

**The Relationships Among Cultural Intelligence, Cross-cultural
Adjustment, Psychological Capital, and Perceived Supervisor
Support: Philippine Labors Working in Taiwan**

by

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ABSTRACT

The rapid advancement of technology and transportation creates a global market that highlights the importance of individuals' ability to manage and resolve conflict with clients and business partners all over the world. The internationalization of market not only leads to a significant incensement of cross-cultural interaction between people, but also enhances the use of diverse workforce in global villages. As the workforce moving globally, the issue of cross cultural adjustment has been draw attention for many years. The longer period of adaptation people take, the greater amounts of cost an organization spends on the overseas assignment. To increase the intercultural effectiveness to construct organization global competition advantages, many researchers have constantly examined the relationship between cultural intelligence (CQ) and cross-cultural adjustment during the past ten years; however, few researchers took individuals mental status as well as the outside factors into consideration while exploring antecedents affecting the intercultural effectiveness. The purpose of this study was to investigate the relationships among CQ, cross-cultural adjustment, psychological capital (PsyCap), and perceived supervisor support (PSS) through the paper-based questionnaires which collected from 538 Philippine labors in Taiwan. The statistic software of SPSS v18.0 and AMOS 18.0 were used to analyze by hierarchical regression and structural equation model (SEM). The result indicated that PsyCap plays as a partial mediating link between CQ and cross-cultural adjustment and PSS served as a moderator on the relationship between PsyCap and cross-cultural adjustment. The result of this study helps human resource practitioners understand the foreign laborers' current situation and the HR practitioners can apply it as one of the selection criteria for successful overseas assignment. In other words, as recruiting employees with positive psychological status, organizations easily take competitive challenges and obtain more business opportunities in the global market.

Keywords: cultural intelligence, cross-cultural adjustment, psychological capital, perceived supervisor support

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CHAPTER I INTRODUCTION

In this chapter, the background, problem statement, study purpose, research questions, significance, and research limitations of this study were introduced.

Background of the Study

The rapid advancement of technology and transportation creates a flat world and allow workforces to move beyond nation boundary. In a global workplace, people have more opportunities to collaborate and compete with others from different corners of the planet than ever (Friedman, 2005). It is important for both individuals and organizations to well-prepared competition in a wide range of cultural context. Budworth and DeGama (2012) asserted that individuals' abilities to lead, manage, negotiate, and resolve conflict with clients, colleagues, and business partners all over the world, which are critical fundamentals that the organizations contest with other competitors in the global market.

Due to the internationalization in the world, the cross-cultural interactions are significantly increased between people. The use of diverse workforce in the global village has led to large number of labors living and working overseas, and having to adjust to new work environment as well as new living style (Black, Mendenhall, & Oddou, 1991). Black and Stephens (1989) found out that the longer the employees adjust to the new environment, the much more cost the organization spend. That is to say, the employees' level of adaptation is one critical factor that determines organization's success or failure in a global market. It is important to address the problem of how to facilitate individual's adjustment as conducting overseas assignment in order to minimize the cost of failure adaptation and increase the organization global competition advantages (Harrison, Chadwick, & Scale, 1996).

The resource-based view of the organization suggested that human capital can

be a key source of competitive advantage because it is difficult to copy individuals' education, knowledge, experiences, skills, and intelligence to increase the organization's competitiveness (Luthans, Luthans, & Luthans, 2004). For instance, cultural intelligence (CQ) is the vital capability for people to function effectively in intercultural settings and many researchers have been draw attention to this issue for many years due to its high relevance to globalization, international management, and workforce diversification (Van Dyne, Ang, Ng, Rockstuhl, Tan, & Koh, 2012). Aside from the intelligence, individuals' mental resources such as confidence, hope, optimism, and resilience have been viewed as important factors to determine the competitive advantage in the workplace (Luthans, Avey, Clapp-Smith, & Li, 2008 a). Luthans et al. (2008) constructed the concept of psychological capital (PsyCap) with features of confidence, hope, optimism, and resilience and proposed that employees with higher PsyCap have great impact on the organization's success. According to Luthans, Avolio, Avey, and Norman (2007), the increasing 10% of PsyCap leads organization to have 50% incensement of performance. PsyCap can be viewed as a factor that translates benefit of positive psychology movement into organizations and labors (Luthans, Norman, Avolio, & Avey, 2008). They believed that when organizations seek ways to help employees to overcome challenging work environment, it is more important to help them recognize the advantages and develop their strength rather than just fix the weakness (Avey, Luthans, Jensen, & Susan, 2009).

In the organization, the supervisors play important roles to give formal feedback about the job performance and to determine employees' amount of payment. Supervisors' support are more influential than other social supports to employees because supervisors act as agents in the organization to closely work together with employees every day, to help employees deal with problems, and also evaluate their

performance directly (Shanock & Eisenberger, 2006). Yoon and Thye (2000) suggested that perceived supervisor support (PSS) is an important determinant of organizational effectiveness and personal well-being. Above all, environmental characteristics, such as supervisor support, do play a critical role that affects individuals' degree of adaptation as well as psychological status when employees encounter challenging situations.

Acknowledging the economic crisis and dynamic industry movement, not only expatriates are sent to overseas assignments but also many other labors move beyond their countries to seek more job opportunities. Take Taiwan as an example, owing to the economic development and the increasing amount of high educated citizens, the problem of labor shortage becomes seriously in recent years. Many foreign labors immigrate into Taiwan from the near countries to work for the dirty, dangerous, and difficult jobs. In May 2013, the total number of foreign labors in Taiwan was 454,171. Foreign laborers in Taiwan suffer many job-related problems, such as missing work time with no excuses, performing job in low quality and low pace, violating rules, and inhabiting low morality, which decreased the productivity and created conflicts within the organization (Chen, Lin, & Sawangpattanakul, 2011). In order to overcome these problems, more alternative ways should be found to enhance individual's degree of adaptation.

Problem Statement

Cross-cultural adjustment is the degree of psychological comfort individuals feel during the adaptation process when living and working in a foreign culture (Black & Stephens, 1989). Prior researches have been identified factors that influence on individual's cross-cultural adjustment. For example, language fluency (Bhaskar-Shrinivas, Harrison, Shaffer, & Luk, 2005; Kim & Slocum, 2008), social support (Adelman, 1988; Bhaskar et al., 2005; Caligiuri & Lazarova, 2002; Caligiuri,

Joshi, & Lazarova, 1999; Kraimer, Wayne, & Jaworski, 2001), previous international experiences (Bhaskar et al., 2005; Black, Morrison, & Gregersen, 1999; Kim & Slocum, 2008), pre-departure training (Black & Grefersen, 1991; Black, Mendenhall, & Oddou, 1991), and individual differences. The individual differences included personality (e.g., open-mindedness, emotional stability, extraversion), self-monitoring, self-efficacy (Harrison et al., 1996; Plathe, 2004; Parker & McEvoy, 1993; Peltokorpi & Froese, 2012; Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006), and cultural intelligence (CQ) (Ang, Van Dyne, Koh, & Ng, 2004; Ang, Van Dyne, Koh, Ng, Templer, Tay, & Chandrasekar, 2007; Lin, Chen, & Song, 2012; Ramalu, Uli, & Kumar, 2012; Ramalu, Raduan, Kumar, & Uli, 2010; Templer, Tay, & Chandrasekar, 2006).

Cultural intelligence (CQ) refers to individual's capability to adapt effectively in culturally diverse settings (Earley & Ang, 2003). Researchers pointed out that individual in high CQ can adjust to the culture diverse environment by processing the related cognition, behavior, and interpersonal skill more effectively. On the other hand, some researchers regarded individual differences as critical antecedents of individuals' cross-cultural adjustment. PsyCap, one type of individual differences, is different from other trait-like constructs such as personality and intelligence. PsyCap is a "state-like" construct of hope, resilience, optimism, and efficacy, which concerns about who you are and was defined as an individual's positive psychological state of development (Luthans, Avolio, Avey, & Norman, 2007). PsyCap has been constantly studied as a predictor of employee behaviors, attitudes (e.g., satisfaction and commitment), and performance (Luthans, Avey, Avolio, & Peterson, 2010; Luthans et al., 2007a; Luthans, Avolio, Walumbwa, & Li, 2005; Luthans et al., 2008b; Rego, Marques, Leal, Sousa, & Pina, 2010; Sun, Zhao, Yang, & Fan, 2011). Although the relationship between CQ and cross-cultural adjustment has been constructed

constantly in the past ten years (Ang et al., 2004; Ang et al., 2007; Lin et al., 2012; Ramalu et al., 2012; Ramalu et al., 2010; Templer et al., 2006), few researches took the individual differences such as PsyCap into consideration when discussing the intercultural effectiveness.

Few studies focused on how PsyCap influences on individual's adjustment in a cross-cultural setting. Avey, Wernsing, and Luthans (2008) asserted that individuals high in PsyCap usually hold optimistic outlook and make use of the positive mental resource to adapt to the new change. More empirical studies demonstrated that hope, resilience, optimism, and efficacy (four features of PsyCap) had influence on cross-cultural adjustment separately. For example, hope and optimism demonstrated higher possibilities of multicultural interaction success (Peltokorpi & Froese, 2012). Individuals high in efficacy and resilience were found more satisfaction with life and work, and tend to adjust to stressful life events (Harrison et al., 1996; Luthans et al., 2007a; Palthe, 2004; Tripathi, 2011).

In short, CQ and cross-cultural adjustment are two variables that being adopted to predict intercultural effectiveness frequently in many researches; however, the individual differences of mental status, which gain little attention as exploring cultural related issues. If the level of CQ is a predictor to know individual's adjustment, and if the features of PsyCap such as hope, resilience, optimism, and efficacy have been shown to be critical for individual's psychological adaptation comfort, then more should be known about the relationships among CQ, PsyCap, perceived supervisor support, and cross-cultural adjustment in the perception of cultural diversity.

Study Purpose

The purpose of the study was to investigate the relationships among cultural intelligence (CQ), cross-cultural adjustment, psychological capital (PsyCap), and perceived supervisor support (PSS) through the analysis of data collected from

foreign labors. The specific aims in this study were (a) to examine how CQ relates to PsyCap and PsyCap relates to cross-cultural adjustment, (b) to identify the mediating effect of PsyCap on the relationship between CQ and cross-cultural adjustment, and (c) to explore the moderating effect of PSS on CQ and cross-cultural adjustment.

Research Questions

To address the issues already outlined and to begin to fill the gaps in the previous research, the present study was designed to address the following research questions:

1. Does CQ have a positive effect on cross-cultural adjustment and its three sub-dimensions?
2. Does CQ have a positive effect on PsyCap?
3. Does PsyCap have a positive effect on cross-cultural adjustment and its three sub-dimensions?
4. Does PsyCap serve as a mediator between CQ and cross-cultural adjustment, CQ and its three sub-dimensions individually?
5. Does PSS positively moderate the relationship between PsyCap and cross-cultural adjustment and its three sub-dimensions individually?

Definitions of Key Terms

Cultural Intelligence (CQ)

CQ refers to an individual's capability to adapt and perform effectively under the cultural diversity situations (Earley & Ang, 2003). Individuals with high CQ are able to come up with new solutions to novel tasks and interact with people from different cultures successfully (Earley & Ang, 2003; Lee & Templer, 2003).

Cross-cultural Adjustment

Cross-cultural adjustment is the degree of psychological comfort individual feels during the adaptation process of living and working in different cultures (Black & Stephens, 1989).

Psychological Capital (PsyCap)

Psychological capital concerns about whom you are and was defined as an individual's positive psychological state of development and characterized by hope, resilience, optimism, and efficacy (Luthans et al., 2007b).

Perceived Supervisor Support (PSS)

Perceived supervisor support was defined as employees' general beliefs concerning the extent to which supervisors value their contributions and care about their well-being (Kottke & Sharafinski, 1988).

Foreign Labors

This study defines foreign labors as blue collar labors being legally employed in Taiwan according to the Employment Services Act (<http://law.moj.gov.tw>).

Research Procedure

The procedure of this study is shown below. Please see Figure 1.1.

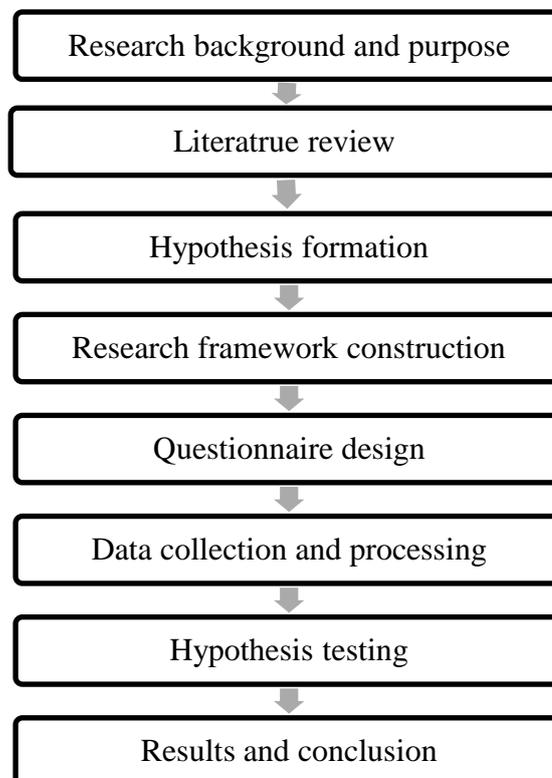


Figure 1.1. Research procedure

CHAPTER II LITERATURE REVIEW

This chapter reviewed the literature regarding cultural intelligence (CQ), cross-cultural adjustment, psychological capital (PsyCap), and perceived supervisor support (PSS). Also, the research hypotheses were proposed based on theories and researches.

Cultural Intelligence

The concept of CQ, one predictor to explain intercultural effectiveness, was different from general intelligence (IQ) and it was first proposed in the book of *Cultural Intelligence: Individual Interactions across Cultures*. CQ was defined as “an individual’s capability to adapt effectively to situations of cultural diversity” (Earley & Ang, 2003, p.3). Individuals with high cultural intelligence were able to interact with people from different cultures successfully since they can interpret the message and make correct judgments in cultural diversity settings. Further, they were able to come up with new solutions to novel tasks (Earley & Ang, 2003; Lee & Templer, 2003). Earley and Ang (2003) presented that CQ was viewed as a multifactor structure which consists of mental ability (cognitive CQ and meta-cognitive CQ), motivational CQ, and behavioral CQ.

