such as shift work, work overload, and poor work environment, lead to stress, depression, and anxiety in working individuals (Bolger, DeLongis, Kessler, & Wethington, 1989; Karasek, Gardell, & Lindell, 1987; Kandel, Davies, & Raveis, 1985; Pearlin, 1975). According to Galambos et al. (1995), work overload is a salient work strain which has a strong association with stress symptoms; therefore further investigation is desired (see also Sears & Galambos, 1992; Pleck, Staines, & Lang, 1980). In addition, Bakker et al. (2004) found that job demands, like work overload and emotional demands are strong predictors of job outcomes, specifically in-role performance. Hence, in concordance with their ideas, this study has focused on work overload for further investigation. Generally speaking, work overload is conceptualized as the content to which “the job performance required in a job is excessive or overload due to performance required on a job” (Iverson & Maguire, 2000, p.814). For some authors, work overload, as a psychological stressor that is specific to employees’ performance, is characterized by excessive workload within a short time frame (Claessens et al., 2004). Bradley (1983) explained the cause of work overload in modern organizations simply lied in the fact that there is an escalating need for work efficiency, and therefore the fast completion of tasks is deemed as the standard of good performance. As a consequence, employees have to deal with a certain amount of workload with time pressure. Since the problem prevails in most of the occupations today, work overload becomes a main variable studied in stress literature (Sparks & Cooper, 1999; DeFrank & Ivancevich, 1998; Taylor, Repetti & Seeman, 1997). For example, Reiche (1982) and House (1974) showed evidence that work overload is negatively related to well-being. And high work overload results in

uncertainty for the employee who will later suffer from anxiety and worry (Beehr & Bhagat, 1985). Moreover, according to Taylor et al (1997), workers who were asked to work too long and too hard at too many tasks were vulnerable to both physical and psychological health. Some research also demonstrated that work overload sharply decreases the level of commitment (Stevens et al., 1978), and job satisfaction (Iverson & Maguire, 2000), while it has a significant and positive association with voluntary turnover (Mueller et al., 1994), and work exhaustion (Moore, 2000).

2.6 Work-related Flow

Flow (Csikszentmihalyi, 1975, 1990; Csikszentmihalyi & Csikszentmihalyi, 1988) is the psychological state of optimal experience, which is characterized by “focused attention, clear performance goals and feedback, mind and body unison, effortless concentration, complete control, a loss of self-consciousness, the distortion of time, and intrinsic enjoyment” (Catley & Duda, 1997, p. 309). In short, Csikszentmihalyi (1977, p.36) conceived flow as “the holistic sensation that people feel when they act with total involvement”. In addition, he proposed a model of flow experience by suggesting that the precondition for flow to occur is that people should obtain a balance between the challenge of a situation and their own skills to tackle with the challenge (Demerouti et al., 2012; Bakker, 2008; Clarke & Haworth, 1994; Ellis et al., 1994; Csikszentmihalyi, 1990; Massimini & Carli, 1988; Csikszentmihalyi & Csikszentmihalyi, 1988). According to Csikszentmihalyi and Larson (1984, p.269), such balance functions “like a built-in thermostat that indicates whether we are operating at full capacity, at the leading edge of growth”. Only when high challenges are met with high skills can optimal experience of flow be obtained (Csikszentmihalyi, Rathunde, & Whalen, 1993; Csikszentmihalyi & LeFevre, 1989; Csikszentmihalyi, 1982). It is the most enjoyable experience possible, and “the experience is so enjoyable that people will do it even at great cost, for the sheer sake of doing it” (Csikszentmihalyi, 1990, p.4). Nevertheless, the combination of high skill and high challenge is not easily obtained. Usually, people either lack skills, or they face overwhelming challenges that are far beyond their capacity. Other combination of skill and challenge, however, would produce less beneficial outcomes. When the individual’s skill is high relative to the challenge provided by the task, boredom would occur; when low skill cannot deal with high challenge,

anxiety would occur; when both skill and challenge are low, apathy is likely to be the outcome (Eisenberger et al., 2005). There is some empirical evidence for the potential outcomes brought by the various combinations of skill and challenge (Csikszentmihalyi, 1997; Edwards, 1996; Massimini & Carli, 1988).

Csikszentmihalyi's flow theory has provided the most widely used explanations for enjoyment and absorption in a variety of non-employment settings, such as schooling (Moneta & Csikszentmihalyi, 1996; Clarke & Haworth, 1994; Carli et al., 1988; Massimini & Carli, 1988; Mayers, 1978), sports setting (Kowal & Fortier, 1999; Catley & Duda, 1997; Stein et al., 1995; Jackson, 1992; Jackson & Roberts, 1992), and leisure (Csikszentmihalyi & LeFevre, 1989; Mannell et al., 1988; Graef et al., 1983), etc. However, investigation on flow experience at work was limited at that time. Among the few studies, Csikszentmihalyi & LeFevre (1989) reported that the optimal experience of flow would occur three times more often during work than leisure. This means that employees are very likely to experience flow at work when their job demands match their skills. Work-related flow, according to Bakker (2008, p.401), is "a short term peak experience at work that is characterized by (1) absorption, (2) work enjoyment, and (3) intrinsic work motivation". Absorption refers to a state of intensive concentration, whereby employees are totally engaged in their work, experiencing a distortion of time, and vanish of self-consciousness (Csikszentmihalyi, 1990). According to Demerouti et al. (2012) and Makikangas et al., (2010), work-related flow shares affinity with work engagement construct (Schaufeli & Bakker, 2004), as both of the constructs contain a dimension of absorption. However, as suggested by Demerouti et al. (2012, p.277), "work engagement refers to a chronic and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior, whereas flow is a more acute state of absorption on a particular task". Work enjoyment refers to the positive evaluation from the individual regarding the work life that he engages in (Veenhoven, 1984). According to Diener and Diener (1996), the enjoyment is the outcome of cognitive and affective appraisal of the flow experience. Intrinsic work motivation refers to the internalization process of pleasure and satisfaction, such that the job becomes autotelic for its own sake (Harackiewicz & Elliot, 1998). People who intrinsically motivate themselves to do the job may not care too much about the payment, and promotion. They do it because they enjoy it.

2.7 Job Performance

Employee performance is deemed to be a central variable in employment relations by many work psychology scholars (e.g., Viswesvaran & Ones, 2000; Viswesvaran, ones, & Schmidt, 1996). In the past decade, much of the work of job performance has been inspired by the United States Army Selection and Classification Project conducted by Campbell and his associates (Campbell, 1990, 1999; Campbell, Gasser, & Oswald, 1996; Campbell et al., 1993; Campbell et al., 1990). In their research, they pointed out that performance is often confused with other activities, and therefore it is better to be understood as referring to the behaviors that employees display and which are valued by the organization (Campbell, McHenry, & Wise, 1990). Drawing ideas from Campbell and his associates, Rotundo & Sackett (2002, p.66) conceptualized job performance as “actions and behaviors that are under the control of the individual that contribute to the goals of the organizations”. This definition avoids the problem of construct confusion by differentiating job performance from other related constructs, for example, output. As suggested by Waldman (1994), output is usually used for measuring performance, but in fact it is an outcome that counts in many factors apart from the employee’s effort, and these factors are usually beyond the control of the employee (see also Campbell, McHenry, & Wise, 1990). Therefore, job performance including actual work behaviors of the employee is relevant to organizational goals; within the individual’s control; and measurable, observable, and scorable (Viswesvaran & Ones, 2000). According to Campbell et al., (1996), there are at least two major types of job performance, namely, job-specific performance, and non-job-specific performance. The former one reflects technical or task performance; the latter one, refers to contextual performance or citizenship behaviors which allow task performance to operate in order to achieve better organizational development. This study exclusively focused on the job-specific perspective of task performance as it is more related to in-role work behaviors that have been investigated in this study. In-role performance is conceptualized as work behaviors that facilitate formal tasks, duties, and responsibilities which are included in a job description (Williams & Anderson, 1991). For example, in the case of nurse, the primary tasks include providing injections, serving meals, and washing patients; in the case of police

officer, the primary tasks are street patrolling, law enforcement, and emergency call handling (Bakker & Heuven, 2006).

CHAPTER 3 THEORETICAL FRAMEWORKS AND HYPOTHESES

3.1 Authentic Leadership and Work Outcomes

Leadership remains one of the most researched topics in organizational science due to its strong impact on individual and organizational outcomes (Barling, Christie, & Hopton, 2011; Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009). In a meta-analysis study, leadership behaviors account for an average of 51% of the variance in follower job satisfaction, 47% of the variance in follower judgment of leader effectiveness, and 20% of the variance in group performance (DeRue, Nahrgang, Wellman, & Humphrey, 2011). More specifically, a number of studies revealed that leadership is positively associated with employees' organizational commitment (e.g., Walumbwa, Mayer, Wang, Wang, Workman, & Christensen, 2008), health and well-being (e.g., Theorell, Bernin, Nyberg, Oxenstierna, Romanowska, & Westerlund, 2010), organizational citizenship behaviors (e.g., Walumbwa, Hartnell, & Oke, 2010), and firm-level performance (e.g., Carmelli, Schaubroeck, & Tishler, 2011).

As a root construct of all other positive leadership styles, authentic leadership is also supposed to have positive impact on various work outcomes (e.g., Wong & Laschinger, 2013; Avolio & Gardner, 2005; Lord & Brown, 2004). Authentic leaders make transparent decisions and take into account different viewpoints from various parties (e.g., followers, stakeholders, and shareholders), which demonstrates their commitment to the organization, and provides a fair working environment for their followers to remain emotionally and physically engaged during their work (Wang, Sui, Luthans, Wang, & Wu, 2014). Such leaders, as argued by Walumbwa et al. (2010), serve as role models to guide their followers because of their credibility and perceived authenticity. According to Avolio et al. (2004), the behaviors of authentic leaders, which are viewed as being guided with high moral standards and characterized by fairness, honesty, and integrity, are more easily to stimulate positive behaviors of employees (e.g., job performance). Apart from the theoretical support, there has been some empirical evidence demonstrating the positive impact of authentic leadership on employees' work outcomes. For example, research studies have confirmed that authentic leadership is positively related to supervisor-rated job performance, organizational citizenship behavior, and work engagement (Walumbwa

et al., 2011, 2010, 2008). In addition, authentic leadership is also related to teamwork and team authenticity (Hannah, Walumbwa, & Fry, 2011), as well as team positive affective tone (Hmieleski, Cole, & Baron, 2011). Leigh (2014) found that authentic leadership exerts the positive impact on job satisfaction and self-rated job performance among nurses. Moreover, in the practitioner literature, George (2003) pointed out that authentic leaders are able to motivate their followers by embedding a strong sense of responsibility in order to produce positive outcomes over a time period. On the basis of the theoretical, empirical and practical literature, the following hypothesis is derived:

H1a. Authentic leadership will be positively related to in-role performance.

So far, few existing studies have tried to investigate the possible relationship between authentic leadership and work-related flow, probably because they are two emerging topics in two distinctive research areas. However, some evidence has indeed supported the positive association between the two constructs through work engagement. Authentic leaders who exhibit integrity, high moral standards, and engage in transparent conversations with their followers are likely to foster work engagement of their people (Gardner et al., 2005). According to Morrison and Robinson (1997), if leaders fail to tell the truth about the company, employees experience a sharp decrease in the perceived fairness and authenticity of their leaders, which also causes a decrease in their work engagement. Researchers have adopted the social exchange approach to explain reciprocity (Cropanzano & Mitchell, 2005) of follower behaviors (Whitener, Brodt, Korsgaard, & Werner, 1998). Wang and Hsieh (2013) asserted that reciprocity actually prevails among supervisor-employee exchange relationships. Especially when employees perceive their supervisors as being authentic (e.g., consistent between words and actions, ethical and moral, transparent, fair), they are more likely to be engaged and committed to their work, which in turn fosters the organizational improvement (also see May, Chan, Hodges, & Avolio, 2003). What's more, Ryan and Deci (2000) suggested that followers are able to internalize their organizational goals with the help of their authentic leaders, thus making the intrinsic work motivation aligned with extrinsic motivation to obtain meaning of work. By internalizing the goals, employees also gain a strong sense of belonging to the work they do, and therefore they become more engaged. According

to some researchers, work engagement and flow concepts have a large theoretical overlap. Particularly, both of the two constructs share similarities in absorption at work, full concentration of the mind (Makikangas, Bakker, Aunola, & Demerouti, 2010; Schaufeli et al., 2002). They additionally argued that engagement differs from flow in terms of time frame, as work engagement is posited to be more stable and enduring than flow at work (Makikangas, Bakker, Aunola, & Demerouti, 2010). Nevertheless, this time frame distinction does not necessarily prevent employees from experiencing the psychological peak experience of flow when they are led by authentic leaders. Therefore, work-related flow can be another potential outcome of authentic leadership.

In addition, the positive relationship between authentic leadership and work-related flow can be explained by leader-member-exchange (LMX) theory (Cassar & Buttigieg, 2013). For instance, followers who perceive their leaders as consistent, genuine, and ethical are likely to generate an inner feeling of satisfaction, commitment toward their leaders, and more generally, the organization they work for. They believe that they are working in a resourceful environment and hence more competent to handle negative work stressors. Indeed, Avolio and Gardner (2005) supported that authentic leaders facilitate a working environment that provides open access to information, resources, support, and equal opportunity for their followers to learn and to improve, such that better outcomes can be achieved. Cassar and Buttigieg (2013, p.175) added: “authentic leaders provide environments that create conducive positive channels for feedback and honesty while keeping at bay negative emotions from invading followers’ connectivity with the task. It is this combination of interactive elements that generates enhanced flow”. Indeed, in their study, Cassar and Buttigieg (2013) found the positive relationship between authentic leadership and flow at work. According to the above background, the following hypothesis is derived:

H1b. Authentic leadership will be positively related to work-related flow.

