THE UNIVERSITY OF HONG KONG

THE RELATIONSHIP between ORGANIZATIONAL CULTURE, JOB BURNOUT AND JOB SATISFACTION of the HONG KONG CONSTRUCTION PROFESSIONALS

A DISSERTATION SUBMITTED TO

FACULTY OF ARCHITECTURE

IN CANDIDACY FOR

THE DEGREE OF

BACHELOR OF SCIENCE IN SURVEYING

DEPARTMENT OF REAL ESTATE AND CONSTRUCTION

BY

TSANG WING CHI

APRIL 2010

Declaration

I declare that this dissertation represents my own work, except where due acknowledgment is made, and that it has not been previously included in a thesis, dissertation or report submitted to this University or to any other institution for a degree, diploma or other qualification.

Signed: _____

Name: ___Tsang Wing Chi_____

Date: ____7-4-2010_____

Acknowledgements

I would like to express my gratitude to my supervisor, Professor Steve Rowlinson. He is always willing to spend his valuable time to give many meaningful and impressive opinions on my dissertation patiently. His continuous guidance inspires me exploring much more on the topic of my dissertation. Without his guidance, the dissertation would hardly be able to complete.

I would also like to express my numerous thankfulness to Dr. Yip, Brenda L. P. and Dr. Jia, Yunyan for their inspiration and valuable time for answering the questions and encouraging the progress of the dissertation. Their helpfulness smoothes the dissertation progress and assists me going through the difficulties throughout the whole years. Last but not least, I would show my greatest respect to my parents who always support me in all circumstances I am faced with.

Without any one of them, the dissertation could hardly be finished.

Abstract

There is limited research relate to the current phenomenon of organizational culture divergence, job burnout and job satisfaction precisely relate to the Hong Kong construction professionals. The relationships between organizational culture, job burnout and job satisfaction have been mentioned by different studies, but their relationships have not yet been statistically examined within the context of the Hong Kong construction professionals. This study is conducted so as to fill the gaps of existing research.

The quantitative questionnaire study is conducted for providing statistical data for examining the relationship between organizational culture divergence, job burnout and job satisfaction. The results of the questionnaire study are further explained by two qualitative follow-up interviews.

There are significant effects of some demographic variables, such as gender, on organizational culture divergence, job burnout and job satisfaction which indicate the reality that particular groups of respondents suffer from significantly higher level of organizational culture divergence, job burnout but lower level of job satisfaction.

The relationship between organizational culture divergence and job burnout and the relationship between organizational culture divergence and job satisfaction do not show the significant correlation as hypothesized. The significant negative relationship

between job satisfaction and the total job satisfaction is verified in the research findings. When these three concepts are further divided and the relationships of their elements are examined, several elements show significant correlations between them.

Contents

List of Figures

List of Tables

List of Appendices

List of Abbreviations

ANOVA	Analysis of Variance
GP	General Practice Survey
JDI	Job Descriptive Index
JDS	Job Diagnostic Survey
JSM	Job Strain Model
JSS	Job Satisfaction Survey
QS	Quantity Surveyor
MBI	Maslach Burnout Inventory
MBI-GS	Maslach Burnout Inventory – General Survey
MBI-ES	Maslach Burnout Inventory – Education Survey
MBI-HSS	Maslach Burnout Inventory – Human Services Survey
MPS	Motivating Potential Score
OCAI	Organizational Culture Assessment Instrument
OCB	Organizational Citizenship Behaviour
OCP	Organizational Culture Profile
POC	Profile of Organizational Characteristics
SPSS	Statistical Package for the Social Sciences
WFC	Work-Family Conflict
WLB	Work-Life Balance

Chapter 1 Introduction

1.1 Development of research rationale

The research is developed by conducting literature review about the organizational culture, job burnout and job satisfaction. The literature review provides an insight into the previous studies. It can help us understand the existing findings on these three concepts and identify any research gaps that can be fulfilled by this research.

Theoretical and empirical perspectives on organizational culture

There is still no comprised definition about organizational culture as different scholars have various opinions on this concept (E.g. Hofstede et al., 1990; Oney-Yazic et al, 2007; Beyler, et al., 1988; Chapin and Noel, 2000; Arogyaswamy and Beyles, 1987 and Shockley-Zalabak and Morley, 1989). Organizational culture differences exist in every organization because of the national differences, occupational differences and organizational characteristics (Tata and Prasad, 1998; Westwood, 1992; Hofstede, 2001, Moore, 2000, Kiefer et al, 2005 and Oney-Yazic et al., 2007).

Several organizational cultures are reviewed to understand the dimensions of organizational culture established by different previous studies. The complexity of organizational culture is revealed and contingency approach and best-fit approach can

be adopted for identifying the appropriate organizational culture (Arogyaswamy and Byles, 1987; Shockley-Zalabak and Morley, 1989 and O'Reilly et al., 1991).

Organizational culture can cause many effects to both individuals and organizations. For individuals, organizational culture can affect psychological condition, such as job burnout, job satisfaction and commitment (Larsson et al., 2007; Thomsen et al., 1999; Kleinman et al., 2002 and Lahiry, 1994). Organizational culture can also affect the performance of individual, such as productivity, which can be viewed as effects to organizations as a whole (Pugh, 1983). Organizational culture can also determine the success and survival ability of organizations (Ali, 2006; Oney-Yazic et al., 2007).

Theoretical and empirical perspectives on job burnout and job satisfaction

Similar to organizational culture, there are different versions of definitions about job burnout and job satisfaction. Abundant literature has suggested job burnout and job satisfaction are relevant concepts (Maslach, 1996; Franzcp, 2008 and Chan, 1995). They can be affected by organizational culture, working characteristics, contact and social factors, demographic factor and individual characteristics (E.g. Chiu, 2005; Nelson, 2005, Leiter and Mashlach, 1988; Wofford, 2003 and Rees, 1995). Several theories and instruments of job burnout and job satisfaction are reviewed so as to

understand these two concepts better.

Job burnout and job satisfaction can cause impact on both individuals and organizations. If individuals suffer from high burnout and low satisfaction, they would have negative attitudinal reactions, such as reduced commitment (E.g. Moore, 1997). High burnout and low job satisfaction of individuals can affect the whole organizations as they can act as mediator between variables of workplace and resultant outcomes (Huang and Chuang, 2003 and Moore, 2000). It shows that job burnout and job satisfaction affects organizations indirectly but significantly, such as organizational success and profit (Zhang and Liu, 2003).

Previous research related to the Hong Kong construction industry

Few researches relate to the organizational culture, job burnout and job satisfaction of the Hong Kong construction industry (Yip, 2007) as most research relate to other occupations and other locations (E.g. Kent, 1991 and Zhao et al., 1999).

The occupational characteristics explain the complexity of organizational culture in the construction industry (E.g. Nummelin et al., 2005). Previous studies have revealed the current phenomenon about the organizational culture within the construction industry. However, no conclusion about the best organizational culture has been made (E.g. Phua and Rowlinson, 2003 and Liu, et al., 2006). Instead,

contingency approach and the best-fit approach explain the complex reality of the Hong Kong construction organizational culture (Nummelin et al., 2005; Serpell and Rodriguez, 2002; Liu et al, 2006).

Previous studies on job burnout support the phenomenon of construction employees suffering from high burnout. They examine the effects of various individual and situational factors affecting job burnout and job satisfaction (E.g. Lingard, 2003 and Ruthankoon and Ogunlana, 2003). Several issues have been identified, such as gender difference, work-life balance and work-family conflict which relate to the job burnout and job satisfaction of the Hong Kong construction professionals (E.g. Lingard and Francis, 2004 and Turner, et al., 2009).

1.2 Research aims and objectives

This research aims to fill the existing research gaps. Due to the limited number of studies relate to the comprehensive picture about the relationship between organizational culture, job burnout and job satisfaction of the Hong Kong construction professionals. Therefore, this research aims to provide an insight about the current phenomenon of these concepts.

The previous studies establish the importance of using contingency approach in explaining organizational culture. Therefore, this research provides a breakthrough

from previous studies. It adopts the concept of best-fit organizational culture to focus on the organizational culture divergence of the existing organizational culture and the ideal organizational culture. Handy (1993)'s Organizational Culture Questionnaire is used as it can measure not only the dominant cultural type but also the perception divergence of organizational culture.

Mashlach Burnout Inventory – General Survey (Mashlach et al., 1996) and Job Satisfaction Survey (Spector, 1985) are choosen to measure the job burnout and job satisfaction of the Hong Kong construction professionals respectively. Mashlach Burnout Inventory has been well tested in the studies relate to the Hong Kong construction professionals (Yip, 2007) and the Hong Kong architectural students (Jia, 2009). Job Satisfaction Survey has also been tested in different samples involving large sample sizes and it is developed based on the previous instrument – Job Descriptive Index (JDI) and new elements are added into it to make the instrument become more comprehensive.

Analysis of Variance (ANOVA) and t-test are used to analyze any significant results of demographic variables on organizational culture divergence, job burnout and job satisfaction that should pay more attention to them. Correlation is used to analyze the relationship of organizational culture divergence and job burnout and the relationship of organizational culture divergence and job satisfaction. The relationship

of job burnout and job satisfaction is also to be examined in this research as there is limited research examining the relationship of job burnout and job satisfaction scientifically. Strategies are to be suggested to reduce organizational culture divergence, job burnout and increase job satisfaction.

1.3 Research strategy and methodology

In order to achieve the research aim mentioned above, this research adopts both quantitative and qualitative analyses to examine the relationship among organizational cultural divergence, job burnout and job satisfaction. The questionnaire survey is used for verifying the quantitative study and the quantitative study can be divided into Stage I and Stage II. The follow-up post survey interviewees are used as qualitative study.

Stage I – Pilot survey

Pilot survey is conducted in order to identify any problem exists in the questionnaire.

The comments from the pilot survey respondents are used for revising the questionnaire into a better one. The results from them are analyzed using correlation to provide a basic idea about the relationship between organization cultural

divergence, job burnout and job satisfaction.

Stage II – Main survey

After revising the questionnaire, construction professionals are invited to participate in the questionnaire survey. The questionnaires are sent to different companies and different types of construction professionals as they may have different levels of job burnout and job satisfaction.

The questionnaire consists of six parts and they are: 1. background, 2. organizational culture, 3. job burnout, 4. job satisfaction, 5. personal background and 6. comments and follow-ups. Respondents can write down their comments about the phenomenon and indicate whether they are willing to participate in the follow-up interviews in part 6. Statistical Package for the Social Sciences (SPSS) is used to examine the data collected from the main survey. The results are analyzed and they can be used in post survey interviewees.

Stage III – Post survey interviews

The results from the main survey are analyzed by SPSS. The major aim of post survey interviews is to confirm the results from the main survey by the interviewees. They can express their views on the questionnaire results, i.e. whether they agree to

the results or not. They can also share their opinions on current phenomenon of organizational cultural divergence, job burnout and job satisfaction of the Hong Kong construction professionals.

1.4 Expected outcomes and significance

It is expected that the findings will show that there is high level of organizational cultural divergence, high level of job burnout and low level of job satisfaction. The research is also expected to show the hypothesized relationships supported by the previous studies.

The findings are expected to have significant effects of demographic variables on organizational cultural divergence, job burnout and job satisfaction. The organizational cultural divergence will be significantly and positively correlated with job burnout while the organizational cultural divergence will be significantly and negatively correlated with job satisfaction. The job burnout will be significantly and negatively correlated with job satisfaction.

The research provides a systematic analysis about the relationship of organizational culture, job burnout and job satisfaction. By establishing these relationships firmly, it can raise the concern about the importance of organizational culture in the Hong Kong construction organizations.

In addition, it can encourage the construction professionals and policy makers to pay more attention on the job burnout and job satisfaction by revealing the current condition of job burnout and job satisfaction. Strategies are suggested to cast light on the problem of organizational cultural divergence, job burnout and job satisfaction.

This research can be a guideline for the policy makers of the construction organizations. Construction professionals and management level can also refer to this research for a better understanding of the current phenomenon, themselves, their colleagues and subordinates.

Chapter 2 Theoretical and Empirical Perspectives on Organizational Culture

Over many years, there is numerous research on topics of organization. Among all, organizational culture can be viewed as one of the most common topics. However, despite the great effort spent, there is still no consensus in the term ‘organizational culture’. ‘Organizational culture’ can simply be interpreted as the ‘culture’ in organizations but ‘culture’ is such a broad term that it has various definitions and it can be applied to different scenarios and environment (Ali, 2006). The following parts follow a surface to deep approach that definitions and of cultures and other relevant concepts are introduced first, then the concept of organizational culture is deeply explained, from the definition, causes and effects (significance) to various analyses and theories of it.

2.1 Definition of culture and organizational culture

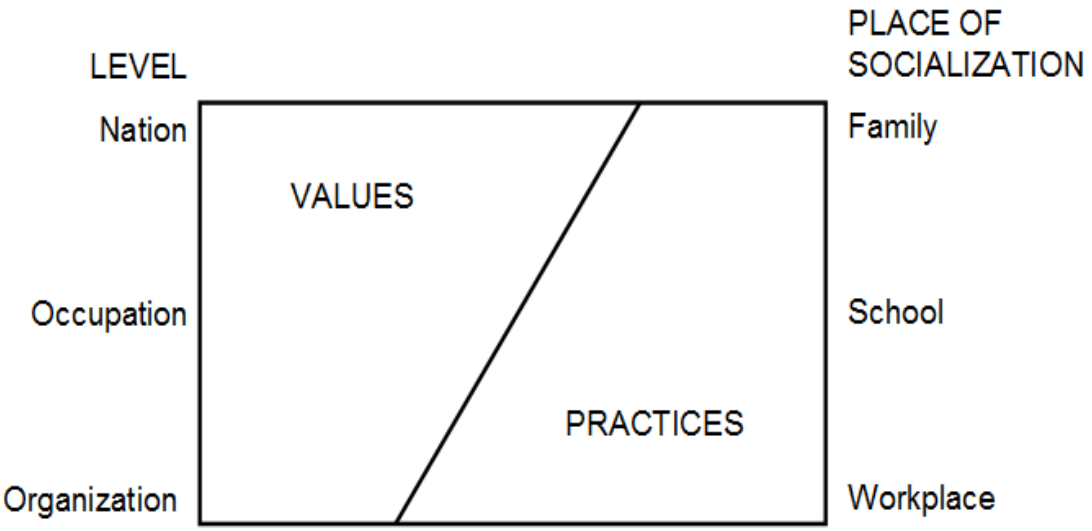


Figure 1 Cultural differences: national, occupational and organizational level (Hofstede et al., 1990, p 312)

Figure 1 shows the explanation from Hofstede et al (1990) about the whole picture about the progress of human acquiring values, different levels of values they acquire, namely nation, occupation and organization and the magnitude of how they apply those values and beliefs. The explanation of can be summarized as follows: During the youth, people acquire values of national level from their family but they seldom practice it. Then, they acquire occupational values from school and organizational values from workplace. Their application of their acquired values increases with their growth.

Oney-Yazic et al (2007, p 519) states that organizational culture "is the shared assumptions, beliefs and 'normal behaviors' (norms) present in organization".

Mckinnon et al (2003) summarizes the meaning of various definitions about organizational culture that they involve combinations of assumptions, values, norms, beliefs and ways of thinking and acting that are shared by organizational members. Ooi et al (2007, p 67) quoted Yusof and Ali (2000), 'organizational culture is not only able to determine behavior of the individual but also give significant contributions to organizations by influencing the feelings, reactions and interaction within the organization.'[1].

The characteristics of organizational culture are "holistic, historically determined, related to anthropological concepts, socially constructed, soft and difficult to change" (Hofstede et al, 1990, p 286). Oney-Yazic et al. (2007) suggest that there are two ways of linking culture and organization – on one hand, culture is treated as an independent variable affecting organizations; on the other hand, organizations can be viewed as culture producers.

Organizational culture, values and beliefs are relevant concepts (Oney-Yazic et al, 2007). Arogyaswamy and Byles (1987) distinguish between values and culture by reviewing various definitions established by scholars. For instance, they adopted the definition by Deal and Kennedy (1982) that "values are at the core of a culture and they can be classified as a rationalized normative system of preferences for certain

[1] Yusof and Ali, 2000, as quoted by Ooi et al., 2007, p 67.

courses of action or certain outcomes".[2] They also adopt Sathe's definition (1983) that culture is the important shared understandings of beliefs and values[3]. Shockley-Zalabak and Morley (1989) quote Hall's (1959) definition of culture as "communication and communication is culture".[4]

Some scholars have also suggested another concept called organizational ideology (Beyler, et al., 1988 and Chapin and Noel, 2000).They define ideology as ways or methods of understanding that are based on shared values and beliefs.

2.2 The Occurrence of Organizational Culture Differences

Every organization can be said to have different organizational cultures with others. From the literature, we can see that there are many factors affecting organizational culture that cause the cultural differences in organizations. In the following paragraphs, it illustrates the factors that contribute the formation of organizational culture and they can be classified into various levels or categories, ranging from macro to micro level.

2.2.1 National Cultural Differences

Tata and Prasad (1998) suggest that national culture or the shared values of a society or country influences organizational culture. This explains why organizational

[2] Deal and Kennedy, 1982, as quoted by Arogyasamy and Byles, 1987, p 648.
[3] Sathe, 1983, as quoted by Arogyasamy and Byles, 1987, p 648.
[4] Hall, 1959, as quoted by Shockley-Zalabak and Morley, 1989, p 483.

culture is so different within the same enterprise. They summarize the relationship of national culture and organizational culture as the following diagram:

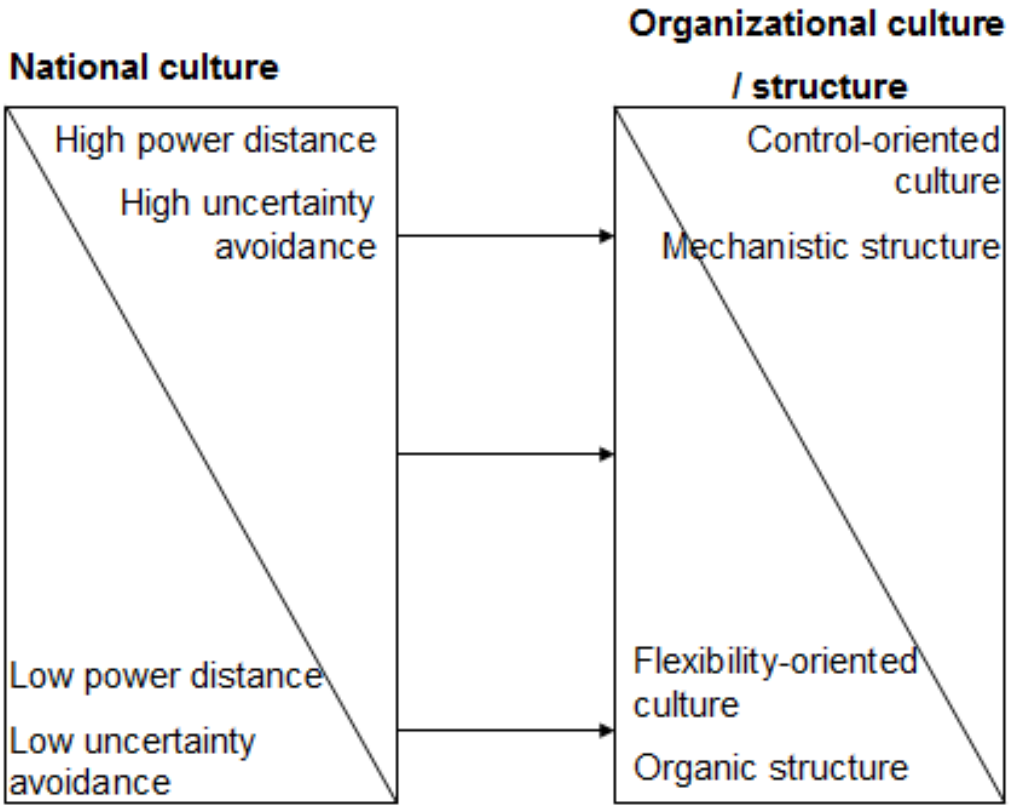


Figure 2 A model of relationships between national culture, organizational culture/structure (adopted from Tata and Prasad, 1998, p 708)

Figure 2 shows the organizational culture follows the trend of the national culture of a place. They explain that if the national culture of a place is high power distance and high uncertainty avoidance, the organizational culture of organizations within that place is generally control-oriented culture and mechanistic structure.

Westwood (1992) provides some interesting analysis about cultural differences in some transnational enterprises: the sub-organizations in various countries of one

transnational enterprise should implement very similar management style and working characteristics within the whole enterprises in various locations but different national cultural contexts turn the similar organizational cultures into different styles in practice (Westwood, 1992).

Hofstede (2001) establishes five national culture dimensions as follows:

1. Individualism-collectivism

People concern their own interest when individualism dominates. In contrast, people concern interest of the group as a whole when collectivism dominates.

2. Power distance

The distribution of the power of people represents the differences between people who have power and those without.

3. Uncertainty Avoidance

The way a society does to avoid uncertainty. Societies which are high uncertainty avoidance construct systems and structures to avoid risk and uncertainty.

4. Masculinity – Femininity

It can be interpreted apparently as the sex role within a society, i.e. what should men and women do. It also represents the characteristics or 'personality' of a society, such as a masculine society is more competitive in nature than a feminine society.

5. Long- Versus Short-term Orientation

This dimension is relatively new. It means the persistence and thrift to personal stability and respect for tradition.

Among the five dimensions of national culture, individualism-collectivism is even interpreted as the explanation of organizational culture in studies conducted by various scholars. The review about the investigation of individualism-collectivism of employees of different nationalities in construction organizations is explored in Chapter 4.

2.2.2 Occupational characteristics

It is found that different occupations have different working environment and characteristics which can form the specific culture for their own. We can try to apply the rationale of Figure 2 as each occupation has their own style; as a result, different occupational cultures are formed among different industries and this condition therefore affects the organizations within it. For instance, the culture between technology industry and health care sector can have a great difference as the two industries have various ways of business and operations. (Moore (2000) and Kiefer et al (2005)).

2.2.3 Organizational characteristics

Although every organization is under the influence of national culture in a macro way, it has own characteristics and management style and therefore its own type of

organizational culture (Tata and Prasad, 1998). Cultural differences at organizational level in terms of firm type, size, and age has been occurred in construction companies (Oney-Yazic et al., 2007).

2.3 Dimensions of organizational culture

Due to the importance of organizational culture to the whole organization, numerous investigations are conducted and many scholars have established organizational culture theories according to their research results in order that people can use them to classify and analyze their own organizational culture to understand their organizations better. The rationale of reviewing several theories about organizational culture is to identify the common important issues for paying special attention into them.

2.3.1 Manifestations of Culture

Hofstede et al (1990) illustrate how organization cultures manifest our own ideas. They classify manifestations of culture ranging from shallow to deep: Symbols are objects that carry a cultural meaning while heroes mean who are classified as the behavior model of culture. Rituals are collective activities that are socially essential. They can be subsumed as ‘practice’. The core of culture is values that cannot be felt but can be manifested in behavior.

2.3.2 Schein's (1985) model and Cultural Dynamic Model (Hatch, 1993)

Hatch (1993) explains the theory of Schein (1985) in his journal article. The theory of Schein consists of three components, namely artifacts, values and assumptions. These components can be ranged from surface to core. Assumptions represent basic human beliefs while values represent social goals and standard, such as ethnics. Artifacts are the visible results of activities grounded in values and assumptions.[5]

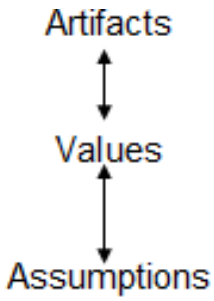
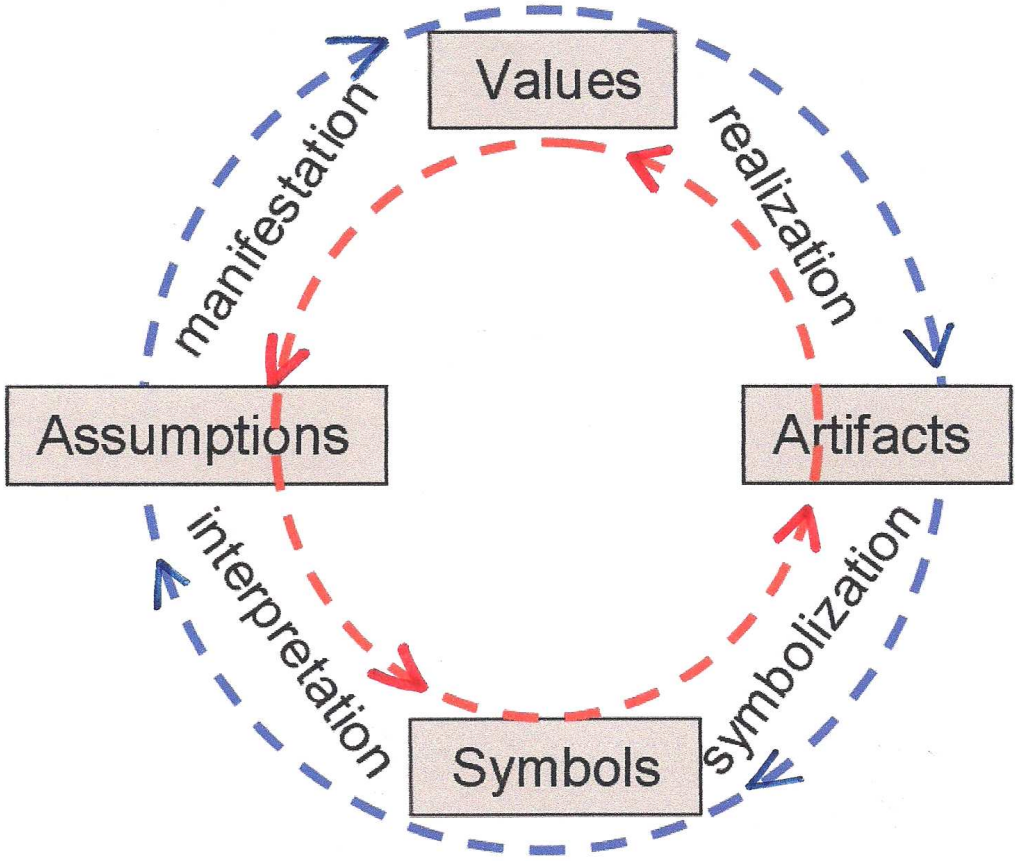


Figure 3 Schein's (1985) model (adopted from Hatch, 1993, p 659)

Hatch (1993) adds the forth component 'Symbols' into the model and he explains the relationships between those components. There are interactive processes between them which are supported by the concept called cultural dynamics which refers to the formation of cultures. The model is summarized as Figure 4.

[5] Schein, 1985, explained by Hatch, 1993 and further summarized by the author.



Note: Arrow in clockwise – proactive; Arrow in anti-clockwise – retroactive
Figure 4 The cultural dynamics model (Hatch, 1993, at p 660)

Figure 4 shows that there are proactive and retroactive flows between two components. Proactive manifestation translates assumptions into tangible values whereas retroactive manifestation maintains or alters existing assumptions. Realization brings the values into 'real'. Symbolization links artifacts with meanings whereas interpretation establishes the meaning of an experience. This model explains the complex 'interaction' between components.

2.3.3 Profile of Organizational Characteristics (POC) (1967)

Likert (1967) developed Profile of Organizational Characteristics (POC) to

measure what are the present characteristics of organizations and what is the ideal organizational culture. He introduced 4 systems of organization culture and 8 operating characteristics to investigate what are the productivity and labour relations under different systems. The model is summarized in Table 1.

Table 1 Abstract of organizational and performance characteristics measurement (summarizing the idea of Likert (1967))

Operating characteristics	System of organization			
	Authoritative ←			→ Participative
	Exploitive authoritative	Benevolent authoritative	Consultative	Participative group
	System 1	System 2	System 3	System 4
1. Leadership 2. Motivations 3. Communication 4. Interaction 5. Decision Making 6. Goal Setting 7. Control 8. Performance				
Total				

Vallen (1991) conducts a study relating to POC, explaining four systems and the probable outcomes of them:

System 1– adopts tighter hierarchical controls and pressure.

System 2 – weaker version of System 1, less control but still primarily downward communication with little employee input in decision-making, a fairly resistive

informal organization.

System 3 – weaker version of System 4 and employees can moderately take part in communication and decision making.

System 4 – the ideal scenario and they encourage the participation of employees in decision making.

He proposed that job satisfaction is negatively associated with System 1 and System 2 while positively associated with System 4 and System 3.

2.3.4 Organizational culture profile (OCP)

Organizational culture profile (OCP) is developed by Mckinnon, et al (2003) for measuring the divergence between desirable culture for employees and the existing organizational culture. The instrument comprises 54 values statement that form seven measurement dimensions: Respect for People, Team Orientation, Attention to Detail, Stability, Innovation, Outcome Orientation, and Aggressiveness. The divergence level is measured by asking individuals and managers (key informants of organizations) to range the statements into the required pattern from the least desirable to the most desirable: 2-4-6-9-12-9-6-4-2.

2.3.5 Competing Values approach

Quinn and Rohrbaugh (1983) introduce Competing Values Approach for evaluating the performance of organizations. The approach consists of 4 models,

namely Human Relations Model, Open System Model, Internal Process Model and Rational Goal Model. The means refer to the ways to achieve the particular culture whereas the ends refer to the outcome when the particular culture is achieved. The model is summarized in Figure 5:

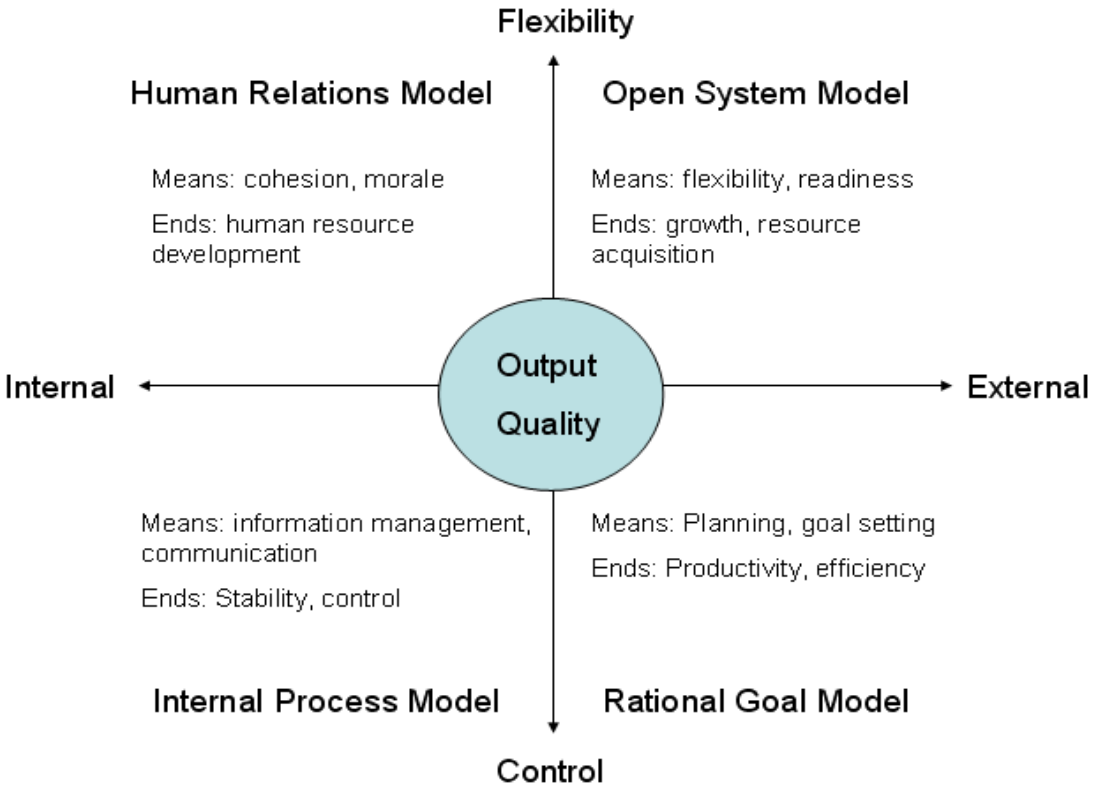


Figure 5 Competing Values Approach (Quinn and Rohrbaugh, 1983)

The four models comprise the overall framework for an effective organization that it needs to perform well on all four models although they may contradictory to each other. The ideal organization is to strike a balance (equilibrium) between the conflicting values according to its own nature, such as the control required in rational

goal model is contradicted to the flexibility required in open system model (Quinn and Rohrbaugh, 1983). This approach is commonly used to examine the organizational culture of construction organizations and please refer to Chapter 4 for further review of Competing Values Approach.