Cognitive CQ was referred to the knowledge and experience about norms, practices, and conventions in different cultures which were stored in individual’s memory and was concern about the information processes of intelligence (Earley & Ang, 2003; Earley & Perterson, 2004). *Meta-cognitive CQ* was an understanding process as individuals having interacting with people in different cultures. Individuals with a high meta-cognitive CQ had ‘cognitive strategies’ in the mind (Ang & Inkpen, 2008) and had better ability to put one specific culture pattern together into a coherent picture even when they did not fully understand the situation (Earley, 2002).

Motivational CQ was the mental capacity to direct attention and energy towards intercultural experiences and to be motivated to learn more about cultural differences (Ang et al., 2007). Imai and Gelfand (2010) also pointed out that motivational CQ put emphasis on the intrinsic motivation and self-efficacy in adapting new cultures. Motivational CQ was regarded as a critical factor that leads to cultural adaptation; in other words, if individuals lack of motivational CQ, the adaptation never occurred (Earley & Perterson, 2004). Earley (2002) pointed out that the cultural adaptation not only had cognition of knowing what and how to do, but also had motivation to persist in performing proper response in cultural diversity situations. *Behavioral CQ* was the ability to express verbal and non-verbal action appropriately in intercultural situations. Individuals with a high behavioral CQ tend to have a comfortable and effective intercultural exchange under cultural diversity situation since they can quickly adapt to another's gesture and message (Earley & Perterson, 2004).

Cross-cultural Adjustment

Cross-cultural adjustment was the degree of psychological comfort individuals feel when living and working in a foreign culture (Black & Stephens, 1989). Mendenhall and Oddou (1985) identified four important dimensions for individuals to utilize during their adaptation process. The first dimension was self-oriented. Individuals' high in self-confidence will reach high level of psychological comfort during the adaptation process by involving in similar activities they had before in the home country, acquiring necessary skill to accomplish the assignments, and coping with stress successfully. The second one was others-oriented. Individuals who are willing to communicate and develop relationships with the host nationals had greater abilities to build a social network in the new environment to advance the adjustment. Third, perceptual dimension referred to the understanding of the host nationals' behaviors. Individuals who had better understanding of the host nationals were able to predict the

host nationals' behaviors and reduce the uncertainty. Forth, cultural-toughness dimension referred to the gap between the host country and the home country. The bigger the gap was, the more difficult individuals adapt to the new culture.

Black and Stephens (1989) proposed three facets of cross-cultural adjustment which had been widely adopted by many other studies related to cross-cultural context. First, *general adjustment* referred to the overall daily adaptation to living, housing condition, food, climate, and health facilitates. Second, *interaction adjustment* was identified as the most difficult facet to be achieved referred to achieving successful and comfortable interaction with host nationals in both work and non-work situations (Balck et al., 1999). Third, *work adjustment* referred to the adaptation to new work role, job task and work environment.

CQ and Cross-cultural Adjustment

Earley and Ang (2003) indicated that individuals with high cultural intelligence have greater motivation to understand new cultures and are able to interact with people from different cultures successfully. Recent studies also indicated the positive relationship between cultural intelligence and cross-cultural adjustment; briefly, the results implied that higher CQ leads to higher level of cross-cultural adjustment (Ang et al., 2004; Ang et al., 2007; Lin et al., 2012; Ramalu et al., 2012; Ramalu et al., 2010; Templer et al., 2006). Ramalu et al. (2012) empirically examined the relationships among CQ, cross-cultural adjustment, and performance with the sample of Malaysia expatriates. The result showed that cross-culture plays as a mediator between CQ and performance, which indicates the causal relationship between CQ and adjustment. When individuals were awarded the cultural knowledge and had confidence to socialize with locals, they had better ability to cope with stress associated with uncertainty and ambiguity in new cultural environment, hence resulting in a better adjustment. Lin et al. (2012) conducted a study among 295 international students in

Taiwan to test the moderating effect of emotional intelligence between CQ and adjustment in a cross-cultural context. The result showed that CQ positively related to cross-cultural adjustment. Specifically, individual who had higher meta-cognitive CQ can adjust to a culture diverse environment by processing the cultural related cognitive effectively. Based on the previous studies, this study hypothesized a positive relationship between CQ and cross-cultural adjustment; specifically, individuals with high CQ adapt to the new culture setting better than those with lower CQ.

Hypothesis 1. Cultural intelligence has a positive effect on cross-cultural adjustment.

CQ and General Adjustment

General adjustment involved factors such as living, housing, food and health facilitates that affect individual's daily life adaptation. Individuals with high CQ tend to sense and understand the political, economic, and social systems similarities and differences across cultures; therefore, they had better capability for successful adaptation to new and unfamiliar cultural settings (Ang et al., 2007; Brislin, Worthley, & MacNab, 2006; Earley & Ang, 2003). Ramalu, Chuah, and Rose (2011) conducted a study among 339 expatriates working in Malaysia through online and e-mail surveys in order to confirm the effects of CQ on cross-cultural adjustment and job performance; the result showed that meta-cognitive CQ and motivational CQ were positively associated with general adjustment. Ang et al. (2007) found the similar result among technology consulting professionals in Singapore. The result showed that individuals with high motivational CQ and behavioral CQ performed higher level of general adjustment; in other words, individuals with high intrinsic interest in other cultures and had the capacity to perform appropriately in a cultural diversity situation was predicted to have higher general adjustment. Templer et al. (2006) noted that motivational CQ was regarded as a critical component that affected individual's daily

live adjustment since they were more open to experience and try new thing. Based on the previous researches, this study assumed that individuals with high CQ predict higher level of general adjustment.

H 1-1. Cultural intelligence has a positive effect on general adjustment.

CQ and Interaction Adjustment

Interaction adjustment represented the degree of individual's comfort to socialize with local people both in work and non-work situations. Individuals with high CQ enjoyed and had confidence on interacting with people from different or unfamiliar cultures. Ang et al. (2007) conducted a study among 593 undergraduate students in mid-western U.S.A and Singapore aimed to exam the relationship between CQ and cultural adaptation. The result showed that motivational CQ and behavioral CQ predicted interaction adjustment. Ramalu et al. (2011) also indicated that individuals with high meta-cognitive CQ, cognitive CQ, and motivational CQ performed higher level of interaction adjustment. Overall speaking, individuals who have higher CQ are more willing to make use of the cultural knowledge and change their verbal and non-verbal behavior in order to build friendly relationship with people from different cultures than those with lower CQ. Hence, this study proposed that CQ has a positive effect on interaction adjustment.

H 1-2. Cultural intelligence has a positive effect on interaction adjustment.

CQ and Work Adjustment

Job factors such as role novelty, role ambiguity, role conflict, and role overload inhabited in individual's work adjustment (Black, 1988). Individuals who perform high work adjustment usually involved the adaptation to new job tasks, work roles, responsibilities, and the new work environment in a cultural diversity environment. Rose, Ramaly, Uli, and Kumar (2010) noted that "since expectations for performing

role prescribed behaviors often differ across cultures, CQ will facilitate individuals to perform in their job because of its more context or situation-specific nature characterized by cultural diversity” (p.79). Researchers indicated that individuals with high CQ were able to deal with cultural diversity by their efficacious belief of adaptive capabilities; furthermore, they were more open to new situation and tend to persist in adapting to both work and non-work situations in cultural diversity environment (Ang et al., 2004). Many other empirical researchers also found that there was a positive relationship between CQ and work adjustment, implying that the higher level of CQ predicted the greater level of work adjustment (Ang et al., 2007; Ramalu et al., 2010, 2011; Templer et al., 2006). Ang et al. (2007) conducted a study among 103 foreign professionals worked for an information technology consulting firm in Singapore through online survey. The results showed that motivational CQ and behavioral CQ predicted work adjustment. Ramalu et al. (2010, 2011) indicated that the four dimensions of CQ positively associated with work adjustment. Templer et al. (2006) also pointed out that motivational CQ was positively associated with work adjustment. Based on the theoretical and empirical literatures, this study proposed that there was a positive relationship between CQ and work adjustment. Individuals with high CQ usually sense the culture differences and take appropriate actions to meet the expectations across cultures. Hence, this study proposed that CQ has a positive effect on work adjustment.

H 1-3. Cultural intelligence has a positive effect on work adjustment.

Psychological Capital

Luthans (2008a) defined positive organization behavior (POB) as “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace” (p.59). PsyCap was derived from the POB

foundation and criteria (Luthans & Youssef, 2004; Luthans et al., 2004) and was first proposed by Luthans et al. (2004). It addressed the importance of ‘who you are’ beyond the concept of economic capital (what you have), human capital (what you know), and social (who you know). PsyCap was defined as “an individual’s positive psychological state of development” (Luthans et al., 2007b, p.542). Briefly, PsyCap reflects the condition of individual’s positive emotional status during the process of development and it helps individuals to recognize their role as well as sustains positive perception of well-being. PsyCap is characterized by four features which include hope, resilience, optimism, and efficacy.

Hope drew from the work of positive psychology and was defined as “a positive motivational state that was based on an interactively derived sense of successful (a) agency (goal-oriented energy) and (b) pathways (planning to meet goals)” (Snyder, Irving, & Anderson, 1991, p.287). Luthans and Youssef (2004) defined *resilience* as “the capacity to bounce back from adversity, uncertainty, failure, or even positive but seemingly overwhelming changes” (p.152). Resilience was composed with three components, including a firm acceptance of reality, a deep belief, and the ability to adapt to significant change. With the three components, individuals are encouraged to face the difficulties and hold firm belief that they can deal with any difficulties in any situations. In short, people with high resilience capacity can not only bound back from the difficulties but also perform better and find meaningful value during the life process (Luthans & Youssef, 2004).

Optimism was another feature that is applied in the positive psychology movement. Seligman (1998) drew the definition of optimism from attribution theory in terms of one’s explanatory style of good and bad events. The two critical dimensions that to do with time and space are permanence and pervasiveness. Specifically, the optimisms interpreted bad events as being temporary, while the

pessimisms interpreted bad events as being permanent. *Self-efficacy* (or confidence) was defined as “one’s conviction (or confidence) about his or her abilities to mobilize the motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context” (Stajkovic & Luthans, 1998, p. 66). People with high self-efficacy are willing to put more efforts on tasks and are likely to take challenging goals. Furthermore they usually persist to the end no matter how many obstacles they meet during the process of accomplishment (Luthans & Youssef, 2004).

CQ and PsyCap

Meta-cognitive CQ component associated with thinking about rational and related strategies (Earley & Peterson, 2004). MacNab and Worthley (2012) noted that within this component individuals reflect their own cultural background, stereotypes of thinking on the other culture. In other words, meta-cognitive CQ influenced individual’s perspective of thinking. Optimism referred to the style that individual explains positive or negative events. Individuals who were more optimistic tend to interpret good events as personal, and permanent, whereas negative events as external, temporary, and situation-specific (Seligman, 1998). Hope was composed with two components which were “will-power” (agency) and “way-power” (pathway). Agency provided the determination to achieve goals, whereas pathway promoted individuals’ creation to come up with alternative paths to replace the obstacles occurred in their process of pursuing goals (Youssef & Luthans, 2007). Owing to meta-cognitive CQ had been constructed by the original culture or international experience, meta-cognitive CQ affected on individual’s perspective of thinking. There was a great possibility that when individuals try to explain events happened around them or intend to come up with new pathway to pursue a certain goal, people will be either constrained or liberate by distinguishing the culture style. Therefore, meta-cognitive

CQ influences individual's creative thinking as well as psychological status.

Motivational CQ component referred to perseverance and appropriate goal setting in the culture setting (Earley & Peterson, 2004). Resilience involved maintaining positive adjustment and bouncing back when individuals meet both positive and negative overwhelming changes. People with high resilience were recognized to hold staunch acceptance of reality and believe life as meaningful (Luthans et al., 2004). Motivation had been regarded as an important intrinsic energy to overcome obstacles and perform successfully. The component of perseverance in motivation affected individual's willingness to maintain positive belief while facing setbacks. Hence, motivational CQ facilitated the positive energy to help individuals recover from difficulties. Applying to the cross-cultural setting, individuals with high motivational CQ have greater chances to bounce back when they face setback during the adaptation process or meet difficulties to communicate with the locals, because they have been set their goals to deeply involved in the host nation. On the other hand, self-efficacy, the other features of PsyCap, had been recognized to play an important role in CQ (Earley & Peterson, 2004; NacNab & Worthley, 2012). Earley and Peterson (2004) stated that people high in CQ had a strong sense of efficacy; on the contrary, people low in motivational CQ feel frustrated when encountering initial frustration of goal attainment and then decreasing efficacy as well as constructing negative self-images.

Based on the above literatures, both meta-cognitive CQ and motivational CQ had many theoretical and empirical studies to support the relationship between CQ and the four features of PsyCap (optimism, hope, resilience, and self-efficacy), this study proposes that CQ has a positive effect on PsyCap. Specifically, individuals with high CQ perform higher level of PsyCap in the cross-cultural setting than those low in CQ.

Hypothesis 2. Cultural intelligence has a positive effect on psychological capital.

PsyCap and Cross-cultural Adjustment

Luthans et al. (2004) first proposed the concept of PsyCap that go beyond human capital and social capital. PsyCap could be trained and invested to develop competitive advantages (Luthans et al., 2010). There were growing studies shown that PsyCap was significantly related to desired employee behaviors, attitudes (e.g., satisfaction and commitment), and performance (Luthans et al., 2007b); however, very few researches applied PsyCap under cross-cultural settings or even discussed the relationship between PsyCap and adjustment. In spite of this, Avey et al. (2008) conducted a study among 131 adults working in the US and found that employee with high PsyCap were easier to adjust the change of the organization. Avey et al. (2008) suggested that it was the employees' responsibilities to adapt and behave in ways with new organization strategies and regulations. Under the circumstance of change, employee knew how to adjust to the new paths and strategies to meet the redefined goals of the organization. First of all, employee tended to keep the confidence (efficacy) to adapt to the organizational change as well as the resilience to recover from the setback occurred during the change process. Further, they had motivation and determination (hope) to come up with new pathways to encounter obstacles. Finally, they were positive (optimistic) to the attribution when things happened beyond expectations. These characteristic would be helpful for employees to survive in a new organization. In short, individuals who had the ability to utilize the characteristics of PsyCap advances the organization change process since they tend to adapt to the new organization easier than those who hold low level of PsyCap. Based on the study, individual with high PsyCap showed little resistance to unfamiliarity environment and tended to adapt to the new setting. Similarly, individuals with high level of PsyCap were supposed to experience higher level of psychological comfort

when living and working in a foreign culture.