3.2 Flow and In-role Job Performance

According to the broaden-and-build theory (Fredrickson, 2001), positive emotions have the capacity of broadening people's thought-action repertoires and foster the growth of individuals' personal resources (also see Demerouti, 2006). Fredrickson (2001) additionally argued that the accumulation of resources (ranging from physical to psychological resources) generates positive work outcomes (e.g., flow experience). Demerouti (2006, p.269) pointed out that flow experience at work which is "the total immersion in intrinsically rewarding activities" can be obtained only when employees are involved in the right activities. From her perspective (Demerouti, 2006), when individuals put great effort in the targeted work goals, they are more likely to experience flow which is a state derived from challenges imposed by proximal goals (Cassar & Buttigieg, 2013). This optimal peak experience is strongly related to in-role performance because people who experience flow immersed themselves in the right task (i.e., tasks that serve the organizational goals). On the contrary, when individuals do not care about the work goals set for them, they are less likely to enter the state of flow, and thus will not achieve high performance. Therefore, in order to achieve high performance, particularly, in-role performance, employees are supposed to have flow experience which allows for a high concentration of mind, intrinsic enjoyment toward the tasks that are imposed by the organization. In addition, there has been some empirical evidence supporting that flow can foster better performance in some specific professions. For example, flow can lead to better performance among soccer players (Bakker, Oerlemans, Demerouti, Slot, & Ali, 2011), among students (Asakawa & Csikszentmihalyi, 2000; Csikszentmihalyi, Rathunde, & Whalen, 1993; Wong & Csikszentmihalyi, 1991), and among old athletes (Jackson et al., 1998). So far, only a few studies have investigated flow experience among employees. Bakker (2004) found a positive relationship between work-related flow and job performance. Also, Demerouti (2006) found that work-related flow is related to both in-role and extra-role performance for only conscientious employees. According to the above theoretical and empirical evidence, the following hypothesis is derived:

H2. Work-related flow will be positively related to in-role performance.

3.3 The Mediating Role of PsyCap between Authentic Leadership and Work Outcomes

3.3.1 Authentic Leadership and PsyCap

Ample research evidence has supported that authentic leadership potentially influences employees' PsyCap (e.g., Yammarino et al., 2008; Ilies et al., 2005; Norman, Luthans, & Luthans, 2005). According to Gardner et al. (2005, p.345), authentic leaders “draw from the positive psychological states that accompany optimal self-esteem and psychological well-being, such as confidence, optimism, hope and resilience, to model and promote the development of these states in others”.

Authentic leaders are able to foster the growth of self-efficacy in their followers. For example, authentic leaders who are transparent in terms of communication and open for information-sharing can build confidence in their employees, because leader sharing information provides a chance for employees to expand their knowledge, acquire new skills, and learn from each other (Walumbwa, Luthans, Avey, & Oke, 2009). Besides, authentic leaders frequently solicit views from different parties in the organization, which also enhances the efficacious feelings of their followers. Kirkman and Rosen (1999) explained that followers become more confident in their abilities, if their leader has utilized their ideas for the organization. Rego et al. (2012) suggested that employees' self-efficacy is probably developed through the motivational power of the self-fulfilling prophecy, because authentic leaders can effectively help their followers to internalize their positive qualities through modelling (also see Luthans, Youssef, & Avolio, 2007; Gardner et al., 2005; Avolio et al., 2004).

Avolio et al. (2004, p. 809) stated: “because authentic leaders have the ability to remain realistically hopeful and trustworthy, such leaders can enhance followers' hope by establishing not only their willpower, but also by including in their comments positive aspects of the waypower or directions to pursue that enhance a follower's sense of self-efficacy”. Therefore authentic leaders are more like to develop hope in their followers, since they are regarded as credible sources of input and feedback (Walumbwa et al., 2008), such that followers become more persevere

(willpower) and flexible (waypower) in the course of goal accomplishment (Rego et al., 2012).

Many research studies supported that authentic leadership enhances followers' optimism (De Hoogh & Den Hartog, 2008; Avolio et al., 2004; Gardner & Schermerhorn, 2004). According to Gardner and Schermerhorn (2004, p.275), the "task of authentic leaders is to raise optimism". Learned optimism, as suggested by Seligman (2011), indicates the developable property of optimism which can be acquired through modeling (Peterson, 2000). Ways that authentic leaders can develop optimism in their followers are by increasing followers' identification with them and by fostering positive emotions of followers through emotional contagion effects (Avolio et al., 2004). In addition, as additionally argued by Rego et al. (2012), "by being fair, caring about followers' feelings, promoting transparent and open communication, rewarding ethical conduct, and investing followers with voice, such leaders make employees more positive and optimistic about their organization and work situation, and more willing to remain and contribute to its success".

Gardner and Schermerhorn (2004, p.277) suggested that one "task of the authentic leaders is strengthening resilience". According to Gardner et al. (2005), authentic leaders have a heightened self-awareness, and therefore they know what they can accomplish. These leaders can foster followers' resilience in several ways, including (1) facilitating good interpersonal relationship, such that employees can receive social support when encountering adverse events. Such support is especially beneficial for the development of resilience; (2) enhancing followers' psychological resources which enable them to handle adverse events with resilience; (3) promoting positive emotions of followers to develop resilience (see Rego et al., 2012; Luthans, Youssef, & Avolio, 2007; Gardner et al., 2005; Luthans & Youssef, 2004). Therefore, on the basis of the evidence, the following hypothesis is derived:

H1c. Authentic leadership will be positively related to PsyCap.

3.3.2 PsyCap and Work Outcomes

Avey and colleagues (2011) suggested that performance has been the most extensively researched topic in PsyCap literature. So far, various performance variables have been included in PsyCap research for investigation, such as supervisor-rated performance, quality and quantity of manufacturing, creative tasks (see Avey et al., 2011). Based on the comprehensive model of performance developed by Campbell and his colleagues (1993), PsyCap is postulated to have influence on employees' job performance mainly through the dimension of demonstrating effort. Avey et al. (2011, p.135) explained that "individuals higher in PsyCap are likely to be energized and put forth effort that is manifested in higher performance over extended periods of time". More specifically, people who are higher in efficacy are more motivated to invest effort in the course of goal accomplishment. Besides, people with higher PsyCap are more likely to utilize their willpower and waypower, to think positively and solve problems proactively, and to bounce back quickly under adverse situations in order to achieve better performance compared with those who are lower in PsyCap. Empirical evidence has also supported that PsyCap is related to performance. For example, Luthans and associates (Luthans, Avolio, Avey, & Norman, 2007; Luthans et al., 2005) found that each component of PsyCap relates about the same level to performance outcomes, while PsyCap as a whole exerts greater influence on performance than does each individual component.

According to the JD-R model, job resources are crucial for employees due to the motivational potential. Given adequate resources, employees feel more responsible for the work process and outcome, and attribute a greater value to the work they involve (Makikangas, Bakker, Aunola, & Demerouti, 2010). In previous studies, job resources, such as skill variety, supervisor support, feedback, have been investigated in the JD-R model, which indeed support the positive relationships with positive work outcomes, such as engagement (Bakker, Demerouti, & Verbeke, 2004), and job performance (Tierney & Farmer, 2002). Therefore, it is also likely that job resources can foster the optimal state of flow experience at work. In fact, there has been an emerging body of research which investigates the relationships between flow and job resources (Makikangas, Bakker, Aunola, & Demerouti, 2010). For example, Bakker

(2005) found that organizational resources are predictive for the flow experience among a sample of music teachers and their students. In addition, Bakker (2008) also found that autonomy, social support, and opportunities for professional development have positive associations with work-related flow. In order to answer the call for the inclusion of personal resources (Bakker & Demerouti, 2007), recently some researchers have investigated self-efficacy, optimism, and self-esteem as the personal resources in the JD-R model (Bakker, Albrecht, & Leiter, 2011; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). They found that personal resources also have the motivational potential to achieve better outcomes. Indeed, such resources have predictive power for work engagement, job performance, and well-being. In the study of Salanova et al. (2006), personal resources (e.g., self-efficacy beliefs) are found to be positively related to work-related flow among 258 secondary school teachers. PsyCap, the psychological resources of the individual, is also a vital personal resource due to the fact that it is motivational in the nature (Luthans, Youssef, & Avolio, 2007). And so far, the personal resources which have been researched in the JD-R model share overlaps with the components of PsyCap (i.e., self-efficacy, optimism, resilience, and hope). Therefore, PsyCap is assumed to be related to work-related flow as well. According to the theoretical and empirical evidence, the following hypotheses are derived:

H3a. PsyCap will be positively related to in-role performance (supervisor rating).

H3b. PsyCap will be positively related to work-related flow.

In order to test the role that PsyCap plays in the authentic leadership-outcome relationships, the major hypotheses are derived:

H5a. PsyCap will mediate the relation between authentic leadership and in-role performance (supervisor rating).

H5b. PsyCap will mediate the relation between authentic leadership and work-related flow.

3.4 The Mediating Role of Supervisory Support between Authentic Leadership and Work Outcomes

As pointed out by Luthans and Avolio (2003), supportive working cultures are needed for the development of human resources to achieve sustainable performance. Luthans, Norman, Avolio, and Avey (2008, p. 225) described supportive organizational climate as “the overall amount of perceived support employees receive from their immediate peers, other departments, and their supervisor that they view as helping them to successfully perform their work duties”. In addition, Schermerhorn et al. (1990) asserted that, employees’ job performance is the outcome of their ability, the support they receive in the organization, and the motivation they display for goal accomplishment (also see Luthans, Norman, Avolio, & Avey, 2008). Therefore, a supportive work climate becomes especially important, as it enhances support in organization. Based on the previous research studies, authentic leadership is described as an organizational climate which is characterized with high moral concerns, transparency in interpersonal relationships, fairness and justice, as well as mutual trust and helping behaviors (e.g., Walumbwa et al., 2008; Avolio & Gardner, 2005, Gardner, Avolio, & Walumbwa, 2005). Specifically, as suggested by Avolio and Gardner (2005), authentic working environment provides support for their followers to combat difficulties and adversities. In a long run, followers perceive their leaders as credible sources of input and feedback (Walumbwa et al., 2008), and thus are more likely to perceive high supervisory support from their leaders. Mercer and Bilson (1985) found that supportive organizational climate is positively related to organizational commitment and job satisfaction (also see Rhoades et al., 2001). Rogg, Schmidt, Shull, and Schitt (2001) found additional evidence showing that such supportive organizational climate is related to desired work outcomes. In addition, conventional wisdom suggests that the amount of support that employees receive in their organization would directly lead to higher job performance, and indeed previous studies have demonstrated the positive association between these variables. For example, Shanock and Eisenberger (2006) found that employees’ perceived supervisory support is positively related to both in-role performance and extra performance. Therefore, based on the above research evidence, the following hypotheses are derived:

- H1d. Authentic leadership will be positively related to supervisor support.*
- H4a. Supervisor support will be positively related to in-role performance (supervisor rating).*
- H4b. supervisor support will be positively related to work-related flow.*

In order to test the role that supervisor support plays in the authentic leadership-outcome relationships, the major hypotheses are derived:

- H5c. Supervisor support will mediate the relation between authentic leadership and in-role performance (supervisor rating).*
- H5d. Supervisor support will mediate the relation between authentic leadership and work-related flow.*

3.5 The Moderating Roles of Work Overload and Emotional Demands

In the core of the JD-R model lies in the assumption that the combined effects of job resources and job demands predict organizational outcomes, such as work engagement, job satisfaction and performance (Bakker, Demerouti, & Verbeke, 2004). Job resources are assumed to serve as buffers to mitigate the negative effects of job demands (Bakker, Demerouti, & Euwema, 2005). In fact, quite a few research studies supported that job resources, such as supervisory support, colleague support, autonomy, feedback, supervisor coaching, required saliency under the condition of high job demands, such as emotional demands, work overload, cognitive demands (e.g., see Bakker & Demerouti, 2007; Hakanen et al., 2006; Bakker, Demerouti, & Verbeke, 2004). For example, Bakker et al. (2005) found that high demands with low resources causes burnout among teachers, but when teachers were given adequate support and autonomy, the negative effects of burnout are greatly reduced. Also, job resources are found to be particularly beneficial for teachers to remain engaged at work when they deal with problematic students. In addition, as suggested by Schaufeli and Taris (2014), personal resources also display the motivational potential in the nature to cancel out negative effects of job stressors and lead to better work well-being. Recently, researchers tried to include personal resources like self-efficacy, optimism, self-esteem in the JD-R model to test the resource-demand interactions (e.g., Bakker, Albrecht, & Leiter, 2011). Indeed, results supported that personal resources, like job resources, can effectively buffer negative job demands

for sustainable performance (see Xanthopoulou et al., 2007). PsyCap which is postulated as a vital personal resource of the individual also has positive relationships with a number of desired outcomes, for example, engagement, self-rated performance, creativity, and commitment (e.g., Wang, Sui, Luthans, Wang, & Wu, 2014; Luthans, Youssef, & Avolio, 2007, Luthans, Avolio, Walumbwa, & Li, 2005). It is very likely that PsyCap, if included in the JD-R model, serves as the buffer to mitigate the negative effects on demands. Despite the fact that resources can buffer the negative effects of demands, Bakker and Demerouti (2007) pointed out that specific resources can act as buffers for specific demands. In other words, resources may not effectively mitigate the negative effects of certain demands, because such resources are not the remedy for such demands. According to the previous research, work overload is frequently paired with supervisory support for investigation by the JD-R researchers, which has been supported by the rationale that leaders' support, especially instrumental support, may help the employee coping with workloads in order to reduce the physical work demands. Similarly, emotional demands are often paired with psychological qualities, such as resilience, optimism (see Bakker & Demerouti, 2007). PsyCap which contains not only resilience, optimism, but also efficacy and hope, is therefore also assumed to serve as buffer for emotional demands. According to the above evidence, the following hypotheses are derived:

H6a. Emotional demands will moderate the relation between PsyCap and in-role performance (supervisor rating).