2.3.6 Organizational Culture theory

Harrison (1972) suggests that an organization's ideology affects the behavior and interest of its people and the way they cope with external environment. Harrison (1972) illustrates four orientations of organization ideologies, namely power, role, task and person as follows: People who have power can have absolute control over subordinates in power orientated organizations. Role orientated organizations aim to act rationally and orderly. Organizations focus on the achievement of a superordinate goal in task-orientated. Person orientation focuses on serving the needs of its members.

Handy (1993, 1995) conducted his studies following the theory established by Harrison (1972) to explain the organizational culture. The explanation of Handy (1993, 1995) is basically similar with Harrison (1972) but provides more detailed explanation and a representing figure illustrating each type of culture.

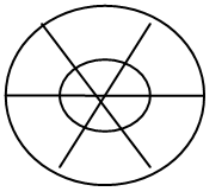


Figure 6a A web – power culture

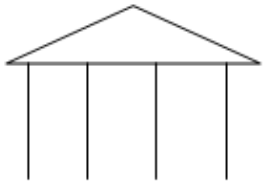


Figure 6b A Greek temple – role culture

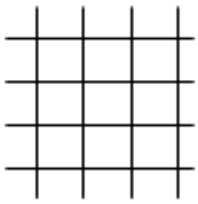


Figure 6c A net – task culture

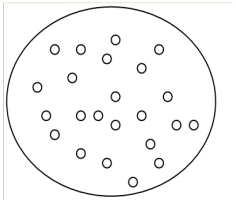


Figure 6d A cluster – person culture

Table 2 and 3 explains the interests of people and organization respectively and the capability to fulfill those interests by each ideological orientation, each type of orientation contribute to different level of various interests of people and interests of organizations as each orientation has different characteristics (Harrison, 1972).

Table 2 Interests of people under four orientations (summarized from Harrison, 1972, at 127)

People interest / Culture type	Security of economic, political and psychological aspect	Voluntary commitment to worthwhile goals	Own development and growth (independent from organization goals)
Power	Low	Low	Low
Role	High	Low	Low
Task	Moderate	High	Low
Person	High	High	High

Table 3 Interests of the organization under four orientations (Harrison, 1972 p 127)

Organization / Interest / Culture type	Effectiveness of dealing with dangerous environments	Effectiveness of dealing with environmental complexity and change	Internal team integration and coordination of effort than individual needs
Power	High	Moderate to low	High
Role	Moderate to low	Low	High
Task	Moderate to high	High	Moderate
Person	Low	High	Low

Conflict appears where there is divergence between the interest of people and the interest of an organization. Therefore, striking a balance between interests of organization and interests of people is essential to reduce the conflict occur in organizations (Harrison, 1972 at p 127). Handy (1995) suggests that more than one type of culture can exist at the same time, i.e. mixture of culture types.

2.3.7 Summary of organizational culture dimensions

From the above theories, we can classify them as inductive theory. Inductive theory is the opposite approach from the deductive one. The difference between them is that inductive starts from observing from the real world first, then generalizing the pattern and finally categorizing into the theory while deductive starts from establishing the theory first, then applying it into the real world (Burney, 2008). Those culture theories can provide a general approach for people understanding their organizational culture.

Scholars have developed various organizational culture theoretical models, which can be roughly classified into two types. One type is to establish the

relationship between relevant concepts of organization. The other one is to provide classifications of culture types.

2.4 Organizational culture: best-fit approach

Although many studies have been conducted, it only can be certain that each organization has its own organizational culture and each type of organizational culture have specific focus, such as power or task. No best organizational culture can be found out for organizations as the suitability of organizational culture is determined by various factors such as occupational characteristics (Arogyaswamy and Byles, 1987). Therefore, they illustrate the concept of best-fit with contingency driven.

As shown in the Figure 7, Arogyaswamy and Byles (1987) suggest that the organizational culture needs to be both internal fit (cohesion and consistency) and external fit over different time and circumstances in order to be appropriate to organizations.

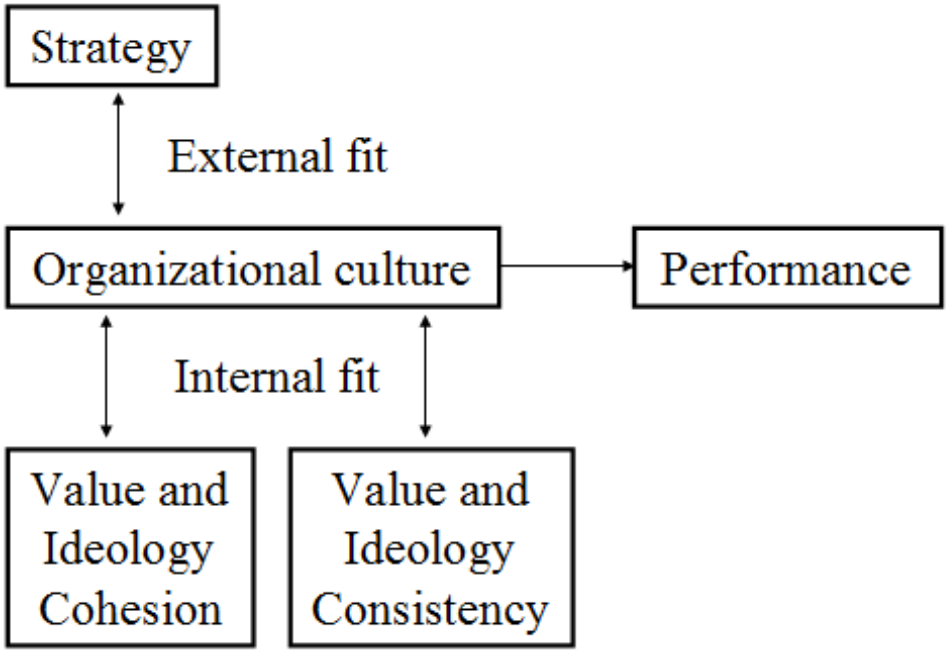


Figure 7 External fit, internal fit, and performance (Arogyaswamy and Byles, 1987 at p 653)

Shockley-Zalabak and Morley (1989) analyze the interaction between individual values and organizational culture. Those relationships can be summarized as below: Firstly, each employee has his own values and beliefs of his job and organization. Secondly, both thematic rules and communication activities are determined by organizational culture to a certain extent. Individual values and organizational culture work together to produce organizational outcomes (Figure 8).

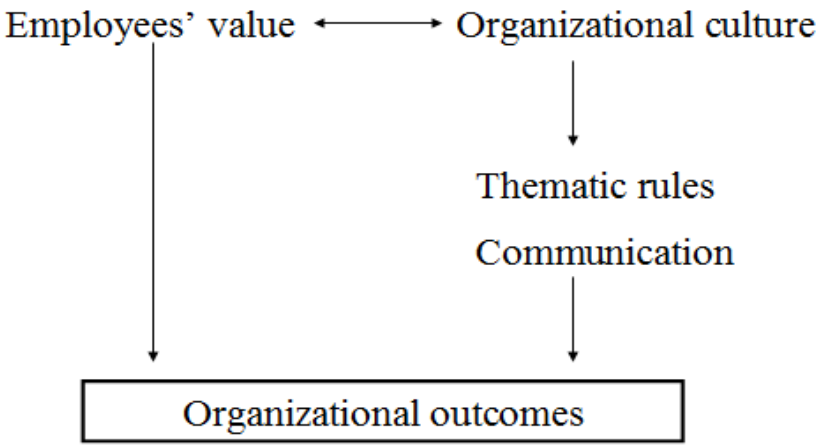


Figure 8 Interactions of individual value and organizational culture
(summarizing the model conclusion of Shockley-Zalabak and Morley (1989))

Arogyaswamy and Byles (1987) suggest that in addition to the organization-environment fit in terms of culture, the fit of culture between the individual and the organization is also important. This explains the phenomenon that certain organizational culture is suitable for some employees while not suitable for others.

O' Reilly et al (1991) classify 'fit' into two main categories, namely person-situation fit and person-culture fit. Person-situation fit means the magnitude of how individuals fit their own job characteristics and job requirement. They suggest that person-culture fit is more relevant to organizational culture as it explores the relationship between the relationship between each employee and the magnitude of individuals fitting into the culture of organizations they belong to.

The divergence between an individual's and organization's values may be at the crux of person-culture fit as each person has his/her own values or perception of their

organizations which are different from other employees and the organizations (O' Reilly et al., 1991). O' Reilly et al (1991) also adopt the view of Lofquist and Dawis (1969): 'satisfaction results from a harmonious relationship between the individual and his environment'.[6]

2.5 Effects of Organizational Culture

Organizational outcomes cannot be ignored as they consist of various aspects. Mckinnon et al (2003) suggests that organizational culture has the potential to affect a range of organizationally and individually desired outcomes.

Organizational outcomes become most negative when there is high divergence between individual values and organizational culture and the communication activities are poor in performance Handy (1995). He suggests that a perfect match between an individual's preferences and his organization's cultures would suggest a perfectly fitting psychological contract.

2.5.1 Effects of Organizational Culture to individuals

Organizational culture can cause both positive and negative impact on different level of employees working in organizations. The impact of organizational culture on employee is great as they spend a lot of time in organizations every day.

[6] Lofquist and Dawis, 1969, referred by O' Reilly, Chatman and Caldwell , 1991, p 489.

On one hand, organizational culture can contribute in several ways to higher performance, such as greater motivation, more positive views of the organization, and higher retention (Larsson et al., 2007). Organizational culture can associate with greater job satisfaction if there is enough support for work-related problems, a positive view of leadership and having a sense of participation in the organization (Thomsen et al., 1999). On the other hand, it may cause increased role, stress, job burnout, loss of commitment to the organization, intention to leave and diminished job satisfaction (Kleinman et al., 2002).

Lahiry (1994) explains the building of commitment through organizational culture as defines organizational commitment as the psychological strength of employees to attach to organizations and subdivides into affective, continuance and normative commitment. Generally speaking, higher commitment, better performance they achieve; however, if employees have high continuance commitment that the cost of leaving is high; so they are 'forced' to remain, they have poor performance (Lahiry, 1994).

Table 4 Components of commitment (summarized from Lahiry, 1994)

Component	Definition
Affective	Emotional attachment of employees to their organizations
Continuance	Costs for employees to leave the organization
Normative	Feelings of obligation for employees to stay at their organizations

2.5.2 Effects of Organizational Culture to organizations

Oney-Yazic et al (2007) quote the explanation of Schein (1992) that "Organizational culture is extreme important for understanding how to run and improve organizations" [7] More importantly, it has a powerful effect on the performance and long-term effectiveness of organizations. Ali (2006) suggests that organizational culture determines the ability of organizations surviving in and adapting to the external environment.

Mckinnon et al (2003) express that organizational culture can not only affect individual outcomes but also organizational outcomes. About the organizational outcomes, they can be divided into various aspects. From the earlier theories of management and organization, the focus is productivity and performance; so companies always put first priority on these outcomes as they are essential to the profit and growth of organizations (Pugh, 1983)

In recent years, there are increasing discussions about another aspect – people (employees) in organizations. The reason is that organizational culture that causes impacts to individuals can be linked to the impacts to the whole organization. For example, the increased intention to leave for employees will inevitably increase the training cost for training new joining staff (Kleinman et al., 2002).

[7] Schein, 1992, quoted by Ela el at, 2007, p 519.

Tata and Prasad (1998) explain connections between national culture, organizational culture and the success of Total Quality Management implementation. Their result shows that organic structures and flexibility-oriented cultures are more conducive to the success of the implementation when compared to control-oriented cultures and mechanistic structures.

Therefore, it shows that there is complicated interaction between the effects on individual and on organizations that the culture can have direct effects on individuals (e.g. commitment) causing indirect effects on organizations, such as higher turnover rate while the culture can also have direct effects on organizations' success, such as productivity as a whole.

2.6 Summary of Chapter 2

This chapter critically reviewed the theoretical and empirical findings about organizational culture. From the review, the definition of organizational culture is deeply investigated. Different types of organizational culture theories are reviewed and the critical issues can be discovered is that there is no best approach for any one of the organizations and the success depends on person-culture-fit. The significance of organizational culture to both organizational level and individual level are investigated. By understanding the relevant concepts of organizational culture, it helps establish the hypotheses for the research – the relationship between organizational culture, job burnout and job satisfaction.

Chapter 3 Theoretical and Empirical Perspectives on Job Burnout and Job Satisfaction

From the discovered outcomes of organizational culture, we can see that it actually affects the hard side and soft side of organizations. For example, the hard side of outcomes includes productivity and profit while the soft side of outcomes means the psychological effects to individuals.

For instance, job burnout, and job satisfaction address to psychological aspect. It seems that psychological health conditions of employees only causes direct impact on individual employees but not on organizations. However, many scholars have revealed the significance impacts of psychological health conditions of employees on organizations. Therefore, there are increasing discussions about psychological health of employees in organizations.

In the followings, the theoretical frameworks about job burnout and job satisfaction are explored. The rationale of explaining job burnout and job satisfaction within the same chapter is that many scholars have established their views that both of them are relevant concepts and they normally discuss these concepts together; so it is much ideal and effective to explain them for comparison and understanding

3.1 Definition of Job Burnout

Among the topics of psychological health of employees, many scholars have investigated job burnout and job satisfaction and their impacts on both individuals and organizations. In order to investigate the job burnout, the definition of it should be well understood first.

Job burnout is negative mental feelings to the job, such as boredom, and physical exhaustion generating helplessness (Poe and Scheer, 1981 and Sloan, 1982). Franzcp (2008) explains the relationship between them by referring to the studies of Farber (1983): 'Burnout is the consequence of being stressed at work over a protracted period'.[8] Cordes and Dougherty (1993) have similar definition about job burnout and job stress that job burnout is a unique type of stress syndrome. There is a cause and effect relationship between stress and job burnout.

The well-recognized definition of job burnout comes from Maslach et al (2001, p 416) explain burnout as engagement erosion: "important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless, energy turns into exhaustion, involvement turns into cynicism, and efficacy turns into ineffectiveness".

Maslach et al (1996) also establishes the relationship between exhaustion, cynicism and professional efficacy. Exhaustion are suggested to be positively related

[8] Farber , 1983, quoted by Franzcp, 2008, p 17.

with each other and job burnout while professional efficacy should be negatively related with exhaustion, cynicism and job burnout, i.e. when there are higher scores for questions relating to professional efficacy, the job burnout level should be lower.

Likert and Maslach (1988, at p 306) provide a comprehensive analysis about the three stages of burnout: “high levels of exhaustion cause depersonalization; if depersonalization continues, the feelings of accomplishment would then be reduced.”

Although there are various definitions about job burnout, they provide similar explanation that job burnout can be generalized as the negetative emotional responses to the job.

3.2 Definition of job satisfaction

When compared to job burnout, job satisfaction, however, has much complex relationship with its causes and effects.

Job satisfaction is usually considered to be an attitude and it is based partially on what one feels and partially on what one thinks (Wright and Cropanzano, 1996).

On the meanwhile, Cranny et al (1992) defines job satisfaction as an affective reaction to the comparison between desired outcomes and actual outcomes of the job. Maslach et al (2001) suggest that job satisfaction can be viewed as the feeling of fulfillment from the job.

Herzberg et al (1959) developed the theory of high-order needs and lower-order

needs – motivation and hygiene factors (intrinsic and extrinsic satisfiers): Hygiene factors consist of company policy, supervision, and relationship with supervisors, work conditions, relationship with peers, salary, personal life, relationship with subordinates, status, and job security whilst motivation factors consist of achievement recognition, work itself, responsibility, advancement, and possibility of growth; Hygiene factors can be viewed as 'basic' factors to each employee. They do not contribute to job satisfaction but contribute to job dissatisfaction without it and motivation factors are rightly opposite to the hygiene factors that they only contribute to job satisfaction and do not contribute to job dissatisfaction without it.

The major rationale of this theory is that extrinsic satisfiers do not necessarily lead to job satisfaction as intrinsic satisfiers are required altogether, but absence of them can lead to job dissatisfaction (Herzberg et al., 1959).

Several scholars (e.g. Ruthankoon and Ogunlana, 2003 and Sachau, 2007, etc.) try to find out whether Herzberg's theory is applicable in organizations of various industries nowadays. Ruthankoon and Ogunlana (2003) investigate the applicability of the two-factor theory on Thai constriction industry and his results show that the theory is not entirely applicable in the Thai construction industry that some factors are bi-polar factor can affect both job satisfaction and job dissatisfaction. Please refer to Chapter 4 for the comparison of the two-factor theory and the findings of Ruthankoon

and Ogunlana (2003).

From the various definitions mentioned above, the job satisfaction can be viewed as a positive emotional response of employees to their work.

3.3 The relationship between job burnout and job satisfaction

Job satisfaction can be generally defined as the degree to which individuals have a positive emotional response towards employment in an organization while job burnout can be viewed as negetative emotional response. As a result, this raises a problem to many scholars: what is the actual relationship between job burnout and job satisfaction. There are very few studies that examine and link these two concepts together. Most of them focus on either one.

There are mainly two types of theories that are related to the cause-and-effect relationship between job burnout and job satisfaction - one theory suggests that job stress affects job satisfaction while another theory is exactly opposite: job satisfaction affects job stress. Although the cause-and-effect relationship has not formally been examined, the negative relationships between job burnout and job satisfaction are supported by many scholars, i.e. when job burnout is increased, then job satisfaction is decreased.

Burnout is the syndrome of job stress and it can not only have physiological or

behavioral effects on people, but also decreases job satisfaction (Maslach et al, 1996). Franzcp (2008) also tries to clarify the key concepts about job satisfaction, job stress and job burnout: Dissatisfaction of work is likely to increase job stress and cumulative exposure to work stress causes burnout. However, it is difficult to determine the causality direction between job satisfaction and burnout: whether people score low job satisfaction scores because of burnout or they have high burnout because of low job satisfaction (Franzcp, 2008).

Although the literature review above shows mostly adverse effects of stress and job burnout to organizational outcomes for both individual employees and organizations, the positive effects of stress on job satisfaction and job performance cannot be ignored. Chan (1995) adopts the study of Rees (1989) suggesting that 'stress, if at suitable magnitude, can enhance job performance and job satisfaction'.[9]

Figure 9 shows that job satisfaction and job performance stays at low level when the stress suffered is low. The job satisfaction and job performance increases to a certain level when more stress is suffered. However, the job satisfaction and job performance declines when stress continues to arise and becomes distress. This proves that stress can have positive effects and the crux of job stress is its magnitude to become 'suitable'.

[9] Rees, 1989, quoted by Chan, 1995, p 6.

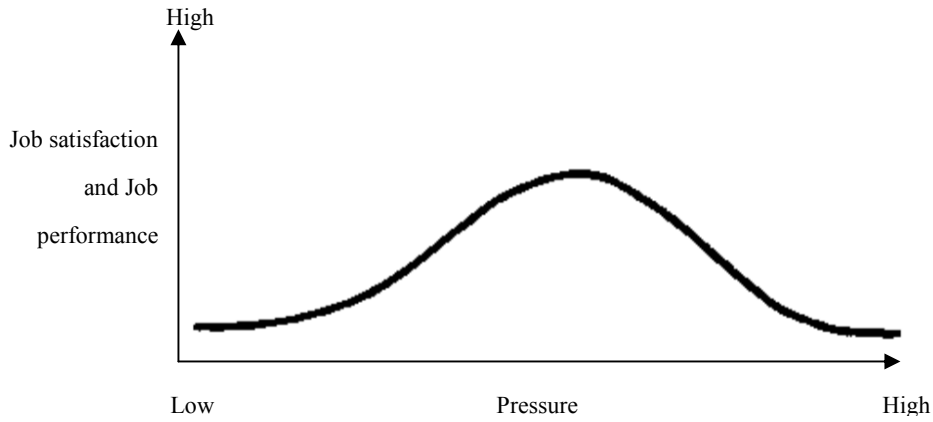


Figure 9 The relationship between pressure, job satisfaction and performance (Rees, 1989, quoted by Chan, 1995, p 7)

3.4 Factors affecting job burnout and job satisfaction

Previous research suggests that many factors contribute to the magnitude difference of the impacts of job burnout and job satisfaction on employees. Those factors can either moderate or enhance the experience of stress, such as personality, socio-demographic factors and coping strategies that the employees adopt (Rees, 1995). Maslach (2003) suggests that burnout is affected by both the factors relating to person and work environment; so researches should ignore neither one of it in order to understand the comprehensive picture about job burnout.

From the above sections, it proves that job burnout and job satisfaction are relevant concepts; so we cannot totally differentiate the factors affecting job burnout and those affecting job satisfaction. Therefore, the following paragraphs in this

section explain those relevant factors for both job burnout and job satisfaction.

3.4.1 Organizational culture

The explanation in section 2.5.1.about the effects of organizational culture to individuals can be used to illustrate why organizational culture is one of the major factors that affects job burnout and job satisfaction of employees working in organizations.

Among various aspects of organizational culture, goal setting, work motivation, team building and organizational commitment of organizations affect the job performance (Chiu, 2005). High job performance includes increased employees' satisfaction, team effectiveness and productivity (Chiu, 2005). The research of Crosbie (2007) suggests that leadership, role autonomy and participation in decision making have impacts on the job effectiveness and satisfaction of employees (level of staff(s) happiness).

It is difficult to determine which type of organizational culture causes the greatest job satisfaction. Therefore, contingency approach should be adopted when analyzing its fitness to organizations as a whole and individuals working in them. Therefore, the key of maintaining job burnout and job satisfaction at satisfactory level is to handle the conflict and strike a balance of organizational culture.

3.4.2 Working characteristics

Nelson (2005) suggests that workplace dimensions such as workload, control and reward and recognition, constituting the psycho-social workplace environment that is able of achievement the highest job engagement.

Anderson (2001) suggests that management can affect workplace stress depending on its ability to conduct proper job design, ongoing communication and team building while Heyer (1982) investigates the job burnout of data processing personnel and found that they experience less job burnout and greater job satisfaction when the manager allows a flexible and unstructured work schedule.

3.4.3 Contact and social factors

As mentioned in section 3.4.2, ongoing communication can relieve job burnout and improve job satisfaction. Mentoring, peer relationship and team participation are found to be significantly correlated with attitudinal outcomes, such as role stress, job burnout and job satisfaction, organizational commitment, turnover intention and teamwork orientation (Lankau, 1996).

Ford (1985) suggests that structural, informational and emotional support from managers and supervisors can have positive effects on job satisfaction. Among them, emotional support is the most effective in improving work outcomes. Insufficient

support leads to role stress or job stress, which cause frustration and job burnout among employees.

(a) Social contacts

The findings of Leiter (1988) suggest the importance of social contacts as the factor affecting both job burnout and job satisfaction. Social contacts can be divided into work-oriented interactions and informal contacts. Both types of contacts have a positive effect on job satisfaction, but they are differently correlated with job burnout. Formal contact is related to increasing personal accomplishment (lower level of job burnout) but also increasing emotional exhaustion. Informal contact is positively correlated with personal accomplishment only (Leiter, 1988). Depersonalization can be reduced by informal contact. The relationship of depersonalization with job satisfaction is indirect: "Unsatisfied workers would depersonalize only if they were exhausted". (Leiter, 1988, p 116).

Figure 10 shows the findings about the relationship of social contacts, job burnout and job satisfaction.

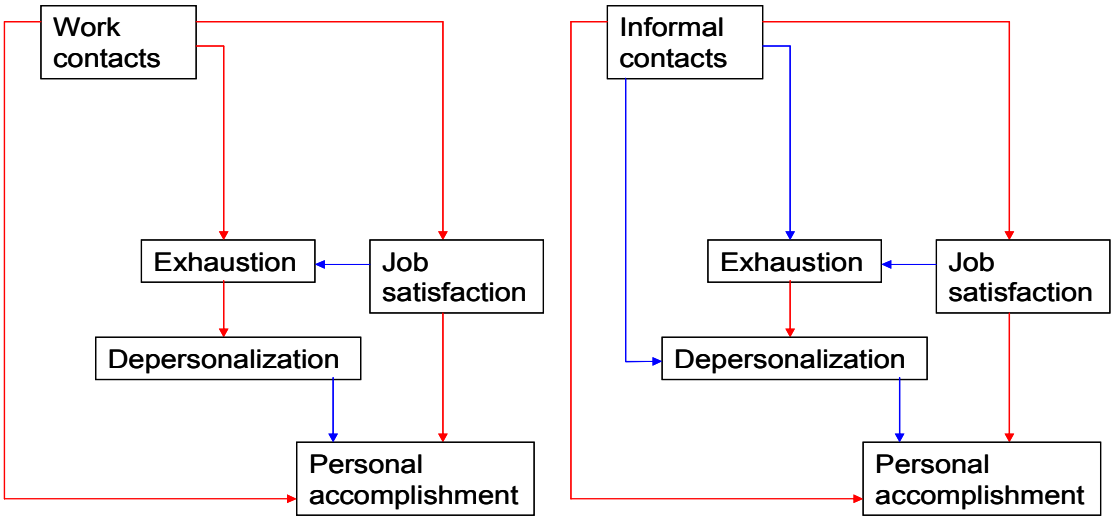


Figure 10 The relationship between communication, job burnout and job satisfaction (Leiter, 1998, p 116) Note: Arrow in red: positive relationship; arrow in blue: negative relationship

Leiter and Maslach (1988) investigate the relationship of supervisor contacts and coworker contact with job burnout and find that exhaustion is more related to role conflict and unpleasant supervisor contacts while decreasing depersonalization and increasing personal accomplishment are related to pleasant coworker contacts. Unpleasant supervisor contacts are associated with unclear job instructions to employees and too high job demand (role conflict).

(b) Social support

Baruch-Feldman and Schwartz (2002) conduct a study about the relationship between social support, burnout, job satisfaction and productivity. They classify social support into three major types, namely family support, coworker support, and immediate supervisor and unit supervisor. The latter two can be viewed as factors

relevant to organizational behavior while family support is a concept that relates to individual work/family conflict.

They find that family support has a stronger association with was more closely associated with burnout than coworker and supervisor support do, whereas supervisor support was related to satisfaction and productivity in a sample from education sector. The overall result provides the evidence that social support has negative relationship with job burnout and positive relationship with job satisfaction and productivity.

3.4.4 Demographic factor

Wofford (2003) found that demographic factors are related to the magnitude of job satisfaction of employees in construction organizations, such as age, gender, tenure and job position. The relationship of age and job position with job satisfaction can be shown in Figure 11:

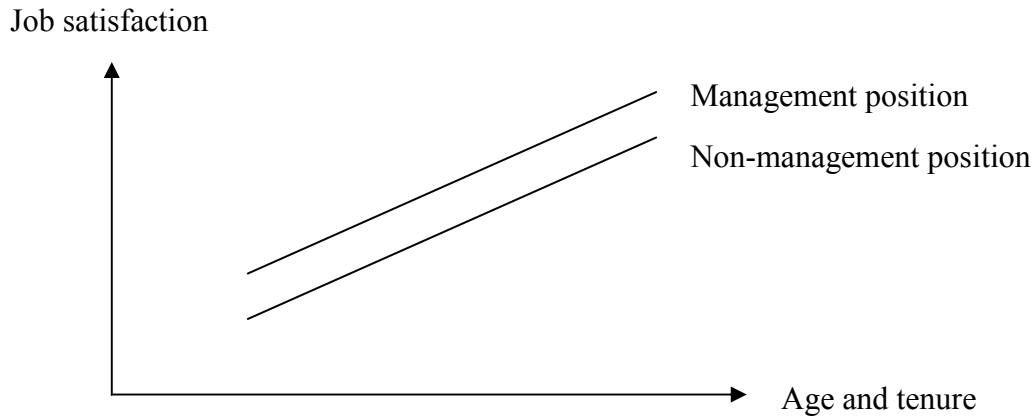


Figure 11 Comparison of job satisfaction of employees in different position (Wofford, 2003)

Wofford (2003) also suggests that gender does not cause significance effect on job

satisfaction. Similarly, Koehn and Pratt (1985) have found significant differences between the perceptions of middle and upper management as they have different perceptions about their work.

Another piece of research conducted by Aziz and Cunningham (2009) supports the findings of Wofford (2003) that gender does not mediate the relationship between workholism (addiction to work) with work stress and work-life imbalance. The result implies that traditional role difference between men and women may not explain the work stress and work-life imbalance in modern society since women may become more career-oriented while men may become more family-oriented.

On the contrary, gender is found to be a factor associated with job burnout by other studies. Greenglass (1991) suggests that work is the sole source of job burnout for male while work-family conflict is the sources affecting job burnout for female. Female, has higher emotional exhaustion but lower depersonalization than male, having "greater interpersonal skills and social competence." (Greenglass, 1991, p 570). The association between gender and job burnout, between gender and job satisfaction is a controversial topic in the population of the construction industry. This will be discussed in more detail in Chapter 4.

Zhou (2005) suggests that motivation, work experience and education affect the performance of construction management professionals. Schaeffer (1982) suggest that

the length of employees working for organizations can affect the level of burnout as an employee suffers from great burnout if he / she has been working the same job for 3 to 5 years, has heavy workloads and deadlines and need to be competitive and aggressive. This can be explained as employees are bored by the working environment, co-workers and job tasks that they are repeatedly faced with every day.

3.4.5 Individual characteristics

Job burnout is also affected by individual difference, such as having different emotional feelings and psychological condition; so that individuals they suffer from various level of "burnout" even they are at the same position within an organization. Individual characteristics include (1) self-esteem, (2) locus of control, (3) communal orientation and (4) negative affectivity (Caudill, 1996). Caudill (1996) suggests that negative affectivity was the strongest personality predictor of emotional exhaustion and depersonalization while communal orientation was the strongest personality predictor of personal accomplishment.

Rees (1995) suggests that stress is moderated or enhanced by individual characteristics of personality. Personality includes perceived locus of control and type A behavior pattern. Employees who perceive they have control over a situation can withstand the effects of stress better that those who believe that they have little control. Employees who have Type A characteristics (competitive, ambitious, excessively

time-conscious) will suffer from higher job stress as they have more pessimistic attitude.

3.5 Theories and instruments about job burnout

Previous research of job burnout and job satisfaction is mainly conducted in the health service and educational sector (E.g. Rees, 1995; Maslach et al, 1996). Rees (1995) suggests that health professional face on occupational stressor which is caused by the special characteristics of the industries itself and is not part of most other professions. Therefore, the researches may not totally be applicable in the Hong Kong construction industry.

Maslach et al (1996) based on her research findings and developed Maslach Job Burnout Inventory (MBI). The original MBI consists of 22 items: Emotional Exhaustion (9 items), Depersonalization (5 items) and Personal Accomplishment (8 items). In order that burnout of employees in organizations from different occupations can be measured in a reliable and valid fashion, there are three versions of the instrument, namely MBI-HSS, MBI-ES and MEI-GS and the original MBI belongs to MBI-HSS as the initial propose of MBI is to identify the job burnout of employees in health services sector. MBI-ES is developed specifically for education sector while MBI-GS is developed generally for normal sector and industries that are not so clearly

people-oriented (Maslach et al, 1996, 1997, 2001).

The rationale for them is basically the same despite few variations of the measurement dimensions of job burnout. The comparison of MBI-HSS and MBI-GS is shown as follows:

Table 5 Comparison of the components forming MBI-HSS and MBI-GS

Component	Definition (Maslach et al, 1996; Maslach et al, 1997)
● Emotional Exhaustion (MBI-HSS)	Feeling emotionally drained by one's contact with other people
● Emotional Exhaustion (MBI-GS)	Refers to both emotional and physical fatigue and it is generic, without the MBI-HSS's emphasis on emotions and direct reference to clients
● Depersonalization (MBI-HSS)	Negative feelings and cynical attitudes toward the recipients of one's service or care
● Cynicism (MBI-GS)	Indifference or a distant attitude toward work
● Personal Accomplishment (MBI-HSS)	A tendency to evaluate negatively one's own work
● Professional Efficacy (MBI-GS)	Social and nonsocial aspects of occupational accomplishments (an individual's expectations of continued effectiveness at work)

Despite the fact the MBI is almost the most well known instrument of measuring job burnout, Schaufeli and Salanova (2007) conduct a research showing that the third element of Maslach Burnout Inventory General Survey – professional efficacy should be changed into professional inefficacy with a view to increasing the correlation with the other two components, namely exhaustion and cynicism.

3.6 Theories and instruments about job satisfaction

3.6.1 Theories of job satisfaction

There are several theories explain the whole picture of the concept of job satisfaction. The job satisfaction theory developed by Herzberg et al (1959) is mentioned in Section 3.2. It introduces the motivation factors which cause job satisfaction and hygiene factors which cause job dissatisfaction.

Hackman and Oldham (1975) developed Job Characteristics Model for explaining the whole process of how the job dimensions affect critical psychological states and finally cause impact on personal and work outcomes, such as job satisfaction. Figure 12 shows the flow of the model.