Hypothesis 3. Psychological capital has a positive effect on cross-cultural adjustment.

Psychological Capital and General Adjustment

General adjustment referred to the degree of individuals' psychological comfort to adjust to the overall daily life such as living conditions, transportation system, food, shopping, weather, and entertainment. Individuals took pleasures from the activities that happened in the daily life and satisfied with the life tend to perform high level of general adjustment. Avey, Reichard, Luthans, and Mhatre (2011) conducted a meta-analysis study by reviewing 51 researchers about PsyCap in order to clarify the relationship between PsyCap, desirable and undesirable attitude. The result showed that PsyCap was positively related to psychological well-being, while negatively related to stress and anxiety. In addition, Tripathi (2011) examined the relationship among PsyCap, life satisfaction, and well-being. The samples were 37 male employees working in the insurance sector from Raebareli. The result showed that well-being was positively correlated with PsyCap; particularly, self-efficacy and resilience were found as significant predictors of well-being, which help individuals to adjust to stressful life events better.

H 3-1. Psychological capital has a positive effect on general adjustment.

Psychological Capital and Interaction Adjustment

Interaction adjustment referred to the degree of individual's comfort when socialize and communicate with host country nationals. Peltokorpi and Froese (2012) conducted an empirical study among 181 expatriates in Japan and found that individual's personality trait was positively related to interaction adjustment. The result indicated that individuals who were more interest in the local people and took flexible views of right and wrong were more likely to adjust to work and non-work

overseas assignments. In other words, individuals who are comfortable when interacting with locals usually hold strong willpower (hope) to interact with locals and tend to value positive events more contributive than negative one (optimism). In addition, self-efficacy, one of the features of Psycap, was viewed as an important antecedent to interaction adjustment (Harrison et al., 1996; Palthe, 2004). Briefly, even though individuals confronted many unsuccessful outcomes when interacting with people from different cultural backgrounds, people with higher levels of self-efficacy tend to apply both verbal and non-verbal behaviors that being learned constantly than those with less self-efficacy. Moreover, resilience was defined as individual's capacity to bounce back from setbacks or overwhelming changes. Individuals with resilience were characterized by holding firm acceptance of reality and had ability to adapt to significant change. Resilience did not limit in proactive recovery from setbacks but also included active learning and growth through difficult challenges (Luthans & Youssef, 2004). Through the trial process of interacting with different people from diverse culture, individual facilitated the degree of adjustment (Black et al., 1991). Above all, since both empirical and theoretical studies pointed out that the four features of Psycap were positive components to smooth the interaction adjustment progress, the study proposed that individuals with high PsyCap perform higher level of interaction adjustment.

H 3-2. Psychological capital has a positive effect on interaction adjustment.

Psychological Capital and Work Adjustment

Individuals with high level of PsyCap usually held optimistic outlook and made use of the positive mental resource (e.g., resilience, hope, self-efficacy) to adapt to the new change (Avey et al., 2008). On the other hand, individuals who felt more comfortable and less stressful when adapting to new job tasks, work roles,

responsibilities, and the new work environment leads to high work adjustment (Black & Stephens, 1989). PsyCap, featured by hope, resilience, optimistic, and self-efficacy, had been regarded as a significant predictor to employees' satisfaction, commitment, and performance (Luthans et al., 2007b). Although the relationship between PsyCap and work adjustment did not demonstrated consistently in the past, prior research showed a direct relationship between PsyCap and other positive individual and organizational outcomes. Further, the relationship between self-efficacy and work adjustment had been constructed directly in empirically studies (Luthans et al., 2008b; Avey et al., 2011; Luthans et al., 2007a; Harrison et al., 1996; Palthe, 2004).

Empirically, Luthans et al. (2008b) tested the relationship among supportive organizational climate, PsyCap, and desirable attitude with a total of 737 samples from different occupations. The result showed that PsyCap was positively related with job satisfaction. Besides, the meta-analysis conducted by Avey et al. (2011) found the same result that PsyCap had a positive effect on desire attitude (e.g., satisfaction, work happiness, commitment, and psychological well-being). Researchers suggested that individuals high in PsyCap report were more satisfied with job as well as experience work happiness since they expected good things to happen at work (optimism), hold strong belief that they created success on their own (hope and efficacy), and setback from difficulties easier than those who lower in PsyCap (Luthans et al. 2007a). Furthermore, Harrison et al. (1996) and Palthe (2004) found that expatriates with high self-efficacy (one of the features of PsyCap) had significantly great degree of work adjustment.

Above all, individuals with high PsyCap look forward to good things happening and they believed that they had the abilities to take over the challenges. Most importantly, they have better abilities to facilitate the positive mental resources to make them feel comfortable to adapt to the redefined goals of the new role,

responsibility, and tasks. Therefore, this study proposed that individuals with high PsyCap perform higher level of work adjustment, while, those who hold lower level of PsyCap can hardly accept the new performance standard or expectations and tend to face more difficulties to adjust to the new job responsibilities.

H 3-3. Psychological capital has a positive effect on work adjustment.

The Mediating Effects of PsyCap

PsyCap served as a mediator to predict performance, satisfaction, commitment, and engagement in many other researches (Luthans et al., 2008b; Vink, Ouweneel, & le Blance, 2011). According to Stajkvoic and Luthans (1998b), self-efficacy (on feature of PsyCap) was defined as “individual’s conviction about his or her abilities to mobilize the motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context” (p.66).

Prior research found that people high in CQ had strong sense of efficacy even when encountering frustration and were less likely to construct negative self-images (Earley & Peterson, 2004). Precisely, motivational CQ facilitated the positive energy to help individual recover from difficulties, and meta-cognitive CQ influenced individual’s creative thinking as well as psychological status. On the other hand, researchers asserted that individuals with high level of PsyCap usually held optimistic outlook and made use of the positive mental resource (e.g., resilience, hope, self-efficacy) to adapt to the new change (Avey et al., 2008). Particularly, individuals high in PsyCap usually looked forward to good things to happen, deeply believe that they can create success on their own, and had strong confidence to setback form difficulties (Luthans et al., 2007a). As the pattern suggested in the prior literatures, CQ had effects on PsyCap and PsyCap had been regarded as antecedent of individual’s degree of cross-cultural adjustment.

The argument above suggested that individuals high in CQ lead to higher PsyCap and that PsyCap drives them to adjust better in a cross-cultural context. Applying PsyCap to the cross cultural setting, individuals high in PsyCap have ability to mobilize the motivation and cognitive CQ to overcome difficulties during the process of adaptation. In addition, they know the effective strategies as well as efficient path to adjust to redefined goal or new environment. Therefore, this study proposed that Psycap mediates the relationship between CQ and cross-cultural adjustment as well as the three sub dimensions.

Hypothesis 4. Psychological capital serves as a mediator between cultural intelligence and cross-cultural adjustment.

H 4-1. Psychological capital serves as a mediator between cultural intelligence and general adjustment.

H 4-2. Psychological capital serves as a mediator between cultural intelligence and interaction adjustment.

H 4-3. Psychological capital serves as a mediator between cultural intelligence and work adjustment.

Perceived Supervisor Support

Perceived supervisor support (PSS) was defined as employees' general beliefs concerning the extent to which supervisors value their contributions and care about their well-being (Kottke, 1988). Supervisor support was one influential foci derived from the organizational commitment (Becker & Billing, 1993; Becker, Billing, Eveleth, & Gilbert, 1996; Gregersen, 1993). Unlike traditional studies discussed about employees' identification of involvement in one organization, the new studies focused on how the employees' commitment was affected by their sense of commitment from the organization such as the tangible (e.g., pay raise, promotion) or intangible (e.g., perceptiveness to employees' needs) benefits. Employees usually formed a general

belief consistent with the organization's commitment to them and showed the agreement pattern by whether the origination appreciated their contribution or treat them in either favorable or unfavorable ways (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Individual who sensed high appreciation from the organization or supervisor means that they perceived high supervisor support.

The Moderating Effects of PSS

Perceived supervisor support (PSS), the extension of perceived organization support (POS), represented an employee's overall assessment concerning how much supervisors valued their contributions and cared about their well-being. Rhoades and Eisenberger (2002) noted that PSS was one of the most important factors for employees to receive the commitment message from the organization since the supervisors were the front channel of the organization to reflect how organization view the employees' contribution and well-being.

Researchers pointed out that PSS highly related to performance, job satisfaction, and adjustment (Galletta, Portoghese, Penna, Battistelli, & Saiani, 2011; Shanock & Eisenberger, 2006). Caligiuri et al. (1999) conducted structured phone interview among 42 female expatriates on global assignments. The result showed that organizational support was a significant predictor of cross-cultural adjustment. Specifically, women who perceived greater support from the organization performed higher level of cross-cultural adjustment than those who perceived less support. Therefore, this study proposed that supervisor support provides a positive emotion support for individuals to perform successfully in diverse cultures and facilitates individuals' adaptation in new culture settings.

Hypothesis 5. Perceived supervisor support positively moderates the relationship between psychological capital and cross-cultural adjustment.

Emotional support, informational support, and instrumental support were three different types of social support, which may come from resources such as host nationals, colleagues, friends, and supervisors. Individuals usually suffered stress, disorientation and loneliness during the adjustment process; therefore, emotional support would be helpful for them to overcome negative feelings in the process of adaptation. The scope of information sharing included where to shop, eat, entertainment, and how to interpret host nationals' behavior, which reduced individuals' uncertainty and confusion when trying to fit in the new environment. Finally, instrumental support referred to provide necessary resources for individuals to feel easy in a stressful situation. The instrumental support includes money, baby-sitting, and lessons related to any issue about host-country (Caligiuri & Lazarova, 2002). Above all, the variety supports provided by the supervisor would increase individuals' degree of general adjustment comfort.

H 5-1. Perceived supervisor support positively moderates the relationship between psychological capital and general adjustment.

Kraimer et al. (2001) found that perceived organization support from the foreign facilities' managers was positively related to expatriate's interaction adjustment because expatriates worked with managers on a day-to day basis. The managers were viewed as an important channel for expatriates to gain information about the host countries. Similarly, interaction with supervisors was an important source of gaining knowledge about cultural difference. Supervisors who were willing to interact with expatriates enhance expatriates' degree of interaction adjustment.

H 5-2. Perceived supervisor support positively moderates the relationship between psychological capital and interaction adjustment.

Researchers pointed out that PSS had influence on employee's performance (Dawley, Houghton, & Bucklew, 2010; DeConinck & Johnson, 2009) and work adjustment (Kraimer et al., 2001). For example, DeConinck and Johnson (2009) conducted a research on 384 salespersons and found that the sales manager played an important role not only in reducing salesperson turnover but also increase performance. Salespeople who received praise and well-being concerns from the managers reported to have lower turnover intention as well as have better performance. Both perceived organization support and PSS are one form of social supports in an organization context. Kraimer et al. (2001) conducted a study among expatriates from three U.S.-based Fortune 500 companies. The result showed that organization support was positively significant to employee's work adjustment. In addition, researchers asserted that supervisor supports can reduce employees' emotional exhaustion and stressful feeling arose from job demands (Willemse, Jonge, Smith, Depla, & Pot, 2012). In other words, individual who received aids such as rewards and affirmation from organization or supervisors would have better encouragement to take over the new responsibility in different settings.

H 5-3. Perceived supervisor support positively moderates the relationship between psychological capital and work adjustment.

CHAPTER III METHODOLOGY

In this chapter, the research framework, hypothesis, research design, measurement, questionnaire design, and data analysis method were described. This research adopted quantitative research process to investigate the relationships among cultural intelligence (CQ), psychological capital (PsyCap) with four feathers, cross-cultural adjustment with three dimensions, and perceived supervisor support.

Research Framework

The independent variable was CQ. The dependent variable was cross-cultural adjustment which was consisted of three dimensions: general adjustment, interaction adjustment, and work adjustment. Psychological capital was the mediator to examine the relationship between CQ and cross-cultural adjustment. Perceived supervisor support served as the moderator to examine the relationship between PsyCap and cross-cultural adjustment with three dimensions. The research framework was shown below, see Figure 3.1.