H6b. Emotional demands will moderate the relation between PsyCap and work-related flow.

H6c. Emotional demands will moderate the relation between supervisor support and in-role performance (supervisor rating).

H6d. Emotional demands will moderate the relation between supervisor support and work-related flow.

H7a. Work overload will moderate the relation between PsyCap and in-role performance (supervisor rating).

H7b. Work overload will moderate the relation between PsyCap and work-related flow.

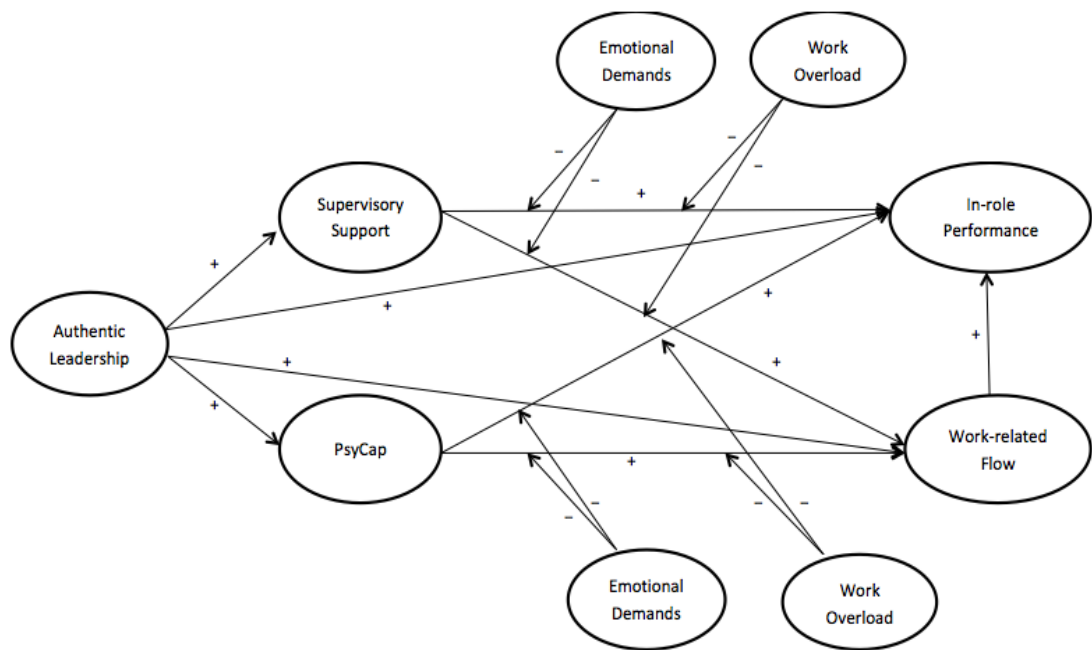
H7c. Work overload will moderate the relation between supervisor support and in-role performance (supervisor rating).

H7d. Work overload will moderate the relation between supervisor support and work-related flow.

3.6 Summary

Figure 1

The Proposed Research Model of the Study



To summarize all the aforementioned hypotheses in this chapter, Figure 1 describes the research model for the study.

First of all, the present study aims at examining the possible associations between authentic leadership and two work outcomes, namely, work-related flow and in-role performance. In addition, it tries to examine the relationship between work-related flow and in-role performance. As mentioned previously, this study has proposed a novel way of investigating leadership by incorporating authentic leadership in the framework of JD-R model, and therefore more complex

organizational mechanisms can be explained, possibly, through moderated mediation or mediated moderation process. Here, this study also aimed at exploring how authentic leadership exerts influences on the two work outcomes (work-related flow and in-role performance) by the inclusion of two mediators, namely, supervisory support and PsyCap. Moreover, two moderators have been included in the mediation process. Specifically, this study aims at examining how work overload and motional demands moderate the relationships between supervisory support and two outcomes, as well as the relationships between PsyCap and two work outcomes. To reiterate, the present study tries to examine the positive influence of authentic leadership on work outcomes, such as work-related flow and in-role performance in the JD-R framework which allows for a thorough investigation of resources (mediator) \times demand (moderator) interactions, more specifically, supervisory support \times work overload, supervisory support \times emotional demands, PsyCap \times work overload, and PsyCap \times emotional demands. Based on both authentic leadership and JD-R literature, this study offers considerable insight into the leader-follower relationships in today's complex working environment.

CHAPTER 4 STUDY ONE

4.1 Methodology

In study one, two pilot studies were conducted to validate the authentic leadership and the work-related flow scale before the entire questionnaire was finalized for data collection among organizations in Shanghai. The pilot studies for the scale validation are necessary, as the two instruments have seldom been used among Chinese employees before. Although some researchers suggested that authentic leadership displays characteristics as a second-order construct using US samples, there has been inadequate evidence to support the second order premise within Chinese organizational settings (Walumbwa et al., 2010, 2008; Clapp-Smith et al., 2009). In addition, research studies on work-related flow, so far, have been restricted to Europe only (Makikangas et al., 2010; Salanova et al., 2006; Bakker, 2005). It is a novel attempt to investigate flow among Chinese employees. Therefore, study one is to validate the two scales by examining the reliability and construct validity using the Chinese working sample.

Back translation (Brislin, 1970, 1980, 1986) was adopted for the work-related flow scale, as there is no existing Chinese version. An assistant professor with a background in I/O psychology helped to translate the scale into Chinese, followed by another psychology professor who back translated the Chinese scale into English. Discrepancies between the original scale and the translated English scale were carefully compared, discussed, and revised. For the authentic leadership scale, the existing Chinese version was modified in order to fit into the targeted organizations of the present study (The existing Chinese scale of authentic leadership can be retrieved from MindGarden.com.).

4.1.1 Pilot Study (1)

For the first pilot study, two focused groups were conducted to discuss the face validity and content validity for the authentic leadership and the work-related flow scale. In the first focused group, three PhD students with psychology and translation background were invited to read through the items one by one for each scale. They

were asked to mark down items with ambiguous meaning, and items of poor translation. Several problematic items were discussed, and were later rephrased to be more reader-friendly for targeted participants. In addition, the PhD students also helped to tailor the entire questionnaire to fit into the cultural contexts of targeted organizations. For example, wordings and job titles were slightly modified for different work settings. In the second focused group, five working people were invited to read through the two scales, and then the entire questionnaire in order to give further comments on the Chinese translation. They proposed several valuable ideas. For example, Chinese idioms should be rephrased, so that less educated workers could understand the meaning accurately.

4.1.2 Pilot Study (2)

The second pilot study was carried out soon after the final amendment of the scales. Pilot questionnaires were distributed in a community school in Shanghai to test the applicability of the authentic leadership and the work-related flow scale in Chinese contexts. Data were collected with the help of a community leader during a work talent training workshop. Participants were asked to fill in the questionnaire during the break of class. The completed questionnaires were returned immediately on site. The short survey did not require names of participants, and therefore it was totally anonymous.

4.1.3 Pilot Sample

In total, 160 questionnaires were administered for the pilot study. 135 out of 160 questionnaires were collected and entered for data analysis. Thus, the response rate is 84.38 percent. The age of the sample ranges from 22 to 54 years old. Most of the participants are female (61.5% are female, $n=83$; 38.5% are male, $n=52$). Concerning the education level, 48.2% ($n=65$) of the participants have received high school education, while another 51.1% ($n=69$) have received college education (one missing case). The work tenure of the participants ranges from 1 year to 34 years (mean=9.75, SD=10.32). Table 2 summarizes the demographic features of the sample.

Table 2***Descriptive Statistics for Demographic Variables of the Pilot Study (N=135)***

Variable		Percentage		
<i>Age</i>	22-54			
<i>Gender</i>				
Male		38.5		
Female		61.5		
<i>Education</i>				
High school		48.2		
College		51.1		
Missing data		.7		
Variable		Mean	S.D.	Range
Work tenure		9.75	10.321	1-34

4.1.4 Fit Indices Chosen for Reference

For the data analyses in both study one and study two, maximum likelihood estimation method was adopted. For the model fit, (1) the Chi-square goodness-of-fit statistic is one of the absolute goodness of fit indices used (*Jöreskog & Sörbom, 1993*) However, due to the fact that Chi-square is sensitive to the sample size, it is very likely to reject the model which uses the big sample size (*Jöreskog & Sörbom, 1993; Bentler, & Bonnet, 1980*). On the other hand, Chi-square also lacks power to discriminate between good fit models and bad fit models when the sample size is small (*Kenny & McCoach, 2003*). Therefore, alternative fit indices have also been used in this study. (2) The Root Mean Square Error of Approximation (RMSEA) was adopted, with a general consensus of less than .08 indicating an acceptable fit (*Hooper et al., 2008; Schaufeli & Bakker, 2004*). According to *Dattalo (2013)*, the RMSEA values are classified into four categories: close fit (.00-.05), fair fit (.05-.08), mediocre fit (.08-.10), and poor fit (over .10). (3) Comparative Fit Index (CFI) and (4) Tucker–Lewis Index (TLI) which is also known as Non-Normed Fit Index (NNFI), are strongly encouraged to be used as fit indices in the prediction of goodness of fit (*Marsh, Balla, & Hua, 1996*). Therefore, in this study, CFI and TLI have been included. As a rule of thumb, values greater than .90 indicate a good model fit

(Hoyle, 1995). (5) AIC has been used as well (in study one) for model comparisons. It is a comparative measure of fit, and therefore is only explanatory when two or more models are tested for comparisons. Basically, a lower value of AIC indicates a better model fit (Kenny, 2014).

4.1.5 Data Analysis for Study One

Reliability of the two scales was tested using SPSS 17.0. Confirmatory factor analysis (CFA) was carried out for the measurement models of the two scales. Second-order factor model of authentic leadership was compared with four-factor model (the four components of authentic leadership correlated with each other) in terms of model fit in AMOS 19.0. AIC, RMSEA, CFI, and TLI have been used as the indicators of goodness of fit. In addition, competing models comparison was adopted for work-related flow to determine the best model among alternative measurement models. A three-factor model was nested in two-factor models, and all the models were again nested in a single factor model. Fit indices like χ^2 , RMSEA, TLI, and CFI were reported.

4.2 Results

4.2.1 Assessment of the Psychometric Properties of the Measurements

As a rule of thumb, only when Cronbach's alpha of the newly developed scales is greater than .70, can the scale be used more confidently in new culture contexts (DeVellis, 1991). Therefore, reliability tests for the authentic leadership and the work-related flow scale were performed.

The overall coefficient alpha of authentic leadership is .94, which indicates an excellent internal consistency. For each substantive factor, the coefficients are .86 for relational transparency, .83 for internalized moral perspective, .75 for balanced processing, and .87 for self-awareness.

For work-related flow, the internal consistency is very high. For the overall instrument, the Cronbach's alpha is .96. The substantive component of absorption,

work enjoyment, and intrinsic work motivation individually also shows high reliability coefficients of .88, .96, and .87, respectively.

Table 3

Comparison of Measurement Models of Authentic Leadership

Model	CFI	TLI	RMSEA	AIC
2-order (M1)	.920	.901	.090	279.465
4-factor (M2)	.906	.884	.097	297.267

Notes: CFI=comparative fit index; TLI=Tucker–Lewis Index; RMSEA=root mean square error of approximation; AIC=Akaike’s Information Criterion.

Suggested by many researchers (Ladkin et al., 2010; Clapp-Smith et al., 2009; Walumbwa et al., 2008; Cooper et al., 2005; Avolio, et al., 2005), authentic leadership is a higher-order factor with four dimensions. The construct has been well validated and established using western samples. Only recently, Walumbwa and his colleagues have started the investigation among Chinese population (Whitehead, & Brown, 2011; Walumbwa et al., 2010). However, previous studies did not go into the depth by exploring the potential factorial structures of authentic leadership. Therefore, a second-order model (M1), and a first-order model which accommodates four inter-correlated factors (M2) of authentic leadership were compared. Results from Table 3 indicate that M1 is superior to M2. According to Bentler (1999), CFI and TLI which is greater than .90 suggests a good fit, and the greater the index, the better the model fit. In this case, the conceptualization of authentic leadership as a second-order factor (M1) is actually better than that of first-order (M2), as M1 has higher CFI and TLI. However, RMSEA for both models are mediocre. It is probably due to the small sample size of study one which has impaired statistic powers of RMSEA to identify bad fitting models. We also used AIC to evaluate the relative fit for the best-fitting model and the non-nested alternative model. A lower value of AIC indicates a better model fit. Therefore, M1 with a smaller AIC is a better model than M2. The above results have supported the findings of previous research by showing more evidence that authentic leadership is a second-order construct.

Table 4***Work-related Flow Confirmatory Factor Analysis Fit Statistics Comparing One, Two and Three First-order Factor Models***

Model	χ^2	df	χ^2/df	RMSEA	TLI	CFI
Default (M1)	123.577	57	2.168	.093	.951	.964
2-factor (M2) (WE+IWM)	273.796	64	4.278	.156	.862	.887
2-factor (M3) (AB+IWM)	274.563	64	4.290	.157	.881	.886
2-factor (M4) (AB+WE)	288.711	64	4.511	.162	.852	.879
1-factor (M5) (AB+WE+IWM)	305.927	65	4.707	.166	.844	.870

Notes: CFI=comparative fit index; TLI=Tucker–Lewis Index; RMSEA=root mean square error of approximation; AIC=Akaike’s Information Criterion. WE=work enjoyment, AB=absorption, IWM=intrinsic work motivation.