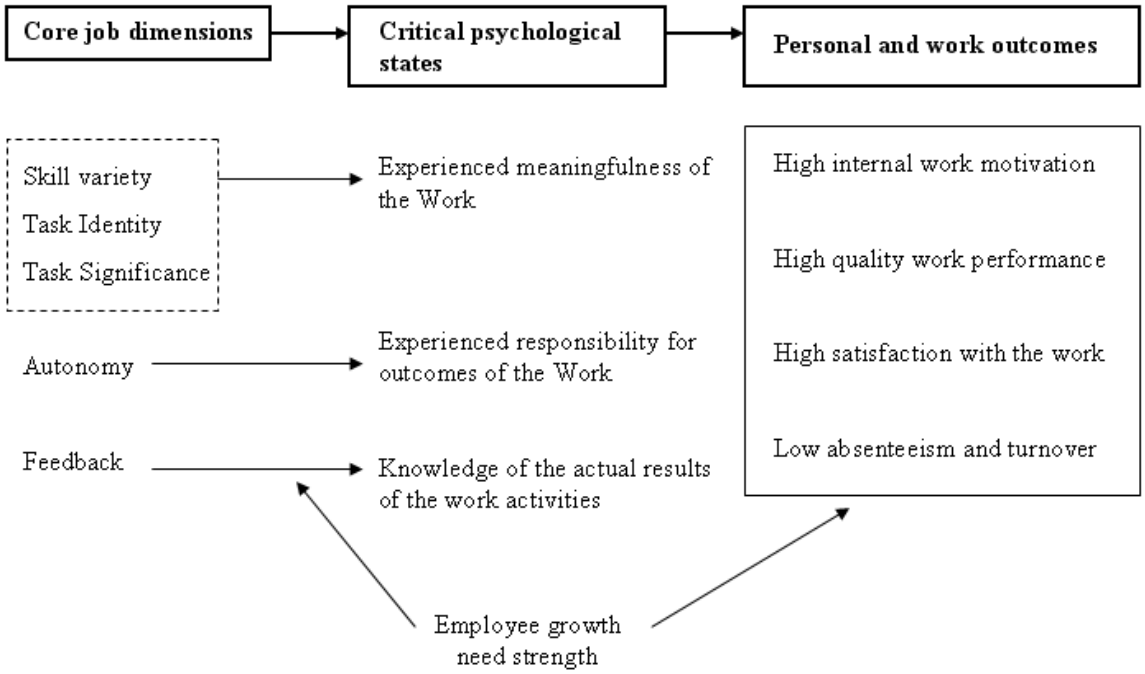


Figure 12 Job Characteristics Model (Hackman and Oldham, 1975 at p 161)

3.6.2 Instruments of job satisfaction

There is no major dominate instrument for job satisfaction as scholars employ different instruments. Over many years, scholars argue on whether we should use single-item or multi-item for measuring job satisfaction is better. Dunham et al (1977) quote the statement of Smith et al (1969) about what good measures of job satisfaction that the measures should be able to identify various aspects of satisfaction, be applied into different situation and compared with relevant measures and short, understandable, efficient for administration that saves the cost and time[10].

(1) Single-dimensional approach

Kiefer et al (2005) suggest that single item measurement can be used for measuring job satisfaction of employees as they believe that job satisfaction is a general, overall emotional response to a person's current work situation, so the job satisfaction can be measured by asking respondents point out their job satisfaction level (from no job satisfaction at all to the greatest job satisfaction).

Nagy (2002) compares the results of using a single-item approach with multi-item approach. The multiple-item questions in a facet scale contain several 'sub-facets'; so the results come from the sum up of the sub-facets. He uses Job Descriptive Index (JDI) as the comparable of the research. His investigation provides

[10] Smith et al , 1969, quoted by Dunham et al, 1977, p 421, summarized by the author.

evidence for the viability of adapting the single-item approach to the measurement of facet satisfaction showing that the single-item facet measure was significantly correlated with each of the JDI facets (correlation ranges from .60 to .72). Therefore, it approves that it is sufficient to know the level of job satisfaction of employees by asking them about how satisfied you are. The advantages of using a single-item approach include the time and resource required and contain more face validity.

(2) Multi-dimensional approach

Other scholars have developed several theories about the components of working characteristics and other conditions that affect the level of job satisfaction of employees. They believe that by including the possible dimensions about job satisfaction, the measurement of job satisfaction can understand not only the overall job satisfaction of employees, but also any particular aspects that contribute to good / poor level of job satisfaction.

JDI (Cranny et al., 1969) is comprised of five dimensions, namely, satisfaction with the work itself, supervision, co-workers, promotion opportunities, and pay. Spector (1985) bases on the rationale of JDI and adds four other items (fringe benefits, contingent rewards, operating and communication) into it and become Job Satisfaction Survey (JSS). After the establishment of JSS, there are are 136 research using JSS for measuring job satisfaction of employees from various sectors in

different place involving a very large total sample size of 36380 (Spector, 2008). The detailed explanation of JSS is illustrated in Chapter 5- research hypotheses, strategy and methodology.

3.7 Impact of job burnout and job satisfaction

The significance of job burnout and job satisfaction cannot be ignored because previous research has found that there are great impacts of job burnout and job satisfaction, ranging from individual level to organizational level.

3.7.1 Impact of job burnout and job satisfaction on employees

Employees suffering from job burnout exhibits attitudinal reactions, such as reduced organizational commitment, diminished self-esteem and higher turnover intention, etc. (Moore, 1997). Leiter and Maslach (1988) also suggest that job burnout decrease the organizational commitment of employees. The consequences of burnout include: employee either quitting or being fired (Caudill, 1996).

Job satisfaction can not only affect the psychological health of employees, but also affect their physical health. Four work compatibility variables, namely work environment, physical task, performance and job satisfaction, are significantly related with musculoskeletal / stress symptoms, so physical and psychological factors can play a significant role in the health and safety of construction workers (Sobeih, 2006).

3.7.2 Impact of job burnout and job satisfaction on organizations

Job burnout and job satisfaction can cause direct effects on individuals first and then indirect effects on organizations.

Job burnout can act as mediator between variables of workplace and resultant outcomes, organizational politics and resultant outcomes, such as turnover (Huang and Chuang, 2003 and Moore, 2000). Variables of workplace and organizational policies contribute to job burnout of employees in organizations and higher turnover rate is resulted from high level of job burnout (Moore, 2000).

Zhang and Liu (2003) contribute meaningfully explaining the overall relationship of the motivation theory as follows: People do what they do to satisfy their needs. Their actions are motivated by extrinsic rewards and intrinsic rewards. Job satisfaction is an example of intrinsic reward. The performance of organizational members affects themselves and they can achieve higher level of job satisfaction. It also affects the whole organization, such as the profit of the organization. Their model can be summarized into the following figure:

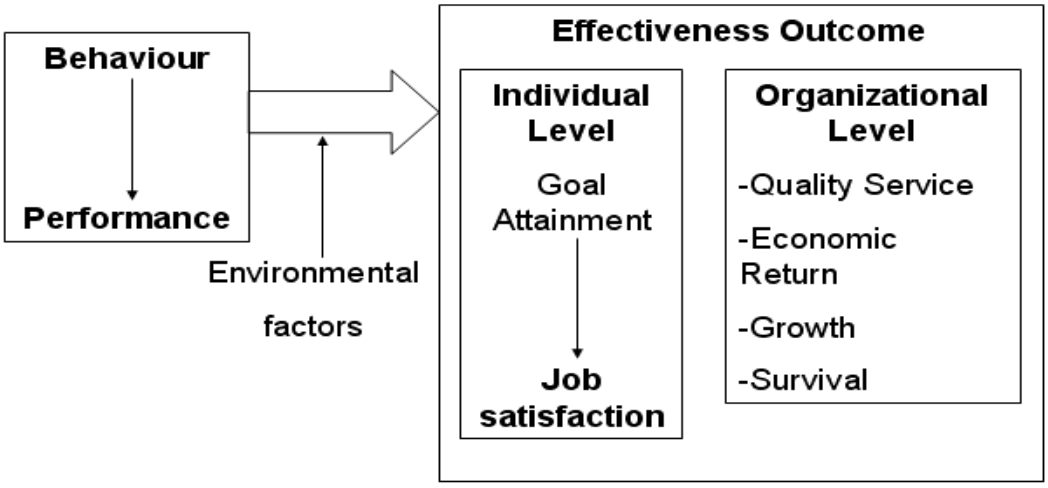


Figure 13 Performance and effectiveness outcome (Zhang and Liu, 2003)

For individuals, job burnout reduces an employee's job performance, causes increased absenteeism and negatively affects personal life (Poe and Scheer, 1981). Therefore, job burnout implies high physical and financial costs for the organization.

3.8 Summary of Chapter 3

The concepts of job burnout and job satisfaction are critically reviewed in this chapter. It is found that organizational culture can affect job burnout and job satisfaction. However, the instruments are then reviewed and found that most of them have not investigated the effects of organizational culture on job burnout and job satisfaction. Job burnout and job satisfaction are currently viewed as relevant concepts as a whole only, so their in-depth relationships can be further investigated. For instance, whether any aspects of job burnout have significant relationship with

particular aspects of job satisfaction can be examined. Therefore, the research gap can be identified and hypotheses for this relationship can be established.

Chapter 4 Previous research related to the Hong Kong construction industry

From the previous chapters, existing studies and theories about organizational culture, job burnout and job satisfaction are illustrated. However, there are only few studies investigating the job burnout and job satisfaction of construction professionals in Hong Kong. Nowadays, most research relate to other occupations and other locations, such as employees of hospitals in USA (Kent, 1991) and the police in USA (Zhao et al, 1999).

As the focus of this research is on the Hong Kong construction industry, the findings may not totally be applied for investigation as it is suggest that there are national and occupational differences that affect the situation among various occupations in difference places. Therefore, this chapter is to explain the specific studies and findings concerning what happen in the Hong Kong construction industry nowadays based on the review in previous chapters.

4.1 Occupational characteristics in the construction industry

The occupational characteristics in the construction industry should be understood before explaining the organizational culture of construction organizations.

It is because those unique features make the construction industry distinct from other sectors and affect the organizational culture of construction organizations.

Lingard (2000) conducted a study about the effect of work conditions on the family life, well-being and performance of white collar employees in the construction industry, he describes the industry as a demanding work environment and makes a contribution by summarizing the working characteristics of the construction industry that are discovered by previous studies. Those characteristics include: 'long and irregular working hours (Aldous et al 1979; White and Keith 1990), job insecurity (Larson et al 1994) and frequent re-location'[11]. They help us understand what the nature of the construction industry is.

However, we should pay special attention to the form of business in the construction industry as the whole industries are supported by project-based organizations. Due to the project-based nature of work and the uncertainty associated with competitive tendering, construction employees suffering job insecurity and frequent re-location to ensure continuity of employment (Lingard and Francis, 2004). The construction industry is hyper-turbulent and fragmented in nature, many parties and stakeholders are involved in projects (Oney-Yazic et al, 2006).

These unique occupational characteristics imply the reason why the

[11] Aldous et al, 1979, White and Keith, 1990 and Larson et al, 1994, quoted by Lingard, 2000, p 1.

organizational culture in construction industry is a complex concept to be illustrated.

4.2 Organizational culture in the construction industry

Putting the organizational culture into the context of the construction industry, scholars have investigated the importance of organizational culture to construction firms and employees although the industry gives people a perception that it mainly about the technologies and products.

Chapin and Noel (2000) agrees that running an engineering firm is not all about engineering and the success of any company relies on sound business philosophies shared at all levels of the organization. Company should firmly include values like integrity, leadership, dedication and service as a foundation for culture developing positive at all levels.

The complex occupational characteristics mentioned in Section 4.1 make the organizational culture of construction organizations complex. Nummelin et al (2005) point out that multinational project must successfully face the challenges and conflict arise because of people having different cultural and institutional backgrounds.

It shows the complexity to handle the cultural conflicts in the construction industry despite the fact that most construction projects in Hong Kong are local in nature. Cultural differences and conflict are become more popular due to the

occupational characteristics of the construction industry, especially the increasing number of multinational construction projects with various parties involving into them.

Cultural issue places an extremely important role on affecting the cooperation of people involved in construction projects which is critical for determining the project success (Phua and Rowlinson, 2004a; Phua and Rowlinson, 2004b). The reason is that people are required to form into different working groups according to project requirements over time in the construction industry; as a result, cooperation in the construction industry indicates that the cooperation with people within the same organization and even outside companies (Phua and Rowlinson, 2004b). It can explain why the cultural conflict happens easily during the construction project.

The fourth dimension (individualism-collectivism) of Hofstede's cultural dimension (2001) can be used to explain the term 'cooperation'. Phua and Rowlinson (2003) proposes a theoretical framework based on social identify theory to compare cooperation behavior of the senior construction project mangers of different nationalities from the same or different construction organizations and project success (Figure 14):

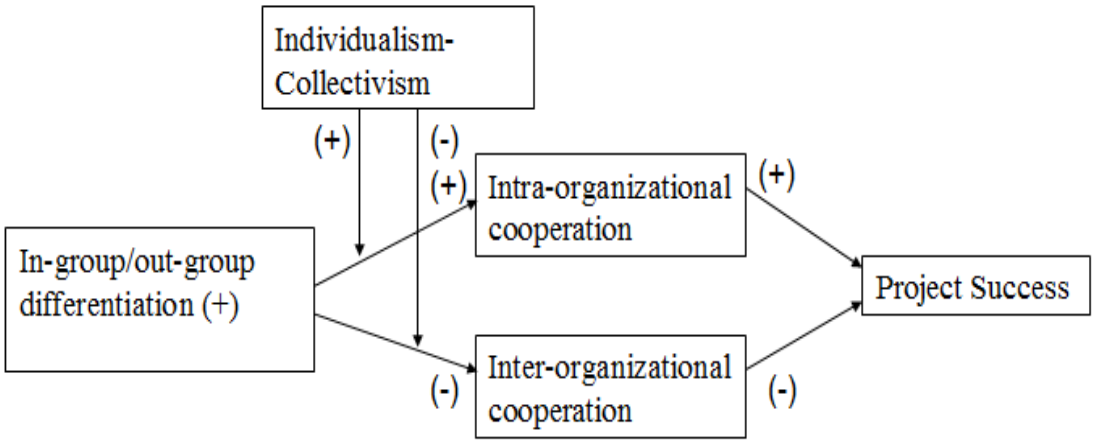


Figure 14 Theoretical framework (adopted from Phua and Rowlinson, 2003)

The general idea of the model is about the relationship between group identity, cooperation behavior and project success. Cooperation is predicted by in-group/out-group differentiation, which is moderated by individualism-collectivism; and cooperation is associated with project success. The model is tested among Hong Kong construction professionals. The proposed relationship of the model is significantly proven in the two other studies (Phua and Rowlinson, 2004a and Phua and Rowlinson, 2004b)

Cheung and Rowlinson (2005) investigate the mismatch between the dominant existing organizational culture and the ideal organizational culture of construction employees using Handy organizational culture questionnaire. The results suggest that the role culture is the dominant existing organizational culture and the task culture is the ideal organizational culture. They explain that the long term mismatch exists and it can affect the organization and the employees' job satisfaction which is a difficult task

for construction organizations.

It is important for construction professionals to reduce the cultural conflicts between their own construction organizations and outsiders, so construction organizations need to maintain the balance of appropriate culture type. In addition, we also need to understand and manage organizational culture because strong and balanced cultures are effective for responding to the environment (Nummelin et al., 2005). In addition, the performance and effectiveness of an organization can be improved if the culture and organizational design is appropriate (Liu, et al., 2006). The authors suggest that organizations are effective when both their goals and constraints can be achieved and solved.

It is complex to determine whether the organization is effective. We can adopt organizational effectiveness indicators as criteria for deciding whether the organization is effective within the culture it adopts (Liu et al., 2006). The indicators can be shown as Table 6:

Table 6 Effectiveness indicators for cultural system (Liu, et al., 2006)

Culture system (Cameron and Quinn, 1999)	Effectiveness indicators (Liu et al., 2006)
Human relations system	Employee satisfaction
Open system	Quality of construction projects
Internal process system	Timely completion of construction projects
Rational goal system	Productivity and profitability

Rowlinson (2001) reported significant association between organizational structure, culture and commitment in a study investigating the impact of changing organization structure of a governmental department. The government department changes from functional organization to a matrix organization requiring task culture and more participative leadership style within the organization.

Rowlinson (2001, p 670) refer to Knight (1976) about the definition of matrix organization: "it is a vertical functional hierarchy overlain by lateral authority, influence or communication."[12] He measured the commitment level after the change of organizational structure and organizational culture. He found that the mismatch of the existing and the ideal organization culture cause low affective and normative commitment and high continuance commitment indicating that employees stay in the organization only due to the cost of leaving is high, such as high salary, stable working hours. The mismatch can be explained by the concept of 'face' and deep-rooted, traditional cultural values of employees hold in the organization.

From the existing studies, most researches about the organizational culture in the construction industry adopt the Organizational Culture Assessment Instrument (OCAI) developed by Cameron and Quinn as the instrument for measuring the organizational culture that construction companies belong to. The following chart summarizes the

[12] Knight, 1976, as referred by Rowlinson, 2001, p 670.

findings from the literature review about the organizational culture of construction companies over different places:

Table 7 Summary of the previous studies using OCAI

Author (year)	Location investigated (target group)	Summary of the findings
Oney-Yazic et al (2006)	US (construction companies)	Dominated by a strong clan culture
Oney-Yazic et al (2007)	Turkey (construction companies)	The Turkish construction industry is mostly a mixture of clan and hierarchy cultures
Zhang and Liu (2003)	Chinese (Contractors)	Hierarchy type and clan type are stronger than market and adhocracy
Liu et al (2006)	Chinese (Construction enterprise)	Hierarchy culture in dominant in Beijing, Langfang, Tianjin and Shantou except Shantou.

From the above, we can see that the construction industry is such a 'complex' industry when compared to others concerning the working environment and organizational culture. Serpell and Rodriguez (2002, p 77) adopted the contingency approach suggests by Luhmann (1984) that can be applied to various industries especially for the construction industry as it is so unique in nature: "Culture is contingent and each cultural element refers to social solutions peculiar to problems derived from the man's coexistence with others. Different cultures can be interpreted

as different means of solutions."[13] The findings of OCAI support this view as it can hardly be determined which culture type is the most suitable to particular type of construction enterprise, only current situations about organizational culture type are reflected.

Liu et al (2006) support the use of the contingency approach in explaining 'organizational culture' that there is no 'best way of organizing'; instead, some forms of organizing are more appropriate and effective than others in certain cultural context. It shows that contingency approach can be illustrated together with the best-fit approach mentioned in Chapter 2. It proves the fact that we cannot straightly determine what kinds of culture are most suitable for construction enterprises having different involved parties and facing various circumstances.

4.3 Job burnout in the construction industry

Lingard (2003) investigated the causes of burnout of civil engineers in Australia and identified the complex interaction between individual and situational factors affecting job burnout of civil engineers in Australia. She found that job characteristics are more significant in predicting burnout when compared to individual characteristics, i.e. personality. Therefore, she concludes job re-design is an effective intervention

[13] Luhmann, 1984, quoted by Serpell and Rodriguez, 2002, p 77.

strategy. Among three aspects of burnout, higher professional efficacy can be identified as engineers have high level of social worth and confidence. Meanwhile, emotional exhaustion and cynicism can be adopted to predict engineers' intention to leave their jobs, turnover rate and associated costs in Australia.

Lingard and Francis (2004) investigate the magnitude difference of burnout of employees with different gender and work location in the Australian construction industry. It is found that site-based construction employees, especially male, suffer more level of work-life imbalance and burnout. However, their studies also find that when compared to men, female employees suffer less level of burnout but there is no significantly difference between site-based and office-based female employees as women may normally be underrepresented in roles demanding highest level of time demands and work pressures. It provides a new and complex insight about gender and working locations difference on affecting burnout of employees in the construction industry.

Job burnout of construction employees is not only result from the daily work of employees, but also from the conflict between their work, family and life. For example, Lingard and Francis (2005) suggest that the construction industry has high work-schedule demand, such as job schedule irregularity and hours worked per work. They find that WFC has a meditating effect on job schedule demands and job burnout

they suffer; so they recommended that organizations should examine ways to reduced WFC in a view to reducing burnout and improve employees' wellbeing.

They then examine the importance of organizational support (POS) and support from supervisors and co-workers in 2006. The findings show that POS has a main effect on burnout and also moderates the relationship between WFC and burnout. In comparison, emotional support and practical support should be provided at the same time for compensating each other as the emotional support causes effect on burnout while the practical support solely has a moderating effect.

After identifying the significance of work-life balance on job burnout and employee's well-being, Turner, et al (2009) investigate the supports and barriers of work-life balance (WLB) (or WFC) in a construction project in Australia. Although it solely focuses on white collar workers from one construction project, we can make a reference to the result to some extent when investigating the condition of Hong Kong construction professionals. They have found that project culture, project resourcing and the schedule demands of the construction stages are identified as barriers for WLB, while "project alliance" delivery model, flexibility of working hours and the project management team's support can be identified as supports for WLB. The contribution of this research is that they investigate various factors during both design and construction stage. The investigation of the whole life cycle process of the project

can understand the significance of factors throughout different stages.

As mentioned above, locational differences of culture occur and this concept can be applied in explaining job burnout which is supported by the research findings of Lingard, et al (2007). In the research, it is suggest that Australian students report higher level of cynicism than Hong Kong students although both of them report high level of personal efficacy than non-construction students in Spain. The result implies job burnout condition is a complicated task as not only numerous situational factors and personality factors can affect the magnitude of job burnout of people but also cultural diversity can also be included as one of the factors explaining job burnout.

Yip (2007) investigates the job burnout of the Hong Kong construction professionals, the effects of job stressors on job burnout and the effects of job burnout: Role workload, long working hours, heavy workload, role conflict, role ambiguity, lack of autonomy and job insecurity can explain why there is high level of job burnout among construction professionals. Job burnout shows significant adverse impact on organisational commitment and intention to turnover.

Yip et al (2008) conducted a research relating to the modeling rule of coping strategies for relieving job burnout among construction professionals in Hong Kong. They used the Ways of Coping Questionnaire (WCQ) and the strategies are restructured into four categories, namely rational problem solving, resigned distancing,

seeking support / ventilation and passive wishful thinking. The result shows that rational problem solving is the most popular strategy and then seeking support / ventilation, passive wishful thinking and then resigned distancing. They suggest that this research focus on the popularity of different types of coping strategies and the effectiveness of the coping strategies can be investigated in future studies.

4.4 Job satisfaction in the construction industry

Love and Edwards (2005) define job satisfaction as 'a function of the match between the rewards offered by the work environment and preferences for those rewards of individuals'.

The studies conducted by Ruthankoon and Ogunlana (2003) show impressing result relating to Herzberg's two-factor theory (1959). They applied the theory in investigating the construction workers in Thailand. The result shows that the theory cannot entirely be applied to the industry there as there is different constitution about motivation factors and hygiene factor. In addition, some factors are bi-polar in nature (such as achievement for foremen) which is contradict to the theory that motivation factors can only increase job satisfaction but not increase job dissatisfaction, vice versa for hygiene factors. However, bi-polar factors can affect both job satisfaction and job dissatisfaction. The result also reveals the reality that contingency approach

should be adopted as the factors cause different effects to various categories of workers. For instance, achievement is only a motivation factor to engineers while it is a bi-polar factor to foremen. It proves the existence of the locational difference about the job satisfaction of employees in various places because they may work and live in different environment. Therefore, it explains the importance of conducting a research to investigate the situation of the Hong Kong construction industry.

Bowen and Cattell (2008) conduct a study to investigate the factors affecting job satisfaction of South African quantity surveyors. They summarized the relevant studies and classify those factors into two main categories personal characteristics and the working characteristics. In their study, they examine most possible variables that can be divided into four aspects, namely, demographic factors, workplace factors, career choice issues, and gender and race discrimination. The summary of the result can be shown as follows:

One special contribution of this research is its findings about demographic factors and gender and race discrimination make the result regarding the construction industry diminishing from other industries. It suggests that gender, race and discrimination on the basis of gender and religious affiliation are significantly related to job satisfaction.

Some other researches also investigate the gender issue discovered in the

construction industry. For instance, when comparing female and male, women's employment is lower than male. Although it has increased in the labour market nowadays, they have still been concentrated in traditional female fields such as health and education (Arslan and Kivrak, 2004). Organizations with relatively few women in positions of power are experienced as less hospitable to women and less accepting of attitudes, values and behaviors typically associated with women (Ely, 1994).

Fielden et al (2001) explores the barriers to women's entry and participation in the construction industry from four main perspectives: building contractors, housing associations, change agents (e.g. Equal Opportunities Commission) and relevant construction organizations (e.g. Construction Industry Training Board). The focus groups identified a number of issues in education and training; recruitment and retention that they felt were the main barriers to female.

Davidson and Burke (1994) suggests that organizations which are successful in developing practices and policies that support the career aspirations for their managerial and professional women can help them gain certain competitive advantages, such as achieve better quality of management, attract the best talent, optimize potential and productivity, retain the investment, attract and retain clients. Therefore, supportive policies not only have positive impacts on women professionals themselves, but also organizations. Therefore, these studies support the idea about the

gender difference of job burnout in the construction industry.

Love and Edwards (2005) explore the relationship between the full job strain model (JSM) and psychological wellbeing (health and job satisfaction) of construction project managers. The findings show that the social support within JSM (other components include job demand, job control) have a significant positive relationship with psychological wellbeing (health and job satisfaction) and non-work-related support has even more significant result than work-related support. Therefore, the result provides an important idea that psychological wellbeing can be greatly affected by totally 'soft' and 'subjective' psychological factors.

Similar to other industries, the negative relationship between job stress, job satisfaction in the construction industry and their possible outcomes such as anxiety can be supported by previous studies. Love and Edwards (2005) adopting the idea of Theorell (1976): the high level of job stress can be linked with low level of satisfaction and therefore high level of adverse possible outcomes, vice versa[14].

[14] Theorell, 1976, quoted by Love and Edwards, 2005, p 92.

4.5 Summary of Chapter 4

The relevant theoretical and empirical studies about organization culture, job burnout and job satisfaction in the construction industry are critically reviewed. This chapter not only provides insights about the related current phenomenon, but also discussed more relevant findings, such as the effects of demographic variables in the construction industry for this research. It shows that more studies about these concepts in the Hong Kong construction industry could be conducted in future since there are still few studies investigating the current condition of the Hong Kong construction industry.

Chapter 5 Research Hypotheses, Strategy and Methodology

In this part, the whole process development of research hypotheses is illustrated. The rationale of it is corroborating the existing findings from literature review and identifying the possible research gaps. Then, research hypotheses and model are constructed for investigation. The methodology and research design is explained in Section 5.3.

5.1 Development of research model and hypotheses

5.1.1 Synthesis of existing findings: gap and the aim of this study

From the literature review, the relationship between organizational culture, job burnout and job satisfaction has been established but have yet to be empirically tested in the Hong Kong construction industry. A majority of studies concentrate on other industries that require interaction with other people. Therefore, only few studies relate to the Hong Kong construction industry.

Most previous studies concentrate on investigating other factors affecting job burnout and job satisfaction, such as working characteristics, coping strategies. There are only some explanations about the concepts of job burnout and job satisfaction. The general explanation about their relationship has not yet been examined.

Noting the gap, this study aims to investigating the relationship between organizational culture, job burnout and job satisfaction of the Hong Kong construction professionals.

5.1.2 Research Model

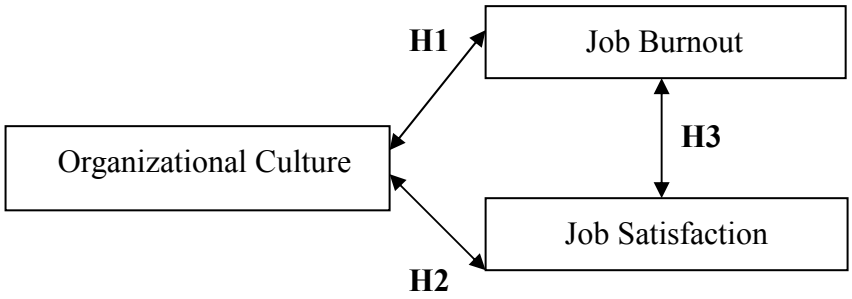


Figure 15 Research model

Hypothesis 1: Divergence of various aspects concerning the organizational culture between the existing reality and the ideal of employees in organizations are expected to contribute to the positive relationship with job burnout, i.e. employees who have the higher cultural divergence level would have higher level of job burnout. Therefore, the 15 organizational culture aspects are expected to have positively relationship with exhaustion and cynicism while they are expected to have negatively relationship with professional efficacy.

Hypothesis 1.1: The divergence of the perception about a good boss is positively correlated with burnout.

Hypothesis 1.2: The divergence of the perception about a good subordinate is positively correlated with burnout.

Hypothesis 1.3: The divergence of the perception about what a good member of the organization gives first priority to is positively correlated with burnout.

Hypothesis 1.4: The divergence of the perception about who do well in the organization is positively correlated with burnout.

Hypothesis 1.5: The divergence of the perception about how the organization treats the individual is positively correlated with burnout.

Hypothesis 1.6: The divergence of the perception about how people are controlled and influenced is positively correlated with burnout.

Hypothesis 1.7: The divergence of the perception about the situation that one person to control another's activities is legitimate is positively correlated with burnout.

Hypothesis 1.8: The divergence of the perception about the basis of task assignment is positively correlated with burnout.

Hypothesis 1.9: The divergence of the perception about how work is performed is positively correlated with burnout.

Hypothesis 1.10: The divergence of the perception about how people work together

is positively correlated with burnout.

Hypothesis 1.11: The divergence of the perception about competition in organization is positively correlated with burnout.

Hypothesis 1.12: The divergence of the perception about conflict in organization is positively correlated with burnout.

Hypothesis 1.13: The divergence of the perception about decisions in organization is positively correlated with burnout.

Hypothesis 1.14: The divergence of the perception about the appropriate control and communication structure is positively correlated with burnout.

Hypothesis 1.15: The divergence of the perception about how the environment responds is positively correlated with burnout.

Hypothesis 2: Appropriate organizational culture is expected to have positive relationship with job satisfaction. Therefore, the divergence of organizational culture between the existing reality and the ideal of employees in organizations are expected to contribute to be negatively correlated with job satisfaction; so the 15 cultural divergence elements are expected to be negatively correlated with 9 aspects of job satisfaction and total job satisfaction.

Hypothesis 2.1: The divergence of the perception about a good boss is negatively correlated with job satisfaction.

Hypothesis 2.2: The divergence of the perception about a good subordinate is negatively correlated with job satisfaction.

Hypothesis 2.3: The divergence of the perception about what a good member of the organization gives first priority to is negatively correlated with job satisfaction.

Hypothesis 2.4: The divergence of the perception about who do well in the organization is negatively correlated with job satisfaction.

Hypothesis 2.5: The divergence of the perception about how the organization treats the individual is negatively correlated with job satisfaction.

Hypothesis 2.6: The divergence of the perception about how people are controlled and influenced is negatively correlated with job satisfaction.

Hypothesis 2.7: The divergence of the perception about the situation that one person to control another's activities is legitimate is negatively correlated with job satisfaction.

Hypothesis 2.8: The divergence of the perception about the basis of task assignment is negatively correlated with job satisfaction.

Hypothesis 2.9: The divergence of the perception about how work is performed is negatively correlated with job satisfaction.

Hypothesis 2.10: The divergence of the perception about how people work together

is negatively correlated with job satisfaction.

Hypothesis 2.11: The divergence of the perception about competition in organization is negatively correlated with job satisfaction.

Hypothesis 2.12: The divergence of the perception about conflict in organization is negatively correlated with job satisfaction.

Hypothesis 2.13: The divergence of the perception about decisions in organization is negatively correlated with job satisfaction.

Hypothesis 2.14: The divergence of the perception about the appropriate control and communication structure is negatively correlated with job satisfaction.

Hypothesis 2.15: The divergence of the perception about how the environment responds is negatively correlated with job satisfaction.

Hypothesis 3: Among three aspects of job burnout, exhaustion and cynicism are expected to be negatively correlated with 9 aspects of job satisfaction and total job satisfaction while professional efficacy is expected to be positively correlated with them.

Hypothesis 3.1: Total job satisfaction is negatively correlated with job burnout.

In hypotheses 1.1-1.16, organizational culture divergence is hypothesized to have

significant positive relationship with exhaustion and cynicism and negative relationship with professional efficacy.

The rationale of hypotheses 2 is basically similar to hypothesis 1, that is, to investigate the relationship between organizational culture divergence and job satisfaction. The divergence of the perception about various aspects of organizational culture is used for providing comprehensive result about the significance of particular aspects of organizational culture. In hypothesis 3, the relationship between job burnout and job satisfaction is examined and employees who suffer from job burnout are expected to have lower level of job satisfaction, vice versa.