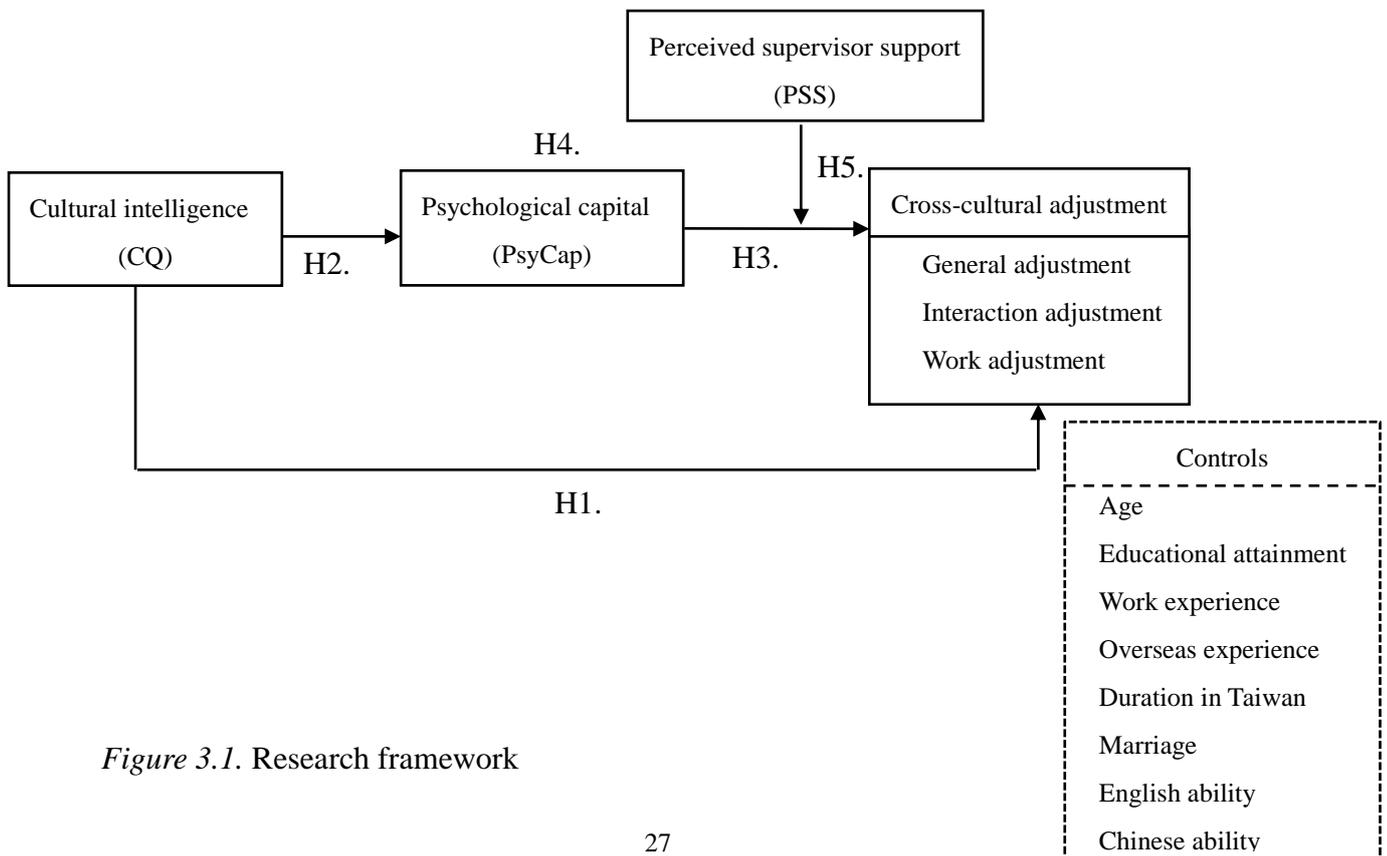


Figure 3.1. Research framework

Research Hypotheses

Based on previous literatures, the research purpose, and research questions, the hypotheses were described as followed.

- Hypothesis 1.* Cultural intelligence has a positive effect on cross-cultural adjustment.
- H 1-1.* Cultural intelligence has a positive effect on general adjustment.
 - H 1-2.* Cultural intelligence has a positive effect on interaction adjustment.
 - H 1-3.* Cultural intelligence has a positive effect on work adjustment are.
- Hypothesis 2.* Cultural intelligence has a positive effect on psychological capital.
- Hypothesis 3.* Psychological capital has a positive effect on cross-cultural adjustment.
- H 3-1.* Psychological capital has a positive effect on general adjustment.
 - H 3-2.* Psychological capital has a positive effect on interaction adjustment.
 - H 3-3.* Psychological capital has a positive effect on work adjustment.
- Hypothesis 4.* Psychological capital serves as a mediator between cultural intelligence and cross-cultural adjustment.
- H 4-1.* Psychological capital serves as a mediator between cultural intelligence and general adjustment.
 - H 4-2.* Psychological capital serves as a mediator between cultural intelligence and interaction adjustment.
 - H 4-3.* Psychological capital serves as a mediator between cultural intelligence and work adjustment.
- Hypothesis 5.* Perceived supervisor support positively moderates the relationship between psychological capital and cross-cultural adjustment.

- H 5-1.* Perceived supervisor support positively moderates the relationship between psychological capital and general adjustment.
- H 5-2.* Perceived supervisor support positively moderates the relationship between psychological capital and interaction adjustment.
- H 5-3.* Perceived supervisor support positively moderates the relationship between psychological capital and work adjustment.

Research Design

Samples

Foreign labors face lots of adjustment challenges when moving from the home country to work in other countries since they were hired by a company located in a host country. In this study, foreign labors were defined as “legal blue collar labors being employed in Taiwan without the host nationality according to the Employment Services Act” (<http://law.moj.gov.tw>). The blue collar labors referred to those who engaged in physical works such as mining, construction, and manufacturing.

The total number of foreign labors in Taiwan was 454,171 according to the statistic data provided by Bureau of Employment and Vocational Training in May, 2013. Foreign labors who work in industry and social welfare sectors in Taiwan came from Indonesia, Philippian, Thailand, Vietnam, Malaysia, and Mongolia. As dividing labors according to industry, there were 9,460 (2.08%) labors in agricultural, forestry, fishery, and husbandry industry; 233,530 (51.41%) labors in manufacturing industry; 2,630 (0.01%) labors in construction industry; 208,551 (45.91%) labors in nursing and housing industry. Above all, Indonesia and Vietnam labors were mainly engage in nursing and housing industry while Thailand and Philippian labors were mainly engage in manufacturing and construction industry. In addition, all the Philippine labors engaged in the high technology industry were female.

Table 3.1.
Population Description of Foreign Labors in Taiwan

Sectors	Nationality						
	Total	Indonesia	Philippian	Thailand	Vietnam	Malaysia	Mongolia
Total	454,171	199,971	87,808	62,591	103,797	4	0
Industry	245,620	36,347	63,664	64,865	82,621	4	0
Primary industrial	9,460	7,968	1,346	9	137	0	0
Manufacturing	233,530	28,246	63,484	59,700	82,096	0	0
Construction	2,630	133	35	2,074	388	0	0
Welfare	208,551	163,624	22,942	808	21,176	0	0

Note. Adapted from Bureau of Employment and Vocational Training. Retrieved May 28, 2013.

This study conducted purposive sampling concerning the language boundary and sample accessibility toward foreign labors. The target participants were Philippine labors in technology manufacturing industries.

The sample criteria included: fluent in English, high educational attainment, and working in group with supervisors. First of all, high technology manufacturing industry in Taiwan prefer to hire female Philippine labors because they are fluent in English and they got at least college degree. Secondly, in order to answer questions related to perception of supervisor, the target participants must have high connection with the supervisors in a workplace. Hence, this study chose the Philippine labors as our target samples.

Measurement

This study adopted matured scales to measure all variables and the precision of measurements was confirmed through the reliability analyses. The degree of precision indicated by Cronbach alpha coefficient (Cronbach α) is to show the “stability” and

“consistency” of instrument. The higher value of Cronbach α means a higher consistency of each dimension. The acceptable value is higher than 0.7 (Nunnally & Berstein, 1994).

Cultural Intelligence (CQ)

Cultural intelligence refers to an individual’s capability to adapt effectively to situations of cultural diversity (Earley, 2002). This research adopted the cultural intelligence scale (CQS) which developed by Ang et al. (2007). The scale contains 20 items in 4 dimensions: meta-cognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ. Example items of each dimension were “I am aware of the cultural knowledge I use when interacting with people with different cultural backgrounds” (meta-cognitive CQ); “I know the legal and economics of other cultures” (cognitive CQ); “I enjoy interacting with people from different cultures” (motivational CQ); “I change my verbal behavior (e.g. accent, tone) when a cross-cultural interaction requires it” (behavioral CQ). Responses were designed on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The high score indicated that the person can deal with cultural diversity well in a new environment. The Cronbach’s alpha reliability of the CQ in this study was 0.92 and the four dimensions of CQ were ranged from 0.84 to 0.90 (See Table 4.2).

Cross-cultural Adjustment

Cross-cultural adjustment refers to a person’s feeling of comfort in the new role and the degree of mastering the role requirement (Black, 1988). The scale was developed by Black and Stephens (1989). It contains 14 items divided into three dimensions: general adjustment with 7 items, interaction adjustment with 4 items, and work adjustment with 3 items. Example items of each dimension were “I am adjusted to the living condition in general” (general adjustment); “I am adjusted to socializing with Taiwanese” (interaction adjustment); “I am adjusted to my specific job responsibilities”

(work adjustment). Responses were designed on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The high score indicated that the person can adjust to a new cultural environment. The Cronbach's alpha reliability of the cross-cultural adjustment in this study was 0.94 and the three dimensions of cross-cultural adjustment were ranged from 0.89 to 0.91 (See Table 4.2).

Psychological Capital (PsyCap)

Psychological capital (Psychcap) was a term derived from positive psychology that goes beyond human and social capital. Individuals can gain competitive advantages through investing and developing of 'who you are'. (Luthans, et al., 2004; Luthans & Youssef, 2004). Psychological capital was adopted from Psychological capital (PsyCap) questionnaire (PCQ) self-rater version by Harms and Luthans (2013). There are 24 items (includes three reverse items) divided into four dimensions which were *Hope, Resilience, Optimism, and Efficacy*. Example item of *hope* was "If I should find myself in a jam at work, I could think of many ways to get out of it."; example item of *resilience* was "I feel I can handle many things at a time at this job", and the reverse item was "When I have a setback at work, I have trouble recovering from it, moving on."; example item of *optimism* was "If something can go wrong for me work-wise, it will", and it included two reverse items; example item of *efficacy* was "I feel confident analyzing a long-term problem to find a solution." Each dimension was in the form of statement and responses were designed to answer by a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The high score of scale indicated that people have higher level of psychological capital (PsyCap). The Cronbach's alpha reliability of the PsyCap in this study was 0.87 (See Table 4.2).

Perceived Supervisor Support (PSS)

Perceived supervisor support (PSS) refers to the degree a person's feeling of how the supervisor values his/her contribution and well-being. This study adopted PSS scale

developed by Cheng, Jiang, and Riley (2003), which consists of four items with 7-point Likert scale ranged from 1 (strongly disagree) to 7 (strongly agree). Example item included: "My supervisor offers help when I am in a personal crisis." The high score indicated that the person's perception of supervisor support is high. The Cronbach's alpha reliability of the PsyCap in this study was 0.84 (See Table 4.2).

Control Variables

Prior research on cross-cultural adjustment had established that individual-level factors, such as age, educational attainment, work and overseas experience, duration in Taiwan, marriage, and language ability had influence on individual's cross-cultural adjustment. Therefore, these control variables were included in the final section of the questionnaire to clarify the relationships among dependent, independent, moderator and mediator variables.

Age.

Researchers suggested that age is one demographic factor that would affect a person's adaptation. The older workers are generally had better adaptation to the other culture and were more satisfied with their job than younger workers (Parker & McEvoy, 1993; Sam, 1998). Therefore, the questionnaire included one blank for participants to fill in their age.

Educational attainment.

The highest education degree the participants had received was included in the personal information part in the questionnaire and it was measured by dummy variable. The coding was 1 (high school), 2 (vocational course), 3 (college).

Work and overseas experience.

Black and Gregersen (1991) and Black et al. (1991) pointed out that previous work-related experiences help individual to form accurate work expectations in mind; on the other hand, previous non-work experiences facilitated the formation of accurate

non-work expectations. Besides, Bhaskar et al. (2005) stated that people who had longer experience in overseas assignment or related industry tended to leverage the experience better. The previous experience and the relocation skills acquired from the previous assignment helped people to go through trial-and-error processes and became more concentrated on the present work (Parker & McEvoy, 1993; Shaffer, Harrison & Gilley, 1999). Participants needed to answer whether they have ever worked or lived in other countries, and if yes, they filled out for how many years and months they've been there. The answer of "no" was coded as 0; the answer of "yes" was coded as 1. The duration was analyzed by months.

Duration in Taiwan.

The more time individual stay in the host country and spend with the host-country nationals, the better adaptation level performed (Parker & McEvoy, 1993; Ramalu et al., 2010). The participants indicated how many times they have visited and for how long they have worked in Taiwan. The number of visits to Taiwan was coded as "1" for once, "2" as "twice", etc. The year they've worked in Taiwan was analyzed by months.

Language ability.

Previous literatures indicated that language ability will have great impact on a person's adjustment (Bhaskar et al., 2005; Ramalu et al., 2010; Shaffer et al., 1999). The participants rated their both their Chinese and English language ability according to the proficiency on listening, speaking, reading, and writing. The answers were coded as 1 "not at all", 2 "poor", 3 "average", 4 "good", 5 "excellent".

Questionnaire Design

The questionnaire adopted maturing scales to ensure that all the desired traits were measured and enhance the content validity. Since the official language in Phillipian is English, the questionnaire was designed in English and was reviewed by Phillipian

translator to confirm whether all the Philippine labors can understand the statement of each item or not in order to reduce the language boundary and confirmed the face validity.

Aside from confirming the questionnaire validity, the questionnaire was also designed to avoid common method variance (CMV) (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) that may occur during the data collection process. The research purpose and variables were not revealed in the questionnaire; also, the questionnaire adopted both 5-point and 7-point Likert scale to measure different variables in order to reduce the CMV problem. In addition, reverse items were contained in the questionnaire to avoid random answers.

In addition to the prevention in advance, Harman's one-factor analysis was conducted in this study as post-preventive to examine the CMV (Podsakoff & Organ, 1986). The general hypothesis of Harman's one-factor analysis was to see if the majority of the variance can be explained by a single un-rotated factor.

Focus Group

Before conducting the pilot test, we interviewed one Philippine translator and five Philippine labors to know the possibilities to conduct this research. First of all, we interviewed the Philippine translator to have brief understanding of the characteristic of Philippine labors and to know if the circumstances of each question meet the Philippine labors' current situation. Secondly, five Philippine labors were required to complete the whole questionnaire and gave us some feedback about the wording and questionnaire design. Also, we estimated the time to complete the questionnaire in order to facilitate the following questionnaire distributing process.

Pilot Test

The purpose of conducting the pilot test was to get understanding about the samples, to confirm the reliability of the measurement, and to examine the relationship between

all the variables. The data collected for the pilot test was from the central Taiwan through the help by the manpower agency and the sample size was 100. The period for data collection lasted for one week, and each of the participants rewarded a gift after handing in a complete questionnaire.

First of all, the descriptive statistics analysis was applied to understand the demographic information about the samples. Table 3.2 indicates that all of the participants were female. Most of them were single (66%) and aged from 26 to 35 years old (74%). Regarding to the international experiences, 92% of them did not work or live beyond their host nation, and most of them (47%) have been stayed in Taiwan for four to eight years. As for the educational background, 63% of the participants got the bachelor degree and 55% of the participants rated their English ability as good. The demographic information presented the characteristics of the target samples and indicated the criteria to fill in the questionnaire were met. For instance, their rating of the English listening-speaking and reading-writing ability showed that they had the ability to understand the questions and they have been stayed in Taiwan long enough to identify the difficulty they meet during the adaptation process.