Bakker (2008) suggested that work-related flow is a first-order construct which consists of three distinctive factors, namely absorption, work enjoyment, and intrinsic work motivation. So far, there has been no research on work-related flow that is conducted in Chinese organizations. Therefore, confirmatory factor analysis was performed to see if the flow concept can apply to Chinese working contexts. Competing models comparison method was adopted in order to determine the best measurement model of work-related flow for the Chinese population. Considering all the five models being analyzed, default model (M1) is the first-order model consisting of the three components of absorption, work enjoyment, and intrinsic work motivation. For the three 2-factor models, two of the original components of work-related flow are collapsed into one bigger factor. For example, M2 combines work enjoyment and intrinsic work motivation; the bigger new factor then is labeled as WE+IWM. M3 and M4 are created in the same fashion. For M5, all 13 measuring items of work-related flow are loaded on one single factor, called WOLF (Work-related Flow). CFAs with maximum likelihood estimation were conducted for the five models. According to Table 4, five models (from M1 to M5) demonstrate a substantial increase in χ^2 ; an increase in χ^2/df as well as in RMSEA. The χ^2 of the

five models can be compared as each of the five models is nested within models of fewer factors, and all models are nested in the single factor model (see Keith, 1997 for details of the method). χ^2 and RMSEA are the smallest for the default model (M1), which indicate that M1 is the best-fitting model compared to the other four models. In addition, M1 is also superior in terms of TLI and CFI, and the two fit indices are both above .95, which indicates an excellent model fit. Therefore, findings here supported Bakker's multidimensional concept of work-related flow which includes three distinctive factors of work enjoyment, absorption, and intrinsic work motivation (Bakker, 2005; Salanova, & Bakker, 2006; Bakker, 2008).

Figure 2 shows the measurement of models of work-related flow. Figure (left) demonstrates M5, where all 13 measuring items are loaded on one single factor, called WOLF. Figure (right) demonstrates the default model M1 which is a first-order model with the three substantive components correlating with each other

Figure 2

One- factor and Three-factor Models of Work-related Flow

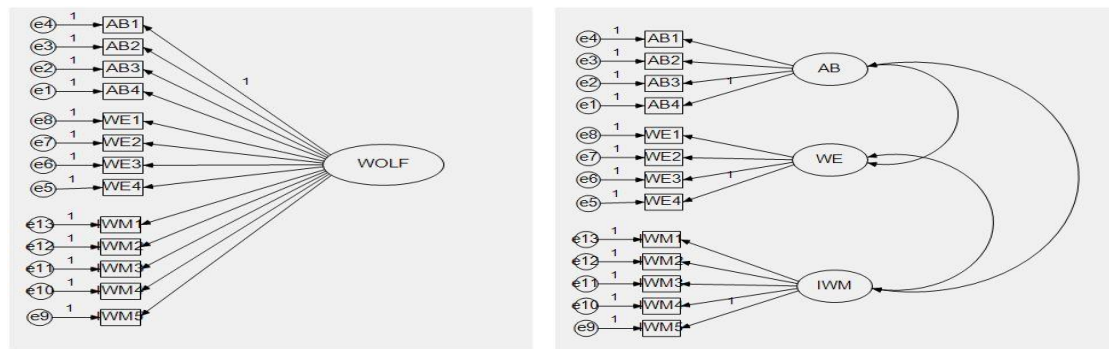


Table 5**Range of Factor Loadings for the Indicators of the Constructs**

Construct	Range of factor loadings
Authentic leadership	.90 – 1.01
Relational transparency	.68 - .79
Internalized moral perspective	.73 - .78
Self-awareness	.74 - .81
Balanced processing	.65 - .76
Absorption	.64 - .89
Work enjoyment	.90- .94
Intrinsic work motivation	.41 - .93

Notes: Factor loading for each item was significant at $P < .001$

Table 5 shows the range of the factor loadings for authentic leadership and work-related flow. All the factor loadings of the indicators of the two constructs are significant at $p < .001$. However, one item loads poorly on intrinsic work motivation (.41). As a rule of thumb, the factor loading in SEM which is less than .40 is regarded problematic, as it does not measure very well the corresponding factor, and thus should be deleted (Stevens, 1992). Therefore, the factor loading of .41 is yet acceptable in our study. As a matter of fact, previous study of Bakker (2008) also found the same problem of low loading for the same item. Moreover, self-awareness in this study has an extremely high loading on authentic leadership, which exceeds 1. This is a rare case, however, not impossible. It can be explained by the close relatedness of self-awareness with authentic leadership, as self-awareness alone explains the most of the variances in authentic leadership. Indeed, theoretical support can be found in most of the authentic leadership papers which claim that self-awareness is the core element that makes up authentic leaders (e.g., Avolio & Gardner, 2005)

To summarize, findings of study one provide evidence that the authentic leadership and the work-related flow scale have demonstrated good reliability and construct validity using the Chinese sample ($N=135$).

CHAPTER 5 STUDY TWO

5.1 Methodology

Data collection was started in July 2013. Questionnaires were administered to different organizations in Shanghai. Participants who deal with “people work” were surveyed in this study (“People work” requires intensive daily interactions with other people). There was a designated person in each targeted organization (either HR officers or supervisors) for questionnaire distribution and collection. All the completed questionnaires were sealed in envelopes and sent back to the principal researcher by post.

The survey booklet contains a cover page which states the background of the principal researcher, the purpose of the study, and the instruction for completing the survey. Names were not required for the questionnaire survey; however, participants were asked to create their unique codes (Pinyin of the last name combined with the birth date).

In order to avoid common method bias, the idea of multiple sources of rating suggested by Podsakoff and colleagues (2003) was adopted. According to them, procedure remedy for controlling common method bias in leadership studies is that effects of leader behaviors can be obtained from subordinates, while subordinate job performance can be evaluated by the leaders. Therefore, in study two, immediate supervisors were asked to rate the in-role performance of their followers. Performance evaluation forms were given to the supervisors whose subordinates were surveyed. For every supervisor, they had a name list (including national ID) of the followers who worked under their supervision. Therefore, copies of the name lists were also requested from the supervisors in order to match evaluation forms with questionnaires.

5.1.1 Sample of Study Two

In total, 1089 questionnaires were distributed, and 935 questionnaires were collected. However, 869 questionnaires were counted for data analysis at last, as 66

questionnaires were either blanked or severely incomplete. The response rate for study two is 79.80 percent. The age of the sample ranges from 20 to 68 years old. Female participants count for 52.9 percent (n= 460), and male participants count for 46.7 percent (n=406) of the entire sample. Three cases are without gender clarification. Concerning the education level, 48.1% (n=418) of the participants have received high school education, another 48.4% (n=421) have received college education, and 3.2 % (n=28) have obtained the master degree. 2 cases did not specify the education level. The work tenure of the participants ranges from 1 year to 40 years (mean=12.46, SD=10.81). Not much difference was displayed among the studied variables when all the demographic variables were controlled. Table 6 summarizes the demographic features of the sample.

Table 6

Descriptive Statistics for Demographic Variables of Study Two (N=869)

Variable		Percentage		
<i>Age</i>	20-68			
<i>Gender</i>				
Male		46.7		
Female		52.9		
Missing data		.4		
<i>Education</i>				
High school		48.1		
College		48.4		
University degree or above		3.2		
Missing data		.3		
Variable		Mean	S.D.	Range
Work tenure		12.45	10.779	1-39

5.1.2 Data Analysis for Study Two

Different from the first generation method (e.g. linear regression), structural equation modeling has the advantage of carrying out all path analyses simultaneously. It also allows complicated analyses by testing the relationships among multiple independent and dependent variables (Gerbing & Anderson, 1988), and the models comprising conditional indirect effects, and hierarchical or recursive structures (Gefen et al., 2000; Bullock et al., 1994; Hanushek and Jackson, 1977). Therefore, SEM is the major data analytic method in study two. Several tests were conducted for the research model. First of all, CFAs were performed to retest the measurement models of authentic leadership and work-related flow using the sample of study two (N=869). Then, each path was analyzed in order to get the preliminary knowledge of the correlations among the studied variables. After the correlation test, mediation analysis was conducted with bootstrap method (5000 re-samples). Finally, the moderated mediation analysis was performed for the proposed research model.

5.2 Results

5.2.1 Assessment of the Psychometric Properties of the Measurements

According to DeVellis (1991), it is important to test the reliability and factor structures of a newly developed instrument with new samples in order to further assess the construct validity. Therefore, in study two, measurement structures of the two constructs were examined again using another independent sample (N=869) from Shanghai.

The second-order property of authentic leadership is reconfirmed by the results of study two. The measurement model reaches an excellent model fit. In addition, the coefficient alpha of the overall instrument reaches .95, which shows even better consistency when compared with the alpha of study one (Cronbach's alpha is .94).

CFI and TLI for Work-related flow as a three-factor model are .96 and .93, respectively. And the Cronbach's alpha of the overall instruments is .94 (Coefficient

alpha is .96 in study one), demonstrating a good reliability of the scale in Chinese contexts.

PsyCap is another second-order construct in the preset study. It has been intensively researched by both western and Chinese scholars. Ample research findings supported its higher-order property. For instance, Luthans et al (2005), carried out the exploratory analysis of PsyCap among Chinese factory workers, and found out that PsyCap which consists of hope, optimism and resilience is a higher-order construct. In addition, he and his colleagues conducted follow-up studies among the Chinese population by including self-efficacy as a forth component into PsyCap (e.g., Luthans, Avey, Clapp-Smith, & Li, 2008), and provided evidence that PsyCap is a second-order construct, as it predicted stronger relationships with performance and satisfaction on employees than did the individual component of PsyCap (e.g., Siu, 2013; Cheung et al, 2011; Sun et al, 2011; Luthans, Avolio, Walumbwa, & Li, 2005). In study two, CFA for PsyCap was performed. CFI=.95, TLI=.94 and RMSEA =.088 indicate a good model fit of PsyCap as a second-order construct.

5.2.2 Testing of Hypotheses

Table 7 describes the correlations between the studied variables in the research model. Correlations between authentic leadership and in-role performance ($r=.227$, $p<.01$), work-related flow ($r=.417$, $p<.01$), supervisory support ($r=.689$, $p<.01$), and PsyCap ($r=.587$ $p<.001$) provide preliminary supports to hypotheses H1a, H1b, H1c, and H1d. PsyCap is positively correlated with both in-role performance ($r=.315$, $p<.01$) and work-related flow ($r=.540$, $p<.01$). Such results support the hypotheses H3a and H3b. In addition, Supervisory support is positively correlated with in-role performance ($r=.240$, $p<.01$) and work-related flow ($r=.480$, $p<.01$), which supports hypotheses H4a and H4b. Positive correlation between work-related flow and in-role performance supports hypothesis H2 ($r=.172$, $p<.01$).

Table 7
Means, Standard Deviations, Correlations, and Cronbach's Alphas of the Variables in Study Two (N=869)

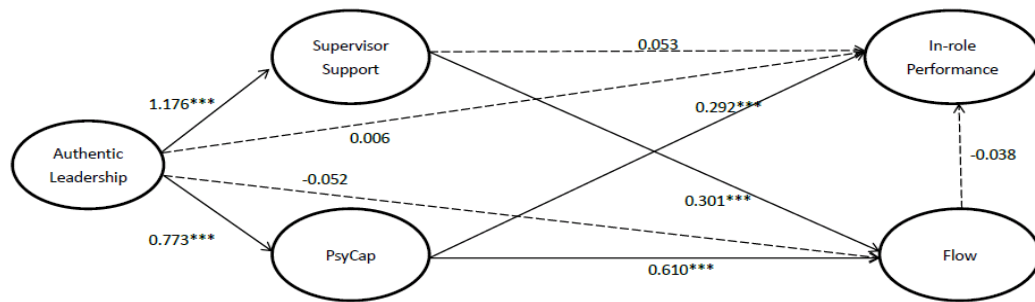
	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. AL	2.86	.67	(.947)																	
2. RT	2.82	.75	.921**	(.864)																
3. IMP	2.87	.71	.898**	.772**	(.823)															
4. BP	2.88	.76	.879**	.739**	.725**	(.822)														
5. SA	2.87	.75	.904**	.749**	.748**	.771**	(.866)													
6. PsyCup	4.66	.81	.587**	.537**	.556**	.493**	.525**	(.940)												
7. SE	4.64	.94	.550**	.506**	.526**	.442**	.498**	.870**	(.862)											
8. HO	4.57	.89	.560**	.503**	.530**	.476**	.509**	.924**	.737**	(.865)										
9. RE	4.74	.90	.458**	.430**	.427**	.396**	.393**	.895**	.681**	.767**	(.853)									
10. OP	4.78	.95	.481**	.438**	.456**	.407**	.429**	.814**	.621**	.664**	.703**	(.855)								
11. SS	4.40	1.00	.689**	.641**	.600**	.608**	.633**	.610**	.549**	.596**	.482**	.502**	(.892)							
12. ED	3.68	.81	.123**	.082*	.120**	.124**	.129**	.219**	.179**	.178**	.218**	.209**	.104**	(.790)						
13. WO	2.56	1.00	-.022	-.040	-.020	-.026	.010	-.010	.000	.018	-.034	-.036	.037	.200**	(.922)					
14. IPS	4.92	.68	.227**	.219**	.221**	.170**	.200**	.315**	.313**	.276**	.264**	.252**	.240**	.065	.011	(.840)				
15. FL	4.76	1.23	.417**	.345**	.393**	.375**	.403**	.540**	.441**	.510**	.467**	.485**	.480**	.447**	.129**	.172**	(.944)			
16. AB	4.86	1.31	.353**	.299**	.330**	.318**	.333**	.472**	.405**	.435**	.406**	.420**	.387**	.593**	.136**	.166**	.883**	(.895)		
17. IWM	4.64	1.32	.393**	.319**	.369**	.355**	.388**	.497**	.395**	.467**	.441**	.451**	.467**	.336**	.139**	.171**	.925**	.702**	(.841)	
18. WE	4.82	1.41	.394**	.325**	.374**	.353**	.378**	.509**	.410**	.493**	.430**	.456**	.454**	.321**	.079*	.134**	.928**	.750**	.796**	(.937)

Notes: AL= authentic leadership; RT= relational transparency; IMP= internalized moral perspective; BP=balanced processing; SA= self-awareness; SE= self-efficacy; HO= hope; RE= resilience; OP= optimism; SS= supervisor support; ED= emotional demands; WO= work overload; IPS= in-role performance (supervisor rating); FL= work-related flow; AB= absorption; IWM= intrinsic work motivation; WE= work enjoyment; *p< .05; **p< .01 (two-tailed).