5.2 Measures of variables

As mentioned before, the aim of this research is to identify the impact of organizational culture divergence on job burnout and job satisfaction and the relationship between them. From the literature review, we can find that organizational culture is a major factor affecting job burnout and job satisfaction. In order to validity the result of the questionnaire survey, other demographic variables are for exploring the result.

5.2.1 Demographic variables

From the literature review, it is identified that there are several variables, apart from organizational culture, affects the magnitude of job burnout and job satisfaction of employees in Hong Kong construction companies. In the research, those variables are identified by requiring the respondents to answer them first and analyze the correlation of them with job burnout and job satisfaction. After that, they are examined their impacts on organizational culture, job burnout and job satisfaction as suggested by the research hypotheses.

(1) Demographic information

The literature review reveals the reality that demographic factor can affect a person's job burnout and job satisfaction level when holding other factors, such as the divergence of organizational culture constant. Therefore, correspondents are invited to provide their demographic information, namely years working in the construction industry, age, education level, marital status and gender for result analysis in the "Personal Background" part.

(2) Job nature and position

The construction industry is complex that many parties are involved. For instance, for a construction project, government officer, developer, architect, consultant, contractor, engineer, sub-contractor, etc. participate throughout the project

(Oney-Yazic et al, 2006). The role the people play can differentiate their working condition from others. Apart from the role, what kinds of company they work for may imply different working environment for them. For instance, working in public sector may have huge difference with those working in private sector (Ng et al, 2005).

Therefore, respondents are invited to fill in what the organization they work for and what the profession they are in the "Background" part of the questionnaire. They can tick the box which represents their present organization and profession type.

In this research, Statistical Package for the Social Sciences (SPSS) is used to analyze to see whether there are any effects caused by demographic variables. ANOVA and t-test are proposed to carry out whether there are any divergence results among those demographic variables. It hopes providing meaningful data for understanding the psychological health condition of construction professionals in Hong Kong.

5.2.2 Organizational culture

From the literature review, we can see that there are many types of theories about the organizational culture. The review also reveals the complex reality about the organizations in the construction industry because of its project-team-oriented structure. In order to clarify the scope of investigation in this research, permanent based company organizations in Hong Kong are as bases of the research and

employees working within them are investigated of their job burnout and job satisfaction.

The instrument used in this research is the Organizational Culture Questionnaire developed by Handy (1993). According to Handy (1995) and Harrison (1972), the organizational cultures consist of four major types, namely club, role, task and existential. The questionnaire has 15 questions representing 15 aspects of organizational culture and each question is comprised of four sets of statements describing the above mentioned four cultures. The 15 aspects can be summarized as: 1. perception of a good boss; 2. perception of a good subordinate; 3. what a good member of the organization gives first priority to; 4. what kind of people is viewed as do well in the organization; 5. how the organization treats the individual; 6. how people are controlled and influenced by; 7. perception of exercising legitimate control on others activities; 8. the basis of task assignment; 9. how the work is performed; 10. how people work together; 11. competition; 12. conflict resolution; 13. decision making; 14. appropriate control and communication structure; 15. the organizational environment.

The respondents are required to rank the four statements from 1 (dominant view) to 4 (the least dominant view). They need to rank according to the existing organizational culture and their ideal perception about culture.

There are two major reasons of choosing this instrument is because of the limited previous researches about organizational culture in the Hong Kong construction industry. In addition, based on the findings of literature review, the construction industry is very complex that it involves different parties and professional, such as architects, surveyors, contractors, government departments, etc. Therefore, by combining the occupational characteristics and contingency approach altogether, it shows that it is difficult for us to identify the best type of organizational culture for different kinds of construction companies. As a result, Handy (1993)'s questionnaire has been choosen with a view to give in-depth analysis about organizational cultures of construction companies in Hong Kong.

The analysis of cultural divergence can be divided into three stages: First, it provides insight about what the dominant cultural type and ideal cultural type are (Handy, 1993). The existing cultural type which has the lowest among the four cultural types represents the dominant existing type as the score "1" means the dominant view. The logic applies to the ideal cultural type. Mixture of culture exists if two cultural types have the same total score (Handy, 1995).

Second, the relationship with the existence of cultural divergence can be examined by coding the cultural compliance as 0 and the cultural divergence as 1 (Bourantas, et al, 1990). Third, the cultural divergence can be quantified by

calculating the rank difference between the existing and ideal culture as this method can also focus on the effects of overall cultural divergence other than solely the dominant cultural type (Bignardi, 1996). He suggests that if the power culture in the existing culture about the perception of a good boss is ranked as 1 and it is ranked as 4 in the ideal culture. Then, "3" represents the magnitude of cultural divergence of that element. The difference of each row is added up for each aspect (15 aspects in total) and the score for 15 aspects are added up as a total number representing total cultural divergence that correspondents suffer. In order to prevent confusion, the term "culture divergence" is used for explaining the second method. The term "total divergence" is used for explaining the quantifying method.

The perfect match between an individual's preferences and his organization's cultures then is to be investigated as it would suggest a perfectly fitting psychological contact (Handy, 1993). Therefore, it is hypothesized that the higher divergence between the ideal and the current situation of organizational culture, the higher job burnout and lower job satisfaction construction professionals suffer from their jobs.

The rationale of the hypothesis when there is discrepancy between one person's ideal and actual perception, conflicts between project participants may also occur as each of them have their own ideal perception about organizational culture which is different from actual organizational culture in construction organizations; so they may

have different style to work and relationship with the other colleagues and organization (Ankrah and Langford, 2005).

5.2.3 Job burnout

For investigating job burnout of employees in the Hong Kong construction industry, the Maslach Burnout Inventory-General Survey (MBI-GS) should be chosen as the main role of construction practitioners are service providers and the clients are not the direct product recipients (Maslach et al, 1996). The reason of choosing this instrument is due to its popularity in measuring job burnout. It has been used in examining the Hong Kong construction professionals (Yip, 2007) and the Hong Kong construction and architect students (Jia, 2009).

Although the tasks of their job are usually required to communicate with other involved parties, such as sub-contractors, foreman, etc., they do not have tight relationship with other people.

The MBI-GS consists of 16 items: Emotional Exhaustion (5 items), Cynicism (5 items) and Professional Efficacy (6 items) and a 7-point Likert scale is used to rate those items, from ‘never in the past year’ (0) to ‘every day’ (6) (Maslach et al., 1996).

The higher the emotional exhaustion and depersonalization scores and the lower the personal accomplishment scores, the more the person would be suffering from burnout (Prosser et al., 1999). Experiencing any one of these three symptoms is

manageable to some extent; however, when individuals begin to exhibit all three symptoms, they have reached burnout (Koesten, 2005).

The three elements cannot of job burnout cannot be combined into one total score of job burnout as suggested by Maslach et al (1997) that professional efficacy is independent of exhaustion and cynicism; so it cannot be assumed as the totally opposite of exhaustion and cynicism as the correlations of it with exhaustion and cynicism is low. Apart from this, the exhaustion and cynicism representing different characteristics of job burnout that cannot be combined into the total scores; therefore, the three elements should be measured and analyzed separately.

5.2.4 Job satisfaction

Job Satisfaction Survey (JSS) is newly developed instrument when compared to others such as Job Diagnostic Survey (JDS) and Job Descriptive Index (JDI). The justification of using this instrument is that Spector (1985) has made reference to those previous researches, especially JDS and added in his own research findings into the questionnaires. Therefore, JSS may provide some innovation findings about the job satisfaction of the Hong Kong construction professionals.

Spector (208) suggest that JSS can measure the satisfaction of nine dimensions, namely, pay (pay and remuneration), promotion, supervision, coworkers, nature of work (job tasks), fringe benefits (both monetary and non-monetary), contingent

rewards (appreciation, recognition, and rewards for good work), operating conditions (policies and procedures) and communication.

The first five dimensions are basically similar to the dimensions of JDS and Specter (1985) added the latter four dimension that show significant influence on job satisfaction of employees. Each dimension is comprised of four questions; so JSS has altogether 36 questions in total. Similar to MBI, JSS adopts Likert scale of measurement from 1 (strongly disagree) to 6 (strongly agree). Spector suggests that the negatively worded items should be reverse scored and negatively worded items are 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 21, 23, 24, 26, 29, 31, 32, 34, 36.

The calculated scores can be analyzed by one of the below methods: normative approach and absolute approach. Spector (2008) explains the use of normative approach is to compare the score with the norms as JSS has been used for investigating the job satisfaction of various factors while the absolute approach is to analyze the score directly that possible scores of JSS range from 36 to 216:

Table 8 Explanation of JSS scores (Spector, 2008)

Scores	Explanation
36-108	Dissatisfaction
108-144	Ambivalent
144-216	Job satisfaction

It is suggest that absolute approach should be adopted as the norms are mainly based on USA and Canada that they may different from the condition of the Hong Kong construction industry. The reason is that the literature reviews that the culture of enterprises of different locations are affected by their own national culture, therefore, it may not suitable to compare the scores with the norms directly. By adopting absolute approach, the data can be collected for understanding the seriousness of job dissatisfaction of construction employees in Hong Kong before the relationship between organizational culture, job burnout and it can be examined.

5.3 Research design

It is proposed to conducted both quantitative and qualitative study in this research. The quantitative study acts as a snapshot of the current situation about significance level of the relationship between organizational culture, job burnout and job satisfaction and the psychological health condition of construction professionals in Hong Kong. The qualitative study, meanwhile, dig-deep into the issue to confirm the importance of organizational culture to job burnout and job satisfaction and identify factors, strategies and other issues relating to job burnout and job satisfaction. It hopefully gives a broad picture about the overall analysis of the psychological health condition of the Hong Kong construction industry.

The methodology used for quantitative study is the questionnaire survey as mentioned before whereas a follow-up semi-structure interview is conducted for qualitative study. The aim of use the two studies are to compensate the findings from each study and come up with the most possible compensative findings for the research. The research flow can be summarized as follows:

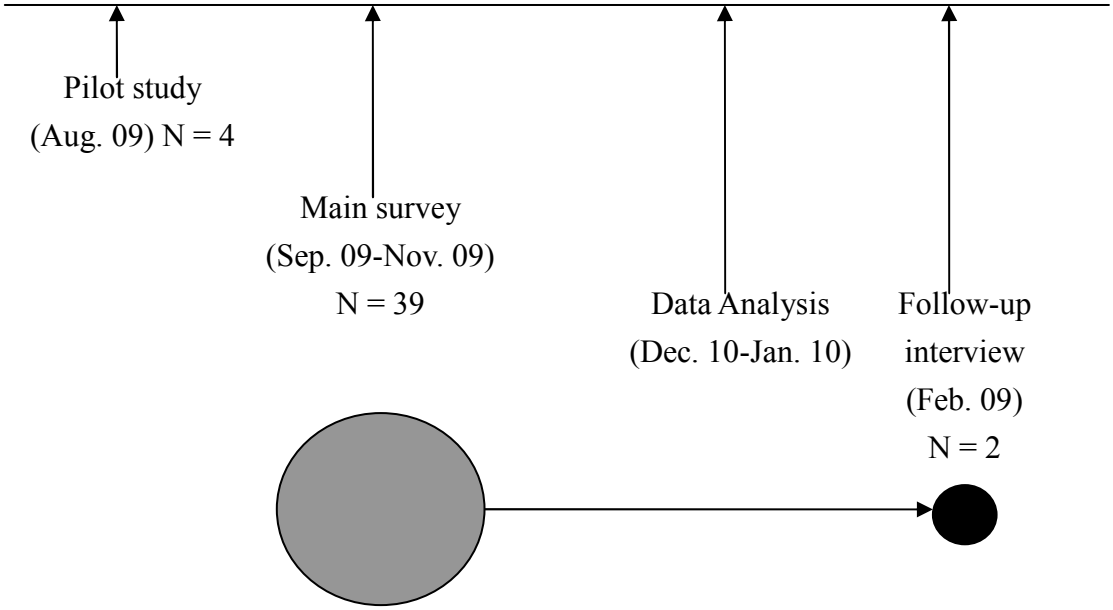


Figure 16 Research flow

5.3.1 Stage I – Pilot study

The aim of the pilot study is the initial test of the questionnaire. At the beginning of the pilot survey, four participants are first invited to complete the questionnaire in order to collect feedback about the questionnaire items. Among four correspondents, one participant is engineer and three are QS. Their nationality is different: one is British and three are local Hong Kong resident.

Their results provided good indication for the questionnaire survey. After

completing the questionnaire, they reported a great difficult time spent. This might be explained by different reading speed. However, the time required should be much longer at around 45-60 minutes. They both commented that the questionnaire does not have any major problems, instead, some minor errors, such as formatting and typos.

However, some misunderstandings of the questionnaire requirement were reported by the local participants. This problem occurs especially in the part of Handy Organizational Culture Questionnaire. In the questionnaire, participants are required to rank the four statements from one to four while three participants misunderstood it as rating i.e. one (strongly disagree), 4 (strongly agree) which is the common way of filling normal questionnaire. All local participants (totally 3) suggest that a Chinese version of questionnaire should be provided for reference in order to minimize misunderstanding and shorten the time spent in completing the questionnaire.

The minor mistakes and typos in the questionnaire are corrected. In addition, a Chinese version of questionnaire is produced. The translation of the questionnaire is conducted by the author and double checked by a bilingual degree holder. After the improvement of the questionnaire, the two local participants who misinterpreted some items in the questionnaire previously were invited to complete the questionnaire again. They reported the questionnaire is much more user-friendly and the required time can be reduced to less than 45 minutes by referring to the Chinese questionnaire.

Statistical Package for the Social Sciences (SPSS) is used to analyze the result of the pilot study. The statistics provide some basic indications about the relationship between the organizational culture, job burnout and job satisfaction. In the pilot survey, the results of four respondents were input into SPSS in order for testing the validity of hypotheses. The correlations of them are investigated so that we can have basic idea of the relationship between cultural divergences, job burnout and job satisfaction of construction professionals in Hong Kong. However, t-test is unable to be conducted for analyzing the result differences among different target groups due to the limited number of correspondents involved in the pilot survey.

Table 9 Pilot survey: the relationship between total cultural divergence and job burnout

Correlations

		Total divergence	Exhaustion	Cynicism	Professional Efficacy
Total_divergence	Pearson Correlation	1	0.654	0.604	-0.645
	Sig. (2-tailed)		0.346	0.396	0.355
	N	4	4	4	4

*. Correlation is significant at the 0.05 level (2-tailed).

Table 10 Pilot Survey: the relationship between total cultural divergence and total job satisfaction

Correlations

		Total_divergence	Total_job_satisfaction
Total_divergence	Pearson Correlation	1	-0.194
	Sig. (2-tailed)		0.806
	N	4	4

Table 11 Pilot survey: the relationship between job burnout and total job satisfaction

Correlations

		Total job satisfaction
Exhaustion	Pearson Correlation	-0.753
	Sig. (2-tailed)	0.247
	N	4
Cynicism	Pearson Correlation	-0.675
	Sig. (2-tailed)	0.325
	N	4
Prof_Efficacy	Pearson Correlation	-0.62
	Sig. (2-tailed)	0.38
	N	4
Total job satisfaction	Pearson Correlation	1
	Sig. (2-tailed)	
	N	4

*. Correlation is significant at the 0.05 level (2-tailed).

Table 9 to Table 11 do not show the significant relationship between organizational culture, job burnout and job satisfaction. Table 9 and 10 only show the same direction about the hypothesized relationship between organizational culture and job burnout, organizational culture and job satisfaction respectively whereas Table 11 shows the same direction of hypothesized relationship between exhaustion, cynicism and job satisfaction.

In pilot survey, only the same directions about the relationships are shown but the not significant relationships. They should be further analyzed in the main survey

by using more results from correspondents in a view to getting more validated result.

5.3.2. Main Survey

After the completion of pilot survey, the main survey was then conducted. Due to the time limitation for BSc dissertation, the author sends out the questionnaire via email (a hard copy is made for correspondents filling out the questionnaire using Microsoft word) and some hard copies of the questionnaire to her friends and colleagues and invite them to forward the question to those people they know. An invitation letter is attached with the questionnaire stating the focus of the questionnaire and the methods of questionnaire submission (Please refer to Appendix for the sample letter). The completed questionnaires can either be returned by email or by hardcopy.

There are 39 questionnaires returned to the author finally. They have all been completed but three of correspondents miss to fill in one demographic item (i.e. one misses the age while the remaining two miss the years they have entered into the industry). The details of the results please refer to Chapter 6. None of them has provided any additional comments in the last page of the questionnaire. Among 39 correspondents who return the questionnaire to the author, two of them indicate their interest in participating the follow-up interview. Finding of the main survey are reported in Chapter 6.

5.3.3 Follow-up interview

For the two interviewees, one correspondent is a female QS working in main contractor while another is a male land surveyor working in a government department. The interviews were to be conducted in coffee shops after the working hour in weekend. During interviews, the ethical issues were explained to them before the interviews actually started. The author first conducted a briefing to them regarding the findings in the questionnaire survey. They were then invited to share their opinion about the survey results and relevant issues. The role of author is mainly to ask some questions and invite them to answer instead of 'discussing' the issue. The length of interviews is around 30 minutes.

The interviews were conducted in Cantonese while English is used for specific technical terms, e.g. cultural divergence, job burnout and job satisfaction, etc to keep the original meeting be accurate. Since the mother tongues of them are Cantonese, it is more convenient for them to express their views. Notes were taken in during the interview and organized at the same day of the interview.

Interviewees were assured that their personal information will not be disclosed. The results of the interviews are organized and presented in Chapter 6 and they are analyzed using relevant concepts and theories in Chapter 7.

5.4 Summary of Chapter 5

The whole progress of developing the research hypotheses, strategy and methodology are illustrated. The explanation includes the process of formulating research problem from the existing research gap, developing the research model – the rationale of choosing the instruments, the measurement of variables in this research to the research progress (i.e. the research flow). This chapter links Chapter 2, 3 and 4 together and develops them into a valid research model and testable hypotheses.

Chapter 6 Results and analysis

This chapter consists of two major parts. The first part is to provide quantitative analysis of the questionnaire data gathered and statistical examination of the hypotheses by using SPSS while the second part is to provide qualitative affirmation of quantitative results from the interviews conducted.

6.1 Factor analysis

The measures are validated by Explanatory Factor Analysis. Principle Component Analysis and Varimax rotation are used to examine the relationships between the variables and provide a suggestion of restructuring the variables. Cronbach's alpha is used to test the reliability of the scale (α).

6.1.1 Organizational culture

The respondents are invited to answer one question about each aspect of organizational culture perception. Therefore, there are 15 questions altogether representing the 15 aspects of organizational culture. A forced three-factor structure is selected among various factor structures as it yields marginal validity and good reliability.

Based on the nature of the factors, the three factors are given new names representing them. They are 1.procedural structure, 2.environment and 3.problem solving. Item loading below than .40 is suppressed and only equal to or above .40 is shown in Table 12. The Kaiser-Meyer-Olkin (KMO) is 0.693, reflecting a marginal acceptability of factor analysis (Field, 2005). The total variance of the force three-factor solution is 64.141%. For reliability, the Cronbach's Alpha (α) is .891, which is above 0.7 minimum requirement (Field, 2005).

Table 12 Factor analysis of organizational culture divergence

Rotated Component Matrix[a]

		Component		
		1	2	3
boss	A good boss		.777	
subordinate	A good subordinate		.717	.563
priority	A good member of the organization gives priority to			.773
do_well	People who do well in the organization	.536		
treat_individual	The organization treats the individual	.809	.308	
influenced	People are controlled and influenced by	.702		.487
legitimate_control	It is legitimate for one people to control another's	.410	.477	.433
task_basis	The basis of task assignment is		.786	
work_performed	Work is performed out of	.518	.628	
work_together	People work together	.538	.640	
competition	Competition	.592		
conflict	Conflict			.675
decisions	Decisions	.474	.528	
structure	The appropriate control and communication structure	.419	.659	
environment_response	The environment is responded to as though it were	.855		

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

6.1.2 Job burnout

The respondents are invited to answer five questions for exhaustion, five questions for cynicism and six questions for professional efficacy. A forced three-factor structure is used for yielding marginal validity and good reliability. The three factors roughly have a similar structure from the original three aspects although the combination of cynicism and exhaustion are different from proposed.

The 3 factors are 1.professional efficacy, 2.cynicism and 3.exhaustion. The KMO is .611, reflecting a marginal acceptability of factor analysis. The total variance of the force three-factor solution is 61.711%. For reliability, the Cronbach's Alpha of the whole scale is .769, which is above 0.7 minimum requirement.

Table 13 Factor analysis of job burnout

Rotated Component Matrix[a]

		Component		
		1	2	3
E1	I feel emotionally drained from my work.			.743
E2	I feel used up at the end of the workday.			.760
E3	I feel tired when I get up in the morning and have to face another day on the job.			.725
E4	Working all day is really a strain for me.		.693	
E5	I have accomplished many worthwhile things in this job.		.604	.419
C1	I have become less interested in my work since I started this job.	-.418		
C2	I have become less enthusiastic about my work.		.798	
C3	I just want to do my job and not be bothered.	.407		
C4	I have become more cynical about whether my work contributes anything.		.462	.720
C5	I doubt the significance of my work.		.738	
PE1	I can effectively solve the problems that arise in my work.	.877		
PE2	I feel I am making an effective contribution to what this organization does.	.558		
PE3	In my opinion, I am good at my job.	.914		
PE4	I feel exhilarated when I accomplish something at work.	.796		
PE5	I feel burned out from my work.	.443	.604	
PE6	At my work, I feel confident that I am effective at getting things done.	.912		

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

6.1.3. Job satisfaction

The respondents are invited to answer four questions for each aspect. The factor analysis of the 9 aspect is conducted. Eigenvalues over 1 are extracted. The factor analysis provides a seven-factor solution. Items on pay, fringe benefits and coworkers are combined to be one factor. Supervision and coworkers are combined to be one factor. The other factors roughly remain as proposed.

The seven factors are 1. benefits and coworkers, 2.interpersonal relationship, 3.operating, 4.work nature, 5.promotion, 6.communication and 7.contingent rewards. The KMO is .504, reflecting a marginal acceptability of factor analysis. The total variance of the seven-factor solution is 82.925%. For reliability, the Cronbach's Alpha is .944, which is well above 0.7 minimum requirement.

Table 14 Factor analysis of job satisfaction

Rotated Component Matrix[a]

		Component						
		1	2	3	4	5	6	7
Pay1	I feel I am being paid a fair amount for the work I do.	.574		.555				
Pay2	Raises are too few and far between.	.607						
Pay3	I feel unappreciated by the organization when I think about what they pay me.	.629		.421				
Pay4	I feel satisfied with my chances for salary increases.	.598		.444				.400
Promotion1	There is really too little chance for promotion on my job.					.886		
Promotion2	Those who do well on th job stand a fair chance of being					.853		
Promotion3	People get ahead as fast here as they do in other places.					.868		
Promotion4	I am satisfied with my chances for promotion.					.769		
Supervision1	My supervisor is quite competent in doing his/her job.		.848					
Supervision2	My supervisor is unfair to me.		.890					
Supervision3	My supervisor shows too little interest in the feelings of		.885					
Supervision4	I like my supervisor.		.874					
Fringe1	I am not satisfied with the benefits I receive.	.806						
Fringe2	The benefits we receive are as good as most other	.728						
Fringe3	The benefit package we have is equitable.	.879						
Fringe4	There are benefits we do not have which we should have.	.825						
Contingent1	When I do a good job, I receive the recognition for it that I							.871
Contingent2	I do not feel that the work I do is appreciated.							.763
Contingent3	There are few rewards for those who work here.					.411		.535
Contingent4	I don't feel my efforts are rewarded the way they should be.							.596
Operating1	Many of our roles and procedures make doing a good job			.858				
Operating2	My efforts to do a good job are seldom blocked by red tape.			.897				
Operating3	I have too much to do at work.			.871				
Operating4	I have too much paperwork.			.782				
Coworkers1	I like the people I work with.	.665	.517					
Coworkers2	I find I have to work harder at my job because of the incompetence of people I work with.	.617	.469		.408			
Coworkers3	I enjoy my coworkers.	.601	.521					
Coworkers4	There is too much bickering and fighting at work.	.644	.552					
Work_nature1	I sometimes feel my job is meaningless.				.778			
Work_nature2	I like doing the things I do at work.				.901			
Work_nature3	I feel a sense of price in doing my job.				.779			
Work_nature4	My job is enjoyable.				.823			
Communication	Communications seem good within this organization.						.798	
Communication	The goals of this organization are not clear to me.		.456				.725	
Communication	I often feel that I do not know what is going on with the						.902	
Communication	Work assignments are not fully explained.						.854	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

The above factor analyses provide solutions about the restructuring of the variables and the reduction of variables for result analysis. However, the original scales are used in result analysis in this research. There are several reasons supporting this decision. First of all, the original scale are well-tested by other researches. For instance, Mashlach et al (1996) have used the MBI instruments for measuring the job burnout of employees from different industries. Yip (2007) and Jia (2009) have conducted studies on the job burnout level of construction professionals and construction students in Hong Kong. Their studies involve large sample size and their factor analyses support adopting the structure of job burnout.

For JSS, Spector (2008) has also examined the instrument with large sample size. Therefore, these instruments are well-tested by previous researches. Due to the small sample size in this research, it is more appropriate to apply the original scale in result analysis.

In addition, the result analysis in this research adopts the original scale so as to separate the factors to discover any significant results and interesting issues in this research. The original scale can indicate more details about which certain factors have significant relationship with others. For example, 15 original factors are kept in the result analysis, so we can have better understandings about the significance of those factors of their relationship with job burnout and job satisfaction.

6.2 Quantitative results and analyses

There are 39 questionnaires returned. Most of them entirely completed except two miss number of years entering into the industry; one misses his/her age. Therefore, 39 data can be used to analyze the relationship between cultural divergence, job burnout and job satisfaction and those missing data are excluded when the relationship of demographic variables, cultural divergence, job burnout and satisfaction is examined.

6.2.1 Demographic variables

From the literature review, demographic variables in the questionnaire include organization type, profession type (occupation), years of working in the industry, age, education level, marital status and gender can contribute to the result difference of job burnout and job satisfaction; therefore, they are classified as demographic variables. The frequency distribution and proportions of those demographic variables of the correspondents in the main survey are shown as the below figures.

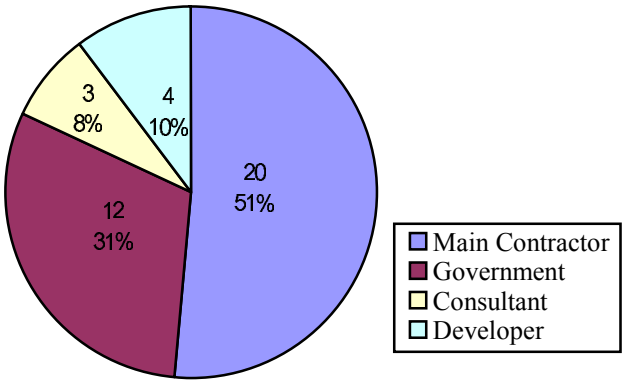


Figure 17 Frequency distribution by organizations

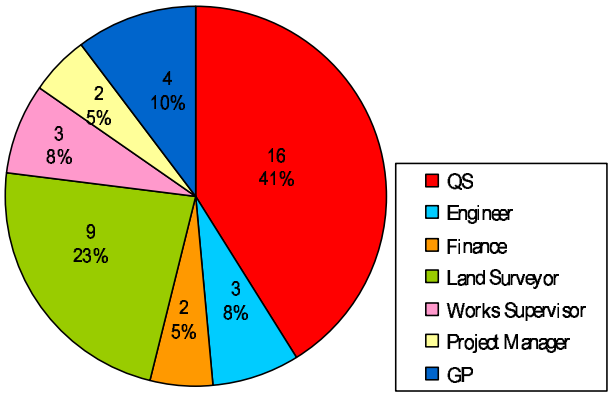


Figure 18 Frequency distribution by occupation

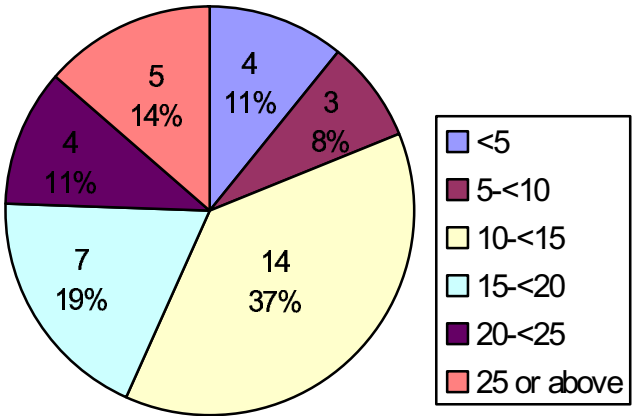


Figure 19 Frequency distribution by years working in the industry

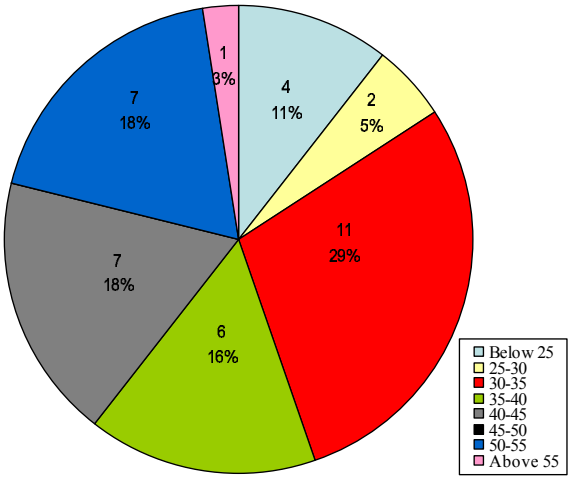


Figure 20 Frequency distribution by the age of correspondents

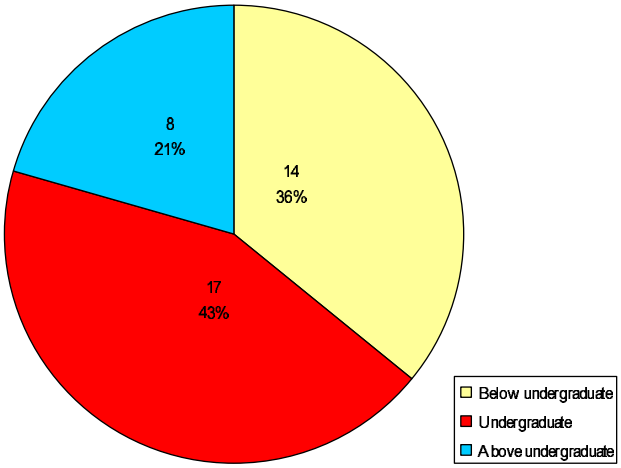


Figure 21 Frequency distributions by education level

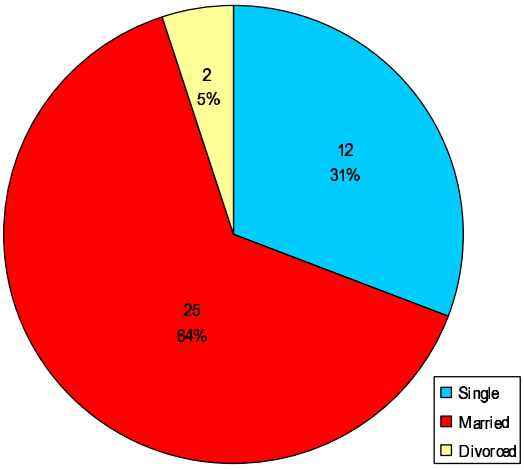


Figure 22 Frequency Distribution by martial status

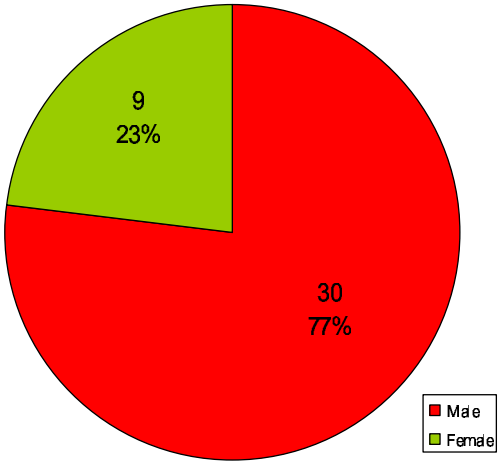


Figure 23 Frequency Distribution by gender

From the above charts, a majority of correspondents (51.28%) are from main contractor followed by 30.77% of correspondents work in government departments while the remaining 17.95% correspondents are comprised of consultant and developer. The occupations of them are quite diverse forming 7 categories and 41% correspondents work as QS from contractor and consultant followed by 25.64% land surveyor and other occupations, such as engineer, etc.