Secondly, the reliability and Pearson correlation analysis were also conducted for the pilot test to confirm the reliability of the instruments and get brief understanding of the relationships among each variable. Table 3.3 presents the mean, standard deviation, correlations, and reliability for pilot test. The cronbach alpha above 0.7 is acceptable (reference). In this study the Cronbach alpha for each instrument were: 0.91 for CQ, 0.92 for cross-cultural adjustment, 0.86 for PsyCap, and 0.87 for PSS. The result of the correlation analysis indicated that all the main variables were significantly positive correlated ($r=.56$, $p<.001$ for the relationship between CQ and cross-cultural adjustment; $r=.45$, $p<.001$ for the relationship between

CQ and PsyCap; $r=.42$, $p<.001$ for the relationship between CQ and PSS; $r=.30$, $p<.001$ for the relationship between PsyCap and PSS).

Table 3.2.

Descriptive Statistics for Pilot Test (n=100)

Item	Frequency	Percentage	Item	Frequency	Percentage
1. Age			6. Marriage		
less than 25	6	6%	Single	66	66%
26 - 35	74	74%	Married	32	32%
More than 35	20	20%	Divorced/Separated	2	2%
Total	100	100%	Total	100	100%
2. Duration in Taiwan			7. Educational attainment		
less than 1 year	14	14%	High school	19	19%
1- 3 years	27	27%	Vocational Course	18	18%
4 - 8years	47	47%	College	63	63%
More than 8 years	12	12%	Total	100	100%
Total	100	100%			
3. Overseas experience			8. English ability		
No	92	92%	Not at all	0	0%
Yes	8	8%	Poor	1	1%
Total	100	100%	Average	36	36%
			Good	55	55%
4. Gender			Excellent	8	8%
Female	100	100%	Total	100	100%
Male	0	0%			
5. Work experience			9. Chinese ability		
No	20	20%	Not at all	20	20%
Yes	79	79%	Poor	75	75%
Missing value	1	1%	Average	5	5%
Total	100	100%	Good	0	0%
			Excellent	0	0%
			Total	100	100%

Table 3.3.

Mean, Standard Deviations, Correlations, and Reliability for Pilot Test (n=100)

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. Age (year)	32.20	4.32												
2. Overseas experience (month)	2.50	13.77	-.10											
3. Duration in Taiwan (month)	51.20	33.34	.62***	-.10										
4. English ability	3.86	0.62	-.08	.02	-.08									
5. Chinese ability	2.07	0.39	.05	.03	-.05	.01								
6. CQ	4.87	0.71	.06	.01	.00	.12	-.01	(.91)						
7. Cross-cultural adjustment	5.08	0.79	.14	.10	.13	.10	.05	.56***	(.92)					
8. General adjustment	5.12	0.90	.10	.11	.10	.13	.04	.49***	.94***	(.86)				
9. Interaction adjustment	4.84	0.93	.10	.05	.10	.05	.14	.50***	.85***	.67***	(.89)			
10. Work adjustment	5.30	0.87	.19*	.10	.14	.05	-.07	.44***	.74***	.57***	.53***	(.77)		
11. Psychological capital	3.64	0.43	.09	.10	.02	.05	-.15	.45***	.40***	.34***	.33***	.40***	(.86)	
12. Perceived supervisor support	4.26	1.34	.07	.15	-.08	.12	.08	.42***	.58***	.46***	.57***	.54***	.30***	(.87)

Notes. Numbers in parentheses represent Cronbach's alpha value. *** $p < .001$ ** $p < .01$ * $p < .05$

Data Collection

The channel to contact with foreign labors was through manpower agencies. In order to avoid the lawsuit in Taiwan and minimize the management cost, companies in the technology industry recruit Philippine labors through the manpower agency or outsourcing the related affairs to manpower agency. In Taiwan, most high technology manufacturing industries were located in north and central Taiwan. By contacting with managers and translators in the manpower agency, the number of labors can be estimated. Two manpower agencies in north and central Taiwan were willing to help to distribute 800 questionnaires to their foreign labors one by one and collect back around two months. Each respondent gained one small gift while completing the questionnaire. Through the data key in process, if over half of the questions were blank or if the responses were all the same, the questionnaires were regarded as invalid questionnaires. The number of valid questionnaires was 538, and return rate was 81.7%.

Data Analysis

This was a quantitative study being conducted in questionnaires. The statistic software of SPSS v18.0 and AMOS 18.0 were used in this study to analyze the data. The analysis method included:

Pearson correlation analysis

The Pearson correlation analysis was performed to understand the degree of linear relationship between two variables. Positive correlation indicated that both variables increase or decrease together, while negative correlation indicated that as one variable increases, the other one decreases, and vice versa. Pearson's r ranged from +1 to -1. A correlation of +1 means that there is a perfect positive linear relationship between variables; on the contrary, a correlation of -1 means that there is a perfect negative linear relationship between variables. A correlation of 0 means there is no linear

relationship between variable. A correlation of 0.4 to 0.8 means the variables are medium correlated.

Descriptive Statistics

This study adopted descriptive statistics to describe the characteristics of participants. The frequency distribution and percentage number were used to identify the participants' distribution pattern in age, educational attainment, work experience, overseas experience, duration in Taiwan, and language ability.

Confirmatory Factor Analysis (CFA)

The validity of the questionnaire was tested by confirmatory factor analysis (CFA) to confirm whether the data fit a hypothesized measurement model that based on theory or previous researches. This study adopted indicators had been proposed in previous researches to examine the construct validity of cultural intelligence, cross-cultural adjustment, psychological capital, and perceived supervisor support. The indexes were presented as follows:

Chi-square test (χ^2) is to determine the overall model fit. According to Joreskog and Sorbom (1993), the value lower than 3 indicates a good model fit. In addition to the chi-square test, there are many other statistics for assessing the goodness of fit of the experimental value and the theoretical value.

Root Mean Square error of approximation (RMSEA) serves as a supplementary statistic to determine fit in large sample sizes. The value of RMSEA equals to 0 represents a perfect model fit. The value range from 0.05 to 0.1 represents a medium model fit; thus, the value higher than 0.1 represents a bad model fit (Brown & Cudeck, 1993; MacCallum, Browne & Sugawara, 1996). Goodness of fit index (GFI) higher than 0.8 describes the observed data well fit in the experimental distribution (Carmines & McIver, 1981). Normed fit index (NFI) represents a ratio of the difference in the value for the model and the independent model. Comparative fit

index (CFI) and non-normed fit index (NNFI) takes sample size into account based on NFI. CFI, NNFI, and NFI were higher than 0.9, which represent desirable indexes (Bentler & Bonett, 1980; Tucker & Lewis, 1973). To sum up, the above indexed range from 0 to 1; specifically, the value close to 1 represents a better model fit. Table 3.4 summarized the fit indexes.

Table 3.4.

Summary of Fit Indexes

Fit indexes	Threshold	References
χ^2/df	<3	Joreskog & Sorborm, 1993
RMSEA	<.08	Brown & Cudeck, 1993; MacCallum, Brown & Sugawara, 1996
GFI	>0.8	Carmines & McIver, 1981
NFI	>0.9	Bentler & Bonett, 1980
CFI	>0.9	Bentler & Bonett, 1980
NNFI	>0.9	Tucke & Lewis, 1973

Structure Equation Model (SEM)

A complete structure equation model (SEM) includes two parts. The first one is the measurement model, and the second one is the structure model. First of all, the measurement model is to test the relationships among observed variables and latent variables, and confirm the validity of each model through confirmative factor analysis. Secondly, structure model was adopted to examine the causal effects among latent variables through the path analyses. In this study, the latent independent variable was PsyCap; the latent dependent variable was cross-cultural adjustment; the mediating latent variable was PSS.

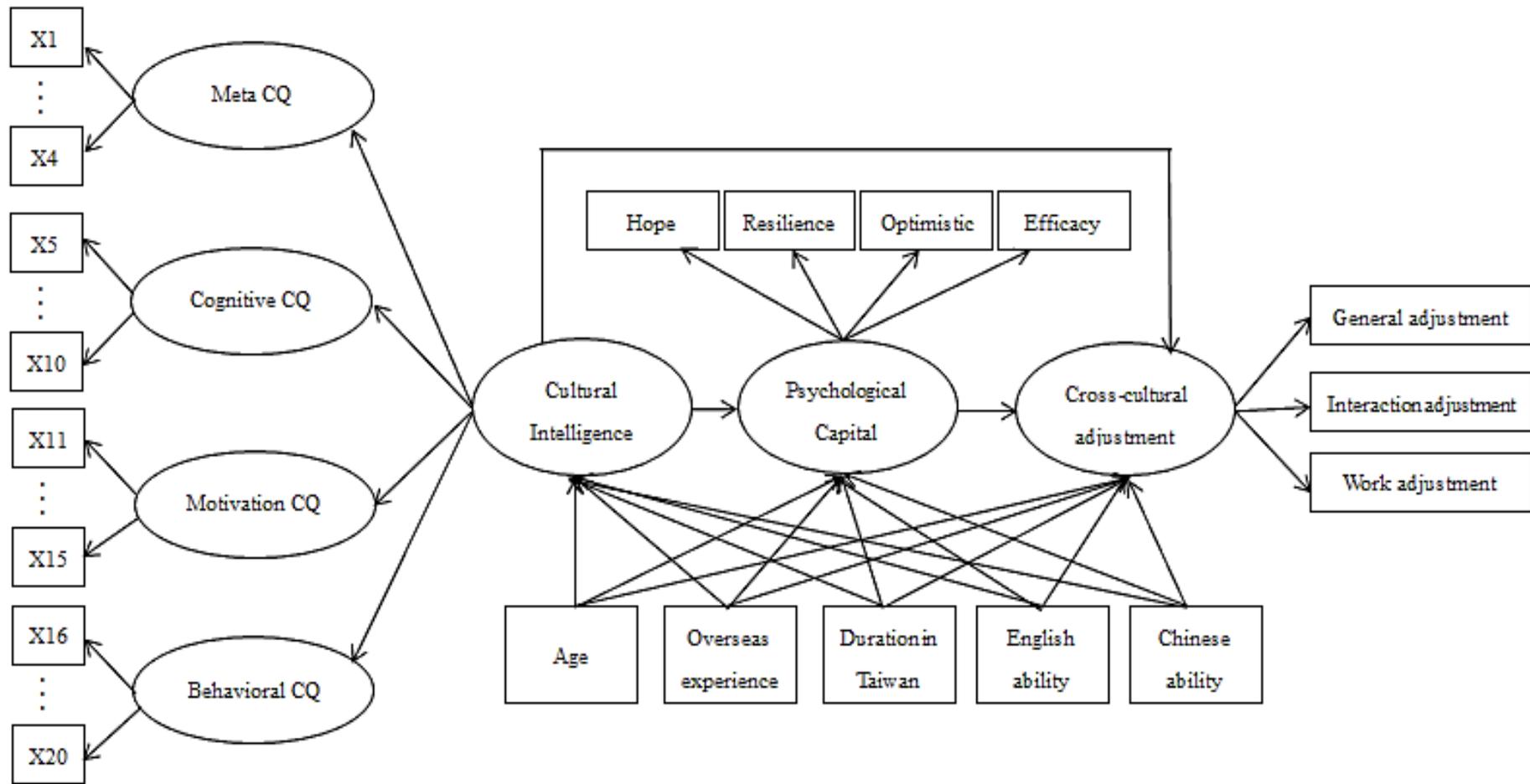


Figure 3.2. SEM conceptual model

Hierarchical Regression Analysis

Both independent and dependent variables were continuous variables; therefore, hierarchical regression analysis was used to test the moderating effect of PSS in this study followed by Baron and Kenny's (1986) recommendations. This study conducted three steps to test the moderating effects of PSS on PsyCap and cross-cultural adjustment. The first step was to enter control variables; then, the second step was to enter PsyCap and PSS spontaneously to test the two variables' impact on the dependent variable. Finally, before calculating the interaction variables, PsyCap and PSS were entered by subtracting the mean from the original ones in order to reduce the multicollinearity problem (Aiken & West, 1991). The third step was to enter multiplication item of PsyCap and PSS to test their interaction effect on the dependent variable.

To interpret the moderating effect precisely, PSS was divided into high and low level group based on calculating the mean value. According to the hypothesis, if PSS positively moderate the relationship between PsyCap and cross-cultural adjustment, the high group of PSS was expected to depict a steeper line than the other one with low PSS group.

CHAPTER IV FINDINGS AND DISCUSSIONS

This chapter presented findings based on the study hypotheses. In the first part, the descriptive statistics analysis was presented. The second part included the result of correlation analysis among cultural intelligence (CQ), cross-cultural adjustment, psychological capital (PsyCap), and perceived supervisor support (PSS). The third parts showed the validity of the study. The fourth part focused on the findings of hypotheses testing by using structure equation model (SEM) and hierarchical regression analysis.

Descriptive Statistics

The demographic information include age, duration in Taiwan, overseas experience, marriage, educational attainment, and language ability. Owing to the characteristics of the industry, all of the 538 participants were female. Most of them were single (73.4%) and aged from 26 to 30 years old (41.3%). The participants had stayed in Taiwan for three to six years principally (42.5%). As for the overseas and working experience, a great percentage of them did not work or live in other countries aside from their home country (91.6%); however, most of them have work experience in electronic industry before coming to Taiwan. Regarding their education background, over 66.5% participants had bachelor degree and over half of them (56.7%) rated their English ability (both listen-speaking and reading-writing) at the level of the good. On the contrary, a great number of participants rated their Chinese ability at the level of the poor (60%). The frequency and percentage of the demographic information are summarized in Table 4.1.