The correlation table above shows the preliminary evidence for some of the research hypotheses. However, in order to obtain a comprehensive understanding of the research model, structural equation modeling method was adopted.

Figure 3

Structural Model (Mediation Only) with Study Variables



Notes: * $p < .05$; ** $p < .01$; *** $p < .001$.

Next, the mediation tests of the research model were carried out for examining the relationship between authentic leadership and the two job outcomes via supervisory support and PsyCap. Notably from Figure 3, paths from authentic leadership to the two job outcomes, namely, in-role performance ($\beta = .006$; $p = .929$) and work-related flow ($\beta = -.052$, $p = .630$) become statistically not significant. The path from authentic leadership to supervisory support is positive and significant ($\beta = 1.176$, $p < .001$), although the path from supervisory support to in-role performance is not significant at all ($\beta = .053$, $p = 0.257$). Therefore, H5c is not supported, as supervisory support is not a mediator between authentic leadership and in-role performance. On the other hand, the path from supervisor support to work-related flow is statistically significant ($\beta = .301$, $p < .001$); thus H5d is supported that authentic leadership exerted influences on work-related flow via supervisor support. In addition, the path from authentic leadership to PsyCap is significant ($\beta = .773$, $p < .001$), and paths from PsyCap to in-role performance ($\beta = 0.292$, $p < .001$) and work-related flow ($\beta = 0.610$, $p < .001$) are significant as well. Thus, results of the mediation analysis provide a rough idea that full mediations exist in a way that the influence of

authentic leadership on the two job outcomes can be explained through the indirect effect of PsyCap. Therefore, hypotheses H5a and H5b are supported.

In addition, a more robust analysis was carried out for mediation effects for the proposed research model. Bootstrap (5000 re-sampling) was chosen to generate 95% confidence intervals for indirect effects of supervisory support and PsyCap. In Table 8, confidence intervals are provided. Results of bootstrapping demonstrate similar mediation patterns of supervisory support and PsyCap between authentic leadership and the two job outcomes when compared with the previous mediation analysis. Notably, in table 8, the confidence interval of specific indirect effect from authentic leadership-supervisory support-performance contains 0 (CI= -.024-.156), which means the mediation effect of supervisory support on the relationship between authentic leadership and in-role performance is not statistically significant. Therefore, H5c is indeed not supported.

Table 8

Summary of Indirect Effects of Authentic Leadership on In-role Performance and Work-related Flow via Supervisor Support and PsyCap

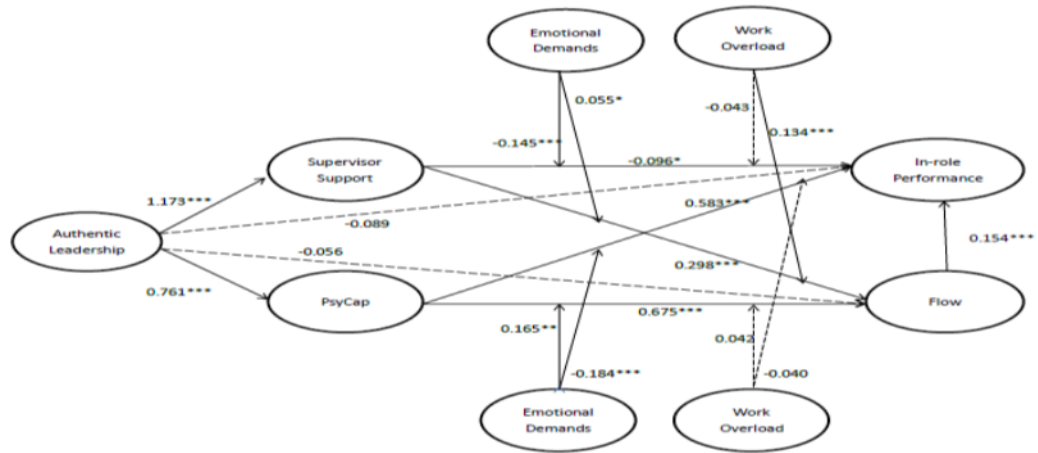
CONFIDENCE INTERVALS OF TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimates	Upper 5%	Upper 2.5%	Upper .5%
Effects from AUTHEN to PERFORMS							
Sum of indirect	0.114	0.151	0.172	0.288	0.416	0.441	0.486
Specific indirect							
PERFORMS							
PSYCAP							
AUTHEN	0.111	0.135	0.147	0.226	0.309	0.325	0.362
PERFORMS							
SUPSUP							
AUTHEN	-0.079	-0.044	-0.024	0.062	0.156	0.172	0.207
Effects from AUTHEN to FLOW							
Sum of indirect	0.602	0.654	0.684	0.825	0.983	1.014	1.070
Specific indirect							
FLOW							
PSYCAP							
AUTHEN	0.326	0.362	0.379	0.471	0.569	0.588	0.624
FLOW							
SUPSUP							
AUTHEN	0.153	0.200	0.225	0.354	0.495	0.523	0.572

Notes: PERFORMS= in-role performance (supervisor rating); AUTHEN= authentic leadership; SUPSUP= supervisor support; FLOW= work-related flow.

Figure 4

Structural Model (Moderated Mediation) with Study Variables



Notes: * $p < .05$; ** $p < .01$; *** $p < .001$.

The interaction effects of resource (i.e., PsyCap, supervisor support) x demand (i.e., emotional demands, work overload) to predict job outcomes (work-related flow, in-role performance) are summarized in Figure 4. First, emotional demands moderate the relationship between supervisory support and in-role performance ($\gamma = -.145$, $p < .001$), as well as the relationship between supervisory support and work-related flow ($\gamma = .055$, $p < .001$). As such, hypotheses H6c and H6d are supported. Apart from that, emotional demands also moderate the relationships between PsyCap and the two job outcomes, in-role performance ($\gamma = -.184$, $p < .001$) and work-related flow ($\gamma = .165$, $p < .001$), respectively. Therefore, hypotheses H6a and H6b are supported. The moderation effects of work overload, however, show an opposite pattern. Specifically, work overload does not moderate the relationship between PsyCap and the two outcomes, namely, in-role performance ($\gamma = -.040$, $p = .223$), and work-related flow ($\gamma = .042$, $p = .141$). Thus, hypotheses H7a and H7b are not supported. Moreover, work overload does not moderate the relation between supervisory support and in-role performance ($\gamma = -.043$, $p = .164$). As such, hypothesis H7c is not supported as well. Nevertheless, work overload is a moderator between supervisory support and work-related flow ($\gamma = .134$, $p < .001$) in this research model, which supports the hypothesis H7d. One thing to be noted here, when the two moderators were examined, the path

from supervisory support to in-role performance, which is not significant in the mediation model, becomes statistically significant. Simply, it can be explained by the existence of moderators which might have changed the strength or direction of the original path coefficients. The fit indices of the research model indicate an excellent model fit. CFI equals .968, and TLI equals .963, while RMSEA equals .052.

Finally, Figure 5 through 9 present the plots of interaction effects. According to the plots, work overload is an effective moderator only for the relationship between supervisory support and work-related flow. For individuals who have the same amount of workload, their flow experience at work become higher if the amount of supervisory support increases. Moreover, for individuals who have high work-overload compared with their counterparts with moderate or low work overload, the supervisory support becomes particularly salient to predict higher flow experience, as the slope is the steepest for WO-HIGH (work overload high), meaning per unit increase in supervisory support would cause larger increase in the amount of flow experience at work.

As previously mentioned, emotional demands can moderate all paths as proposed in our research model. First, it exerts moderation effect on the relationship between supervisory support and in-role performance. Supervisory support is an effective buffer in the prediction of better in-role performance, only when the individual experiences low or moderate emotional demands. With the increase in supervisory support, these individuals can perform better at work. Second, emotional demands moderate the relationship between supervisory support and work-related flow. For individuals who have the same level of emotional demands, their flow experience at work becomes higher if the amount of supervisory support increases. In addition, supervisory support becomes particularly salient to predict higher flow experience, when individuals are under conditions of higher emotional demands. The slope of ED-HIGH (emotional demands high) indicates that per unit increase in supervisory support can cause larger increase in the amount of flow experience when compared with the slope of ED-MOD (emotional demands moderate) and ED-LOW (emotional demands low). Third, emotional demands also moderate the relationship between PsyCap and in-role performance. From the plot, the increase in PsyCap predicts better performance under the condition of same emotional demands.

Specifically, PsyCap is a valuable personal resource that can empower people who encounter low emotional demands to perform better at work. However, the empowering effect of PsyCap decreases if people are under moderate or high emotional demands, such that PsyCap does not contribute much to the performance. Last but not least, for individuals who have the same amount of emotional demands, their flow experience become higher if the amount of PsyCap increases. Specifically, for individuals who have high emotional demands, PsyCap becomes a particularly salient protection mechanism to predict high flow experience at work, because the slope is the steepest for ED-HIGH (emotional demands high), meaning per unit increase in PsyCap causes greater increase in the amount of flow experience when compared with ED-MOD (emotional demands moderate) and ED-LOW (emotional demands low).

Figure 5

Moderating Effect of Work Overload on the Relation between Supervisor Support and Work-related Flow

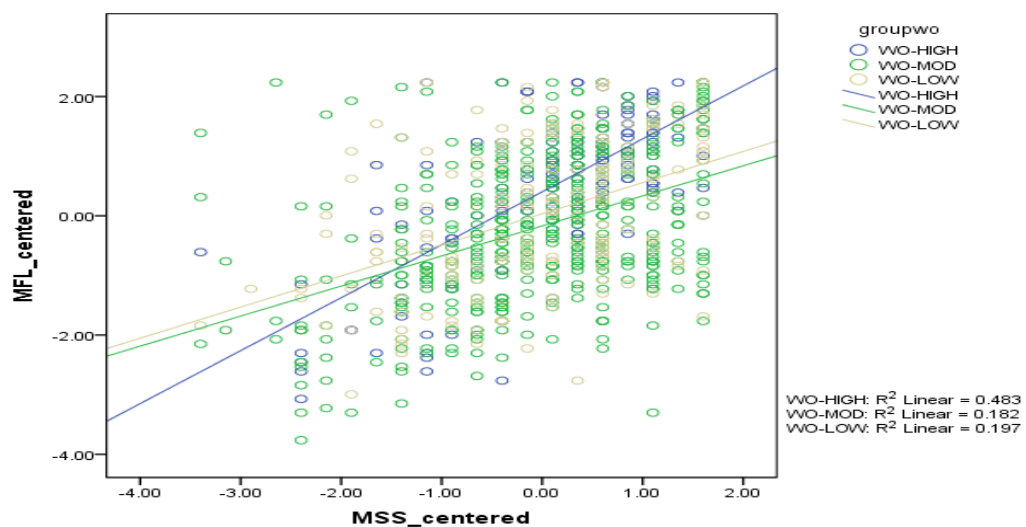


Figure 6

Moderating Effect of Emotional Demands on the Relation between Supervisor Support and In-role Performance

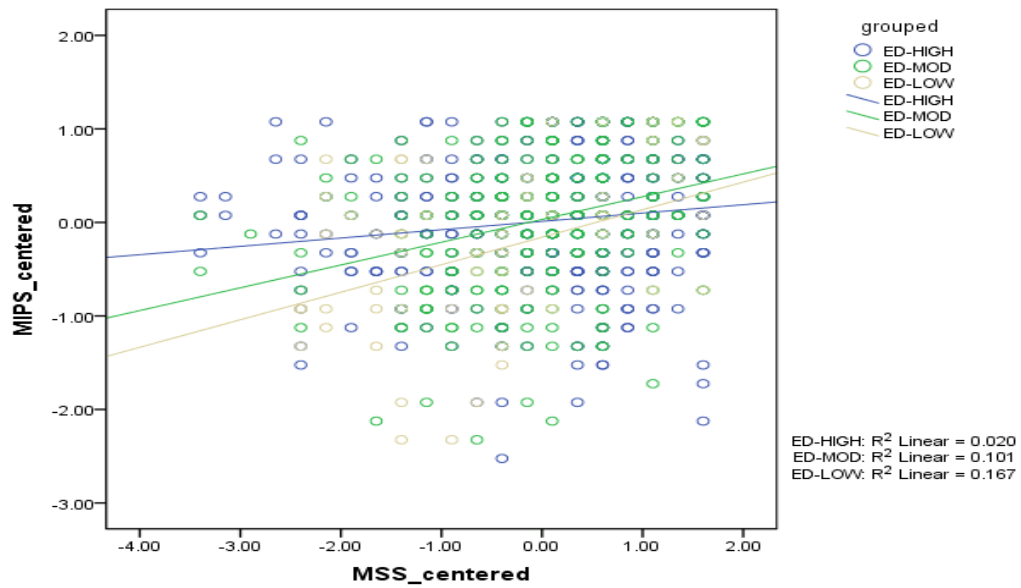


Figure 7

Moderating Effect of Emotional Demands on the Relation between Supervisor Support and Work-related Flow