The frequency distribution of years correspondents working in the construction industry is shown as Figure 19. The correspondents working in the industry within 20 years form the majority of 75% and near one third of them (28.95%) are now 30-35 at the time they fill out the questionnaire. The education level of correspondents quite evenly distributed among three categories; around 35% below undergraduate, 44% undergraduate and 21% above undergraduate.

64% correspondents have got married and 31% are single while the remaining 5% are divorced. The correspondents are mainly male (77%) and the female correspondent only amounts to about 23%.

The above paragraphs show the frequency distribution of demographic details of the 39 respondents. Their relationships with organizational culture, job burnout and job satisfaction are going to be explored in section 6.1.3.

6.2.2 Organizational culture

Section 5.2.2 explains how the scores are computed and how the dominant cultural type identified. Figure 24 shows the frequencies distribution of the perception about existing types of organization cultures. About the existing culture, correspondents suggest that most of them are working in organisations adopting role culture followed by adopting power culture while one correspondent working in mixture of power and role culture. The remaining one correspondent work in task culture.

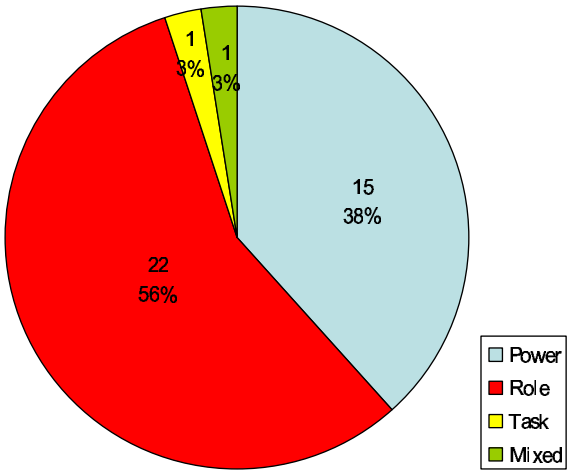


Figure 24 Frequency distribution by existing culture of organizations correspondents

Figure 25 shows the frequency distribution of the perception of respondents about the ideal culture. Most respondents (41%) desire task culture while 38% of them desire role culture and three of them desire the mixture of role and task culture. Only three and two correspondents desire power culture and person culture respectively.

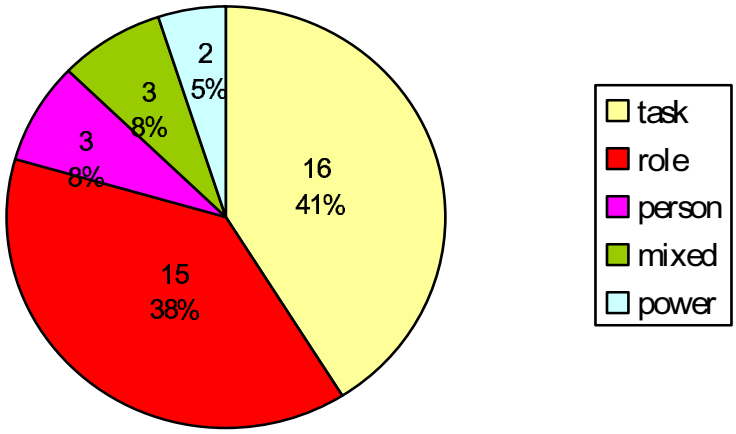


Figure 25 Frequency distribution by the ideal culture of correspondents

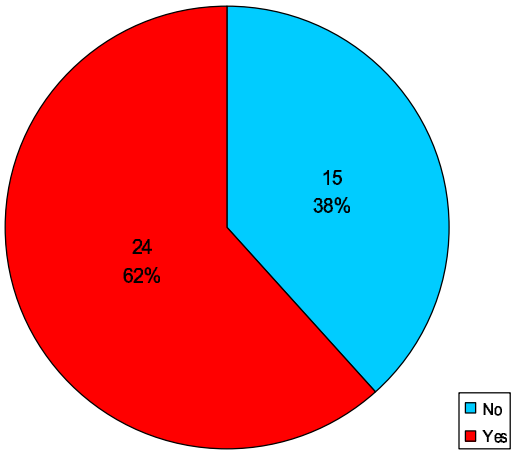


Figure 26 Frequency distribution of the occurrence of cultural type difference

Among 39 correspondents, 24 of them have the existence of cultural divergence representing only 38.46% correspondents have the same culture type when compared the existing organization culture they face and the ideal culture they preference.

However, it cannot simply be concluded that the culture divergence problem is very serious. The reason is that Handy (1995) suggests that understanding the type of existing and ideal cultures construction professional belong to should be the basic only but not the conclusion since construction professionals can have more than one

type of culture at the same time. The method of dominant type analysis limits the investigation about the actual situation of correspondents.

As a result, in order to examine the relationship between cultural divergence, job burnout and job satisfaction, no cultural type difference occurrence cannot simply be coded as 0 while culture type difference occurrence cannot simply be coded as 1 and then using Spearman Bivariate correlation test. Bignardi (1996) suggests quantifying the cultural divergence by calculating the rank difference between the existing and ideal culture. The total score is used to conduct Pearson correlation test during relationship analyses.

6.2.3. Job burnout

Job burnout does not have an absolute score representing whether the correspondents suffer from high level of burnout and Maslach et al (1996) suggests dividing the scores into 3 levels and be labeled as low, moderate and high job burnout. Instead, the score of each correspondent should be compared with the overall correspondent score whereas the overall score should be compared with the norms of other industries or other locations.

Table 15 shows the score range from this research and two other researches. One of them is the large-scale-research conducted by Maslach et al (1996) while another is the doctoral thesis conducted by Yip (2007). The findings from Yip (2007) is more

relevant to this research as the focus of it is similar to this research which focuses on the construction professionals in Hong Kong implying the same national culture, economic environment, more similar working condition.

Table 15 Comparison of burnout levels with previous studies

Job Burnout		Range of burnout experience		
		Low (lower third)	Average (middle third)	High (upper third)
Exhaustion	North American Sample (N=3727)	≤2.00	2.01-3.19	≥3.2
	Research of Yip (N=471)	≤2.23	2.24-4.00	≥4.01
	This research (N=39)	≤1.60	1.61-2.60	≥2.61
Cynicism	North American Sample (N=3727)	≤1.00	1.01-2.19	≥2.2
	Research of Yip (N=471)	≤1.99	2.00-3.20	≥3.21
	This research (N=39)	≤1.60	1.61-2.60	≥2.61
Professional Efficacy	North American Sample (N=3727)	≤4	4.01-4.99	≥5
	Research of Yip (N=471)	≤3.82	3.83-4.67	≥4.68
	This research (N=39)	≤2.70	2.71-3.33	≥3.34

Note: North American Sample (N=3727) (Maslach et al, 1996)
Research of Yip (N=471) (Yip, 2007)

It shows that the range of exhaustion is lower than North American sample and Yip sample representing a lower level of job burnout as exhaustion while the range of cynicism is higher than North American sample and Yip sample. For professional efficacy, the range in this research is lower than the two other pieces of research indicating a lower level of professional efficacy indicating a higher level of job burnout.

6.2.4 Job satisfaction

Job Satisfaction Survey (JSS) consists of nine elements and each element is comprised of four questions. The scores of the 36 questions can be summed up as a total to indicate if the correspondent has high level of job satisfaction.

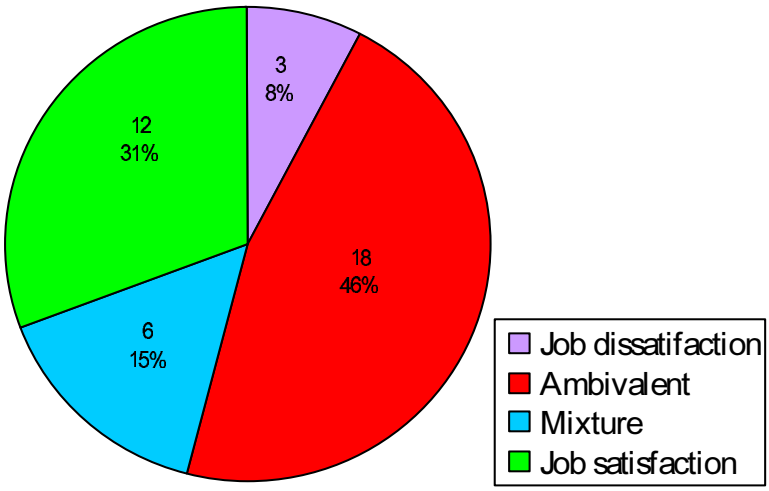


Figure 27 Frequency distribution by job satisfaction level

The figure above shows that a majority of 46% respondents have ambivalent level of job satisfaction meaning they neither suffer from job dissatisfaction nor job satisfaction. Meanwhile, 3 respondents suffer from job dissatisfaction while 12 suffer from job satisfaction and the remaining six stand in the middle of ambivalent and job satisfaction representing they might have job satisfaction sometimes.

The scores can also be used as a comparison with the norms of other industries and other places. It can give us some indications about the condition of job satisfaction in the Hong Kong construction industry although there are different

individual factors and situational factors affecting the results of different people located all over the world.

The comparison of job satisfaction findings in this research and the norms of American from different industries of private and public sector, such as education, manufacturing, medical, mental health, police, retail, social services provided by JSS inventor Specter (2008). The norms come from previous 136 studies and total sample size is 36380.

Table 16 Comparison of mean and standard deviation scores

Facet	Mean (Spector, 2008) N=36380	Standard Deviation (Spector, 2008) N=36380	Mean of this research (N=39)	Standard Deviation of this research (N=39)
Pay	12.3	2.4	14.8	3.1
Promotion	12.1	1.8	14.1	2.6
Supervision	18.8	1.7	15.0	4.9
Fringe benefits	14.6	2.1	16.4	3.0
Contingent rewards	13.8	1.8	15.3	2.4
Operating	13.5	2.0	13.2	2.4
Coworkers	17.9	1.4	17.7	3.6
Work nature	18.9	1.8	15.6	3.5
Communication	14.5	1.9	15.2	2.5
Total	138.0	21.6	137.0	18.4

Although there are variations among the nine aspects of job satisfaction in both

the norm provided by Spector (2008) and this research, the total mean scores are incidentally similar at around 138 which falls within the category of ambivalent which implies a normal level of job satisfaction. In all nine aspects, the standard deviation is higher in this research whereas the standard deviation of the total job satisfaction is lower than Spector (2008) norm. The findings provide that the variation of results from correspondents is higher in each aspect and it is lower in the total score meaning the correspondents' scores distribute more concentrated and evenly than the Spector norm.

6.2.5 Correlation analyses

The hypothesized relationship can be examined by analyzing their correlations. The selection of correlation adopted affects the accuracy of the analysis. The correlation can be divided into parametric and non-parametric test. Pearson belongs to parametric test while Spearman and Kendall belongs to the latter one. When compared the two non-parametric tests, Spearman is more well-known than Kendall.

Non-parametric test can be adopted to examine the correlation of variables which are categorical in nature, i.e. the results are classified and grouped into several categories. Therefore, Spearman correlation analysis is adopted in this research to analyze the relationship between those demographic variables, organizational cultural divergence, job burnout and job satisfaction as the demographic variables are to be analyzed among different target groups meanwhile Pearson correlation is used to test the relationship between organizational culture divergence, job burnout and job satisfaction.

(1) Relationship between demographic variables, cultural divergence, job burnout and job satisfaction

The table below analyzes the correlation between those demographic variables, organizational cultural divergence, job burnout and job satisfaction in order to examine whether they can affect the results of hypotheses within the context of the

Hong Kong construction industry.

Both years and age shows the significant positive relationship with culture divergence (0,1) whereas gender shows the negative significant relationship with culture divergence. Education shows significant positive relationship with the total culture divergence and significant negative relationship with the professional efficacy.

However, the Spearman correlation can only provides the first insight about the relationship of demographic variables with organizational culture divergence, job burnout and job satisfaction as it is only able to provide a general relationship analysis but not a significance analysis of demographic variables on independent variable and dependent variables.

Table 17 Spearman correlation analysis of demographic variables with cultural divergence, three elements of job burnout and total job satisfaction

Nonparametric Correlations

Correlations

			Culture divergence	Total divergence	Exhaustion	Cynicism	Efficacy	Total job satisfaction
Spearman's rho	Organization	Correlation	.069	-.167	.070	-.003	.059	-.028
		Sig. (2-	.676	.309	.670	.984	.723	.867
		N	39	39	39	39	39	39
	Occupation	Correlation	-.012	-.116	-.025	.001	.013	-.152
		Sig. (2-	.941	.482	.879	.993	.937	.355
		N	39	39	39	39	39	39
	years	Correlation	.409*	-.102	.119	.137	-.007	.109
		Sig. (2-	.012	.548	.482	.419	.965	.520
		N	37	37	37	37	37	37
	age	Correlation	.338*	-.145	.252	.153	.106	-.045
		Sig. (2-	.038	.387	.128	.360	.525	.787
		N	38	38	38	38	38	38
	education	Correlation	-.181	.322*	-.028	.056	-.335*	.077
		Sig. (2-	.269	.046	.868	.736	.037	.642
		N	39	39	39	39	39	39
	marry	Correlation	.050	-.171	.157	.225	.101	.040
		Sig. (2-	.762	.297	.341	.168	.541	.810
		N	39	39	39	39	39	39
	gender	Correlation	-.318*	.203	.105	.057	-.087	-.182
		Sig. (2-	.049	.215	.526	.729	.600	.268
		N	39	39	39	39	39	39

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

For examining the effects of demographic variables on organizational culture, job burnout and job satisfaction, ANOVA and t-test is conducted is conducted for demographic variables which have more than two groups whereas the t-test is used for variables which have two groups only; therefore, ANOVA is used for organization, occupation, years, age, education and martial status while t-test is used for gender difference. For gender, T-test is used to investigate whether there is significant result between female and male correspondents.

The following chart summarizes the results of ANOVA and t-test as follows (please refer to Appendix 5 and 6 for complete statistical results).

Table 18 Summary of significant effects caused by demographic variables

Dependent factor	Demographic variable	Significance	Mean comparison within the demographic variable
Cultural divergence (0,1)	Years	F (5, 31) = 5.418, p = .001	5-<10, 15-<20, 25 or abov (M = 1, SD = 0)
	Age	F (6, 31) = 2.956, p = .021	25-30, 40-45, above 55 (M = 1, SD = 0)
	Gender	t = 2.037, p = .049	Male (M = .70, SD = .466)
Total divergence	Occupation	F (6, 32) = 2.986, p = .0202	Engineer (M = 93.33, SD = 27.30)
	Years	F (5, 31) = 3.798, p = .008	5-<10 (M = 85.33, SD = 41.10)
	Age	F (6, 31) = 8.245, p = .000	25-30 (M = 109, SD = 4.24)
	Education	F (2, 36) = 7.397, p = .002	above (M = 84.50, SD = 24.97)
Exhaustion	Age	F (6, 31) = 3.926, p = .005	50-55 (M = 3.11, SD = .93)
	Education	F (2, 36) = 3.575, p = .038	below (M = 2.41, SD = 1.04)
Professional efficacy	Occupation	F (6, 32) = 4.672, p = .002	Finance (M = 5.17, SD = .94)
	Education	F (2, 36) = 3.400, p = .044	below (M = 4.00, SD = 1.32)
Total job satisfaction	Gender	t = 1.230, p = .226 Equality of Variances: F = 4.421, p = .042	Male (M = 139.43, SD = 15.86)

In Levene's Test for Equality of Variances, 'F' represents the variances and Sig. represents the significance of the differences. There are significant differences of the variances as Levene's tests are significant (i.e. the value of Sig. is smaller than .05). Levene's tests conducted in total cultural divergence, the three burnout elements (exhaustion, cynicism and professional efficacy) fulfill the null hypothesis that the variances of the groups (male and female) are the same. However, the significant difference is shown in total job satisfaction (Sig. .042) and reject the null hypothesis.

The t-test shows the significant difference in culture divergence (0,1) at .049 showing that male has significantly higher level of culture divergence. Although gender shows significant difference on total job satisfaction in equality of variances, the significance of the test is larger than 0.05 indicating that the value of variances are likely caused by chance. This contradicting result is worth discussing in the interview part.

(3) Relationship between organizational culture divergence and job burnout, organizational culture and job satisfaction

The t-test is conducted for examining whether the organizational culture divergence (0,1) exists or not can have significant effects on the results of job burnout and job satisfaction. The t-test suggests that both exhaustion and cynicism have significance differences caused by the organizational culture divergence (0,1), i.e. when the cultural divergence exists, there are significantly higher level of exhaustion and cynicism. (Please refer to appendix 7). However, when the magnitude of organizational culture divergence is quantified, there are more detailed results can be found and they are shown as follows.

A. Cultural divergence and job burnout

The relationship between cultural divergence (caused by the contrast between organization culture and employees' ideal culture) and job burnout can be analyzed by

using two-tailed Pearson correlation in two ways as it cannot be determined that only cultural divergence can affect the level of job burnout but not the vice versa.

Table 19 Pearson correlation analysis between cultural divergence and job burnout

Correlations

		Exhaustion	Cynicism	Professional Efficacy
boss	Pearson	.009	.335*	-.438**
	Sig. (2-tailed)	.958	.037	.005
	N	39	39	39
subordinate	Pearson	-.125	-.009	.018
	Sig. (2-tailed)	.450	.957	.913
priority	Pearson	.121	-.013	.108
	Sig. (2-tailed)	.465	.936	.511
do well	Pearson	-.181	.050	-.241
	Sig. (2-tailed)	.271	.762	.139
treat individual	Pearson	-.083	-.069	-.104
	Sig. (2-tailed)	.615	.676	.530
ways of being influenced	Pearson	.007	-.193	.027
	Sig. (2-tailed)	.969	.239	.872
legitimate control	Pearson	-.004	.132	-.189
	Sig. (2-tailed)	.981	.423	.250
task basis	Pearson	-.019	.114	.014
	Sig. (2-tailed)	.907	.490	.933
how work performed	Pearson	.001	.125	-.038
	Sig. (2-tailed)	.996	.448	.817
work together	Pearson	-.153	-.098	-.252
	Sig. (2-tailed)	.352	.552	.122
competition	Pearson	-.126	.181	-.230
	Sig. (2-tailed)	.446	.271	.159
conflict	Pearson	-.295	-.313	-.144
	Sig. (2-tailed)	.069	.052	.381
decisions	Pearson	-.347*	-.288	-.101
	Sig. (2-tailed)	.030	.075	.543
structure	Pearson	-.265	-.187	-.101
	Sig. (2-tailed)	.104	.254	.541
environment response	Pearson	-.185	.026	-.202
	Sig. (2-tailed)	.261	.875	.219
Total cultural divergence	Pearson	-.171	-.021	-.195
	Sig. (2-tailed)	.299	.897	.234

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

It is found that the perception of boss (r=.335, p=.037) has significance positive relationship with cynicism at the level 0.05 while boss also has significance negative relationship with professional efficacy even at the 0.01 level (r=-.438, p=0.005). The perception difference on decision making has significant negative relationship with

exhaustion which is opposite to the hypothesized relationship at the 0.05 level (r=-.347, p=.030).

Except the elements highlighted above, the remaining elements have insignificant (either positive or negative) relationships with the three elements of job burnout. Those relationships cannot be used to explore the validity of hypothesized as they are happen by chance and affected by the small sample size in this research, i.e. there can be a different result next time. Therefore, the correlation provides that boss and decisions are the most important elements for further investigation.

Secondly, the divergence scores of each element is summed up and become the total divergence score and its relationship with exhaustion, cynicism and professional efficacy are examined. However, the results do not support those hypothesized relationships between total divergence scores and the three elements of job burnout as all the three elements of job burnout show insignificant relationship with the total cultural divergence representing the increase of total cultural divergence score does not necessarily affect the scores of job burnout elements.

B. Correlation between cultural divergence and job satisfaction

The relationship of the fifteen elements of cultural divergence and job satisfaction is measured. It is hypothesized that cultural divergence elements have significant negative relationship with job satisfaction (9 elements). The result shows

that only a small proportion has significant negative relationship as hypothesized and it can be summarized as the below chart:

Table 20 Pearson correlation between cultural divergence and job satisfaction

Correlations

		Pay	Promotion	Supervision	Fringe	Contingent	Operating	Coworkers	Work nature	Communi-cation	Total job satisfaction
boss	Pearson	-.178	-.067	.171	-.016	-.070	-.251	-.065	-.312	.160	-.089
	Sig. (2-tailed)	.278	.685	.298	.922	.671	.123	.695	.054	.330	.589
	N	39	39	39	39	39	39	39	39	39	39
subordinate	Pearson	-.054	-.306	-.040	.138	.066	-.347*	-.146	-.349*	-.150	-.193
	Sig. (2-tailed)	.742	.058	.810	.401	.690	.030	.374	.029	.362	.238
priority	Pearson	.141	.093	-.070	-.069	-.065	.222	-.049	-.109	-.057	-.010
	Sig. (2-tailed)	.390	.573	.674	.677	.695	.174	.766	.507	.731	.953
do well	Pearson	.196	-.182	.490**	-.046	.175	.281	.169	.039	.342*	.276
	Sig. (2-tailed)	.233	.268	.002	.780	.286	.083	.304	.812	.033	.089
treat individual	Pearson	.124	-.422**	-.085	-.212	-.062	.084	-.075	.094	.182	-.066
	Sig. (2-tailed)	.450	.007	.608	.195	.706	.610	.651	.568	.267	.688
being inflenced	Pearson	.119	-.410**	-.301	-.143	.084	.316	-.239	.025	-.112	-.147
	Sig. (2-tailed)	.470	.010	.063	.385	.611	.050	.143	.881	.496	.370
legitimate control	Pearson	-.258	-.294	-.370*	-.278	-.103	-.172	-.532**	-.298	-.203	-.455**
	Sig. (2-tailed)	.113	.070	.020	.086	.533	.294	.000	.065	.215	.004
task basis	Pearson	.092	-.316*	-.225	-.072	.108	-.068	-.319*	-.240	-.124	-.222
	Sig. (2-tailed)	.576	.050	.169	.665	.512	.679	.048	.141	.452	.175
how work performed	Pearson	-.173	-.549**	-.273	-.251	-.062	-.115	-.400*	-.234	-.067	-.377*
	Sig. (2-tailed)	.292	.000	.093	.123	.708	.484	.012	.152	.687	.018
work together	Pearson	.037	-.308	.025	-.239	.022	.038	-.139	.007	.133	-.071
	Sig. (2-tailed)	.825	.056	.879	.143	.893	.818	.398	.966	.420	.667
competition	Pearson	-.293	.011	.004	-.342*	-.027	.173	-.312	.011	-.039	-.148
	Sig. (2-tailed)	.070	.948	.979	.033	.868	.292	.053	.949	.816	.367
conflict	Pearson	.029	-.039	.236	.117	.119	.172	.072	.078	.151	.169
	Sig. (2-tailed)	.860	.816	.148	.478	.471	.294	.662	.637	.358	.303
decisions	Pearson	-.065	-.263	-.078	.218	.175	-.221	-.146	.006	.326*	-.024
	Sig. (2-tailed)	.692	.106	.637	.182	.286	.176	.376	.969	.043	.887
structure	Pearson	-.099	-.531**	.005	.064	-.029	-.158	-.066	-.114	.275	-.103
	Sig. (2-tailed)	.549	.001	.974	.700	.863	.338	.689	.490	.091	.533
environment response	Pearson	-.104	-.407*	-.014	-.305	.003	.046	-.192	.102	.114	-.127
	Sig. (2-tailed)	.527	.010	.931	.059	.985	.781	.241	.536	.490	.441
Total cultural divergence	Pearson	-.052	-.433**	-.065	-.153	.031	-.012	-.261	-.140	.095	-.176
	Sig. (2-tailed)	.754	.006	.692	.354	.851	.940	.109	.395	.563	.283

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

From the above, it is found that promotion is the element which can be viewed as has the most hypothesized relationship with cultural divergence elements. It is

significant negatively correlated with six elements of cultural divergence, namely treat individual (r=-.422, p=.007), influenced (r=-.410, p=0.010), task basis (r=-.316, p=.050), work performed (r=-.549, p=0), structure (r=-.531, p=.001) and environment response (r=-.407, p=.010). It shows that task basis and environment response have significant negative relationship with promotion at the 0.05 level while the remaining have even more significant relationship at the 0.01 level and the Sig. for work performed and promotion is even 0 representing the tight relationship between them, i.e. when the divergence of work performed increased by 1, the satisfaction of promotion will be decreased by 0.549.

Another element of job satisfaction – coworkers is negatively correlated with both legitimate control (r=-.532, p=0), task basis (r=-.319, p=.048) and how work is performed (r=-.400, p=.012). Task basis and how work is performed are shown to have significant negative relationship with coworkers at the 0.05 level while legitimate control is shown to have significant negative relationship with coworkers at the 0.01 level.

Operating (r=-.347, p=.030) and work nature (r=-.349, p=.029) have significant negative relationship with subordinate at the 0.05 level whereas supervision (r=-.370, p=.020) and fringe (r=-.342, p=.033) have significant negative relationship with legitimate control and competition at the 0.05 level respectively.

There are also some interesting findings from the correlation analysis. Communication have significant positive relationship at the 0.05 level with do well (r=.342, p=.033) and decisions (r=.326, p=.043) which is contradict to the hypothesized relationship. Do well also causes another contradiction with supervision that they (r=.490, p=.002) have significant positive relationship even at the 0.01 level.

From the table above, the scores of job satisfaction from nine aspects are added as a total job satisfaction representing the total level of job satisfaction of construction professionals in Hong Kong. The correlations of the 15 cultural divergence elements with the total job satisfaction level are examined. Only two of them (out of 9), namely legitimate control (r=-.455, p=.004) and work performed (r=-.377, p=.018) show significant negative relationship with total job satisfaction at the 0.01 level and 0.05 level respectively.

The relationship of the total cultural divergence scores and the 9 job satisfaction elements then is to be examined. The total cultural divergence scores are shown only having significant negative relationship with promotion (r=-.433, p=.006) at the 0.01 level.

When the correlation between total cultural divergence and total job satisfaction is examined, it is discovered although the total cultural divergence has negative relationship with the total job satisfaction as suggested by the hypothesis, they are

insignificantly correlated as p is larger than 0.05 and indicating that it is happen by chance.

(3) Relationship between job burnout and job satisfaction

Table 21 Correlations between job burnout and job satisfaction

Correlations

		Exhaustion	Cynicism	Professional Efficacy
Pay	Pearson Correlation	-.157	-.435**	.227
	Sig. (2-tailed)	.340	.006	.165
	N	39	39	39
Promotion	Pearson Correlation	-.071	-.160	.058
	Sig. (2-tailed)	.667	.331	.726
Supervision	Pearson Correlation	-.527**	-.339*	-.288
	Sig. (2-tailed)	.001	.035	.076
Fringe	Pearson Correlation	-.241	-.437**	.239
	Sig. (2-tailed)	.140	.005	.143
Contingent	Pearson Correlation	-.257	-.241	.299
	Sig. (2-tailed)	.115	.139	.064
Operating	Pearson Correlation	.068	-.102	-.012
	Sig. (2-tailed)	.679	.538	.945
Coworkers	Pearson Correlation	-.404*	-.463**	.017
	Sig. (2-tailed)	.011	.003	.918
Work nature	Pearson Correlation	-.651**	-.608**	-.076
	Sig. (2-tailed)	.000	.000	.647
communication	Pearson Correlation	-.319*	-.471**	-.069
	Sig. (2-tailed)	.048	.003	.675
Total job satisfaction	Pearson Correlation	-.486**	-.573**	.026
	Sig. (2-tailed)	.002	.000	.874

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between job burnout and job satisfaction is examined by

adopting Pearson Bivariate correlation. Exhaustion is hypothesized to have significant negative relationship with job satisfaction. From the chart above, exhaustion is shown to have negative relationship with all elements of job satisfaction except operating which has insignificant positive relationship with exhaustion. Among the eight components, coworker (r=-.404, p=0.011) and communication (r=-.319, p=0.048) has significant relationship with exhaustion at the 0.05 level (i.e. less than 5% happen by chance) while supervision (r=-.527, p=0.001) and work nature (r=-.651, p=0) have significant relationship with exhaustion at 0.01 level.

The second element of burnout (cynicism) is hypothesized to have significant negative relationship with job satisfaction. All of the 9 elements of job satisfaction are shown to have negative relationship with cynicism. Among them, supervision (r=-.339, p=0.035) has significant negative correlation with cynicism at the 0.05 level and pay (r=-.435, p=0.006), fringe (r=-.437, p=0.005), coworkers (r=-.463, p=0.003), work nature and communication (r=-.471, p=0.003) are significant negatively related to cynicism at 0.01. Work nature (r=-.608, p=0) establish the significant negative relationship with cynicism that it is not happen by chance.

Professional efficacy, the third element of burnout, is hypothesized to have significant positive relationship with job satisfaction, i.e. high professional efficacy (indicating low level of burnout) should positively related to high level of job

satisfaction. Among 9 elements, all of them have neither significant positive relationship with professional efficacy as hypothesized nor negative relationship opposite to it.

When the relationships between the three elements of job burnout and total job satisfaction scores are examined, it is found that those relationships can be supported by the hypotheses to a large extent. Both exhaustion (r=-.486, p=.002) and cynicism (r=-.573, p=0) show significant negative relationship with total job satisfaction at the 0.01 level while professional efficacy shows only the same hypothesized relationship (insignificantly). It shows that the significant negative relationship is established especially in cynicism and the total job satisfaction.

6.3 Qualitative affirmation of quantitative results

Two post-survey interviews were conducted to understand the views of construction professionals about the current condition on this issue and their opinions on the quantitative results. Five questions were asked during the two interviews as follows:

1. Can you comment on the questionnaire result? Do you agree to the questionnaire result? Why?
2. Do you have any ideas on why certain cultural divergence aspects are

significant correlated to certain aspects of job burnout and job satisfaction?

3. Do you have any opinion about the relationship between organizational cultures, job burnout and job satisfaction?
4. Do you have any comments on the current situation of job burnout and job satisfaction in the Hong Kong construction industry?
5. Do you have any additional comments?

6.3.1 Current phenomenon

(1) Organizational culture

The interviewees first expressed their views on organizational culture. Both of them thought that the organizational culture divergence (conflict) exists in various industries and it is not the special problem to the construction industry. They both agree that the role-culture to be the dominant culture in the Hong Kong construction industry as they pointed out that although their work is project-based, the construction professionals are employed as employees within organizations; so they are 'controlled' by their organizations.

One interviewee shared about the personal experience of cultural conflict about suffering about the conflict during the change of job to another organization. He/she found that it is very difficult to adapt the organizational culture as people have already

used to adapt the organizational culture of the previous organizations. Time is essential for people to adapt the changes of organizational culture and handle the conflict between the new organizational culture and their own preferred culture. Another interviewee suggested that the ability of resolving the organizational culture conflict is determined by the personality and characteristics of people. People who are outgoing may solve the conflict better as they are more willing to share their opinions.

(2) Job burnout

For interviewees, the job burnout in the construction industry mainly comes from their work. They both thought that the construction industry, as a whole, is not the hardest industry when compared to others. They gave out some examples of industry that are 'hard' to them, for instance, they know their friends need to work overnight in accounting firms during the closing of financial year.

One interviewee suggests that they feel they are more 'burnout' during the downturn of the construction industry. The downturn of the construction industry is different from the economic downturn of Hong Kong. He/She thought that they may even have many job opportunities during the economic downturn as government would implement many infrastructure projects. He/She reviewed his/her previous experience that he/she received a notification letter from belonging company that if it cannot tender for new projects, he/she will be fired. He/She felt that he/she was more

pressurized at that time. It is because people even need to worry about their career. Another interviewee expressed that this kind of influence is less in government department as the government job has long been ‘iron rice bowl’; so the employees in government department do not need worry for being fired.

(3) Job satisfaction

Both interviewees suggested that job satisfaction comes from their work. One of them thought that job satisfaction is even a more ideal concept to employees than job burnout. It is because people who have low job burnout not represent them having high level of job satisfaction. To him/her, the job satisfaction means the success in job satisfaction while the job burnout means the failure in job satisfaction. He/She suggested that not failing in the job does not mean that success is achieved.

6.3.2 Relationships among demographic variables, organizational culture, job burnout and job satisfaction

The findings are explained to them first and their comment was then invited. The two interviewees have different comments on those relationships. They think that the significant effect of occupation on total cultural divergence may be actually caused by the sampling differences as he/she thought that no particular occupation would have special result of organizational culture divergence as the perception organizational culture mainly depends on the employees themselves.