Table 4.1.
Descriptive Statistics (n=538)

	Frequency Percentage		Item	Frequency Percentage	
1. Age			5. Marriage		
Below 25	73	13.6	Single	395	73.4
26 - 30	222	41.3	Married	122	22.7
31 - 35	164	30.5	Divorced/Separated	13	2.4
Above 35	75	13.9	Missing value	8	1.5
Missing value	4	0.7	Total	538	100.0
Total	538	100.0			
2. Duration in Taiwan			6. Educational attainment		
Below 1 year	89	16.5	High school	65	12.1
1 - 2 years	96	17.8	Vocational Course	91	16.9
3 - 6 years	228	42.5	College	358	66.5
7 - 9 years	118	21.9	Missing value	24	4.5
Missing value	7	1.3	Total	538	100.0
Total	538	100.0			
3. Overseas experience			7. English ability		
No	493	91.6	Not at all	0	0.0
Yes	45	8.4	Poor	1	0.2
Missing value	0	0	Average	88	16.3
Total	538	100.0	Good	305	56.7
			Excellent	143	26.6
			Missing value	1	0.2
			Total	538	100.0
4. Work experience			8. Chinese ability		
No	83	15.4	Not at all	3	0.6
Yes	443	82.4	Poor	323	60.0
Missing value	12	2.2	Average	198	36.8
Total	538	100.0	Good	12	2.2
			Excellent	1	0.2
			Missing value	1	0.2
			Total	538	100.0

Correlation Analysis

In order to understand the relationship between two variables, the Pearson correlation analysis was performed. The means, standard deviations, reliabilities, and correlations among all of the variables are presented in Table 4.2. The major variables in this study showed significant correlation coefficients. CQ was positively correlated to PsyCap ($r=.48, p<.001$), cross-cultural adjustment ($r=.54, p<.001$), and the three sub-dimensions of cross-cultural adjustment ($r=.47, r=.46, r=.48, p<.001$). Also, CQ was moderately correlated with PSS ($r=.30, p<.001$). Cross-cultural adjustment was positively correlated with PsyCap ($r=.43, p<.001$) and PSS ($r=.42, p<.001$).

Table 4.2.

Mean, Standard Deviations, Correlations, and Reliability (n=538)

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. Age (year)	30.48	4.47												
2. Overseas experience (month)	2.36	11.12	.12**											
3. Duration in Taiwan (month)	46.04	31.80	.54***	.06										
4. English ability	3.93	0.60	-.12***	-.00	.02									
5. Chinese ability	2.15	0.50	-.00	-.02	.08	.21***								
6. CQ	5.00	0.69	-.04	-.01	.01	.19***	.13***	(.92)						
7. Cross-cultural adjustment	5.32	0.77	-.01	-.01	.06	.14***	.11**	.54***	(.94)					
8. General adjustment	5.36	0.83	.02	.01	.07	.15***	.08	.47***	.94***	(.91)				
9. Interaction adjustment	5.07	0.93	-.02	-.01	.08	.10*	.15***	.46***	.87***	.71***	(.91)			
10. Work adjustment	5.54	0.91	-.06	-.06	-.03	.11*	.07	.48***	.78***	.61***	.56***	(.89)		
11. Psychological capital	3.61	0.36	.02	.04	.04	.21***	.07***	.48***	.43***	.38***	.34***	.43***	(.87)	
12. Perceived supervisor support	4.66	1.15	-.10	-.02	-.09*	.10*	.12***	.30***	.42***	.37***	.39***	.34***	.26***	(.84)

Notes. Numbers in parentheses represent Cronbach's alpha value. *** $p < .001$ ** $p < .01$ * $p < .05$

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was performed to evaluate the distinctiveness of the measures by using AMOS 18.0. Since the chi-square test is sensitive to sample size, the overall model fit was also examined by other fit indices, including root-mean-square error of approximation (RMSEA), Tucker–Lewis non-normed index (TLI), incremental fit index (IFI), and the comparative fit index (CFI). When RMSEA is below .08 (Browne & Cudeck, 1993) and TLI, IFI and CFI scores are above .90 (Byrne, 1998) presents good model fit index.

The practice of item parceling was adopted as conducting confirmatory factor analyses on cross-cultural adjustment and PsyCap in order to reduce the measurement error and to increase the stability of the parameter estimates (Bagozzi & Edwards, 1998). However, a limitation of the data analysis occurred in regards of the identification issue. As for cross-cultural adjustment, the number of free parameters exactly equals to the number of known values that caused zero degree of freedom, which made it a perfect just-identified model. Thus, there was no need to assess the CFA of cross-cultural adjustment. The original 24 items of PsyCap was divided into four parcels. The chi-square of PsyCap was 1.62, while the other fit indexes were: RMSEA=0, CFI=1, NFI=1, IFI=1, TLI=1, GFI=1. CQ was tested by 20 items and the fit indexes were presented as follows: Chi-square (χ^2)=451.84, RMSEA=.06, CFI=.95, NFI=.93, IFI=.95, TLI=.94, GFI=.92. PSS with four items also showed expected fit indexes; the chi-square (χ^2) was 5.93, while the other fit indexes were: RMSEA=.06, CFI=.1, NFI=.99, IFI=.1, TLI=.99, GFI=.99. The variables in this study all presented good fit indexes and it confirmed the validity of the study.

Other than evaluating the validity of each variable, the validity of the full model was tested. The validity of the 27 constructs (three factors of cross-cultural adjustment, four factors of PsyCap, 20 factors of CQ, and four factors of PSS) presented

acceptable fit: Chi-square (χ^2)=1149.29, RMSEA=.06, CFI=.91, NFI=.87, IFI=.92, TLI=.90, GFI=.88. Also, the alternative two-factor and one-factor model was conducted to show the discriminant validity among the multidimensional constructs. The two-factor model reveals the unacceptable fit indices (χ^2 =3534.74, RMSEA=.14, CFI=.60, NFI=.58, IFI=.60, TLI=.56, GFI=.59). And the one-factor model also results in poor fit indices (χ^2 =3879.17, RMSEA=.14, CFI=.56, NFI=.54, IFI=.56, TLI=.52, GFI=.57). The chi-square differences indicated that the three-factor model was superior to the two-factor and the one-factor models.

Table 4.3.

Results of Confirmatory Factor Analysis (n=538)

	χ^2	df	χ^2/df	RMSEA	CFI	NFI	IFI	TLI	GFI
One-factor	3879.17	324	11.97	.14	.56	.54	.56	.52	.57
Two-factor	3534.74	323	10.94	.14	.60	.58	.60	.64	.59
Three-factor	1149.27	437	2.63	.06	.91	.87	.92	.90	.88

Notes. RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; NFI = Normed Fit Index; IFI = Incremental Fit Index; TLI = Tucker-Lewis Index, GFI = Goodness of Fit Index

Because the data was self-reported and collected through the same questionnaire in the same time, Harman's one-factor test (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) was conducted to detect potential bias caused by common method variance (CMV). The assumption provided by Podsakoff et al. (2003) suggested that if a single factor emerged or one general factor accounts for the majority of all the dependent and independent variables means that the CMV problem presented in the study. In this study, all the 62 items were entered into the factor analysis and then the un-rotated factor solution was examined to determine the number of variances of the variables. The result reveals 13 factors with the eigenvalue greater than 1.0, which accounted for 69.39% of variance. The first factor accounts for 27.40% of variance

and the result shows that the items did not load on a single factor.

Structure Equation Model (SEM)

Structure equation model (SEM) was designed to test the Hypothesis 1 to Hypothesis 4 in this study. As for testing the mediating effect of PsyCap, we used Baron and Kenny's (1986) approach. Figure 4.1 and Figure 4.2 shows the result in details.

Hypothesis 1 predicted that CQ has a positive effect on cross-cultural adjustment. The SEM result showed that CQ had a significantly positive effect on cross-cultural adjustment ($\beta=.682, p<.001$). Specifically, CQ had a significant positive effect on three sub-dimensions of cross-cultural adjustment: general adjustment ($\beta=.858, p<.001$), interaction adjustment ($\beta=.814, p<.001$), and work adjustment ($\beta=.713, p<.001$). Therefore, Hypothesis 1-1, 1-2, and 1-3 were all supported and Hypothesis 1 was sustained.

Hypothesis 2 predicted that CQ has a positive effect on PsyCap. The SEM result presented that the structural coefficient β relating CQ to PsyCap was .584 ($p<.001$), providing support for Hypothesis 2.

Hypothesis 3 predicted that PsyCap has a positive effect on cross-cultural adjustment. The data indicates that PsyCap also had a positive effect on cross-cultural adjustment ($\beta=.187, p<.01$). Specifically, PsyCap had positive effects on the three sub-dimensions of cross-cultural adjustment: general adjustment ($\beta=.863, p<.001$), interaction adjustment ($\beta=.807, p<.001$), and work adjustment ($\beta=.715, p<.001$). The results revealed supports for Hypothesis 3-1, 3-2, and 3-3. Therefore, Hypothesis 3 was fully supported.

Meanwhile, Hypothesis 4 predicts that PsyCap serves as a mediating link between CQ and cross-cultural adjustment as well as the three sub-dimensions. The beta coefficient between CQ and cross-cultural adjustment decreased and remained

significant (from .682 to .577) when PsyCap was added as the mediator. Therefore, PsyCap played as a partial mediating link between CQ and cross-cultural adjustment. The similar results were observed when testing the mediating effects of PsyCap on the relationship between CQ and general adjustment, CQ and interaction adjustment, and CQ and work adjustment. We can tell from Figure 4.1 and Figure 4.2 that the beta coefficients between CQ and general adjustment as well as between CQ and interaction adjustment were decreased and remained significant (.858 to .855; .814 to .810, respectively) after PsyCap was added as the mediator. These results indicated that PsyCap partially mediated the relationship between CQ and general adjustment as well as the relationship between CQ and interaction adjustment. The beta coefficient between CQ and work adjustment changed from significant to not significant after PsyCap was added. This indicates that PsyCap fully mediated the relationship between CQ and work adjustment. Therefore, Hypothesis 4.1 and Hypothesis 4.2 was partially supported, and Hypothesis 4.3 was fully supported.