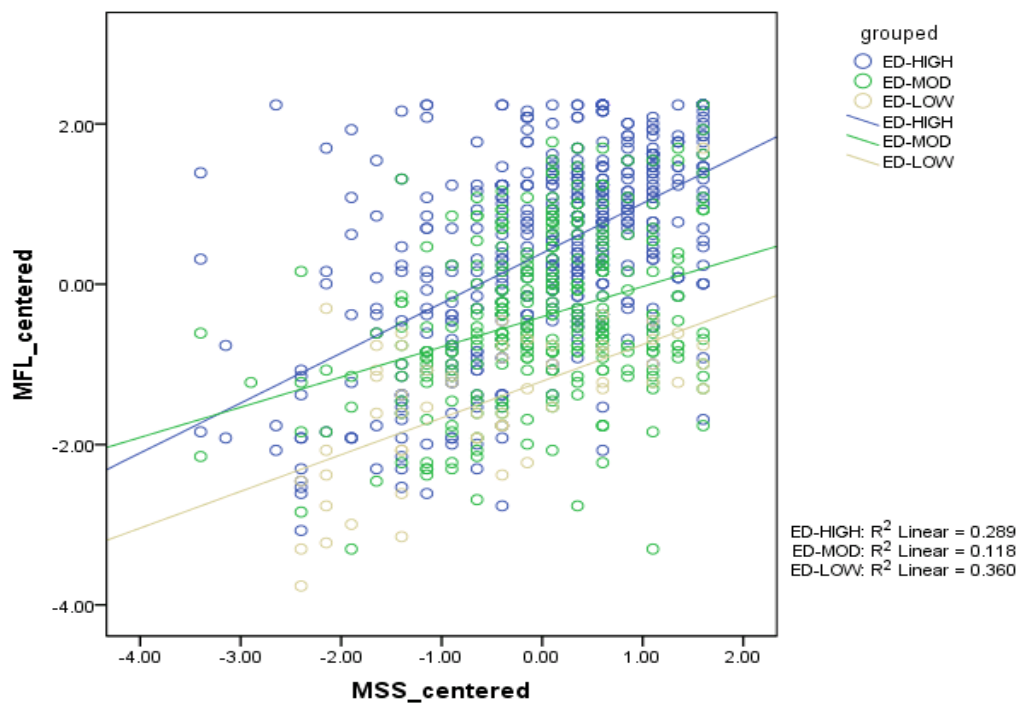


Figure 8

Moderating Effect of Emotional Demands on the Relation between PsyCap and In-role Performance

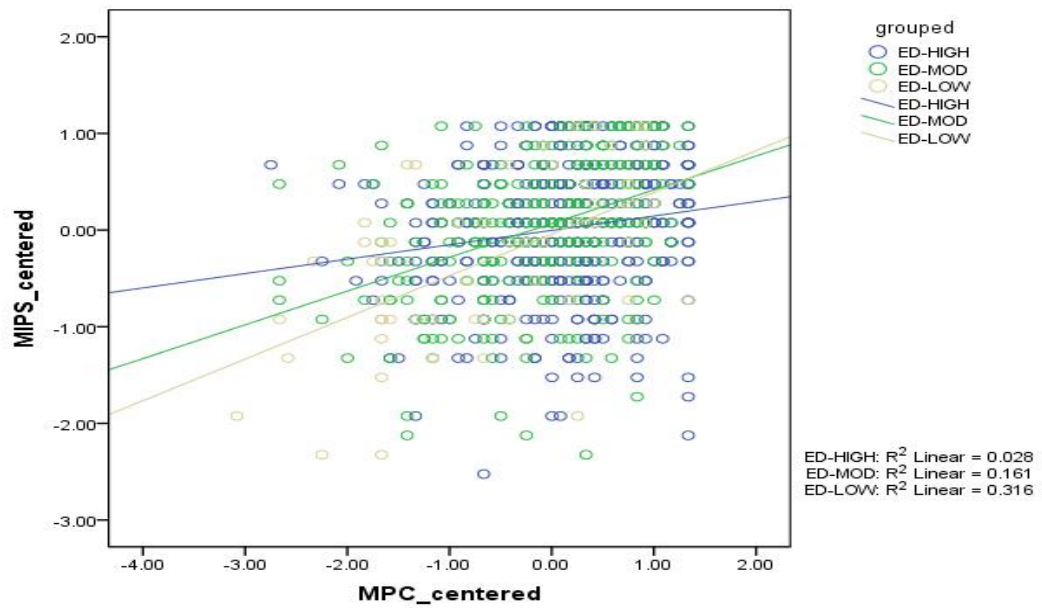
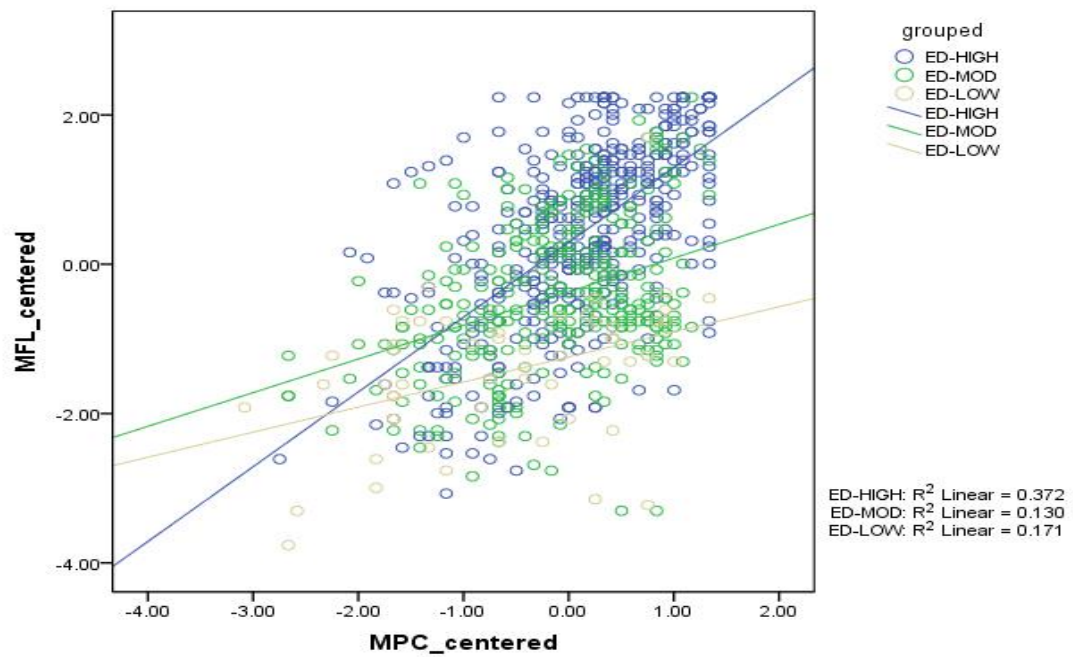


Figure 9

Moderating Effect of Emotional Demands on the Relation between PsyCap and Work-related Flow



5.3 Measurements

5.3.1 Authentic Leadership

Authentic leadership is measured by the 16-item Authentic Leadership Questionnaire (ALQ) which has been validated by Walumbwa and his colleagues (2008). He showed evidence that the scale has both convergent and discriminant validity when it is related to other leadership constructs, like transformational leadership. He and his associates conducted several other studies which have supported the higher-order premise of authentic leadership (Rego et al., 2012; Walumbwa et al., 2010; Clapp-Smith et al., 2009). According to Walumbwa, Avolio and Gardner (2008), authentic leadership consists of four substantive components including (1) balanced processing (3 items), self-awareness (4 items), internalized moral perspective (4 items), and relational transparency (5 items). Sample items include the following: “my immediate supervisor admits mistakes when they are made” (relational transparency), “my immediate supervisor demonstrates beliefs that are consistent with actions” (internalized moral perspective), “my immediate supervisor analyzes relevant data before coming to a decision” (balanced process), and “my immediate supervisor accurately describes how others view his or her capabilities” (self-awareness). This scale anchors from 1 (not at all) to 5 (frequently, if not always). The Chinese version has been validated by Walumbwa and colleagues using two samples of telecom companies from China (Walumbwa et al., 2010). As previously mentioned, in the present study, the existing Chinese scale of authentic leadership was tailored to better fit into the culture contexts of the targeted organizations. In this study, coefficient alpha is .95 for the overall scale, and .87, .86, .82, .82 for self-awareness, relational transparency, internalized moral perspective and balanced processing, respectively.

5.3.2 Psychological Capital (PsyCap)

PsyCap is measured with a newly validated 12-item Psychological Capital Questionnaire (PCQ) developed by Luthans and his colleagues (PCQ-12, see Luthans et al. 2007 for the full 24-item measure). This short scale of PsyCap has revealed good reliability and validity in studies that Luthans et al. (2008) conducted using

Chinese samples. The 12-item PCQ, though a short version, contains all the four substantive components of PsyCap, including 4 items for hope, 3 items for self-efficacy, 3 items for resilience, and 2 items for optimism. Sample items include the following: “I feel confident presenting information to a group of colleagues” (self-efficacy), “I can think of many ways to reach my current work goals” (hope), “I can get through difficult times at work because I’ve experienced difficulty before” (resilience), and “I always look on the bright side of things regarding my job” (optimism). This scale anchors from 1 (strongly disagree) to 6 (strongly agree).

In this study, reliability coefficients for all components are greater than .80, as is for the overall 12-item PsyCap instrument.

5.3.3 Supervisory Support

Supervisory support is measured by the subscale of social interaction record developed by Peeters, Buunk, and Schaufeli (1995). 2 items measure supervisors’ emotional support (e.g. my supervisor pays attention to my work); another 2 items measure supervisors’ instrumental support (e.g. my supervisor helps me with a given task). The subscale anchors from 1 (strongly disagree) to 6 (strongly agree).

In this study, the coefficient alpha of the subscale is .89.

5.3.4 Work Overload

Work overload is measured by Quantitative Workload Inventory (QWI) (Spector & Jex, 1998). The instrument is rated on 5-point likert scale, from 1 (less than once per month or never) to 5 (several times per day). All the 5 items ask about the amount of work that the worker daily involves. In this study, the coefficient alpha is .92.

5.3.5 Emotional Demands

Emotional demands are measured with the four-item scale developed by Van Veldhoven and Meijman (1994; also see Van Veldhoven et al., 2002). The instrument anchors from 1 (never) to 5 (always). Sample items include: “do the

people who you meet through your work intimidate you”. In this study, the coefficient alpha of the overall scale is .79.

5.3.6 Work-related Flow

Flow experience is measured by the 13-item Work-related Flow Inventory (WOLF) of Bakker (2008). The construct consists of three components, including absorption (4 items), work enjoyment (4 items), and intrinsic work motivation (5 items). Examples are: “I am totally immersed in my work” (absorption), “my work gives me a good feeling” (work enjoyment), and “I work because I enjoy it” (intrinsic work motivation). Participants were asked to rate on the 7-point likert scale from 1 (never) to 7 (always). Bakker (2008) validated the scale using multi-samples from different organizations. His findings supported that the WOLF inventory has both the divergent and convergent validity, and the underlying three components of work-related flow have high reliability coefficients. In addition, a two wave study among 258 secondary school teachers who filled out the WOLF scale twice showed evidence that the test-retest reliability is also satisfying (Salanova, et al., 2006). In this study, the coefficient alpha of the overall instrument is .94. For the individual components, the coefficients are .90 (absorption), .94 (work enjoyment), and .84 (intrinsic work motivation).

5.3.7 In-role Job Performance

Supervisors were asked to rate their followers’ job performance instead of the workers rating themselves. In the present study, workers’ in-role behaviors were surveyed. In-role performance is measured by the instrument of Viswesvaran, Ones, and Schmidt (1996). And there is a Chinese version developed by Feng and Lu (2008) who have modified the original scale of Viswesvaran et al. (1996) for using in Chinese organizations. The scale anchors from 1(very bad) to 6 (very good), including 5 items in total. One sample was; “the quality of your work”. In the study of Feng and Lu (2008), the coefficient alpha is .78, which has demonstrated adequate reliability. In this study, the coefficient alpha is .84.

CHAPTER 6 DISCUSSION

6.1 Summary of Findings

The central aim of this study is to test the applicability of the proposed research model, namely authentic leadership in job demands and resources (JD-R) framework. It investigates leader's authenticity and the potential empowerment effect on employees' personal resources (e.g. PsyCap) and job resources (supervisor support) in order to examine whether or not the employees' refilled resource reservoir can in turn help them to tackle job demands (e.g. work overload & emotional demands), and therefore to generate better outcomes, namely more psychological peak experience of flow at work, and better in-role performance. Specifically, resource x demand interactions are investigated. The present study provides solid evidence that in addition to the main effects, the interactions between job demands and resources also exist. Results show that employees who report high emotional demands and work overload actually are more readily to experience high flow at work, when they are equipped with adequate and relevant resources, such as supervisory support and PsyCap. However, supervisory support and PsyCap seem not to be the effective buffers that can mitigate the negative effects of high emotional demands and high work overload on employees' in-role performance. More details of the findings are discussed in the following paragraphs.