Meanwhile, both of them pointed out several items that may also due to the random sampling differences. They thought that age do not actually have significant effect on culture divergence (0,1), total divergence and exhaustion as they are normally affected by the employees themselves. In addition, years and gender do not necessarily cause significant effects on the culture divergence (0,1).

On the contrary, one of them agreed that education level can have effect on professional efficacy. He/She agreed to the interesting result of the significant effect on exhaustion and professional efficacy. For exhaustion, above undergraduate and below undergraduate have higher level of it as above undergraduate normally involved in management role while the below undergraduate has higher level of exhaustion as they need to do what their supervisors asked to do. Interestingly, both above undergraduate and below undergraduate has higher professional efficacy than undergraduate respondents as the rationale is basically the same to explain the exhaustion situation. For above undergraduate, their efficacy can be obtained from managing the company while they can have efficacy when they have done their jobs well. For undergraduate, on one hand, they have some expectations on participating the organizations; on the other hand, they only able to do their work well and also assign the tasks to those people who have lower positions. As a result, they have lower professional efficacy as there is distance between their expectation and reality.

They were then shown the result that organization has significant effect on professional efficacy. The financial employees have the highest level of professional efficacy and the land surveyors have the second highest level of professional efficacy. Both of them pointed out that the research result can partially reveal that people working in government departments generally have higher level of professional efficacy as one of the interviewees points out that the government also has the highest mean of professional efficacy among all types of organizations.

The interviewees think that people working in government departments have a feeling of privilege when they face the developers who need to tender the projects from the government and their status is much higher when they get along with contractors as their role is the client and they can give out suitable instructions for projects they in charge.

They also agreed to the effect of the gender that female normally have lower job satisfaction as despite the fact that they have similar working ability with male, they often need to handle the conflict between their work and family. They suggested that although male can also have work family conflict, female mainly suffers from it as the normal social perception is that female should bear the role of looking after the family. This situation is already less serious than 70-80's. They recalled that almost very few female would enter the construction industry as they and their family normally

thought that female should do something that are more tender.

6.3.3 Relationships between organizational culture and job burnout

Both of them confirm the general relationships between organizational culture and job burnout but one of them expressed that other factors, such as working condition, can also affect the job burnout; therefore, cultural divergence can has significant effect on employees after holding other factors contrast, such as actual working condition.

They both thought that the boss can be the most essential factor affecting cynicism and professional efficacy. For large companies, what employees face is not the “big boss” of the company, instead it is the supervisor who employees view that as their “boss”. To them, the boss can imply many things to them despite the fact that the question of boss is mainly focus about what a good boss should be. The boss can affect the relationships of employees with supervisor and the self-esteem of employees as the boss often gives comments on their work.

The interviewees said that they only partly agree on the contradicting results between the cultural divergence of decisions and exhaustion. On one hand, the divergence of the decisions perception may cause the actual workload be lower than expected; so their exhaustion is significantly be reduced. On the other hand, the divergence of the decisions perception can also cause the higher exhaustion as the

employees may think that other colleagues should be responsible for the task but not themselves.

6.3.4 Relationships between organizational culture and job satisfaction

Both of them agreed to the overall significant relationship between organizational culture divergence and job satisfaction. However, they have different when the interviewees are shown the results about the detailed relationship between organizational culture and job satisfaction. One of them suggested that what aspects of organizational culture cause significant relationship with certain aspects of job satisfaction cannot represent the whole picture of the Hong Kong construction industry.

However, he/she agrees that several cultural divergences have significant relationship with promotion as he/she thought that the cultural divergence mainly affects the emotional feelings of employees but not actual working condition; so cultural divergences do not much affect the operating and job nature. In addition, the satisfaction of pay depends on the actual amount of salary.

The cultural divergences that relate to company policies may affect their satisfaction of promotion opportunities in their organizations as the divergences make them worry themselves not the most suitable talented in the companies. They also pointed out that the contradicting results between the do well, supervision and

communication, decisions and communications can reveal the reality of one side only as the culture divergence of do well and decisions can adversely the satisfaction of supervision and communication although both of them can be used as a positive means of resolving the culture divergences.

6.3.5. Relationships between job burnout and job satisfaction

One interviewee suggested that there is tighter relationship between job burnout and job satisfaction. The reason is that job burnout and job satisfaction can each by affected by other factors (not solely affected by organizational culture) while the job burnout and job satisfaction is the two similar kind of emotional feelings although in opposite feelings. Both of them agreed to the significant hypothesized relationship of total job satisfaction with both exhaustion and cynicism.

They were invited to explain the reasons why professional efficacy has any significant relationships with any of job satisfaction. They expressed that they think professional efficacy is mainly determined by self-esteem of construction professionals although the job satisfaction can have effects on it but it is less sufficient than the views and personalities of construction professionals themselves.

They were asked the reasons why pay and fringe only have significant relationship with cynicism but not exhaustion. One interviewee explains that the exhaustion is ‘feels being used up all the energy from the work and pay and fringe

refers to the amount of money employees receive; so pay and fringe do not have significant relationship with exhaustion as it does not affect the actual workload. It is quite surprising for interviewees that the operating does not have any significant relationships with exhaustion, cynicism and professional efficacy as they thought that the operating, such as the amount of required procedures, can at least affect the workload of employees and therefore affect the exhaustion of them.

For the remaining factors, both interviewees generally agree on the significant relationships of them with job burnout.

6.4 Summary of Chapter 6

In this chapter, SPSS is used and the quantitative results are analyzed. At the beginning, factor analysis is conducted to examine the validity of those variables to see whether the model should be amended for better analysis. However, due to the small sample size in this research and the model adopts well known instruments that are well recognized; so the original form of research model is used for analysis. The post-survey interviews are also included to affirm the quantitative results of questionnaire survey. The interviewees give some relevant feedbacks relating to the issues using their experience and knowledge of the Hong Kong construction industry.

Hypothesis 1 examines the relationship between organizational culture

divergence and job burnout. Only sub-hypothesis 1.1 is verified among the 15 sub-hypotheses and sub-hypothesis 1.13 is rejected. Hypothesis 2 examines the relationship between organizational culture divergence and job satisfaction. Only sub-hypothesis 2.7 and 2.9 are verified. Hypothesis 3 is verified as there is significant negative relationship between exhaustion, cynicism and total job satisfaction. For hypothesis 1 – 3, the relationships between elements of organizational culture, job burnout and job satisfaction are further examined for providing insight about their in-depth correlations among elements. Those results are discussed in Chapter 7.

Chapter 7 Discussion and Conclusion

In this chapter, the findings are discussed by relating them to previous studies conducted by various scholars and the views of post survey interviewees about the current situation of this issue. The chapter can be divided into five parts. The first part is to provide insights about the current phenomenon of organizational culture divergence, job burnout and job satisfaction of Hong Kong construction professionals. The second part is to examine the relationship between demographic variables with organizational culture, job burnout and job satisfaction while the third part is to discuss the detailed relationship between organizational culture, job burnout and job satisfaction. Then, the fourth part is to identify the limitations in this research and the possibility of conducting relevant researches in future. Finally, a valid conclusion is drawn to explain how the research has fulfilled its aim and objectives.

7.1 The current phenomenon

7.1.1 Organizational culture

Compared with other previous studies, this research has similar results that culture type difference occurs in both existing culture and ideal culture of correspondents. The cultural divergence between existing culture preferred culture is common scenery among various occupations and locations. Despite the fact that each

finding has more or less some variances with others, they form a common picture about the cultural divergence. The common findings are that existing culture is mostly the power-oriented whereas the preferred culture is mostly the task-oriented. The example of variance is that for the preferred culture of Estonia is the mixture of task-oriented and person-oriented (Roots, 2003).

By dividing the four types of culture into two parts, the existing culture mostly belongs to the first end (power-oriented and role-oriented) whereas the preferred culture belongs to the second part (task-oriented and role-oriented). The researches conducted by Bourantas et al (1990), Bignardi (1996), Roots (2003) and Cheung and Rowlinson (2005) support this generalization. The results of this research also prove this as the dominant existing culture for construction professionals is role meaning formal and rational system in organizations while the dominant preferred culture is task meaning the expert groups focusing on task (Handy, 1995).

Employees want to have task culture instead of person culture as Lingard and Francis (2004) suggest that the construction industry is project-based and the construction industry is well-known to be a demanding working environment (Lingard, 2000). As a result, employees, such as surveyors or engineers, want to form into project teams for construction projects. It is always the practice of construction professionals theoretically. Construction professionals, they were taught to form

project teams in their university lectures. The formation of project teams is especially a common thinking during the pre-construction stage; however, construction professionals often ignore the reality of being employed by construction organizations. Construction projects and construction professionals are profit-oriented; therefore, it is unrealistic for construction professionals to hope for person culture because of the reality; instead, they hope for task culture.

The phenomenon of the second preferred culture is role (different from the generalization) can be supported by the previous studies about occupational characteristics of the construction industry. In construction organizations, role is the dominant existing organizational culture can be explained by Cheung and Rowlinson (2005) that the organizations exist even after projects are finished. It may because of higher transaction cost, more procedures would result if the whole employing procedures for each new project and the magnitude of totally new cooperation is not required at least within construction organizations.

Therefore, although cooperation with different outside parties are required for each project (Oney-Yazic et al., 2007), the role culture is adopt to keep the whole construction organizations. Due to the reality constraint of person culture, construction professionals would rather choose the role culture as the second preferred culture.

The result about the dominant organizational culture complies with the concept of no best-fit approach that task culture cannot be determined as what construction organizations should use as employees have different preferred culture type, such as some of them would like to have role culture, despite the fact that most of them prefer task culture. It is because one type of organizational culture may be suitable for certain employees only (Arogyaswamy and Byles, 1987). The reveal of organizational culture type does not be used to encourage the organization to change the dominant existing organizational culture to the dominant preferred organizational culture. It is because Hofstede et al (1990) suggest that organizational culture is very difficult to be changed. This research is to provide a general insight about the existence of organizational culture conflict in the Hong Kong construction industry.

7.1.2 Job burnout

The results of the three elements of job burnout show differences with Maslach et al (1996) and Yip (2007). For example, the scores of both exhaustion and professional efficacy is the lowest among the three researches while the scores of cynicism is located in the middle among them.

The result difference does not actually reflect any important issues as there are national and occupational differences of correspondents; therefore, whether a correspondent suffer from high burnout depends on his categories of scores, whether

they fall into low third, middle third and upper third; for instance, if all of his three scores are within the range of low third, then he suffers from low level of exhaustion, cynicism but also low level of professional efficacy (causing high level of job burnout) (Maslach et al, 1996).

When compared to Yip (2007), despite the fact that there are different scores due to sampling differences, the similar conclusions could be drawn that cynicism should be paid more attention to it when compared to exhaustion and professional efficacy. It is because in near one-third correspondents suffer from high level of cynicism whereas only around one-ten and one-four respondents suffer from high level of exhaustion and low level of professional efficacy respectively.

The high level of cynicism can be supported by the fragmented features of the construction industry discussed by various scholars. They suggest that participants in construction project need to cooperate with other parties, such as employees of main contractor need to cooperate with architect, consultant, government officials, engineers, sub-contractors and this scale of cooperation is even enlarged in multinational projects caused by globalization, implying the interacting working environment for Hong Kong construction professionals (Oney-Yazic et al., 2007, Nummelin, et al., 2005 and Phua and Rowlinson, 2004b). People easily suffer from cynicism if they have difficulties in cooperation with other people involved in

construction projects. Cynicism can be caused by the different cultural perception on cooperation (individualism v. collectivism) and it may affect the project success (Phua and Rowlinson, 2003).

The difference between Yip (2007) and this research is the result of exhaustion and professional efficacy that less proportion of high exhaustion and more proportion of low professional efficacy. The different exhaustion and professional efficacy phenomenon can be explained by correspondents overcoming different levels of relevant factors affecting job burnout, such as different levels of workload, etc. Post survey interview suggests another reason – sampling differences that correspondents from different targets groups affect the result of exhaustion and professional exhaustion. This issue is explored in section 7.2.1 – the relationships between demographic variables.

7.1.3 Job satisfaction

Unlike job burnout, it is easily to determine if a correspondent has job satisfaction as the absolution scoring approach is adopted (Spector, 2008). More than half of the correspondents suffer from ambivalent job satisfaction and job satisfaction. It reveals the reality that construction professionals do not have satisfactory level of job satisfaction.

When compared it to the samples mean, the score for the total job satisfaction is

very similar. However, supervision and work nature are much lower than the samples mean whereas the scores of total job satisfaction is almost the same. On the contrary, the job satisfaction of salary, promotion, fringe and contingent is higher than the norm provided by Spector (2008).

It is discovered that the job satisfaction which are relate to monetary terms is higher in this research. Due to the limited number of researches relating the job satisfaction of Hong Kong construction professionals, it is hardly to compare the mean scores to others. The situation can be explained by the characteristics of respondents that they are all professionals in the construction industry; therefore, their salaries are more satisfactory as their salaries are more stable than the lower level of construction industry, such as construction workers on site. Therefore, the scores in those factors are higher than the sample means provided by Spector (2008). The standard deviation is higher than Spector (2008) samples mean due to the small sample size of this research (N=39).

7.2 The relationships between demographic variables, organizational culture, job burnout and job satisfaction

7.2.1 The relationships between demographic variables and organizational culture

From ANOVA, it reveals that years, age and gender can cause significant relationships with culture divergence (0,1). The significance of them are doubted by the two interviewees in post survey interview.

When the magnitude of organizational culture is quantified, it shows that organization, occupation, age and education can have significant relationship with organizational culture. By comparing the means of the target groups of each demographic variable, engineer (among the groups of occupation), 25-30 (age) and above undergraduate (education level) have the highest scores of organizational culture divergence. Although the general explanation in section 7.1.1. can be used to explain the cultural conflict, the interviewees point out that this significant result may due to the small number of sample size in this research.

However, the previous studies can be used to explain why respondents aged 25-30 and work for 5 to less than 10 years have higher scores of organizational culture divergence. It is because they have already worked for the industry for some years and they start to know well about the culture of existing construction organizations and

they start to discover the clear conflict between their existing culture and their preferred culture; for people who are much older, they have less cultural divergence because they may try to work for different organizations; so their preferred culture would change from their initial one and they would have higher adaptability of existing culture. It is similar rationale with why people working for 3 to 5 years suffer higher burnout but age has overall negative relationship and positive relationship with job burnout and job satisfaction respectively (Schaeffer, 1982 and Wofford, 2003).

The reasons why people who are above undergraduate has higher level of culture divergence can be explained by Hofstede et al (1990) that people receive higher education acquire deeper cultural values from school; so cultural divergence is higher for them when they work in construction organizations as what they face is totally different from what they were taught in so many years in school.

7.2.2 The relationships between demographic variables and job burnout

It is found that not all demographic variables have significant hypothesized relationship with job burnout. Nevertheless, those demographic variables that have significant hypothesized relationship can be supported by the previous studies. ANOVA suggests the age can cause significant effect on exhaustion and Spearman correlation proves the positive significant relationship. However, this relationship is contradictory to the previous studies conducted by Wofford (2003) that when the age

increases, the job burnout decreases and job satisfaction increases. The reason is that age can be viewed as a combined factors of other demographic variables, such as marital status and years entering into the industries; people suffer higher level of burnout when they get older as the expectation from their performance is higher as they should be more experienced and they also need to face other sources of pressure, such as family and financial (as they may become the financial support of the whole family, including their retired parents and their children). Therefore, it can be explained why Hong Kong construction professionals aged 50-55 suffer the highest level of job burnout.

The interesting phenomenon that undergraduate respondents suffer from lower level of job burnout than below undergraduate and above undergraduate can be explained by the amount of daily work they need to do. For example, the respondents from above undergraduate may work as management level of the companies while the respondents from below undergraduate may work as the bottom hierarchy of subordinate level. The previous may need to make many important decisions while the latter one may need to do much daily work. For undergraduate level, their position is lower than above undergraduate but higher than below undergraduate; so their workload can be much less than the other two categories.

7.2.3 The relationships between demographic variables and job satisfaction

From t-test and ANOVA, only gender shows significantly results, i.e. male has higher job satisfaction than female. Although few studies find that there is no significant difference between male and female, its result still complies with previous studies.

Those studies each provide arguments from various perspectives forming a comprehensive explanation of female suffering from lower job satisfaction. The construction industry nowadays is still dominated by male (Bowen and Cattell, 2008). It may because people may think the work in the construction industry requires sufficient energy and hard work. The interviewees suggest that although stereotype thinking is less serious in Hong Kong nowadays, people still think that female should enter other industries instead of the construction industry. However, this situation will soon be changed as more female start participating in this industry.

In addition to greater barrier of entry for female, their conflicting roles of family and work, such as taking care of family and working at the same time, causes female to have normally lower job satisfaction in the construction industry and it is also found that WLB, WFC and support from companies can be mediating factors of job satisfaction level of female respondents (Davidson and Burke, 1994, Ely, 1994, Fielden, 2001). Female having low job satisfaction does not only exist in Hong Kong

but also complies with the findings of Bowen and Cattell (2008) about the job satisfaction of QS in South Africa.

7.3 The relationships between organizational culture, job burnout and job satisfaction

The aim of this research is to identify the relationships between organizational culture divergence and job burnout and job satisfaction. All of these relationships are two-tailed in nature as we cannot exclude the possibility of variables affecting each other, i.e. job burnout can affect job satisfaction and affected by job satisfaction at the same time.

7.3.1 The relationships between organizational culture and job burnout

The t-test suggests that organizational culture divergence has significant effect on exhaustion, cynicism but not professional efficacy, i.e. there is higher level of exhaustion and cynicism when employees have cultural divergence. The relationship of them can be explained by previous studies. Various scholars have suggested the significance of organizational culture as it can cause many effects on both organizations and individuals. The job burnout relates to the effects of organizational culture to individuals and indirect effects to organizations as the suffered employees cause impact on organizations they work for. For instance, Thomsen et al (1999) and

Kleinman et al (2002) both state the organizational culture can affect the job burnout level of employees both positively and adversely.

The phenomenon of professional efficacy can be explained by Maslach et al. (1997) that professional efficacy is independent of exhaustion and cynicism and the correlation of it with exhaustion and cynicism is low; so it cannot be assumed that it to have totally opposite results from exhaustion and cynicism. Schaufeli and Salanova (2007) also suggest the possibility of chancing professional efficacy (negatively to job burnout) to professional inefficacy (positive to exhaustion, cynicism and job burnout) so as to increasing the correlation of the result.

When organizational culture divergence is quantified and examined, the relationship between organizational culture and job burnout is not as significant as the previous studies mentioned.

Among 15 organizational culture elements, only boss has significant relationship with cynicism and professional efficacy. “boss” refers to the characteristics of a good boss. It can be explained by both post survey interviews and previous studies conducted by various scholars. ‘Boss’ can be interpreted as the supervisor of employees and such relationships can be supported by the concept of social contacts suggested by Leiter (1988) and Leiter and Maslach (1988).

It is because although the characteristics of a good boss do not necessarily lead to

unrealistic workload for enhancing exhaustion of employees as there are often guidelines for the work of subordinate, such as subordinate should work over time under certain circumstances. However, they can still cause unpleasant social contacts (Leiter, 1988 and Leiter and Maslach, 1988) to employees when there is cultural divergence about boss exists, for example, bosses should be more generous to those subordinates who are loyal to them than other colleagues if organizational culture of boss is power-oriented as Handy (1995) suggested. Therefore, employees with cultural divergence, such as having task culture would think they are not treated fairly; as a result, increasing the cynicism of employees (they are less likely to get along well with their colleagues, especially their "boss" and reducing the professional efficacy of employees (i.e. the self-esteem is reduced by their "boss"); for instance, the "boss" only focus on what the formal system needs subordinate in role-oriented but ignore personal needs and values of others that desired by subordinate in person-oriented (Handy, 1995).

Another element, decisions, has contradicting significant relationship with exhaustion, the condition can be explained by the factors of job burnout suggested by the previous researches. "Decisions" refers to the decisions should by made by whom (Handy, 1995). It is suggest that workload is a major factor to exhaustion as employees would feel exhausted when the workload for them is too much or

unrealistic. Therefore, the perception divergence in decision makings is high does not mean that there would be higher exhaustion. For example, people is expertise about the problem and they hope decisions to be made by the persons with the most knowledge and expertise about the problem (task orientation); however, the reality is that decisions to be made by the person with higher power and authority (role orientation). As a result, most workloads about decisions working would be done by other people who have higher power but not themselves. Even employees may feel disappointed, their workload is actually be reduced; so exhaustion is significantly negative to decisions as the perception divergence would cause lower workloads than expected.

The reason why only few elements have significant hypothesized relationship can be explained by the concept of 'fit' suggest by Arogyaswamy and Byles (1987) and O' Reilly et al (1991) - the magnitude of individuals fitting into the culture of organizations they belong to. Although the cultural divergence of each correspondent is measured, their adaptability and priorities of those elements are

ignored; therefore, people have higher level of cultural divergence would not totally mean that they would have higher job burnout; in addition, the importance of each factor to them can be different; so they may feel that factor does not matter to them despite that the fact they have high cultural divergence on that factor. Another reason

is that the organizational culture is perception in nature, meaning that the divergence would affect the emotion of employees, such as feeling disappointed when the cultural divergence exists, but it is insufficient to affect job burnout as job burnout may also be affected by the real working condition of Hong Kong construction professionals, such as workload, work nature, etc.

7.3.2 The relationships between organizational culture and job satisfaction

Cheung and Rowlinson (2005) have raised the concern of adopting role culture: organizations need to find ways to deal with long term culture conflict of their employees which can affect their job satisfaction.

The t-test is conduct to examine whether there is significant effect of cultural divergence on total job satisfaction. It shows there is significantly higher level of total job satisfaction if employees have the same culture type between the existing organizational culture and their preferred culture. This can be explained by the previous studies. For instance, Thomsen et al (1999) and Handy (1995) suggests that a perfectly fitting psychological contract can be resulted for a perfect match between an individual's preferences and his organization's cultures.

Subordinate shows significant negative relationship with job satisfaction of operating and work nature. The relationship can be two ways. On one hand, supervisors would have lower level satisfaction of operating and work nature if they

have different cultural perception about subordinate; it may imply that management difficulties may exist during their daily work. On the other hand, if subordinate is supervised under the different orientation than they preferred, then they will have lower satisfaction level of operating and work nature during daily work.

The culture divergence of do well shows significant positive relationship with both job satisfaction of supervision and communication are opposite to the hypothesized results can be explained by previous studies. It is because their relationships are two-tailed. Supervision and communication can be adopted as the means of resolving the perception divergence about the ways of doing well in organizations. Supervision and communication can be used to clarify the responsibilities of employees and assist the employees when they overcome any difficulties provided that the formal work contacts with supervisors are pleasant and communication is good. For example, if the supervisors are fair to their subordinate and willing to communicate about the work demands, employees will be more satisfied with their supervisor and communication. Therefore, it can explain why job satisfaction of supervision and communication is higher even the perception difference about the ways of doing well is increased. The concept of social communication and contacts can be used to explain the contradicting result about the relationship of decisions and communication. However, the cultural divergence of

legitimate control has hypothesized significant negative relationship with supervision.

Although pleasant supervision contacts can be used to resolve the cultural divergence of doing well, different cultural divergence on legitimate control could cause the reduction of job satisfaction of supervision. The reason is that the nature of doing well is more abstractive to workers as it implies what the best ways to do the job well whereas the legitimate control is how workers to be controlled and its effect on employees is more instant than doing well; therefore, workers would reduce the satisfaction of supervision if they are controlled by the different ways from what they preferred. These relationships can be explained again by unpleasant supervisor contacts suggest by Leiter (1988) and Leiter and Maslach (1988).

In order to understand the relationship better, we need to explain why boss can increase cynicism and reduce professional efficacy but not significantly increase or decrease any one of job satisfaction aspects. The reason is that the perception of boss is an impression of good boss; so even if the cultural type is the same between the existing and the preferred, it does not necessarily lead to the to increase of job satisfaction which is affected by the actual work condition, such as the satisfaction of pay is more depending on the monetary amount than the perception of boss.

Legitimate control, task basis and how work performed have significant negative relationship with coworkers. The concept of coworker contacts can explain these

relationships. Despite the fact that pleasant coworker contacts can be emotional support during the work, unpleasant coworker contacts can exist within organizations. If employees have different perception on legitimate control, task basis and how work performed, they and their colleagues would have different ideas on their daily work, their satisfaction of coworkers will decrease especially during the work that requires cooperation among them. For instance, construction professionals are easily to have disagreements with their colleagues if they have cultural divergence about how the work performed, employees of role-oriented would not accept the ways to complete the task by employees of task-oriented as they would think that the employees of task-oriented do not respect and loyal to the organization (Handy, 1995). It should be understood why the item "people who work together" not affecting the satisfaction of coworker as interviewee suggests that the satisfaction of coworkers depends on how well they get along in everyday work but not the cultural divergence about this item.

The satisfaction of coworkers can also be high even if employees have different cultural perception about people work together as coworkers in organizations are always willing to listen to others' opinion with a view to achieving the final harmonious compromise. To interviewees, the matching of the personality and characteristics of employees within organizations are even more important to affect the job satisfaction about coworkers.

Both the ways of treating individual, ways of being influenced, legitimate control, task basis, ways of work performed, structure of control and communication and environment have significant negative relationship with the job satisfaction of promotion. This situation can be explained by the research conducted by Sheridan (1992) that the culture values in organizations can affect their human resource strategies and strategies can imply many things such as employment, promotion, fringe benefits, etc. We can see that these six factors (treat individual, being influenced, task basis, how work performed, structure and environment response) are related to management and human resources policies.

Therefore, when applying the idea of Sheridan (1992) into this research, when employees have cultural divergence compared to the existing organizational culture, they would not be satisfied with the promotion policies set by human resources department that are based on organizational culture to certain extent. For existing organizational culture that is role-oriented, employees have task-oriented preferred culture would have lower satisfaction as the focus of the organizations is formal roles, system, power and loyalty; so the promotion opportunities are often to be given to those employees are role-oriented. Therefore, employees with preferred task-oriented culture will be less satisfied as the cultural divergence may lower the opportunities of promotion than their colleagues.

The reason why competition has significant negative relationship with the satisfaction of fringe benefit is that competition implies the culture about ways how employees compete with others. For example, the task-oriented culture for competition is for excellence of contribution to the task while the role-oriented culture for competition is for high-status position in the formal system. The normal operating system for construction organizations is that they would give high amount of 'bonus' (money in addition to basic salary) to employees having better performance. As a result, employees would have lower satisfaction of fringe benefits if their cultural divergence of competition exists since they think that they have better performance than other colleagues but finally they are able to get lower amount of fringe benefit than other colleagues.

The total divergence has significant negative relationship with promotion whereas legitimate control and the ways of work performed have significant negative relationship with the total job satisfaction. The reason can be supported by the above paragraphs, for total cultural divergence and promotion, the total cultural divergence determines the management and human resources policies as a whole and they can affect the promotion decisions and therefore can reduce the satisfaction of promotion for employees who have higher total cultural divergence. For legitimate and how work performed, it can affect the total job satisfaction as their effects on the daily

work of employees are great and promptly when compared to other factors of cultural divergence that they affect how workers should work directly every day.

When the relationship between organizational culture divergence and job satisfaction is examined, it is found that the factors which are more abstractive and impressive in nature, such as boss, priority, work together and conflict do not significantly relate to job satisfaction as the job itself is the more important factor to achieve job satisfaction. For job satisfaction of contingent benefits, it is surprising that it does not have significant relationship with none of cultural divergence factors. It is because although contingent benefits is emotion in its nature, it is more related to the job itself, such as feeling a sense of pride in doing my job (Spector, 2008).

7.3.3 The relationships between job burnout and job satisfaction

The relationships between job burnout and job satisfaction are supported by the findings. Six elements of job satisfaction shows the significant relationships with job burnout. There are also significant relationships between exhaustion and total job satisfaction; cynicism and total job satisfaction.

First of all, pay and fringe is negatively related only with cynicism, it is because both factors would cause ‘jealous’ psychological feelings to other colleagues, therefore, when the satisfaction of pay and fringe benefits are low for construction professionals, they would be less willing to get along well with other colleagues.

When compared to other factors that have significant relationship with both exhaustion and cynicism, the satisfaction of pay and fringe does not have actual correlation with exhaustion as exhaustion is mainly determined by their daily work.

The concepts of social contacts can be used to explain why supervision, coworkers and communication having significant negative relationship with exhaustion and cynicism.

The significant relationship between the job satisfaction of work nature, exhaustion and cynicism is that is the job satisfaction of work nature is low, employees would feel their workload is high and cause exhaustion whereas employees would feel it is hard for them to cooperate with others because of the tight cooperation in construction projects; therefore, they would suffer from higher burnout.

Professional efficacy only shows the hypothesized but insignificant relationship with total job satisfaction. The explanation of the independency of professional efficacy and its relationship with organizational culture can be applied here, the two results of these two sections show that professional efficacy is independent from exhaustion and cynicism and relationship with both organizational culture and job satisfaction.

7.4 Implication

From this research, it is shows the importance of maintaining good social contacts suggested by Leiter (1988) and Leiter and Maslach (1988). It can be viewed as a basic coping strategy for improving the situation of organizational culture divergence, job burnout and job satisfaction of Hong Kong construction professionals. By having pleasant social contacts, the problem arises in the divergence of the boss and decisions can be relieved. If construction professionals can have the chances expressing their views to their boss and their perceptions about decision makings, the organization can try to adopt it to suit the need of construction employees.

Job satisfaction of construction professionals mainly come from the work itself than the interpersonal relationship with other people working in organizations. It is understandable that each construction organization has its own working policies and rules controlling the work of construction professionals. However, by enhancing the communication, the job satisfaction about the construction professionals can be improved if the organizations can listen to their opinions relating to the work itself and improve the working condition accordingly. Then, the job satisfaction of employees can be improved.

In reality, it is difficult for construction organizations to listen to all suggestions from the construction professionals and change all of them accordingly. However,

enhancing communication can at least understand the thinking of construction professionals better. The organizations can adopt the critical comments to improve the current situations.

7.5 Limitations and future research

The time is the major limitation in this research. Due to the limited time allowed in BSc dissertation, few respondents can be invited to participate in the questionnaire and interview. The time also limits the development of questionnaire administration system, such as online questionnaire system which can help handle the data in a more efficient way.

As the proportion of the respondent number and the factors to be examined is less than 10%. Factor analysis should be conducted in order to identify any possibilities of reorganizing the research model. However, the low respondents number make the factor analysis much more different as the results of one respondent already provide much influence on the result of the factor analysis. As a result, the factor analysis generates the new components that are hardly to have common themes among them.

The ranking and rating are different among the 3 scales of instruments, i.e. organizational culture divergence, job burnout and job satisfaction. The methods of

analysis need to be further verified.

In this research, the research model is able to focus solely on organizational culture. To understand the issue of job burnout and job satisfaction better, other relevant factors should be incorporated into the model, such as some substance factors, such as actual workload and working hours, etc. This can be one of the directions of the future research.

It is found that it is possible to continue this research in future in order to understand the effects of organizational culture on job burnout and job satisfaction. This researches use correlation as the investigation of their relationships and it does not indicate the direction of the relationship. In future, regression model can be used to investigate the effects of organizational culture. As mentioned above, other factors relevant to job burnout and job satisfaction can be added into the research model in order to identify the significance of organization culture and other factors on job burnout and job satisfaction.

The research in future can also incorporate the final outcomes of job burnout and job satisfaction in the research model, such as turnover rate, organizational commitment, etc. It can provide a more comprehensive insight about the whole picture of job burnout and job satisfaction. The scientific contribution of the future research can be enhanced by investigated the appropriateness of different types of

coping strategies used by Hong Kong construction professionals.

When more time is provided in future research, a longitude study can be carried out to understand the changes of job burnout level and job satisfaction level over time, such as the difference between pre-construction stage and the projects are completed. If more respondents can be invited to participate in the research, the more contributing t-test and ANOVA can be conducted with a view to discovering the particular target groups that require special attention to their job burnout level and job satisfaction level. For example, the comparison can be conducted to compare the results between non-management and management level.

It is hope that this research can be expanded into a larger scale in future so that the locational difference of the construction professionals over different countries can be investigated.

7.6 Conclusion

The topic of organizational culture in the Hong Kong construction organizations and its relationship with job burnout and job satisfaction is rarely be examined by previous studies. The gap is fulfilled in this research so as to provide a detailed exploration about the current phenomenon.

The condition of organizational culture in construction organizations is

identified. Many employees have mismatch between their existing organizational culture and ideal organizational culture. The role is the dominant existing organizational culture whereas the task is the dominant ideal organizational culture in construction organizations. The level of cultural divergence is quantified in order to measure the relationship between it and job burnout, it and job satisfaction.