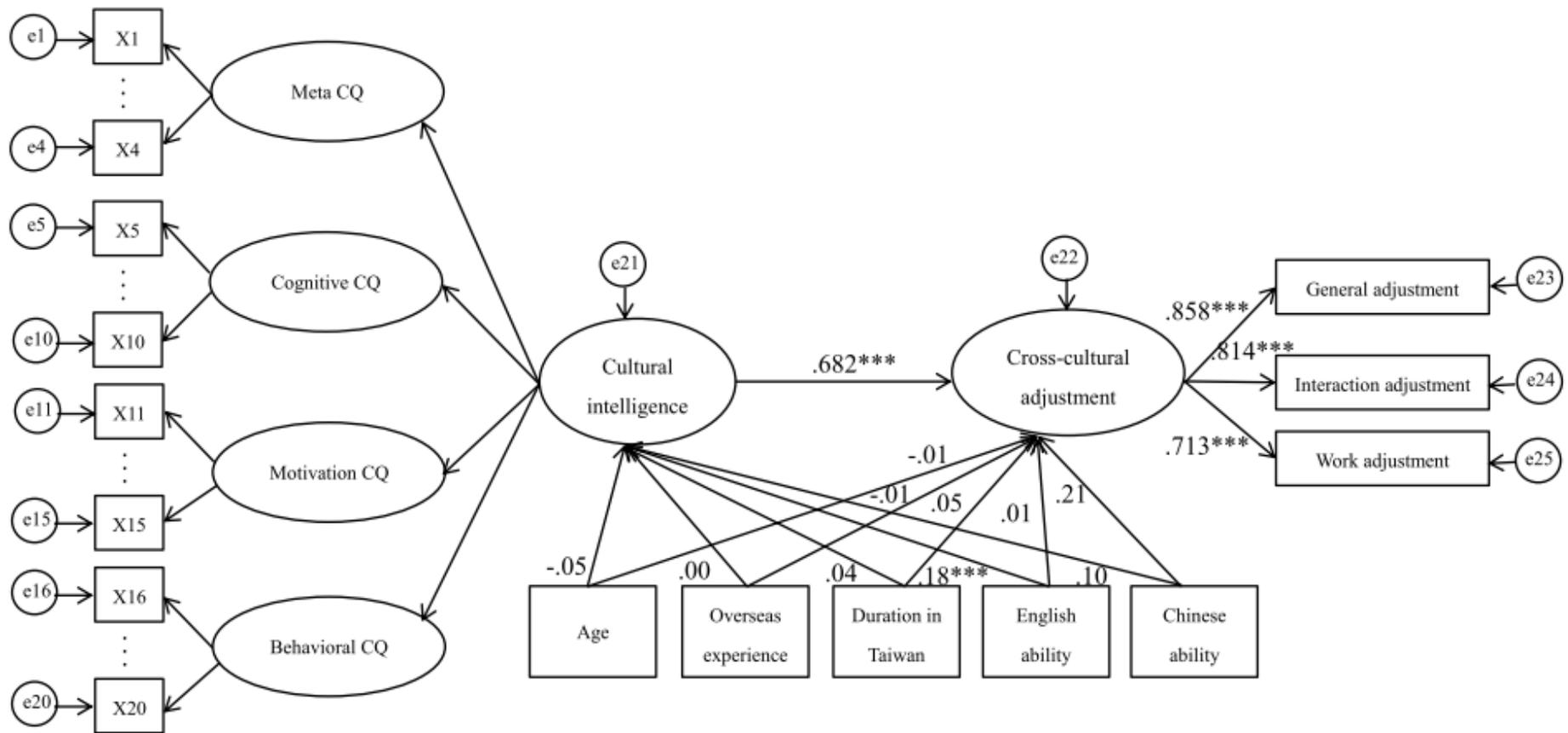


Figure 4.1. SEM model with path coefficients

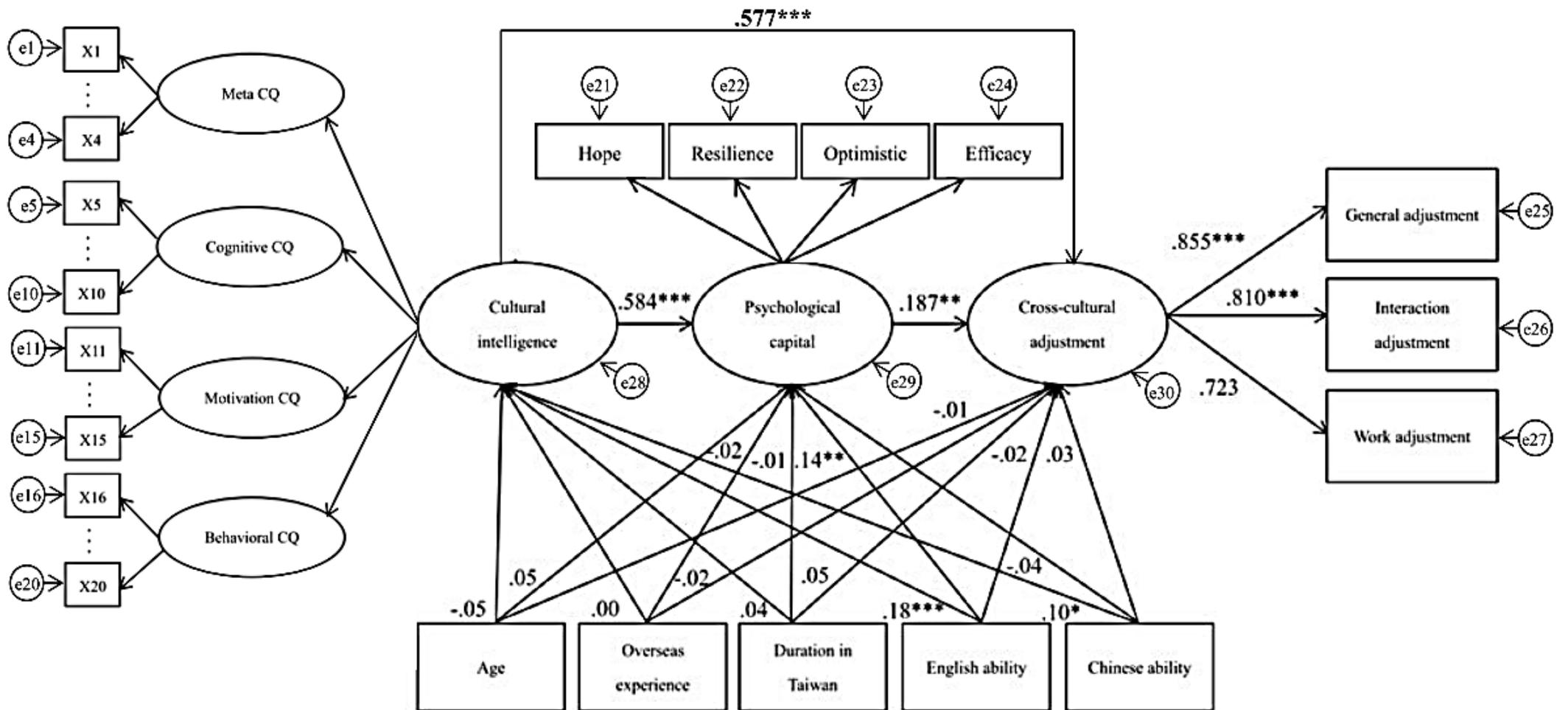


Figure 4.2. SEM mediating model with path coefficients

Hierarchical Regression Analysis

Hypothesis 5 predicted that PSS positively moderated the relationship between PsyCap and cross-cultural adjustment. The moderating effect of PSS was tested via hierarchical linear regression analysis. The three steps recommended by Baron and Kenny (1986) were adopted in this study.

In step one, the control variables such as age, overseas experience, duration in Taiwan, marriage, education attainment, work experience, English ability, and Chinese ability were entered. In step two, the independent variable and moderating variable were entered. In step three, the interactional variable was entered and we examined the beta coefficient and the significance of the interactional variable. However, before calculating the interaction variable, PsyCap and PSS was centered by subtracting the mean from the original ones in order to reduce the multicollinearity problem (Aiken & West, 1991).

Table 4.4 to Table 4.7 summarize the regression result of testing Hypothesis 5 and Hypotheses 5-1 to 5-3. Model 1 presents that the interaction of PsyCap and PSS was significant when cross-cultural adjustment was entered as the dependent variable, and the beta coefficient was positive ($\beta=.23, p<.01$). Model 2 to Model 4 also present the similar results as the three sub-dimensions of adjustment were entered as the dependent variables ($\beta=.22, p<.05$ for general adjustment; $\beta=.25, p<.05$ for interaction adjustment; $\beta=.21, p<.05$ for work adjustment).

To interpret the moderating effect in detail, PSS was divided into high and low level group based on the mean. Figure 4.2 depicts the interactional graphs between PsyCap and PSS. As expected, PsyCap had a more positive effect on cross-cultural adjustment, general adjustment, interaction adjustment, and work adjustment for individuals with higher PSS; whereas, PsyCap had a more slight effect on cross-cultural adjustment as well as the three sub-dimensions for individuals with

lower PSS. To sum up, PSS showed significantly positive interactional effect between CQ and cross-cultural adjustment and its three-sub-dimensions. Hence, Hypothesis 5 and Hypotheses 5-1 to 5-3 were supported.

In conclusion, individuals who perceived higher level of supervisor support performed higher level of cross-cultural adjustment than those who perceived low level of supervisor support. The emotional support, information support, and instrumental support provided by the supervisors were helpful for individuals to overcome stress occurring in the adaptation process (Caligiuri & Lazarova, 2002). In addition, the other tangible or intangible support (e.g., knowledge sharing, entertainment, and welfare) reduced the uncertainty and confusion when individuals moved to an unfamiliar environment. Kraimer et al. (2001) also noted that individuals who received aids, rewards, and affirmation from the supervisors had more encouragement to take over the challenging tasks and to perform successful work adjustment.

Table 4.4.

Result of Regression Analysis of the Moderating Effect Between PsyCap and Cross-cultural Adjustment (n=538)

Variables	Model 1	Model 2	Model 3
	β	β	β
<i>Step 1: Controls</i>			
Age	-.01	-.01	-.01
Overseas experience	.00	.00	.00
Duration in Taiwan	.00	.00	.00
Education attainment	.00	-.02	-.02
Work experience	-.09	-.11	-.10
English Ability	.14	.02	.00
Chinese Ability	.12	.04	.04
<i>Step 2: Main Effect</i>			
Psychological capital		.74***	.71***
Perceived supervisor support		.23***	.23***
<i>Step 3: Interaction</i>			
PsyCap x Pss			.23**
R ²	.03	.30	.31
Adj. R ²	.02	.29	.30
F	1.97*	21.24***	20.33***
ΔR^2		.27	.01
ΔF		95.32***	8.11***

Note. ***p < .001 **p < .01 *p < .05

Table 4.5.

Result of Regression Analysis of the Moderating Effect Between PsyCap and General Adjustment (n=538)

Variables	Model 1	Model 2	Model 3
	β	β	β
<i>Step 1: Controls</i>			
Age	-.01	.00	.00
Overseas experience	.00	.00	.00
Duration in Taiwan	.00	.00	.00
Education attainment	.02	.00	.00
Work experience	-.04	-.06	-.05
English Ability	.17	.07	.04
Chinese Ability	.07	.00	.00
<i>Step 2: Main Effect</i>			
Psychological capital		.66***	.63***
Perceived supervisor support		.23***	.23***
<i>Step 3: Interaction</i>			
PsyCap x Pss			.22*
R ²	.03	.24	.25
Adj. R ²	.01	.22	.23
F	1.80	15.22***	14.51***
ΔR^2		.21	.01
ΔF		67.00***	5.89***

Note. ***p < .001 **p < .01 *p < .05

Table 4.6.

Result of Regression Analysis of the Moderating Effect Between PsyCap and Interaction Adjustment (n=538)

Variables	Model 1	Model 2	Model 3
	β	β	β
<i>Step 1: Controls</i>			
Age	-.02	-.02	-.02
Overseas experience	.00	.00	.00
Duration in Taiwan	.00	.00	.00
Education attainment	.00	-.03	-.02
Work experience	-.13	-.15	-.14
English Ability	.08	-.03	-.06
Chinese Ability	.23	.15	.15
<i>Step 2: Main Effect</i>			
Psychological capital		.68***	.66***
Perceived supervisor support		.27***	.27***
<i>Step 3: Interaction</i>			
PsyCap x Pss			.25*
R ²	.04	.24	.25
Adj. R ²	.02	.23	.24
F	.26**	15.84***	15.11***
ΔR^2		.20	.01
ΔF		66.18***	6.16*

Note. ***p < .001 **p < .01 *p < .05

Table 4.7.

Result of Regression Analysis of the Moderating Effect Between PsyCap and Work Adjustment (n=538)

Variables	Model 1	Model 2	Model 3
	β	β	β
<i>Step 1: Controls</i>			
Age	-.01	.00	.00
Overseas experience	.00	-.01	-.01
Duration in Taiwan	.00	.00	.00
Education attainment	-.02	-.05	-.05
Work experience	-.16	-.18	-.17
English Ability	.13	.00	-.02
Chinese Ability	.08	.01	.01
<i>Step 2: Main Effect</i>			
Psychological capital		.99***	.97***
Perceived supervisor support		.18***	.18***
<i>Step 3: Interaction</i>			
PsyCap x Pss			.21*
R ²	.02	.25	.26
Adj. R ²	.00	.24	.24
F	1.27	16.61***	15.64***
ΔR^2		.23	.01
ΔF		76.46***	4.69*

Note. ***p < .001 **p < .01 *p < .05

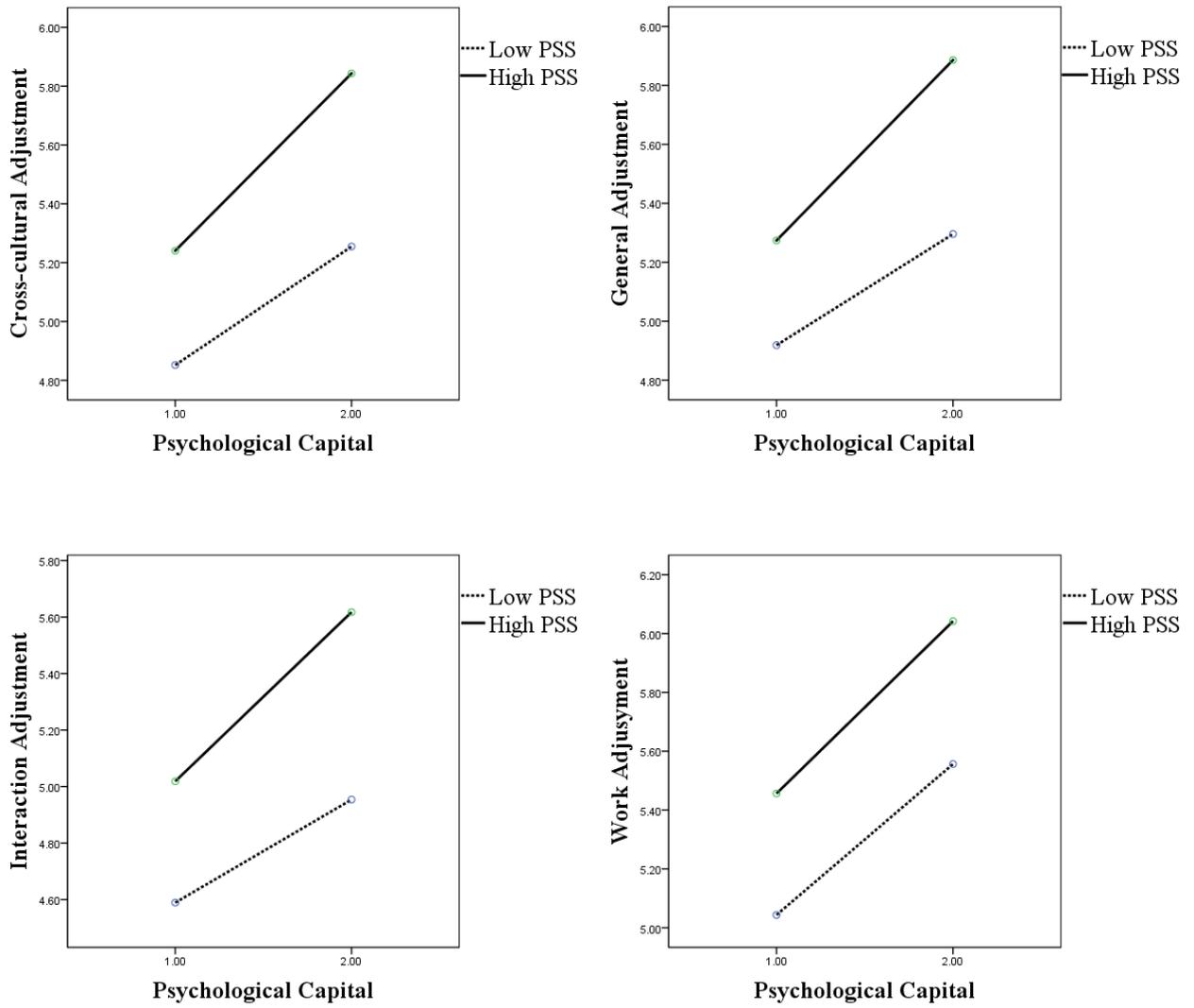


Figure 4.3. Interaction plots for the moderating effects of perceived supervisor support

Table 4.8.

Result of Hypotheses Testing

Hypotheses	Result
<i>H 1.</i> Cultural intelligence has a positive effect on cross-cultural adjustment.	Supported
<i>H 1-1.</i> Cultural intelligence has a positive effect on general adjustment.	Supported

(continued)

Table 4.6. (continued)

<i>H 1-2.</i>	Cultural intelligence has a positive effect on interaction adjustment.	Supported
<i>H 1-3.</i>	Cultural intelligence has a positive effect on work adjustment .	Supported
<i>H 2.</i>	Cultural intelligence has a positive effect on psychological capital.	Supported
<i>H 3.</i>	Psychological capital has a positive effect on cross-cultural adjustment.	Supported
<i>H 3-1.</i>	Psychological capital has a positive effect on general adjustment.	Supported
<i>H 3-2.</i>	Psychological capital has a positive effect on interaction adjustment.	Supported
<i>H 3-3.</i>	Psychological capital has a positive effect on work adjustment.	Supported
<i>H 4.</i>	Psychological capital serves as a mediator between cultural intelligence and cross-cultural adjustment.	Supported
<i>H 4-1.</i>	Psychological capital serves as a mediator between cultural intelligence and general adjustment.	Partially supported
<i>H 4-2.</i>	Psychological capital serves as a mediator between cultural intelligence and interaction adjustment.	Partially supported
<i>H 4-3.</i>	Psychological capital serves as a mediator between cultural intelligence and work adjustment.	Supported
<i>H 5.</i>	Perceived supervisor support positively moderates the relationship between psychological capital and cross-cultural adjustment.	Supported

(continued)

Table 4.6. (continued)

<i>H 5-1.</i>	Perceived supervisor support positively moderates the relationship between psychological capital and general adjustment.	Supported
<i>H 5-2.</i>	Perceived supervisor support positively moderates the relationship between psychological capital and interaction adjustment.	Supported
<i>H 5-3.</i>	Perceived supervisor support positively moderates the relationship between psychological capital and work adjustment.	Supported

CHAPTER V CONCLUSIONS AND SUGGESTIONS

In this chapter, the conclusions were drawn based on the research findings and the limitations. To make this study valuable in both theoretical and practical fields, the implications and suggestions were proposed to further practices and researches.