Authentic Leadership Incorporated in the JD-R Model

Results of SEM analysis suggest that authentic leadership effectively improves employees' in-role performance. In addition, employees have a greater chance of experiencing flow at work, if they are led by authentic leaders. Results also show evidence that employees who are more intensively experiencing flow perform better at work. Apart from that, authentic leaders are supported by the results in this study that they can enhance the development of PsyCap (hope, self-efficacy, resilience, and optimism) in their followers. In the similar vein, employees' self-perceived supervisory support is also positively associated with authentic leadership. Furthermore, results suggest that for those who are equipped with more resources, they have the tendency to perform better and feel more involved at work than their

counterparts who are lack of resources. In fact, their resources (PsyCap and supervisory support) become particularly effective under the condition of high job demands (emotional demands and work overload) to guarantee the flow experience which further leads to better performance at work. On contrary, compared with their resourceful counterparts, employees who have insufficient resources tend to perform worse and are more unlikely to experience intensive flow at work. More specifically, when employees encounter high job demands, but are unable to manage due to inadequate resources at hand, the psychological process fall out of homeostasis in a way that they show a decreased work motivation, and an escalated level of job strain. Therefore, such individuals become less engaged, more exhausted, and thus perform less satisfactorily (Demerouti et al., 2000, 2001; Bakker & Demerouti, 2007).

Job Demands x Resources Interactions

According to Kahn and Byosiére (1992), the combination of job characteristics should be analyzed together with their effects as single predictors, because the interaction effects of different job demands and resources are frequently encountered at the workplace. Results of the moderated mediation analysis support the above view. Supervisory support and PsyCap effectively buffer emotional demands in order to mitigate the potential negative effects on performance and flow experience at work. However, supervisory support and PsyCap serve buffers on emotional demands, but not on work overload to a large extent. One exception is that supervisory support can buffer the negative effect of work overload on flow experience. Just as asserted by Bakker and Demerouti (2007), supervisory support is a potential buffer for work overload; and when the right resource meets with the right demand, the saliency of the resource required under the condition of the high demand stimulates the motivational potential of such resource, activating a heightened concentration of the employee at work, and thus leading to work engagement or flow experience. Nevertheless, in this study, it seems that supervisory support cannot combat work overload in the prediction of better work outcomes, such as in-role performance. It is understandable that work overload is physically tangible and fixed in the daily work routine, and therefore, it can hardly be reduced or eliminated just because the individual has a supportive supervisor. With such workload that can hardly be shared or reduced, employees resources, such as mental and physical

capacities, are under threat of depletion. In a long run, the employee who is losing resources, and is unable to recharge his resource reservoir would experience barriers to perform better at work. And PsyCap seems not to be the right resource to buffer the negative effect of work overload on both in-role performance and flow experience. This finding actually goes in line with the argumentation of some scholars who suggested that particular demands should match the particular resources. Indeed, Bakker et al. (2005) provided some preliminary evidence showing that for each type of job demands, there might be a corresponding type of resources. The mismatch of resources and demands should be counted in for the explanation of disappearance of interaction hypothesis of the JD-R model.

The JD-R model also posits that resources are particularly salient to influence the motivational process of self-actualization when demands are high. In the same vein, flow researchers suggested that the peak psychological state of total concentration and euphoria can be experienced only when high skills meet with high challenges (Csikszentmihaiyi, 1991). Results show that supervisory support is most beneficial to induce high level of flow experience under the condition of high emotional demands and high work overload. Similarly, PsyCap also becomes increasingly salient to maintain higher level of flow experience when emotional demands increase. Such findings have bridged the two separate research topics into one, suggesting that flow experience can be obtained when high skills which are facilitated by available resources of the individual can effectively tackle the challenges that are imposed by various demands at work. Specifically, optimal state of flow can be experienced, when the individual's recourse pool is fully activated for more challenging demands (e.g. work overload, emotional demands, cognitive demands, etc.).

6.2 Limitation

Although this study has several theoretical contributions as discussed previously (see more details in Chapter one), there are still some limitations that are worth mentioning. First, the present study has adopted a cross-sectional design. Therefore, it is difficult to make the conclusion about causalities among variables. For instance, employees who experience flow at work are more likely to perform better than their

counterparts who do not experience flow. Alternatively, it can also be hypothesized in a reversed direction that individuals who perform better are more likely to enter the flow state at work. With a longitudinal design, it is much easier to conclude which comes first in such casual relationships. Experimental design is another remedy to make up for such a shortcoming of cross-sectional studies, as it provides clear evidence of causality between the studied variables. Another point relating to the potential flaw of the cross-sectional design is that trajectories of certain variables which display developable character can hardly be depicted just by one time point. In this study, authentic leadership, PsyCap, and work-related flow are posited to be more state-like constructs; they are malleable under certain conditions (i.e., training and intervention) over a time span. Thus, it is interesting to investigate these variables by using data collected from repeated observations. By doing so will also increase the accuracy of data interpretation. For example, the longitudinal design provides a clearer picture of authentic leadership and the baseline level of PsyCap, as well as the developable ability of employee's PsyCap under the supervision of the authentic leader across time.

Another limitation is that this study may not be entirely free from common method bias (Podsakoff, et al., 2003). Although supervisors were asked to rate the in-role performance of their followers, most of the variables were still rated by employees themselves, thus self-report bias could be a potential problem that may impair the data quality (Donaldson et al., 2002). In fact, it is a better solution to have more cross ratings. For example, authentic leadership is rated by both leaders themselves and their followers. Another remedy is that the questionnaire questions can be trimmed into several parts so that participants can report each part of the questionnaire with intervals in between. Nevertheless, considering the big sample size (N=869), and complicated moderated mediation mechanisms, common method bias is not a big concern in the present study.

Moreover, though different sources of rating have been adopted in this study to avoid common method bias, supervisors' evaluation based on subjective perceptions is again questionable. It is well known that Guanxi which refers to the existence of direct ties between individuals (Jacobs, 1979, 1980), prevails in Chinese organizations; and the use of Guanxi has significant influences on interpersonal

relationships. More specifically, these ties can greatly affect performance evaluations (Tsui & Egan, 1994; Tsui & Farh, 1997). Therefore, an employee would probably get a very positive evaluation if he has a good Guanxi with the supervisor, regardless of the work quality he produces. Therefore, it is highly desirable to get some other objective performance indicators (e.g. salary, commission) as opposed to subjective evaluations to see if results can be replicated.

Finally, despite that the JD-R model enjoys great popularities among both researchers and practitioners, still some caution need to be taken into consideration before the application. One theoretical concern is about the nature of job resources and demands. Schaufeli and Taris (2014, p.55) pointed out, “the conceptual difference between job demands and job resources is not as clear-cut as it may seem at first glance...Since the JD-R model argues that the expenditure of effort is a hallmark of job demands, this reasoning leads to the paradoxical conclusion that lack of resources may be construed as a job demand”. This implies that more effort should be directed to the redefinition of demands and resources in the JD-R model. Based on the central assumption of the conservation of resources (COR) theory (Hobfoll, 2002), resources are things that people positively value, while demands are things that people negatively value. Such value-based nature of demands and resources provides a more clear-cut definition for the two concepts: (1) job demands are negatively valued physical, social, or organizational aspects of the job that require sustained physical or psychological effort and are therefore associated with certain physiological and psychological costs; while (2) job resources are positively valued physical, social, or organizational aspects of the job that are functional in achieving work goals, reducing job demands, or stimulating personal growth and development (Schaufeli & Taris, 2014, p. 56). This redefinition, in fact, solves the problem that not all job demands in the JD-R model are identical in nature. Indeed, previous findings have shown contradicted results that associations between job demands and work outcomes (e.g. engagement) can be either positive or negative. Realizing the inconsistency in the nature of job demands, Crawford et al. (2010) categorized demands into challenges and hindrances that are valued by employees as positive and negative, respectively. Therefore, special cautions should be paid to the selection of demands and resources. It is very likely that the demands chosen are actually challenges, and thus should be counted as resources. Another concern is regarding to

the practical usage of the JD-R model. As previously mentioned, the JD-R model is a heuristic framework that can incorporate any resource and any demand. Therefore, it is relatively difficult for practitioners to use in their targeted organizations. All the resources and demands should be carefully defined and designed under different work situations. Hence, compared to the application of DCM (with predetermined demands and resources), the application of the JD-R model for designing the organization's specific job resources and demands are much more complicated. Fortunately, the leading JD-R researchers have developed a JD-R-based online tool with detailed instruction, which makes the practical application much easier for the practitioners, especially for those practitioners who are not very familiar with the JD-R model (Schaufeli & Dijkstra, 2010).

6.3 Directions for Future Research

It is important to emphasize that in this study leadership is investigated as a global construct. In other words, the present study examined authentic leadership in general, not on its four substantive components of self-awareness, relational transparency, internalized moral perspective, and balanced processing. Therefore, in the future, more studies are encouraged to examine each of the components and their specific influences on followers' work attitudes (e.g. commitment, burnout, etc.) as well as behaviors (e.g. organizational citizenship behaviors, turnover, etc.). In the similar vein, work-related flow which is treated as a global construct as well in this study should be examined by its individual components in the future.

In addition, this study incorporates leadership in the JD-R approach, where interactions of job demands and resources are studied to explain the potential mechanisms in the leader-member relationships. More specifically, this study has tested out several pairs of demands and resources, suggesting that supervisory support and PsyCap are right resources to mitigate the negative effect of emotional demands on job outcomes, while these two resources may not be the right buffer for work overload. Yet, the matching hypothesis of specific resources with specific demands is quite new to most JD-R researchers, and therefore is open for more investigations. In future research, it is especially beneficial to investigate a more broad scope of job characteristics using such JD-R framework in order to identify the

matching pairs of resources and demands for different organizations (Bakker & Demerouti, 2006).

In this study, PsyCap, is included to the JD-R framework in order to explain leaders' empowering effects on their followers' development of psychological resources (Bakker et al. 2007). For future studies, it is meaningful to explore not only personal resources but also personal attributes in the JD-R model. For example, Schaufeli and Taris (2014) suggested that personal vulnerability factors (e.g. pessimism) should also be included to expand the model, so that more complicated organizational mechanisms can be explained through the psychological properties of the working individual.

Moreover, in the current study, authentic leadership is treated as the antecedent of various resources and job outcomes in the JD-R framework. The proposed research model of the study is supported by ample empirical findings, and indeed is very robust (CFI & TLI of model fit exceed .95) for the explanation of potential mechanisms in modern organizations. However, it is possible that alternative models exist, which can explain some totally different scenarios at the workplace. In the future, it is meaningful to test out the moderating effect of authentic leadership on the JD-R model to see whether the JD-R model is more pronounced in the working environment with authentic leaders than the one with non-authentic leaders.

Last but not least, future studies should emphasize more on the multilevel characteristics. Leadership, for example, seems to be inherently multi-level. According to Yammarino and Dansereau (2008), leaders and followers move from the situation in which each party is considered as an individual to a higher level of analysis where they form at least a dyad or where the leader links with the followers as a group. Similarly, for the JD-R model, some researchers argued that it can also be applied to higher team levels (Schaufeli & Taris, 2014; Xanthopoulou et al., 2009; Bakker, et al., 2008). Therefore, it is very crucial for future studies to specify the levels of analysis in order to accurately design the measurement of constructs and data analytic techniques (Dansereau, et al., 1984).

6.4 Practical Implications

The current study integrates two different research topics, namely authentic leadership and the JD-R model into one research framework with some recognized practical implications. Results show that authentic leadership fosters the development of PsyCap in employees, meanwhile enhances support via leader-member relationships in order to produce better job outcomes. Therefore, selecting leaders who are authentic, ethical, and fair is of great importance for the top management teams in today's organizations. In addition, implementing leadership workshops which aim at increasing authenticity in leaders are also very meaningful, since authentic leadership displays developable character (Avolio & Gardner, 2005; Gardner et al., 2005; Luthans & Avolio, 2003). Among the resources, PsyCap seems to be very crucial as an effective buffer to negative stressors, such as emotional demands, providing individuals with important positive qualities that can combat the emotional depletion during the intensive interactions with other people in their daily work routine (Luthans & Youssef, 2007). As suggested by Luthans and Youssef (2002), organizations should invest not only in human and social capitals, but also in PsyCap of their employees to stimulate better performance in today's fast-changing organizations. Therefore, trainings or interventions are suggested to be held among employees in order to foster hope, resilience, optimism and self-efficacy in them. Luthans and colleagues have developed online PsyCap trainings, which are effective to foster the psychological qualities of employees in a short term.

Moreover, since this study adopts the JD-R approach, some other implications are worth mentioning. A clear message of this study is that resources function as buffers when demands exist; they become salient under the condition of high job demands. Therefore, organizations should make sure to provide enough resources to their employees to facilitate better job performance. At the same time, organizations should be especially careful when designing job demands, such that employees can fulfill themselves without health impairment, meanwhile they can be pushed with enough stimuli to work hard (Bakker, Demerouti, & Euwema, 2005). Another implication is that our research model is flexible and applicable to various work settings by incorporating different demands and resources for the specific organization under investigation. In that case, tailor-made interventions are possible

to (1) identify what resources can be fostered by authentic leaders, (2) how these resources can mitigate the corresponding demands that prevail in the organization, (3) and how authentic leaders can help their employees to transform job demands into more positively valued assets with their resources at hand.

6.5 Conclusion

In conclusion, the research findings has supported our theoretical model that authentic leaders foster the growth of PsyCap of employees as a valuable personal resource in order to tackle emotional demands at work; meanwhile these leaders who possess good self-awareness and strict moral standards are more willing to transform their followers by providing both emotional and instrumental support. Such supervisory support is especially salient for the employees under the condition of high emotional demands and work overload. Therefore, for those who are blessed by their authentic leaders are more likely to experience flow at work, and produce better work outcomes. We believe that authentic leaders are the right person who can guide their followers through one battle after another, and create the thriving and enduring organization in today's challenging and turbulent marketplace.