The job burnout situation is explored in this research. The high level of cynicism implies the interpersonal relationship should be improved. Putting it into the context of the construction industry, it may due to the cooperation required with other parties involved in projects. The exhaustion is improved may be explained by the better economic condition in the construction industry. More projects have been started and companies have increased the number of employment.

The relationship of organizational culture divergence and job burnout is measured. Among the 15 aspects of cultural divergence, only boss have significant positive with cynicism and professional efficacy. It reveals the influence power of the boss in the construction industry. The perception difference of decisions has significant negative relationship with exhaustion. It can be explained by the different perception between their expectation and the actual amount of workload.

Only 31% of respondents have job satisfaction showing the room of improvement. Its relationship with organizational culture is measured. It shows that

organizational cultural divergence aspects which are substance in nature (i.e. relate to the real working condition) are correlated with job satisfaction. It may be concluded that the job satisfaction comes from the job itself, such as the task nature and the procedures. The promotion is the only factor which is significantly positively correlated with the total job satisfaction.

The relationship of job burnout and job satisfaction is measured and verified. It is found that six aspects of job satisfaction have the significantly negative relationship with exhaustion and cynicism. The view of professional efficacy being independent from exhaustion and cynicism is supported in this research. The professional efficacy of construction professionals is mainly affected by the self esteem and confidence of the individual itself. The total job satisfaction also has the significant negative relationship with exhaustion and cynicism.

The ANOVA and t-test are used for identifying which particular groups should paid attention to as they have significantly higher level of cultural divergence, job burnout but lower level of job satisfaction. The result shows that age, years and education level have significant result on cultural divergence, job burnout while gender has significant result on job satisfaction. The reasons why particular groups have higher level of culture divergence, job burnout and lower level of job satisfaction are explored. The mean within the groups have also been compared.

Special attention should be paid to those groups of people despite the fact that the results may be affected by the sampling differences. For instance, more attention should be paid to the Hong Kong female construction professionals as the findings comply with the previous studies about the WLB and Work-family-conflict.

Although there is still no perfect solution to cure the situation for those people, social contacts may be supported by previous studies and findings as an effective strategies for the Hong Kong construction professionals improving their job burnout and job satisfaction.

The research provides an insight about the current phenomenon of construction professionals. Policy makers should pay more attention to the situation of high cultural divergence, burnout and low job satisfaction when they design policies for organizations. Construction professionals and management level can have a better understanding about the condition of themselves and their colleagues by referring to this research.

References

Ali, M. M. R. (2006). The impact of organizational culture on the successful implementation of total quality management, *The TQM* Magazine, 18(6), 606-625.

Anderson, P. and Pulich, M. (2001). Managing workplace stress in a dynamic environment, *The Health Care Manager*, 19(3), 1-10.

Ankrah, N. A. and Langford, D. A. (2005). Architects and contractors: a comparative study of organizational cultures, *Construction Management and Economics*, 23(6), 595.

Arogyaswamy, B. and Byles, C. M. (1987). Organizational culture: internal and external fits, *Journal of Management*, 13(4), 647-659.

Arslan, G. and Kivrak, S. (2004). The lower employment of women in Turkish construction sector, *Building and Environment*, 39(2004), 1379-1387.

Aziz, S. and Cunningham, J. (2008). Workaholism, work stress, work-life imbalance: exploring gender's role, *Gender in Management: An International Journal*, 28(8), 553-566.

Baruch-Feldman, C. and Schwartz, J. (2002). Sources of social support and burnout, job satisfaction, and productivity, *Journal of Occupational Health Psychology*, 7(1), 84-93.

Beyer, J. M. et al. (1988). Comment: the concept of ideology in organizational analysis, *Academy of Management. The Academy of Management Review*, 13(3), 483-489.

Bignardi, G. E. (1996). Cultural conflict in a bacteriology department: Apollo v. Athena, *Journal of Management in Medicine*, 10(3), 49-58.

Bourantas, D. et al. (1990). Culture gap in Greek Management, *Organizational Studies*, 11(2), 261-283.

Bowen, P. and Cattell, K. (2008). Job satisfaction of South African quantity surveyors,

Engineering, Construction and Architectural Management, 15(3), 260-269.

Brewer, E. W. and McMahan-Landers, J. (2003). Job satisfaction among industrial and technical teacher educators, *Journal of Industrial Teacher Education*, 40(2), 65-85.

Brewer, E. W. and McMahan-Landers, J. (2003). The relationship between job stress and job satisfaction among industrial and technical teacher educators, *Journal of Career and Technical Education*, 20(1), 37-50.

Bruck, C. S., Allen, T. D. and Spector, P. (2002). The relation between work-family conflict and job satisfaction: a finer-grained analysis, *Journal of Vocational Behavior,* 60, 336-353.

Burney, S. M, A. (2008). *Inductive and deductive research approach*, online resource, Department of Computer Science, University of Karachi, http://www.drburney.net/INDUCTIVE & DEDUCTIVE RESEARCH APPROACH 06032008.pdf, 06th September, 2009.

Caudill, H. L. (1996). An empirical investigation of personality and situational predictors of job burnout, PhD thesis, University of North Texas.

Chan, Y. K. (1995). The investigation about job satisfaction of teachers, http:// web.plkwcc.edu.hk/~cyk/cumed01.html, 31st August, 2009.

Chapin, S. J. and Noel, T. H. (2000). Building a sound company culture, *Civil Engineering*, 70(6), 70-71.

Cheung, F. Y. K. and Rowlinson, S. (2005). The interrelationships between organisational structure, culture and Australian case study, Cooperative Research Centre for Construction Innovation, Australian Government's CRC Program.

Chiu, S. K. (2005). The linkage of job performance to goal setting, work motivation, team building, and organizational commitment in the high-tech industry in Taiwan, PhD thesis, Nova Southeastern University.

Cordes, C. L. and Dougherty, T. W. (1993). A review and an integration of research on job burnout, *Academy of Management. The Academy of Management Review*,

18(4), 621-656.

Cranny, C. J., Smith, P. C. and Stone, E. F. (1992). *Job Satisfaction: How people feel about their jobs and how it affects their performance*, New York: Lexington Books.

Crosbie, K. M. H. (2007). Building healthier teams: the impacts of the leadership and system practices on the job satisfaction and performance of frontline mental health and addictions workers, MA thesis, Royal Roads University (Canada).

Davidson, M. J. and Burke, R. J. (1994). *Women in Management: Current Research Issues*, London: Paul Chapman Publishing Ltd.

Dunham, R. B., Smith, F. J. and Blackburn, R. S. (1977). Validation of the index of organizational reactions with the JDI, the MSQ, and Faces Scales, *Academy of Management Journal*, 20(3), 420-432.

Oney-Yazic, E., Arditi, D. and Uwakweh, B. O. (2006). Organisational culture in U.S. construction companies, http://www.irbnet.de/daten/iconda/CIB4382.pdf, 30thNovember, 2009.

Oney-Yazici, E., Giritli, H., Topcu-Oraz, G. and Acar, E. (2007). Organizational culture: the case of Turkish construction industry. *Engineering, Construction and Architectural Management*, 14(6), 519-531.

Ely, R. J. (1994). The social construction of relationships among professional women at work, *Women in Management: Current Research Issues*, edited by Davidson, M. J. and Burke, R. J., London: Paul Chapman Publishing Ltd.

Field, A. (2005). *Discovering Statistics Using SPSS,* 2nd Edition, London: Sage.

Fielden, S. L., Davidson, M. J., Gale, A. and Davey, C. L. (2001). Women, equality and construction, *Journal of Management Development*, 20(4), 293-305.

Ford, D. L. (1985). Facets of work support and employee work outcomes: an exploratory analysis, *Journal of Management*, 11(3), 5-20.

Franzcp, S. K. (2008). Job satisfaction among psychiatrists: an urgent are for research.

Mental Health Review Journal, 13(3), 16-23.

Greenglass, E. R. (1991). Burnout and gender: theoretical and organizational implications, *Canadian Psychology*, 32(4), 562-572.

Hackman, J. R. and Oldham, G. R. (1975). Development of the job diagnostic survey, *Journal of Applied Psychology*, 60(2), 159-170.

Handy, C. B. (1993). *Understanding organizations*, London; New York: Penguin Books.

Handy, C. B. (1995). *Gods of management: the changing work of organizations*, New York : Oxford University Press.

Harrison, R. (1972). Understanding your organization's character, *Harvard Business Review*, 5-6, 119-128.

Hatch, M. J. (1993). The dynamics of organizational culture, *Academy of Management Review*, 18(4), 657-693.

Herzberg, F., Mausner, B. and Snyderman, B. (1959). *The motivation to work*, New York: John Wiley and Sons Inc..

Heyer, C. (1982). Job burnout: is management to blame?, *Computerworld*, 16(6), 84-85.

Hofstede, G. et al. (1990). Measuring organizational cultures: a qualitative and quantitative study across twenty cases, *Administrative Science Quarterly*, 35(2), 286-316.

Hofstede, G. (2001). *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations*, Thousand Oaks, Calif.: Sage Publications.

Huang, I. C. and Chuang, C. H. (2003). The role of burnout in the relationship between perceptions of organizational politics and turnover intentions, *Public Personnel Management*, 32(4), 519.

Jia, Y. Y. (2009). Burnout and its relationship with Architecture students' job design in Hong Kong, PhD thesis, University of Hong Kong.

Kass. S. J., Vodanovich, S. J. and Callender, A. (2001). State-trait boredom: relationship to absenteeism, tenure, and job satisfaction, *Journal of Business and Psychology*, 16(2), 317-327.

Kent, W. P. (1991). The merging of organizations: an exploration of the impact on job burnout, stress-related illness and turnover, PhD thesis, University of Colorado at Denver.

Kiefer, K. M., Harris-Kojetin, L., Brannon, D., Barry, T., Vasey, J. and Lepore, M. (2005). Measuring long-term care work: a guide to selected instruments to examine direct care worker experiences and outcomes, Office of Disability, Aging and Long-Term Care Policy, Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services and Office of the Assistant Secretary of Policy.

Kleinman, G., Siegel, P. & Eckstein, C. (2002). Teams as a learning forum for accounting professionals. *The Journal of Management Development*, 21(5), 427-459.

Koehn, E. and Pratt, M. W. (1985). Construction project environment – perceptions of management, *American Association of Cost Engineers. Transactions of the American Association of Cost Engineers*, D.4.1. – 4.8.

Koesten, J. (2005). Reducing Stress and Burnout of Financial Planners. *Journal of Financial Planning*, 18(10), 64-74.

Kusel, J. and Deyoub, N. J. (1983). Internal auditor burnout, *The Internal Auditor*, 40(5), 22-25.

Lahiry, S. (1994). Building commitment through organizational culture, *Training and Development*, 48, 50-52.

Lam, S. S. K. (1995). Quality management and job satisfaction, *The International Journal of Quality and Reliability Management*, 12(4), 72-78.

Lankau, M. J. (1996). An examination of mentoring, peer developmental relationships, and team participants as sources of learning in an organization, PhD thesis, University of Miami.

Larsson, R., Brousseau, K. R., Kling, K. and Sweet, P. L. (2007). Building motivational capital through career concept and culture fit; The strategic value of developing motivation and retention. *Career Development International*, 12(4), 361.

Leiter, M. P. (1988). Burnout as a function of communication patterns, *Group of Organization Studies*, 13(1), 111-128.

Leiter, M. P. and Maslach, C. (1988). The impact of interpersonal environment on burnout and organizational commitment, *Journal of Organizational Behavior*, 9, 297-308.

Likert, R. (1967). *The human organization: its management and value*. New York, USA: McGraw-Hill.

Lingard, H. (2000). The effect of work condition on the family-life, well-being and performance of white collar employees in the construction industry, research proposal, *Faculty of Architecture, Building and Planning, the University of Melbourne.*

Lingard, H. (2003). The impact of individual and job characteristics on 'burnout' among civil engineers in Australia and the implications for employee turnover, *Construction Management and Economics*, 21, 69-80.

Lingard, H. and Francis, V. (2004). The work-life experiences of office and site-based employees in the Australian construction industry, *Construction Management and Economics*, 22, 991-1002.

Lingard, H. and Farncis, V. (2005). Does work-family conflict mediate the relationship between job schedule demands and burnout in male construction professionals and managers?, *Construction Management and Economics*, 23, 733-745.

Lingard, H. and Francis, V. (2006). Does a supportive work environment moderate

the relationship between work-family conflict and burnout among construction professionals?, *Construction Management and Economics*, 24, 185-196.

Lingard, H. C., Yip, B., Rowlinson, R. and Kvan, T. (2007). The experience of burnout among future construction professionals: a cross-national study. *Construction Management and Economics*, 25(4), 345.

Liu, M M., Zhang, S. B. and Leung, M, Y. (2006). A framework for assessing organisational culture of Chinese construction enterprises, *Engineering, Construction and Architectural Management*, 13(4), 327-342.

Love, P. E. D. and Edwards, D. J. (2005). Taking the pulse of UK construction project managers' health: Influence of job demands, job control and social support on psychological wellbeing, *Engineering, Construction and Architectural Management*, 12(1), 88-101.

Maslach, C., Jackson, S. E. amd Leiter, M. P. (1996). *Maslach Burnout Inventory Manual*, California: Consulting Psychologists Press.

Maslach, C., Jackson, S. E. and Leiter, M. P. (1997). Maslach Burnout Inventory, in Zalaquett, C. P. and Wood, R. J. (Eds), *Evaluating Stress: A Book of Resources*, 192-217

Maslach, C., Schaufeli, W. B. and Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422.

Maslach, C, (2003). Job burnout: new directions in research and intervention, *Current Directions in Psychological Science*, 12(5), 189-192.

Mau, W. C., Ellsworth, R. and Hawley, D. (2008). Job satisfaction and career persistence of beginning teachers, *International Journal of Educational Management*, 22(1), 48-61.

Mckinnon, J. L., Harrison, G. L., Chow, C. W. and Wu, A. (2003). Organizational culture: association with commitment, job satisfaction, propensity to remain, and information sharing in Taiwan, *International Journal of Business Studies*, 11(1), 25-44.

Messmer, M. (2005). Building employee job satisfaction, *Employment Relations Today*, 32(2), 53-59.

Moore, J. E. (1997). A causal attribution approach to work exhaustion: the relationship of causal locus, controllability, and stability to job-related attitudes and turnover intention of the work-exhausted employee, PhD thesis, Indiana University.

Moore, J. E. (2000). One road to turnover: An examination of work exhaustion in technology professionals, *MIS Quarterly*, 24(1), 141-168.

Nagy, M. S. (2002). Using a single-item approach to measure facet job satisfaction, *Journal of Occupational and Organizational Psychology*, 75, 77-86.

Nelson, J. (2005). Christina Maslach – How to prevent burnout, *New Zealand Management*, 4, 43.

Ng, S. T., Skitmore, R. M. and Leung, K. C. (2005), Manageability of stress among construction project participants, *Engineering, Construction and Architectural Management*, 12(3), 264-282.

Nummelin, J., Tukiainen, S. and Koivu, T. (2005). The influence of cultural effects on different project types, *2005 CIB W92/T23/W107 International Symposium on Procurement Systems: the impact of cultural differences and systems on construction performance*, Las Vegas, USA.

Ooi, K. B., Bakar, N. A. and Arumugam, V. (2007). Does TQM influence employees' job satisfaction? An empirical case analysis, *International Journal of Quality and Reliability Management*, 24(1), 62-77.

O'Reilly, C. A., Chatman, J. and Caldwell, D. F. (1991). People and organizational culture: a profile comparison approach to assessing person-organization fit, *Academy of Management Journal*, 34(3), 487-516.

Phua, T. T. and Rowlinson, S. (2003). Cultural differences as an explanatory variable for adversarial attitudes in the construction industry: the case of Hong Kong, *Construction Management and Economics*, 21, 777-785.

Phua, T. T. and Rowlinson, S. (2004a). How important is cooperation to construction project success? A grounded empirical quantification, *Engineering, Construction and Architectural Management*, 11(1), 45-54.

Phua, T. T. and Rowlinson, S. (2004b). Operationalizing culture in construction management research: a social identity perspective in the Hong Kong context, *Construction Management and Economics*, 22, 9, 913-925.

Pliskin, N. et al (1993). Presumed versus actual organizational culture: managerial implications for implementation of information systems, *The Computer Journal*, 36(2), 143-152.

Poe, S. G. and Scheer, F. C. (1981). Models to combat stress, *Credit and Financial Management*, 83(9), 35-38.

Probst, T. M. (2003). Development and validation of the Job Security Index and the Job Security Satisfaction scale: A classical test theory and IRT approach, *Journal of Occupational and Organizational Psychology*, 76, 451-467.

Prosser, D., Johnson, S., Kuipers, E., Dunn, G., Szmykler, G., Reid, Y., Bebbington, P. and Thornicroft, G. (1999). Mental health, "burnout" and job satisfaction in a longitudinal study of mental health staff, *Soc Psychiatry Psychiatr Epidemiol*, 34, 295-200.

Pugh, D. S. (1983). *Writers on Organisations*, Harmondsworth : Penguin Books.

Quinn, R. E. & Rohrbaugh, John. (1983). A spatial model of effectiveness criteria: towards a competing values approach to organizational analysis. *Management Science*, 29(3), 363-377.

Rees, D. W. (1995). Work-related stress in health service employees, *Journal of Managerial Psychology*, 10(3), 4-11.

Roots, H. (2003). Studying the types of organisational culture, in Maaja Vadi (ed.), Organisational Culture in Estonia: Manifestations and Consequences, Faculty of Economics and Business Administration, University of Tartu (Estonia), 16, 47-64.

Rowlinson, S. (2001). Matrix organizational structure, culture and commitment: a Hong Kong public sector case study of change, *Construction Management and Economics*, 19, 669-673.

Ruthankoon, R. and Ogunlana, S. O. (2003). Testing Herzberg's two-factor theory in the Thai construction industry, *Engineering, Construction and Architectural Management*, 10(5), 333-341.

Sachau, D. A. (2007). Resurrecting the Motivation-Hygiene Theory: Herzberg and the Positive Psychology, *Human Resource Development Review*, 6(4), 377-393.

Schaeffer, D. (1982). Burnout-the headache of the 1980s, *SuperVision*, 44(2), 11-13.

Schaufeli, W. B. and Salanova, M. (2007). Efficacy or inefficacy, that's the question: burnout and work engagement, and their relationships with efficacy beliefs, *Anxiety, Stress, and Coping*, 20(2), 177-196.

Serpell, A. F. and Rodriguez, D. (2002). Studying construction organisational culture: preliminary findings, *Perspectives on culture in construction*, *CIE TG23 – Culture in construction*, International council for research and innovation in building and construction, the Netherlands.

Sheridan, J. E. (1992). Organizational culture and employee retention, *Academy of Management Journal*, 35(5), 1036-1056.

Shockley-Zalabak, P. and Morley, D. D. (1989). Adhering to organizational culture: why does it mean? why does it matter?, *Group and Organization Studies*, 14(4), 483-500.

Sierpe, E. (1999). Job satisfaction among librarians in English-language universities in Quebec, *Library and Information Science Research*, 21(4), 479-499.

Sloan, R. B. (1982). Managerial Burnout: Causes and Cures, *Management Quarterly*, 23(3), 12-18.

Sobeih, T. M. (2006). Work compatibility and musculoskeletal disorders among construction workers, PhD thesis, University of Cincinnati.

Spector, P. E. (1985). Measurement of Human Service Staff Satisfaction: Development of the Job Satisfaction Survey, 13(6), *American Journal of Community Psychology*, 693-713.

Spector, P. E. (2008). Occupational Health Psychology, http://chuma.cas.usf.edu/~spector/scales/jsspag.html

Tata, J. and Prasad, S. (1998). Cultural and structural constraints on total quality management implementation, *Total Quality Management*, 9(8), 703-709.

Thomsen, S., Soares, J., Nolan, P., Dallender, J. and Arnetz, B. (1999). Feelings of professional fulfillment and exhaustion in mental health personnel: The importance of organizational and individual factors. *Psychotherapy and Psychosomatics*, 68(3), 157-164.

Turner, M., Lingard, H. and Francis, V. (2009). Work-life balance: an exploratory study of supports and barriers in a construction project, *International Journal of Managing Projects in Business*, 2(1), 94-111.

Vallen, G.. K. (1991). *The relation between burnout and organizational structure for hospitality management graduates*. PhD thesis, Northern Arizona University.

Weiss, H.M. and Cropanzano, R. (1996). "An affective events approach to job satisfaction", in Staw, B.M. and Cummings, L.L. (Eds), *Research in Organizational Behavior*, 18, 1-74.

Westwood, R. I. (1992). *Organisational behaviour : Southeast Asian perspectives*, Hong Kong: Longman.

Wofford, T. D. (2003). A study of worker demographics and workplace job satisfaction for employees in a global engineering and construction organization, D.B.A., Nova Southeastern University.

Wright, T.A. and Cropanzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology*, 5, 84-94.

Yip, B. (2007). Job burnout among construction professionals in Hong Kong: a

moderator model with coping strategies, PhD thesis, University of Hong Kong.

Yip, B., Rowlinson, S. and Siu, O, L. (2008). Coping strategies as moderators in the relationship between role overload and burnout, *Construction Management and Economics*, 26(8), 869.

Yeager, S. J. (1981). Dimensionality of the job descriptive index, *Academy of Management Journal*, 24, 205-212.

Zhao, J., Thurman, Q. and He, N. (1999). Sources of job satisfaction among police officers: A test of demographic and work environment models, *Justice Quarterly*, 16(1), 153-174.

Zhang, S. B. and Liu, M. M. (2003). Organizational culture profiles of the Chinese contractors, *CIBTG 23 International Conference*, Hong Kong.

Zhou, Y. B. (2005). Motivation, performance and job satisfaction of construction management professionals (CMPs), MSc thesis, University of Calgary (Canada).

Appendices

Appendix 1 Invitation letter and questionnaire

Dear Sir / Madam,

Questionnaire for Research Project

I am a final year student studying in Department of Real Estate and Construction, the University of Hong Kong. I am writing to invite the valuable participation in my research project. The aim of this project is to identify the impact of organizational culture on job burnout and job satisfaction and suggest measures for improving the psychological health of construction professionals in Hong Kong.

In order to understand the relationship between organizational culture, job burnout and job satisfaction condition of employees deeply, members are invited to complete the questionnaire. The content of the questionnaire is in English and Chinese script is provided for quick reference. It can be completed normally within 30 minutes.

Your participation is greatly appreciated. Would you kindly complete the questionnaire by filling the enclosed questionnaires and return via mail to Flat 1704, Fu Shing House, Fung Shing Court, Sha Tin, N. T., Hong Kong or email: ada1215@hku.hk, if possible, before 30th Nov, 2009. ALL SURVEY RESULTS WILL BE STRICTLY CONFIDENTIAL and are for research purposes only.

In addition to conducting a questionnaire survey, I would like to conduct some follow-up interviews (either by face-to-fact or by phone) on this issue. The interview would only last for about 30 minutes and I will always be available for conducting the interview. Would interested participants leave your contact at the end of the questionnaire? The opportunity to understand more opinions on the issue and learn from your experience is greatly appreciated.

If you have any enquiries, please do not hesitate to contact me at 60946085 or email to ada1215@hku.hk. Thank you very much for your time and attention.

Yours sincerely,

Tsang Wing Chi, Ada

BSc Surveying Year 3

HKU

The relationship between organizational culture, job burnout and job satisfaction of construction professionals in Hong Kong

企業文化對於建築業界專業人員工作壓力、工作滿足感之間的關係

Section One: Background (一) 背景資料 (Please highlight your answer.)

1.1. Which sector best describes your current employment?

你正從事哪一種建築企業?

- ❑ Developer 發展商
- ❑ Consultant 顧問公司
- ❑ Main Contractor 承辦商(大判)
- ❑ Sub-Contractor 承辦商(細判)
- ❑ Government 政府
- ❑ Other: _____其他

1.2. Which of the following construction professions best describes your profession?

- ❑ Surveyor: _____測量師
- ❑ Engineer: _____工程師
- ❑ Architect 建築師
- ❑ Project Manager 項目經理
- ❑ Other: _____其他

1.3. What is the title/position of your current job? 你的職位名稱

_____

1.4. On what basis are you employed with your organisation? 你正受僱於哪種形式?

- ❑ Permanent 長工
- ❑ Contract 合約
- ❑ Other: _____其他

1.5. Where do you spend most of your time at work? 你的工作時間: (小時)

- ❑ Site: _____工地
- ❑ Office: _____辦公室
- ❑ Other: _____其他

1.6. On average, how many hours per week do you work outside stipulated hours?
你平均每週加班多少小時?_____

1.7. How long have you been working in this industry?
你從事建築業界的時間? (年)_____

Section Two: Organizational culture

(二) 企業文化

Organizational Culture Questionnaire of Handy (1993) is used in this section to investigate what kind of organization you would like to belong to and what kind of organization you currently belong to. Please rank the following statements in order of salience. Put '1' against the statement which best represents the dominant view, '2' for the next closest, and so on until '4'. E.g.:

這部份用了 Handy (1993)的企業文化問卷, 目的是希望了解你所任職企業的企業文化和你自己理想的企業文化之間的分別。請用 1, 2, 3, 4 排列這四個選擇。(1

為最接近現況, 4 為最不接近現況), 例:

EXAMPLE

1. A good boss 好的老闆

	currently belong to 任職企業的企業文化	would like to belong to 自己理想的企業文化
is strong, decisive and firm but fair. He or she is protective, generous and indulgent to loyal subordinates. 是強勢的，果斷和堅定而公平的。他或她對忠誠的下屬是保護，慷慨和寬容的	1	4
is impersonal and correct, avoiding the exercise of personal authority for personal own advantage. A good boss demands from subordinates only that which is required by the formal system. 是客觀和正確的，避免為自己的好處行使個人權力。一個很好的老闆只要求下屬符合制度中所要求的	3	3
is egalitarian and influenceable in matters concerning the task. He or she uses their authority to obtain the resources needed to get on with the job. 對於任務是平等和有影響的。他或她會利用自己的權力去獲取工作所需的資源	2	1
is concerned and responsive to the personal needs and values of others. He or she uses their position to provide satisfying and growth stimulating work opportunities for subordinates. 關心和回應的其他人的需求和價值觀。他或她利用自己的職權	4	2

去為下屬提供滿意的工作和成長的機會		

1. A good boss 好的老闆

	currently belong to 任職企業的企業文化	would like to belong to 自己理想的企業文化
is strong, decisive and firm but fair. He or she is protective, generous and indulgent to loyal subordinates. 是強勢的 , 果斷和堅定而公平的。他或她對忠誠的下屬是保護，慷慨和寬容的		
is impersonal and correct, avoiding the exercise of personal authority for personal own advantage. A good boss demands from subordinates only that which is required by the formal system. 是客觀和正確的，避免為自己的好處行使個人權力。一個很好的老闆只要求下屬符合制度中所要求的		
is egalitarian and influenceable in matters concerning the task. He or she uses their authority to obtain the resources needed to get on with the job. 對於任務是平等和有影響的。他或她會利用自己的權力去獲取工作所需的資源		
is concerned and responsive to the personal needs and values of others. He or she uses their position to provide satisfying and growth stimulating work opportunities for subordinates. 關心和回應的其他人的需求和價值觀。他或她利用自己的職權去為下屬提供滿意的工作和成長的機會		

2. A good subordinate 好的下屬

is compliant, hard-working and loyal to the interests of the superior. 兼容，辛勤工作的和對於上司(的利益)忠誠		
is responsible and reliable, meeting the duties and responsibilities of the job and avoiding actions which might surprise or embarrass a superior. 負責任和可靠的，完成工作的職責和責任，並避免做令上級驚訝或尷尬的事		
is self-motivated to contribute his or her best to the task and is open with ideas and suggestions, but is nevertheless willing to give the lead to others when they show greater expertise or ability. 自覺於貢獻自己去做好任務，對於想法和建議找開放的態度。但當其他人表現出更多專門知識或能力，自己願意給他們領導		
is vitally interested in the development of personal potentialities and is open to learning and receiving help. He or she also respects the needs and values of others and is willing to give help and contribute to their development.非常關心個人潛能的發展，對於學習和接受幫助持開放的態度。他或她也尊重其他人的需要和價值觀，並願意幫助和促進其人的發展		

3. A good member of the organization gives first priority to 企業中好的成員重視

	currently belong to 任職企業的企業文化	would like to belong to 自己理

		想的企業文化
the personal demands of the boss. 老闆的個人需求		
the duties, responsibilities and requirements of their own role, and the customary standards of personal behavior. 自己工作崗位的職責，責任和要求和一般的個人行為標準		
the requirements of the task for skill, ability, energy and material resources. 任務所要求的技能，能力，精力和物資		
the personal needs of the individual involved. 參與的人的個人需要		

4. People who do well in the organization 企業中表現好的成員是

are shrewd and competitive with a strong drive for power. 是精明，有競爭力和強大推動力量		
are conscientious and responsible with a strong sense of loyalty to the organization. 是認真，有責任感，對於組織有強烈的忠誠		
are technically competent and effective, with a strong commitment to getting the job done. 在技術上勝任和有效的，具有強烈的使命感去做好這項工作		
are effective and competent in personal relationships, with a strong commitment to the growth and development of people. 在人際關係是有效的和有能力的，對於人的成長和發展有強烈的使命感		

5. The organization treats the individual 企業如何對待每一個成員

	currently belong to 任職企業的企業文化	would like to belong to 自己理想的企業文化
as though his or her time and energy were at the disposal of the persons higher in the hierarchy. 好像他或她的時間和精力是花費在架構中更高的人身上		
as though his or her time and energy were available through a contract having rights and responsibilities on both sides. 好像他或她的時間和精力能用在合約的權利和責任化之中		
as a co-worker who has committed his or her skills and abilities to the common cause. 作為同事運用自己的技能和能力於共同事業中		
as an interesting and worthwhile person in their own right. 對於自己的權利感到有興趣和有價值的		

6. People are controlled and influenced by 員工被什麼控制和影響

the personal exercise of economic and political power (rewards and punishments). 行使個人的經濟和政治權力（獎懲）		
impersonal exercise of economic and political power to enforce procedures and standards of performance. 行使非個人的經濟和政治權力去強化執行工作表現的程序和標準		
communication and discussion of task requirements leading to		

appropriate action motivated by personal commitment to goal achievement. 對於任務要求的交流和討論,而導致個人使命感推動達成目標 的行動		
intrinsic interest and enjoyment in the activities to be done; and/or concern and caring for needs of other persons involved. 要做工作的內在的利益和享受;和/或關心和照顧其他有關人員 的需要		

7. It is legitimate for one person to control another's activities

一個人合理地控制其他人的活動

if that person has more authority and power in the organization. 如果該人在組織有更多的權威和權力		
if the role prescribes that they are responsible for directing the responsible for directing the other. 如果職務規定他們負責指示其他人指揮員工		
if he or she has more knowledge relevant to the task at hand. 如果 他或她有更多和任務有關的知識		
if the other accepts that the first person's help or instruction can contribute to the other's learning and growth. 如果其他人接受: 第一個人的幫助或指導可以促進彼此的學習和成長		

8. The basis of task assignment is 工作任務

	currently belong to 任職企業	would like to belong

	的企業文化	to 自己理想的企業文化
the personal needs and judgment of those in authority. 當權者的個人需求和判斷		
the formal divisions of functions and responsibility in the system. 制度中的正式職能和責任的劃分		
the resource and expertise requirements of the job to be done. 工作所需的資源和專業知識		
the personal wishes and needs for learning and growth of the individual organization members. 組織成員的個人願望和學習和成長的需要		

9. Work is performed out of 工作是在如何的感受下進行

hope of reward, fear of punishment or personal loyalty towards a powerful individual. 面對一個強大的人(老闆)，希望得到回報，擔心處罰或個人的忠誠度		
a respect for contractual obligations backed up by sanctions and personal loyalty towards the organization or system. 對組織的制裁和個人的忠誠度支持對合約義務的尊重		
satisfaction in excellence of work and achievement and/or personal commitment to the task or goal. 對於工作和卓越成就的滿意和/或個人對於任務或目標的使命感		
enjoyment of the activity for its own sake and concern and respect for the needs and values of the other persons involved.		

享受活動本身，關心和尊重其他有關人員的需要和價值觀		

10. People Work together 人員一起工作

when they are required to by higher authority or believe they can use each other for personal advantage.更高的權威要求下或他們認為他們能互相利用去取得個人的好處		
when co-ordination and exchange are specified by the formal system. 當正式的制度指定要合作和交流		
when their joint contribution is needed to progress the task. 當任務的進展需要他們的聯合貢獻		
when the collaboration is personally satisfying, stimulating or challenging. 當的合作令個人感到滿意，刺激或具有挑戰性		

11. Competition 競爭

	currently belong to 任職企業的企業文化	would like to belong to 自己理想的企業文化
is for personal power and advantages. 是為了個人權力和優勢		
is for high-status position in the formal system. 為了正式制度中的高地位		
is for excellence of contribution to the task.		