Conclusions

The purpose of this study was to investigate the relationships among CQ, cross-cultural adjustment, PsyCap, and PSS by and collecting the sample of Philippine labors working in Taiwan. There are three results of this study. First, CQ has a positive effect on cross-cultural adjustment and its three sub-dimensions. Second, PsyCap serves as a mediator on the relationship between CQ and cross-cultural adjustment, CQ and general adjustment, CQ and work adjustment. However, PsyCap did not mediate the relationship between CQ and interaction adjustment. Third, PSS served as a moderator on the relationship between CQ and cross-cultural adjustment and its three dimensions of general adjustment, interaction adjustment, and work adjustment. Based on the findings, the conclusions were drawn as follows:

Cultural Intelligence and Cross-cultural Adjustment

Hypothesis 1 predicted that CQ has a positive effect on cross-cultural adjustment. That is to say, individuals' CQ determines their psychological comfort during the adaptation process in foreign countries. The finding of this study is corresponded to several previous studies in this field (Lin et al., 2012; Ramalu et al., 2010). The result of this study indicates that individuals with high CQ have better abilities to adjust to the living, working, and social styles in other countries. In other words, individuals with higher level of CQ are usually more aware of the differences about norms across cultures to cultures and have more enjoyable experiences when interacting with

people from different backgrounds. These characteristics drive them to have higher degree of adjustment no matter in their daily life or workplaces.

Hypothesis 1-1 predicted that CQ has a positive effect on general adjustment. Specifically, individuals with high CQ usually lead to high level of general adjustment. The result of this study implies that individuals with high CQ have greater motivation and interest to experience different life styles, thus they tend to enjoy the exotic atmosphere and to perform high adaptation in foreign countries regarding to general life such as living, housing, climate, and health facilities. This finding, agreed with Templer et al. (2006), showed that individuals with high motivational CQ were highly confident of reaching successful cultural adaptation to the overall living condition.

Hypothesis 1-2 suggested that CQ had a positive effect on interaction adjustment. That is to say, individuals with high CQ have greater ability to perform high interaction adjustment with foreigners by using both verbal and non-verbal behaviors. In this study, CQ was found as an antecedent to predict individuals degree of interaction adjustment. The finding is consistent with other related studies (Ang et al., 2007; Ramalu et al., 2011), and shows that individuals with high CQ are able to utilize related cultural knowledge and experience to socialize with local people. Furthermore, individuals with high CQ have more confidence to build a friendly relationship with local people than those who with lower CQ.

Hypothesis 1-3 aimed to investigate the relationship between CQ and work adjustment, and the result indicated that CQ has a positive effect on work adjustment. To explain the result in detail, Earley and Ang (2003) pointed out that individuals with high CQ possess positive belief of their adaptive capacities and they were more persistent in adapting to different situations such as new expectations for performance and new job demand. The current study was also consistent with researches conducted by Ramalu et al. (2010), who discovered that CQ was positively related to work

adjustment through analysing data collected from expatriates in Malaysia.

Cultural Intelligence and Psychological Capital

Hypothesis 2 predicted that CQ has a positive effect on PsyCap. A review of the literatures revealed few researches had been done to investigate the relationship between CQ and PsyCap. However, the result of this study shows that individuals' CQ and PsyCap are positively correlated. In other words, individuals' with high CQ lead them to think in a more positive way and seeing lives as well as future events optimistically and hopefully. Hence, individuals with high CQ lead them to perform higher level of PsyCap.

To reason the finding clearly, Earley and Peterson (2004) asserted that people high in CQ had a strong sense of efficacy. They tend to be more confident to utilize the resources they have to complete certain tasks. Secondly, MacNab and Worthley (2012) stated that meta-cognitive CQ reflected individuals' perspective of thinking being formed based on their cultural background, stereotypes, and previous inter-culture experiences. Therefore, individuals with high meta-cognitive CQ were aware of applying the cultural knowledge they have to come up with new strategies to overcome overwhelming change. Finally, motivational CQ drives individuals' perseverance to maintain positive beliefs while facing setbacks. In short, CQ has a positive effect on individual's will-power and confidence to create efficient way to accomplish challenging missions. Briefly, this finding implies that individuals with high CQ are more confident to recover from overwhelming changes; in addition, they tend to regard the unknown event in an optimistic and hopeful manners. This kind of thinking pattern benefits their psychological status.

Psychological Capital and Cross-cultural Adjustment

Hypothesis 3 stated that PsyCap has a positive effect on cross-cultural adjustment. The finding of this study shows that individual with high PsyCap performed more

successful cross-cultural adjustment than those who with low PsyCap. The result further supports the statement being proposed by Avey et al. (2008), which indicated that employee with high PsyCap were easier to adjust to the change of organization. The explanation for this finding is that individuals who are more optimistic and confident to take over the challenges and set back from the difficulties are more adaptable to the new environment. Moreover, individuals high in PsyCap are more flexible to fit in the different living and working condition. They feel comfortable to use appropriate manners to interact with people from different cultures (Avey et al., 2008).

Hypothesis 3-1 stated that PsyCap has a positive effect on general adjustment. The result of this study indicated that individuals with high PsyCap lead to higher psychological comfort for the general adjustment during the adaptation process. This finding, agreed with Avey et al. (2011) and Tripathi (2011), showed that PsyCap and well-being were positively correlated to each other. The finding of this study implies that individuals' personal characteristics were one factor that affect on the degree of comfortableness for the overall living conditions such as transportation, housing, climate, and entertainment.

Hypothesis 3-2 assumed that PsyCap has a positive effect on interaction adjustment. This also agreed with the earlier observations that individuals' personality traits were positively related to interaction adjustment (Peltokorpi & Froese, 2012). The result of this study suggests that individuals who are more open-minded and hold flexible view points during the multicultural interaction perform successful interaction adjustment with locals in foreign countries.

Hypothesis 3-3 predicted that PsyCap has a positive effect on work adjustment. In this study, the result is correspond to the statement being proposed by Black and Stephen (1980) showing that individuals with high PsyCap were more optimistic,

flexible, and confident so that they tend to feel less stressful to adapt to the new job role and responsibility. Hence, result in better work adjustment. In addition, the present study seems to be consistent with previous empirically study being conducted by Luthans et al. (2008b), showing that PsyCap was positively related to employees job satisfaction. To conclude, individuals with high PsyCap tend to expect good things to happen, hold strong belief that they can create success on their own, and have greater abilities to set back from difficulties (Luthans et al. 2007a); therefore, they perform better work adjustment than those who with low PsyCap.

Psychological Capital as a Mediator

Based on the previous findings, though CQ has been proved to be one factor affecting on individuals' degree of cross-cultural adjustment, this study suggests that PsyCap is another factor to determine a successful adaptation in cross-cultural settings.

Hypothesis 4 predicted that PsyCap serves as a mediator between CQ and cross-cultural adjustment. And the result of this study confirms the full mediating role of PsyCap between CQ and work adjustment, as well as, partial mediating role of PsyCap on the relationship between CQ and cross-cultural adjustment, CQ and general adjustment, CQ and interaction adjustment. The result implies that individuals with high CQ lead to higher PsyCap and that PsyCap drives them to perform higher level of cross-cultural adjustment. In the cross-cultural setting, individuals with high PsyCap have greater ability to mobilize the cognition, knowledge, and other resources to overcome the obstacles they meet during the adaptation process both in the daily lives and workplaces. Specifically, PsyCap is proved as a direct factor to influence on individual's work adjustment in the cultural diversity environment.

Perceived Supervisor Support as a Moderator

Hypothesis 5 and hypothesis 5-1 to 5-3 predicted that PSS servers as a moderator on the relationship between PsyCap and cross-cultural adjustment, PsyCap and general

adjustment, PsyCap and interaction adjustment, also, PsyCap and interaction. The findings not only confirm the hypotheses but also imply that individuals who perceives more emotional and some other tangible support from their supervisors would perform better both in the daily lives and job roles. This finding further support the statement proposed by Caligiuri et al. (1999) that supervisor support provides a positive emotion support for individuals to perform successfully in diverse culture environment and facilitates their adaptation in new culture settings. In addition, this finding also agrees with the previous research being conducted by Kraimer et al. (2011) showing that the support provided by the foreign facilities managers had positive effect on expatriates' interaction adjustment since the managers were important resource for the expatriates to know culture knowledge about the host nation and learn how to build relationships with the local people. Finally, individuals who receives more rewards and affirmation form the supervisor would encourage them to take over new responsibility and new job task under dynamic situations (Kraimer et al., 2001).

Implications

The rapid pace of globalization and movement of workforce make intercultural effectiveness an import issue. CQ and cross-cultural adjustment were two concepts that had been mentioned constantly in researches related to intercultural context. Some other researches also exam the effects brought by PSS during individuals' adjustment processes. However, very few researches took individual difference such as PsyCap in to consideration when exam the relationship among CQ, cross-cultural adjustment, and PSS. This study would not only have significant contribution to theoretical researches but also have several practical implications.

Theoretically, the major contribution in this study is that PsyCap may play as an important mediating link between CQ and cross-cultural adjustment. Specifically, this

study could provide initial evidence that in concert with cross-cultural adjustment, individual varieties and PsyCap in particular, may have desired impact on the degree of individuals' adjustment. Although many other researches showed that CQ has positive impacts on cross-cultural adjustment (Ang et al., 2004; Ang et al., 2007; Lin et al., 2012; Ramalu et al., 2012; Ramalu et al., 2010; Templer et al., 2006), this is the first study to exam the role of Psycap may play as a mediator in the relationship between CQ and cross-cultural adjustment. The other theoretical contribution is that individual who perceived higher level of supervisor support may be more likely to experience higher levels of PsyCap and cross-cultural adjustment. Even though social support and PSS in particular, have been indicated as a moderator that would increase individual's cross-cultural adjustment (Caligiuri et al., 1999; Kraimer et al., 2001) and PsyCap (Luthans et al., 2008b), there have been few researches attempted to explore the impact brought by PSS on cross-cultural adjustment and PsyCap simultaneously.

Practically, the implication would relate to the criteria in selecting workforce or expatriate for overseas assignment. In spite of CQ has been considered as an important antecedent of cultural adjustment, PsyCap would be more important and direct predictor concerning about cultural adjustment. In the respect, when selecting workforces for overseas assignment, organization should take individuals' PsyCap in to consideration in order to foresee the degree of their adjustment comfort that would result in the intercultural effectiveness. Luthans (2006) also stated that PsyCap can be developed by various means of channel, thus organizations were encouraged to invest on developing employees' PsyCap as a way to increase their degrees of adjustment. This study suggested a new approach for organization to take competitive challenges and obtain more business opportunities in the global market.

In addition, organization can increase individual's cultural adaptation by constructing supportive climate to enhance both individual PsyCap and adjustment

concurrently as well as developing their PsyCap to create competition advantages (Luthans et al., 2010; Luthans, Avey, Clapp, & Li, 2008) (Luthans, Avey, Avolio, & Peterson, Suzanne, 2010; Luthans, Avey, Clapp-Smith, & Li, 2008).

Limitations

Owing to data collection, measurement, and sample characteristics, some limitations need to be recognized in this study. First, the common source bias affects the result of this study since the data was collected from self-report questionnaire. To address this concern, the questionnaire was anonymous and the instrument was designed in a 5-point or 7-point scale. Furthermore, the Harman's one factor analysis was conducted as the post examination for the CMV (Podsakoff, et al., 2003) problem.

Secondly, because the time and resource limitation, purposeful sampling was adopted for data collection that may cause restriction to generalize the result. It is hard to generalize the conclusion to other foreign labors working in Taiwan. In this study, the target sample was a group of Philippine labors. Although the most population of foreign labors in Taiwan came from Indonesia, their working environment didn't fit the criteria of this study. According to the statistic number showed in Table 3.1, most Indonesia labors involved in the welfare industry such as housekeeping and nursing. In this kind of working environment, they did not have a direct supervisor and usually woke alone, thus, it was difficult for them to answer questions regarding to their perception of the supervisor. In addition, this was an academic research questionnaire, for those labors with lower educational degree, it was hard for them to interpret the meaning of the questions and most of the time they might lost passion while filling out the questionnaires. Therefore, other foreign labors who are legally allowed to work in Taiwan, such as Thai, Indonesia, and Vietnamese, are excluded in this study.

Finally, the industry will be constrained in technology manufacturing because

most technology manufacturing industry in Taiwan would prefer to employ the English speaker-Philippian labors, it is difficult to find Philippine labors working in other industries.

Further Research Suggestions

Based on the limitations of this study, there are some other suggestions being provided in this section for further researches. First of all, further study with a greater focus on PsyCap is suggested. Because the concept of PsyCap was new both in the psychology and human resource field, it was difficult to find abundant literatures and empirical studies to connect PsyCap with other variables. In this study, though the relationship among CQ, PsyCap, cross-cultural adjustment, and PSS had been built, there are still some other questions needed to be include while investigate the relationship among the four variables. For instance, PSS might play as a moderator on the relationship between CQ and PsyCap or on the relationship between CQ and cross-cultural adjustment.

Second, in the future investigations, it might possible to use a different mediator to test on the relationship between CQ and cross-culture adjustment. In this study, PsyCap serves as a partial mediator on the relationship between CQ and cross-cultural adjustment, thus, there is a possibility to find some other individual level factors that paly similar role as PsyCap to predict individuals' cultural adaptation in the foreign countries.

Third, PSS represented the effect of outside environment and it is recommend taking some other outside factors into consideration while investigating predictors and control factors to know individuals' cultural adaptation. Finally, one concern is about whether the finding of this research can be applied to other counties and different cultural characteristics since the data in this study were collected form Philippine labors working in Taiwan. This suggestion provided here is to collect data from other

foreign labors such as Vietnam, Thailand, or Indonesia to verify if the result will be different in other group of people from different cultures.

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