APPENDIX I: SAMPLE OF THE QUESTIONNAIRE (CHINESE)

尊敬的先生/女士：

我是王怡青，来自香港岭南大学社会学及社会政策系的研究生。此次问卷调查是一项有关工作幸福感的调研，目的是为了建立透明、互助、和谐的工作环境，从而提升人们的工作幸福感和工作绩效。

烦请各位认真如实填写问卷。问卷中的题目的答案没有对错之分，只有程度上的差异之分。请您根据您的实际情况，选择最符合的选项，并圈出题目后相对应的数字。请不要遗漏任何题目，在此真诚地感谢您的合作！

如有任何疑问，请和我们联系。

联系方式：

王怡青小姐：yiqingwang@ln.edu.hk

张宇乐博士：Francischeung@ln.edu.hk

萧爱玲教授：siuol@ln.edu.hk

我们将尽快回复您的疑问。

问卷调查

我们将为您创建一个匿名编号，请您务必在问卷上填写属于自己的编号。我们保证您填写的所有信息会被严格保密，绝不会向任何第三方透漏。

请根据下方的指示创造您的编号。

如何创造您的编号：

您的姓氏的头三位字母，例如，如果您的姓氏是 Zhang，那么头三个字母就是 Zha。如果您的姓氏是两个字母，例如 Yu，那么您填 Yu 即可。

您的名字的最后一个人的头三位字母，例如，如果您名字的最后一个人是 Fei，那么头三个字母就是 Fei。如果您的名字的最后一个人是两个字母，例如 Le，那么您填 Le 即可。

您的出生日子，例如，如果您是在 17 号出生的，那么您的编号就是 17；如果您是在 4 号出生的，您的编号就是 04。

创造属于您自己的编号：

-----/-----/-----

姓氏的头三个字母 名字的最后一个人的头三位字母 出生的日子

调查问卷

下面有一系列题目，请根据自己的实际情况，选择最适合您的回答，并在每个题目后标出相应的数字。请不要遗漏任何题目，谢谢您的合作。

一、请您根据自己在工作中体验到的实际情况作出回答，并在每个题目后圈出相应的数字。

0. 从不 1. 偶尔 2. 有时 3. 经常 4. 频繁

题号	题目	从不				频繁
1	我的直属上司很清楚的表达了他/她的意思。	0	1	2	3	4
2	我的直属上司犯了错误，会承认错误。	0	1	2	3	4
3	我的直属上司鼓励每个人说出自己的想法。	0	1	2	3	4
4	我的直属上司会告诉我实情。	0	1	2	3	4
5	我的直属上司表达的感情是内心真实写照。	0	1	2	3	4
6	我的直属上司展现出的想法与其行为一致。	0	1	2	3	4
7	我的直属上司根据他/她的核心价值观做出决策。	0	1	2	3	4
8	我的直属上司要求我持有符合我自己核心价值观的立场。	0	1	2	3	4
9	我的直属上司根据高标准的道德守则做出艰难决策。	0	1	2	3	4
10	我的直属上司广纳员工不同的观点，即使这些观点与他/她所持有的立场不同。	0	1	2	3	4
11	我的直属上司在做出决策前会分析相关数据和信息。	0	1	2	3	4
12	我的直属上司在得出结论前会认真听取各种不同意见。	0	1	2	3	4
13	我的直属上司征求反馈意见以改善与员工的互动。	0	1	2	3	4
14	我的直属上司会准确地描述别人对他/她能力的评价。	0	1	2	3	4
15	我的直属上司知道该何时重新评估他/她在重要问题上的立场。	0	1	2	3	4
16	我的直属上司表明他/她清楚的知道他/她的言行举止对员工的影响。	0	1	2	3	4

二. 请您根据自己的实际情况作出回答，并在每个题目后圈出相应的数字。

1. 完全不同意 2. 不同意 3. 有点不同意 4. 有点同意 5. 同意 6. 完全同意

题号	题目	完全不同意				完全同意	
1	我的直属上司关注每位员工的个人情况。	1	2	3	4	5	6
2	我的直属上司向每位员工传达公司的使命及工作目标。	1	2	3	4	5	6
3	我的直属上司能提升员工的工作热诚。	1	2	3	4	5	6
4	我的直属上司很注重员工在职场上的才智发挥。	1	2	3	4	5	6

三. 请您根据自己的实际情况作出回答，并在每个题目后圈出相应的数字。

1. 完全不同意 2. 不同意 3. 有点不同意 4. 有点同意 5. 同意 6. 完全同意

题号	题目	完全不同意				完全同意	
1	我有信心能成为自己工作范畴的代表与管理层会谈。	1	2	3	4	5	6
2	我有信心能在讨论公司策略时做出贡献。	1	2	3	4	5	6
3	我有信心能向一群同事传达信息。	1	2	3	4	5	6
4	如果我在工作中陷入困境，我会想很多办法跳出困境。	1	2	3	4	5	6
5	现在我觉得自己在工作相当成功。	1	2	3	4	5	6
6	我能够想出很多办法达成当前的工作目标。	1	2	3	4	5	6
7	此时，我正在达成自己设定的工作目标。	1	2	3	4	5	6
8	如果需要，我可以独立完成工作。	1	2	3	4	5	6
9	我通常能从容应对工作中的压力。	1	2	3	4	5	6
10	我能够走出工作中的困境，因为我曾遇到过困难。	1	2	3	4	5	6
11	对自己的工作，我总是看到积极的一面。	1	2	3	4	5	6
12	我对将来工作中会发生的事保持乐观心态。	1	2	3	4	5	6

四. 请您根据自己的实际情况作出回答，并在每个题目后圈出相应的数字。

1. 完全不符合 2. 不符合 3. 有点不符合 4. 有点符合 5. 符合 6. 完全符合

题号	题目	完全不符合						完全符合	
1	我能自己决定如何开展工作。	1	2	3	4	5	6		
2	我在工作上能把个人的想法和判断付诸实施。	1	2	3	4	5	6		
3	我在工作上有相当大的自由度及独立性。	1	2	3	4	5	6		
4	工作的安排使我可以定期知道自己的工作成绩。	1	2	3	4	5	6		
5	工作时，有许多机会让我知道自己工作成绩的好坏。	1	2	3	4	5	6		
6	我的工作本身几乎不能让我知道自己工作表现的好坏。	1	2	3	4	5	6		
7	我的直属上司关注我个人的感受。	1	2	3	4	5	6		
8	我的直属上司愿意帮助我解决具体问题。	1	2	3	4	5	6		
9	我的直属上司欣赏我这个人。	1	2	3	4	5	6		
10	我的直属上司愿意分担我的工作。	1	2	3	4	5	6		
11	我的同事关注我个人的感受。	1	2	3	4	5	6		
12	我的同事愿意帮助我解决具体问题。	1	2	3	4	5	6		
13	我的同事欣赏我这个人。	1	2	3	4	5	6		
14	我的同事愿意分担我的工作。	1	2	3	4	5	6		

五. 请您根据自己的实际情况作出回答，并在每个题目后圈出相应的数字。

1. 完全不同意 2. 不同意 3. 同意 4. 完全同意

题号	题目	完全不同意				完全同意	
1	我的工作需要我学习新东西。	1	2	3	4		
2	我的工作中有很多重复性的事务。	1	2	3	4		
3	我的工作需要我富有创新性。	1	2	3	4		
4	我的工作允许我自己做决策。	1	2	3	4		
5	我的工作需要高水平的技能。	1	2	3	4		
6	我无法决定自己怎样开展工作。	1	2	3	4		

六. 请您根据自己在工作体验到的实际情况作出回答，并在每个题目后圈出相应的数字。

1. 从不（或每月少于一次） 2. 每月一至两次 3. 每星期一至两次
4. 每天一至两次 5. 每天数次

题号	题目	从不					每天
1	在工作上，您隔多长时间会需要赶工？	1	2	3	4	5	
2	您隔多长时间会被要求拼命工作？	1	2	3	4	5	
3	您隔多长时间会被要求在短时间内完成工作？	1	2	3	4	5	
4	您隔多长时间要应付大量的工作？	1	2	3	4	5	
5	您隔多长时间被迫要做高于您承受能力的工作？	1	2	3	4	5	

七. 请您根据自己的工作体验如实作出回答，并在每个题目后圈出相应的数字。

1. 从不 2. 甚少 3. 偶尔 4. 有时 5. 经常 6. 频频

题号	题目	从不					频频
1	在工作中，您会遇到心烦的事情吗？	1	2	3	4	5	6
2	您的工作需要您保持积极的情绪状态吗？	1	2	3	4	5	6
3	在工作中，您是否感觉到客户/同事会对您有言语上的攻击和威胁吗？	1	2	3	4	5	6
4	在工作中，您是否需要和难缠的客户/同事打交道？	1	2	3	4	5	6
5	您的工作是否要求您处理充满情绪压力的事情？	1	2	3	4	5	6

八. 请您根据自己的工作体验如实作出回答，并在每个题目后圈出相应的数字。

1. 从不 2. 偶尔 3. 有时 4. 经常 5. 总是

题号	题目	从不					每天
1	你的工作需要你精神高度集中吗？	1	2	3	4	5	
2	你的工作要求你仔细谨慎，精确无误吗？	1	2	3	4	5	
3	你觉得你的工作会让你精神耗竭吗？	1	2	3	4	5	
4	你的工作需要你始终如一地专注其中吗？	1	2	3	4	5	

九·请您根据自己工作体验如实作出回答，并在每个题目后圈出相应的数字。

1. 从不 2. 极少（一念及此或更少） 3. 偶尔（一个月一次或更少）
4. 有时 5. 经常（一周一次） 6. 频繁（一周几次） 7. 总是
（每天）

题号	题目	从不							总是
1	当我工作时，我会专心致志，心无旁骛。	1	2	3	4	5	6	7	
2	我着迷于我的工作。	1	2	3	4	5	6	7	
3	当我工作时，我忘记了周遭一切事物。	1	2	3	4	5	6	7	
4	我彻底地沉浸在我的工作之中。	1	2	3	4	5	6	7	
5	我的工作让我感觉良好。	1	2	3	4	5	6	7	
6	我一边工作，一边享受着（这一份工作）。	1	2	3	4	5	6	7	
7	工作过程中，我感到心情愉悦。	1	2	3	4	5	6	7	
8	我满心欢喜地做着这份工作。	1	2	3	4	5	6	7	
9	即使工资减少，我仍然会坚持做这份工作。	1	2	3	4	5	6	7	
10	我发现我甚至想要利用我的闲暇时间工作。	1	2	3	4	5	6	7	
11	我工作因为我享受着。	1	2	3	4	5	6	7	
12	我为自己而工作。	1	2	3	4	5	6	7	
13	我的原动力来自工作本身，而非来自工作带来的各项奖励。	1	2	3	4	5	6	7	

十·请您根据自己的实际情况作出回答，并在每个题目后圈出相应的数字。

1. 很差 2. 仅可 3. 尚可 4. 一般 5. 良好 6. 优良

题号	题目	很差					优良	
1	总体而言，我的工作的数量	1	2	3	4	5	6	
2	总体而言，我的工作的质量	1	2	3	4	5	6	
3	总体而言，我的出勤率	1	2	3	4	5	6	
4	总体而言，我的专业知识	1	2	3	4	5	6	
5	总体而言，我与同事之间的关系	1	2	3	4	5	6	

十一·请您根据自己的实际情况作出回答，并在每个题目后圈出相应的数字。

1. 完全不同意 2. 不同意 3. 基本不同意 4. 不确定 5. 基本同意
6. 同意 7. 完全同意

题号	题目	完全不同意							完全同意
1	我能帮助新来的同事适应工作环境。	1	2	3	4	5	6	7	
2	我能帮助同事解决与工作相关的问题。	1	2	3	4	5	6	7	
3	当有需要的时候，我会帮助同事做额外的工作。	1	2	3	4	5	6	7	
4	我能配合同事并与之交流沟通。	1	2	3	4	5	6	7	
5	即使没人看见，我也能遵守公司的规章制度。	1	2	3	4	5	6	7	
6	我对待工作认真并很少犯错误。	1	2	3	4	5	6	7	
7	我并不介意新的工作或挑战。	1	2	3	4	5	6	7	
8	我会努力进行自我学习以提高工作成效。	1	2	3	4	5	6	7	
9	我经常很早到达单位并马上开始工作。	1	2	3	4	5	6	7	
10	我会向单位提出建议以改善单位业绩。	1	2	3	4	5	6	7	

十二·请您根据自己的实际情况作出回答，并在每个题目后圈出相应的数字。

0. 从不 1. 甚少 2. 偶尔 3. 有时 4. 经常 5. 频繁 6. 总是

题号	题目	从不						总是
1	在工作中，我感到自己充满能量。	0	1	2	3	4	5	6
2	工作时，我感到自己强大并且充满活力。	0	1	2	3	4	5	6
3	早上一起床，我就想要去工作。	0	1	2	3	4	5	6
4	我对工作富有热情。	0	1	2	3	4	5	6
5	工作激发了我的灵感。	0	1	2	3	4	5	6
6	我为自己所从事的工作感到自豪。	0	1	2	3	4	5	6
7	当工作紧张的时候，我会感到快乐。	0	1	2	3	4	5	6
8	我沉浸于我的工作当中。	0	1	2	3	4	5	6
9	我在工作时会达到忘我的境界。	0	1	2	3	4	5	6

背景信息：

您的年龄	() 岁
您的性别	<input type="checkbox"/> 男 <input type="checkbox"/> 女
您的学历	<input type="checkbox"/> 专科及以下 <input type="checkbox"/> 本科 <input type="checkbox"/> 研究生及以上
您在目前公司工作年数	() 年 () 月
您所在的行业	

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