為了對任務的卓越貢獻		
is for attention to one's own personal needs 為了自己的個人需求		

12. Conflict 衝突

is controlled by the intervention of higher authority and often fostered by them to maintain their own power. 被更高的權威的干預所控制下，也往往助長了他們維持自己的權力		
is suppressed by reference to rules, procedures and definitions of responsibility. 被參照規則，程序和定義的責任所抑制		
is resolved through full discussion of the merits of the work issues involved. 通過充分討論工作涉及的問題而解決		
is resolved by open and deep discussion of personal needs and values involved. 通過對於所涉及的個人需要和價值觀念的開放和深入討論		

13. Decisions 決策

are made by the person with the higher power and authority. 是由有更高權力和權威的人決定。		
are made by the person whose job description carries the responsibility. 是由職務的責任人決定		
are made by the persons with most knowledge and expertise about the problem. 是由對於問題有最多知識和經驗的人決定		
are made by the persons most personally involved and affected by the outcome. 是由最多親自參與和最受影響的人決定		

14. The appropriate control and communication structure 合適的控制和溝通架構

	currently belong to 任職企業的企業文化	would like to belong to 自己理想的企業文化
Command flows from the top down in a simple pyramid so that anyone who is higher in the pyramid has authority over anyone who is lower. Information flows up through the chain of command. 命令在一個簡單的金字塔自上而下流動，使任何處於金字塔較高的位置中的人可以有較大的權力。信息在指揮鏈中向上流動		
Directives flow from the top down and information flows upwards within functional pyramids which meet at the top. The authority and responsibility of a role is limited to the roles beneath it in its own pyramid. Cross-functional exchange is constricted. 指令流由上而下和信息在指揮鏈中向上流動，而且在金字塔的頂端相遇。職務的權力和責任只限於金字塔內的職務，不同跨職能的交流受到限制		
Information about task requirements and problems flows from the centre of task activity upwards and outwards, with those closest to the task determining resources and support needed from the rest of the organization. A coordinating function may set priorities and overall resource levels based on information from all task centres. The structure should shift with the nature and location of the tasks. 職務要求和問題的信息流由職務活動的中心流向外和上層，並		

流向組織內決定職務的物資和支援的人，協調的功能透過所以任務中心的信息而確定優先次序和總體資源水平。結構應隨著任務的性質和位置而改變		
Information and influence flow from person to person, based on relationships which are voluntarily entered into for purposes of work, learning, mutual support and enjoyment, and shared values. A coordinating function may establish overall levels of contribution needed for maintenance of the organization. These tasks are assigned by mutual agreement. 信息和影響基於自願訂立為工作，學習，相互支持，享受目的和共同的價值觀的關係由人傳人，協調職能可設立需要維護本組織的貢獻總水平。任務是經雙方同意而分配。		

15. The environment is responded to as though it were 企業的環境

	currently belong to 任職企業的企業文化	would like to belong to 自己理想的企業文化
a competitive jungle in which all are against all and those who do not exploit others are themselves exploited. 充滿競爭的「森林」中，每個人所是對立的，如果自己不利用他人就會被人利用		
an orderly and rational system in which competition is limited by law and conflicts yield to negotiation and compromise. 有秩序和合理的系統，當中的競爭是受到規律的限制，並會商		

討和妥協衝突		
a complex of imperfect forms and systems which are to be re-shaped and improved by the achievements of the organization. 一個複雜的不完善制度和形式是透過組職的成就重新塑造和改善		
a complex of potential threats and support. It is to be manipulated by the organization to extract nourishment from it, pull its teeth and use it as a play and work space for the enjoyment and growth of members. 一個複雜的潛在威脅和支持。環境被組織操縱著，並從中提取的營份，利用它作為成員享受和發展的工作和發揮空間		

Section Three: Job burnout　(三) 工作倦怠

Burnout Inventory (BMI) of Maslach (1982) is used to measure your current condition of job burnout (stress). Please read the following statements and decide if you ever feel this way about your job. (Never 0, A few times a year or less 1, Once a month or less 2, A few times a month 3, once a week 4, a few times a week 5, everyday 6)

Maslach 的倦怠量表(1982 年)是用來衡量你的目前狀況的工作倦怠(壓力) 。

請細閱讀以下和句子 , 並寫下您對於自己現在的職務的感受。 (從不發生 0, 一年發生幾次或更少 1, 每月一次或更少 2, 一個月內發生幾次 3, 一星期發生一次 4, 一星期發生幾次 5, 每日發生 6)

1	I feel emotionally drained from my work. 我覺得從我的感情在工作中流失	
2	I feel used up at the end of the workday. 我在工作日結束的時候覺得自己「被用盡」	
3	I feel tired when I get up in the morning and have to face another day on the job. 我當早上起床要面對新一天的工作的我覺得疲憊	
4	Working all day is really a strain for me. 整天工作對我的來說是一種壓力	
5	I can effectively solve the problems that arise in my work. 我非常有效地處理自己工作的問題。	
6	I feel burned out from my work. 我在工作中感到倦怠	
7	I feel I am making an effective contribution to what this organization does.我覺得自己能有效地為組織作出貢獻	

8	I have become less interested in my work since I started this job. 自從我開始這份工作後，我對工作的興趣減低	
9	I have become less enthusiastic about my work.我對工作的熱誠減低	
10	In my opinion I am good at my job.我能做好自己的工作	
11	I feel exhilarated when I accomplish something at work. 我完成某些工作時，我感到歡欣鼓舞	
12	I have accomplished many worthwhile things in this job. 我在這份工作中完成了許多有價值的事	
13	I just want to do my job and not be bothered. 我只做自己的工作而不干擾	
14	I have become more cynical about whether my work contributes anything. 我懷疑自己的工作有沒有貢獻	
15	I doubt the significance of my work. 我否定自己工作的重要性	
16	At my work, I feel confident that I am effective at getting things done. 我有信心自己能有效地完成工作	

Section Four: Job Satisfaction

第四節：工作滿意度

Job Satisfaction Survey of Spector (1985) is adopted to find out the satisfaction level that your job gives you. Please indicate the extent to which you agree or disagree with the following statements in your present job. (Disagree very much 1, Disagree moderately 2, Disagree slightly 3, Agree slightly 4, Agree moderately 5, Agree very much 6)

第四節：斯佩克特的工作滿意度調查（ 1985 年）是找出您的工作滿意程度。

請說明您在現在的職務中何種程度上您同意或不同意以下句子。(十分不同意 1 ，不同意 2 ，少許不同意 3， 少許同意 4 ，同意 5，十分同意 6)

1	I feel I am being paid a fair amount for the work I do. 我覺得我得到自己所付出的合理工資	
2	There is really too little chance for promotion on my job. 我的工作在太少的晉升機會	
3	My supervisor is quite competent in doing his/her job. 我的上司工作的很稱職	
4	I am not satisfied with the benefits I receive. 我對於我所得到的福利並不滿意	
5	When I do a good job, I receive the recognition for it that I should receive. 當我工作得好，我得到應得的認同	
6	Many of our rules and procedures make doing a good job difficult. 規則和程序使得很難做好我的工作	
7	I like the people I work with. 我喜歡和我一起工作的人	
8	I sometimes feel my job is meaningless. 我有時候會覺得我的工作沒有意義	
9	Communications seem good within this organization. 這個組織有很好的溝通	
10	Raises are too few and far between.	

	我的加薪的金額太少和加薪的時間相隔得太長	
11	Those who do well on the job stand a fair chance of being promoted. 工作得好的人有公平的晉升機會	
12	My supervisor is unfair to me.我的上司對我並不公平	
13	The benefits we receive are as good as most other organizations offer. 我們的組織/機構提供和其他組織一樣好的福利	
14	I do not feel that the work I do is appreciated. 我所做的工作沒有得到所賞	
15	My efforts to do a good job are seldom blocked by red tape. 我做好工作的努力很小被不必要的程序阻擋	
16	I find I have to work harder at my job because of the incompetence of people I work with. 我要比較辛勤地做自己的工作因為和我一起工作的人無能	
17	I like doing the things I do at work. 我喜歡我的工作職務	
18	The goals of this organization are not clear to me. 我並不清楚這個組織/機構的目標	
19	I feel unappreciated by the organization when I think about what they pay me. 我工作的回報使我覺得自己不被組織/機構欣賞	
20	People get ahead as fast here as they do in other places. 在這裏工作的人取得成功的速度和其他組織一樣	

21	My supervisor shows too little interest in the feelings of subordinates. 我的上司並不關心下屬的感受	
22	The benefit package we have is equitable. 我們的福利是合理的	
23	There are few rewards for those who work here. 這裏工作的人只有很少的獎勵/回報	
24	I have too much to do at work. 我有太多工作要做	
25	I enjoy my coworkers. 我喜歡的我同事	
26	I often feel that I do not know what is going on with the organization. 我時常覺得自己並不清楚組織/機構所發生的事	
27	I feel a sense of pride in doing my job. 我對於自己的工作感到自豪	
28	I feel satisfied with my chances for salary increases. 我滿意自己的加薪機會	
29	There are benefits we do not have which we should have. 我們沒有自己應得的福利	
30	I like my supervisor. 我喜歡我的上司	
31	I have too much paperwork. 我有太多文件工作	

32	I don't feel my efforts are rewarded the way they should be. 我覺得自己所付出的努力並沒有得到應得的回報	
33	I am satisfied with my chances for promotion. 我滿意自己的晉升機會	
34	There is too much bickering and fighting at work. 我工作的地方時常有爭吵發生	
35	My job is enjoyable. 我的工作是愉快的。	
36	Work assignments are not fully explained. 沒有向我充分解釋我自己的工作任務	

Section Five: Personal Background (五) 個人背景資料 (Please highlight your answer.)

5.1. Sex? 性別

Male 男	Female 女

5.2. Age? 年齡

Below 25 小於 25	25-30	30-35	35-40
40-45	45-50	50-55	55 above 大於 55

5.3. Marital Status? 婚姻狀況

Single 單身	Married 已婚 (Please answer 5.3.2 請回答 5.3.2)

5.3.2. Do you have children? 有沒有孩子

- ❑ Yes. How many? What age? 有 (多少個? 年齡)_____
- ❑ No 沒有

5.4. What is the highest level of education you have obtained? 學歷

Certificate 中學	Diploma 文憑	Higher/Professional Diploma 高級文憑/專業文憑	Degree 學位
Master Degree 碩士	Ph.D. 博士	Other: _____其他	

Section Six: Comments and Follow-ups (六) 意見和跟進

6.1 Comments 意見

The space below had been provided for you to make additional comments if you wish to do so. 請寫下你額外的意見

_____

_____

_____

_____

_____

_____

_____

6.2 Follow-ups 跟進

6.2.1 Are you interested in receiving a copy of the data analysis relating to this survey? 你有沒有興趣收到這個研究的結果分析

❑ Yes, please provide your contact details:_____

(This information will be treated with strict confidentiality.)

有, 請寫下你的聯絡方法 (這項資料會絕對保密)

❑ No. 沒有

6.2.2.Would you like to take part in an interview relating to this survey at a later time? 你有沒有興趣稍後進行的跟進訪問

❑ Yes, please provide your contact details:_____

(This information will be treated with strict confidentiality.)

有, 請寫下你的聯絡方法 (這項資料會絕對保密)

❑ No. 沒有

Thank you for your participation in this survey. Your help in providing this data is greatly appreciated.

多謝你的寶貴意見和參與!

Appendix 2 Interview questions

Name of participant: _____
Company: _____
Tel: No.: _____/_____ E-mail: _____
Interview Date: _____ Starting Time: _____ Finishing Time:_____
Venue: _____

Questions:
1. Can you comment on the questionnaire result?
-Do you agree to the questionnaire result? Reason?
2. Do you have any ideas on why certain cultural divergence aspects are significant correlated to certain aspects of job burnout and job satisfaction?
3. Do you have any opinion about the relationship between organizational cultures, job burnout and job satisfaction?
4. Do you have any comments on the current situation of job burnout and job satisfaction in Hong Kong construction industry?
5. What kinds of coping strategies are suitable to you? Why?
6. Do you have any additional comments?

Appendix 3 Summary of questionnaire scores

(a) Respondent 1 - 20

Respondent	Organization	Occupation	Years	Age	Education	Martial Status	Gender	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	i	ii	iii	A	B	C	D	E	F	G	H	I	Total	Existing culture	Ideal culture	Job satisfaction
1	1	1	5	5	1	1	0	4	0	0	6	8	4	2	2	2	6	6	6	4	4	6	60	1.6	1.6	2	15	17	20	13	14	16	20	22	18	155	2	3	4
2	1	1	1	1	1	0	1	2	4	2	2	6	8	6	2	6	4	2	4	4	4	6	62	2.2	2.2	2.7	9	11	11	11	14	12	10	14	12	104	2	2	1
3	1	1	3	3	1	1	0	6	4	0	2	2	2	2	2	2	0	0	4	6	6	0	38	1.6	1.6	3.2	13	15	17	20	16	11	19	16	17	144	2	3	3
4	1	1	1	1	1	0	1	0	4	6	4	0	6	0	0	0	0	2	6	0	0	0	28	2	1.2	3.3	20	19	21	20	20	16	24	21	16	177	2	2	4
5	1	1	4	5	2	1	0	8	8	6	8	8	6	4	8	8	8	2	8	6	8	6	102	2.6	1.8	2.8	18	13	21	20	19	14	17	12	19	153	1	2	4
6	1	1	4	5	0	1	0	6	8	2	6	8	2	4	6	6	6	0	4	4	6	6	74	2	2.6	4.8	13	15	19	13	17	8	17	19	17	138	1	2	2
7	1	1	3	3	2	1	0	6	6	4	6	6	0	4	0	0	0	4	4	4	2	2	48	1.6	2.4	4.5	18	16	16	20	18	12	20	14	14	148	3	3	4
8	1	1	nil	3	2	0	0	8	8	6	6	4	2	4	4	2	2	0	8	2	2	2	60	2.6	2.6	1.7	15	16	18	16	13	12	18	13	14	135	2	2	2
9	1	1	3	3	1	1	0	6	4	2	2	2	2	2	2	2	0	0	6	6	6	0	42	1.7	1.6	3.3	13	15	17	20	16	11	19	16	17	144	2	3	3
10	1	1	3	3	1	1	0	0	6	6	4	2	6	6	0	4	4	0	6	2	2	6	54	2	2.2	2.8	11	11	18	16	14	12	20	14	13	129	2	2	2
11	1	1	1	1	1	0	1	2	4	0	4	6	8	6	4	6	4	8	6	4	4	6	72	2.2	3	2.5	8	11	11	11	14	12	8	14	12	101	2	2, 3	1
12	1	1	3	3	1	1	0	6	4	0	2	2	2	2	2	2	0	0	8	6	6	0	42	1.6	1.6	3.2	12	16	17	20	17	11	19	16	17	145	2	3	4
13	1	1	1	1	1	2	0	0	4	2	4	0	6	0	0	0	0	2	8	0	0	0	26	2	1.2	3.3	20	19	22	20	20	16	24	21	16	178	2	2	4
14	1	2	3	4	1	0	0	8	8	2	2	2	2	4	6	6	8	4	4	0	6	0	62	2.6	3	2.7	11	14	11	12	12	12	14	12	12	110	2	2, 3	2
15	1	2	2	2	2	0	0	8	8	4	8	8	8	8	8	8	8	4	8	8	8	8	112	2.6	3	2.7	15	12	11	14	17	18	14	12	16	129	1	2	2
16	1	2	2	2	2	0	0	8	8	4	6	8	8	8	8	8	6	4	6	8	8	8	106	1.8	2.8	3.3	15	12	11	14	17	14	14	13	16	126	1	2	2
17	1	3	3	nil	1	0	1	2	8	2	6	6	4	0	4	6	4	2	8	2	8	4	66	1	1.4	5.8	13	12	19	19	15	13	23	16	14	144	1	3	3
18	1	3	4	4	2	1	0	2	6	6	6	6	8	6	4	8	2	6	8	6	6	6	86	2.6	2.8	4.5	13	12	9	16	14	13	14	13	13	117	2	3	2
19	2	4	6	7	0	1	0	6	0	0	6	6	2	0	0	2	0	0	0	0	6	2	30	2.6	3	1.8	15	11	18	16	14	13	21	15	15	138	1	3	2
20	2	4	6	7	0	1	0	4	6	2	2	7	7	2	6	2	4	0	6	4	5	3	60	2.8	2	3.3	16	6	7	18	11	15	18	12	10	113	1	2	2

Appendix 3 Summary of questionnaire scores (Con't)
(b) Respondent 21-39

Respondent	Organization	Occupation	Years	Age	Education	Martial Status	Gender	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	i	ii	iii	A	B	C	D	E	F	G	H	I	Total	Existing culture	Ideal culture	Job satisfaction
21	2	4	3	7	0	1	0	8	0	2	2	0	0	0	0	2	0	0	4	0	0	0	18	3	3.4	4.7	12	15	17	13	15	17	18	14	17	138	1	1	2
22	2	4	6	8	1	1	0	3	4	2	4	2	2	0	2	2	2	0	3	3	3	2	34	1.2	0.8	4	14	12	16	17	13	12	15	15	20	134	1	2	2
23	2	4	4	3	0	1	0	3	4	2	4	4	4	0	8	3	5	0	3	2	3	3	48	0.8	2	5.7	23	15	20	21	22	14	23	21	14	173	2	3	4
24	2	4	5	7	0	1	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	6	4.4	3.2	5.5	15	17	4	16	15	13	13	11	13	117	1	1	2
25	2	4	3	3	0	1	0	0	4	4	4	8	8	4	2	4	4	0	6	4	8	2	62	2	0.6	4.8	19	13	13	16	15	16	19	18	18	147	2	3	4
26	2	4	4	7	0	1	0	0	4	8	4	8	8	4	2	6	4	0	6	4	8	2	68	2	0.6	4.8	19	13	13	16	15	16	19	18	18	147	2	3	4
27	2	4	5	7	0	1	0	2	0	6	0	6	6	0	2	0	0	0	0	0	0	0	22	4.4	3.2	5.3	15	17	4	16	15	13	15	11	13	119	1	1	2
28	2	5	2	4	0	0	0	3	2	4	2	2	4	4	4	4	2	0	4	1	2	0	38	1.4	1.4	3	18	17	10	13	14	18	14	19	10	133	1, 2	3	2
29	2	5	3	4	0	0	0	6	6	2	2	8	6	8	6	8	8	0	8	8	6	6	88	1.6	1.2	3	17	14	11	19	16	10	20	20	16	143	1	4	2
30	2	5	3	4	0	0	0	6	8	0	2	8	6	4	6	8	8	0	4	8	6	8	82	1.6	1.2	2.9	16	13	10	18	15	9	19	19	15	134	1	4	2
31	1	6	6	5	1	1	0	4	0	8	6	8	4	2	2	2	6	6	6	4	4	8	70	1.3	1.6	2	14	17	20	13	14	16	20	22	18	154	2	3	4
32	1	6	nil	3	2	0	1	8	8	6	6	4	2	4	4	2	2	0	8	2	2	2	60	2.6	2.6	2.5	15	16	18	16	12	12	18	13	14	134	2	2	2
33	3	1	4	5	0	1	1	2	6	6	6	6	8	6	4	8	2	4	8	6	6	6	86	2.6	2.8	4.5	13	12	9	16	14	13	14	13	13	117	2	3	2
34	3	1	4	5	2	1	1	8	8	2	8	8	6	4	8	8	12	2	8	6	8	6	102	2.6	1.8	2.7	17	12	20	19	18	15	18	11	18	148	1	2	4
35	3	1	5	5	1	1	0	4	0	0	6	8	4	2	2	2	6	4	6	4	4	6	58	1.5	1.6	2	15	16	20	13	14	16	20	22	18	154	2	3	4
36	4	7	3	4	1	2	1	8	8	6	2	2	2	4	6	6	6	2	4	0	6	0	62	2.6	3	2.7	11	14	11	12	12	11	14	12	12	109	2	23	1
37	4	7	3	3	1	1	1	6	4	0	2	2	2	6	2	2	4	4	4	6	6	0	50	1.6	1.6	3.2	14	16	18	21	17	10	19	13	16	144	2	2	3
38	4	7	3	3	1	1	0	6	4	6	2	2	2	2	2	2	0	2	4	6	6	0	46	1.6	1.6	3.2	13	15	17	20	15	11	19	17	17	144	2	2	3
39	4	7	6	7	0	1	0	6	0	0	6	6	2	0	0	6	2	0	0	0	6	2	36	2.6	3	1.8	16	11	19	17	14	13	22	16	16	144	1	3	3

Note:

1. Labeling of the table are as follows: 1 = boss, 2 = subordinate, 3 = priority, 4 = do well, 5 = treat individual, 6 = ways of being influenced, 7 = legitimate control, 8 = task basis, 9 = how work performed, 10 = work together, 11= competition, 12 = conflict, 13 = decisions, 14 = structure, 15 = environment response, Total 1 = total cultural divergence score, i = exhaustion, ii = cynicism, iii = professional efficacy, A = pay, B = promotion, C = supervision, D = fringe, E = contingent, F = operating, G = coworkers, H = work nature, I = communication, Total 2 = total job satisfaction score, Existing culture = dominant existing culture type, Ideal culture = dominant ideal culture, Job satisfaction = Job satisfaction level.
2. Nil represents missing data.
3. Organization recorded as 1 = main contractor, 2 = government, 3 = consultant, 4 = developer.
4. Occupation recorded as 1 = QS, 2 = engineer, 3 = finance, 4 = land surveyor, 5 = work supervisor, 6 = project manager, 7 = GP.
5. Years recorded as 1 = below 5, 2 = 5-<10, 3 = 10-<15, 4 = 15-<20, 5 = 20-<25, 6 = 25 or above.
6. Age recorded as 1 = below 25, 2 = 25-30, 3 = 30-35, 4 = 35-40, 5 = 40-45, 6 = 45-50, 7 = 50-55, 8 = above 55.
7. Education recorded as 0 = below undergraduate, 1 = undergraduate, 2 = above undergraduate.
8. Marital status recorded as 0 = single, 1 = married, 2 = divorced.
9. Gender recorded as 0 = male, 1 = female.
10. Item 1-15 are the scores from the total difference from the 4 statements of each item.
11. Items i-iii are scored on a 7-point Likert scale: 0 = never, 6 = every day.
12. Items A-I are scored on a 6-point Likert scale: 1 = disagree very much, 6 = agree very much (score reverse for negative statements).
13. Existing culture and ideal culture are recorded as 1 = power, 2 = role, 3 = task, 4 = person.
14. Job satisfaction are recorded as 0 = job dissatisfaction (when Total 2 is within 36-108), 1 = ambivalent (when Total 2 is within 108-144), 2 = job satisfaction (when Total 2 is within 144-216).

Appendix 4 Spearman's rho among demographic variables with cultural divergence, job burnout and job satisfaction

Correlations

			Organization	Occupation	years	age	education	marry	gender	Culture_divergence	Total_divergence	Exhaustion	Cynicism	Efficacy	Total_job_satisfaction
Spearman's rho	Organization	Correlation	1.000	.583**	.366*	.482**	-.502**	.350*	.092	.069	-.167	.070	-.003	.059	-.028
		Sig. (2-	.	.000	.026	.002	.001	.029	.579	.676	.309	.670	.984	.723	.867
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	Occupation	Correlation	.583**	1.000	.247	.312	-.376*	.101	-.042	-.012	-.116	-.025	.001	.013	-.152
		Sig. (2-	.000	.	.141	.057	.018	.539	.798	.941	.482	.879	.993	.937	.355
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	years	Correlation	.366*	.247	1.000	.858**	-.303	.584**	-.324	.409*	-.102	.119	.137	-.007	.109
		Sig. (2-	.026	.141	.	.000	.068	.000	.050	.012	.548	.482	.419	.965	.520
		N	37	37	37	36	37	37	37	37	37	37	37	37	37
	age	Correlation	.482**	.312	.858**	1.000	-.476**	.530**	-.301	.338*	-.145	.252	.153	.106	-.045
		Sig. (2-	.002	.057	.000	.	.003	.001	.067	.038	.387	.128	.360	.525	.787
		N	38	38	36	38	38	38	38	38	38	38	38	38	38
	education	Correlation	-.502**	-.376*	-.303	-.476**	1.000	-.168	.212	-.181	.322*	-.028	.056	-.335*	.077
		Sig. (2-	.001	.018	.068	.003	.	.306	.194	.269	.046	.868	.736	.037	.642
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	marry	Correlation	.350*	.101	.584**	.530**	-.168	1.000	-.219	.050	-.171	.157	.225	.101	.040
		Sig. (2-	.029	.539	.000	.001	.306	.	.181	.762	.297	.341	.168	.541	.810
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	gender	Correlation	.092	-.042	-.324	-.301	.212	-.219	1.000	-.318*	.203	.105	.057	-.087	-.182
		Sig. (2-	.579	.798	.050	.067	.194	.181	.	.049	.215	.526	.729	.600	.268
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	Culture divergence	Correlation	.069	-.012	.409*	.338*	-.181	.050	-.318*	1.000	.375*	-.338*	-.347*	.052	.254
		Sig. (2-	.676	.941	.012	.038	.269	.762	.049	.	.019	.035	.031	.755	.119
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	Total divergence	Correlation	-.167	-.116	-.102	-.145	.322*	-.171	.203	.375*	1.000	.002	-.023	-.163	-.177
		Sig. (2-	.309	.482	.548	.387	.046	.297	.215	.019	.	.991	.888	.322	.280
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	Exhaustion	Correlation	.070	-.025	.119	.252	-.028	.157	.105	-.338*	.002	1.000	.707**	-.073	-.493**
		Sig. (2-	.670	.879	.482	.128	.868	.341	.526	.035	.991	.	.000	.660	.001
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	Cynicism	Correlation	-.003	.001	.137	.153	.056	.225	.057	-.347*	-.023	.707**	1.000	-.146	-.577**
		Sig. (2-	.984	.993	.419	.360	.736	.168	.729	.031	.888	.000	.	.377	.000
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	Efficacy	Correlation	.059	.013	-.007	.106	-.335*	.101	-.087	.052	-.163	-.073	-.146	1.000	.052
		Sig. (2-	.723	.937	.965	.525	.037	.541	.600	.755	.322	.660	.377	.	.753
		N	39	39	37	38	39	39	39	39	39	39	39	39	39
	Total job satisfaction	Correlation	-.028	-.152	.109	-.045	.077	.040	-.182	.254	-.177	-.493**	-.577**	.052	1.000
		Sig. (2-	.867	.355	.520	.787	.642	.810	.268	.119	.280	.001	.000	.753	.
		N	39	39	37	38	39	39	39	39	39	39	39	39	39

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Note: N for organization, occupation, education, marital status, gender, total cultural divergence, exhaustion, cynicism, efficacy and total job satisfaction is 39. N for years is 37 (2 missing data) and N for age is 38 (1 missing data).

Appendix 5 ANOVA of demographic variables with cultural divergence, job burnout and job satisfaction
(a) Organization

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Culture divergence (0,1)	Main Contractor	20	.55	.510	.114	.31	.79	0	1
	Government	12	.75	.452	.131	.46	1.04	0	1
	Consultant	3	1.00	.000	.000	1.00	1.00	1	1
	Developer	4	.25	.500	.250	-.55	1.05	0	1
	Total	39	.62	.493	.079	.46	.78	0	1
Total_divergence	Main Contractor	20	63.4000	24.07095	5.38243	52.1344	74.6656	26.00	112.00
	Government	12	46.3333	25.97668	7.49882	29.8285	62.8381	6.00	88.00
	Consultant	3	82.6667	21.19748	12.23837	30.0092	135.3241	60.00	102.00
	Developer	4	48.5000	10.75484	5.37742	31.3866	65.6134	36.00	62.00
	Total	39	58.1026	25.17287	4.03089	49.9425	66.2627	6.00	112.00
Exhaustion	Main Contractor	20	1.9550	.47846	.10699	1.7311	2.1789	1.00	2.60
	Government	12	2.3167	1.17073	.33796	1.5728	3.0605	.80	4.40
	Consultant	3	2.6000	.00000	.00000	2.6000	2.6000	2.60	2.60
	Developer	4	2.1000	.57735	.28868	1.1813	3.0187	1.60	2.60
	Total	39	2.1308	.76301	.12218	1.8834	2.3781	.80	4.40
Cynicism	Main Contractor	20	2.0900	.63735	.14252	1.7917	2.3883	1.20	3.00
	Government	12	1.8833	1.07351	.30990	1.2013	2.5654	.60	3.40
	Consultant	3	2.4000	.52915	.30551	1.0855	3.7145	1.80	2.80
	Developer	4	2.3000	.80829	.40415	1.0138	3.5862	1.60	3.00
	Total	39	2.0718	.79271	.12694	1.8148	2.3288	.60	3.40
Efficacy	Main Contractor	20	3.1567	1.05864	.23672	2.6612	3.6521	1.67	5.83
	Government	12	4.0750	1.24024	.35803	3.2870	4.8630	1.83	5.67
	Consultant	3	3.2333	1.10151	.63596	.4970	5.9696	2.50	4.50
	Developer	4	2.7083	.62915	.31458	1.7072	3.7095	1.83	3.17
	Total	39	3.3991	1.15253	.18455	3.0255	3.7728	1.67	5.83
Total job satisfaction	Main Contractor	20	139.2500	21.07349	4.71218	129.3873	149.1127	101.00	178.00
	Government	12	136.3333	16.13203	4.65692	126.0835	146.5831	113.00	173.00
	Consultant	3	133.0000	15.52417	8.96289	94.4358	171.5642	117.00	148.00
	Developer	4	135.2500	17.50000	8.75000	107.4036	163.0964	109.00	144.00
	Total	39	137.4615	18.39600	2.94572	131.4982	143.4248	101.00	178.00

(a) Organization (Con't)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Culture divergence (0,1)	Between Groups	1.281	3	.427	1.880	.151
	Within Groups	7.950	35	.227		
	Total	9.231	38			
Total_divergence	Between Groups	4402.456	3	1467.485	2.610	.067
	Within Groups	19677.133	35	562.204		
	Total	24079.590	38			
Exhaustion	Between Groups	1.697	3	.566	.969	.418
	Within Groups	20.426	35	.584		
	Total	22.123	38			
Cynicism	Between Groups	.964	3	.321	.491	.691
	Within Groups	22.915	35	.655		
	Total	23.879	38			
Efficacy	Between Groups	8.649	3	2.883	2.412	.083
	Within Groups	41.828	35	1.195		
	Total	50.477	38			
Total job satisfaction	Between Groups	158.526	3	52.842	.146	.932
	Within Groups	12701.167	35	362.890		
	Total	12859.692	38			

(b) Occupation

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Total_divergence	QS	16	59.625	23.15419328	5.788548321	47.28700131	71.96299869	26	102
	Engineer	3	93.33333333	27.30079364	15.76212056	25.51440229	161.1522644	62	112
	Finance	2	76	14.14213562	10	-51.06204736	203.0620474	66	86
	Land Surveyor	9	38.66666667	21.84032967	7.280109889	21.87870316	55.45463018	6	68
	Works	3	69.33333333	27.30079364	15.76212056	1.514402293	137.1522644	38	88
	Project Manager	2	65	7.071067812	5	1.468976319	128.5310237	60	70
	Developer	4	48.5	10.75484387	5.377421935	31.38664343	65.61335657	36	62
	Total	39	58.1025641	25.1728706	4.030885295	49.94246344	66.26266477	6	112
Exhaustion	QS	16	2.025	0.407430976	0.101857744	1.807895358	2.242104642	1.5	2.6
	Engineer	3	2.333333333	0.461880215	0.266666667	1.185959272	3.480707395	1.8	2.6
	Finance	2	1.8	1.13137085	0.8	-8.364963789	11.96496379	1	2.6
	Land Surveyor	9	2.577777778	1.254768682	0.418256227	1.613277188	3.542278367	0.8	4.4
	Works	3	1.533333333	0.115470054	0.066666667	1.246489818	1.820176849	1.4	1.6
	Project Manager	2	1.95	0.919238816	0.65	-6.309033079	10.20903308	1.3	2.6
	Developer	4	2.1	0.577350269	0.288675135	1.181306884	3.018693116	1.6	2.6
	Total	39	2.130769231	0.763011294	0.12217959	1.883429582	2.378108879	0.8	4.4
Cynicism	QS	16	1.9875	0.56317552	0.14079388	1.687404948	2.287595052	1.2	3
	Engineer	3	2.933333333	0.115470054	0.066666667	2.646489818	3.220176849	2.8	3
	Finance	2	2.1	0.989949494	0.7	-6.794343315	10.99434332	1.4	2.8
	Land Surveyor	9	2.088888889	1.179453734	0.393151245	1.182280493	2.995497285	0.6	3.4
	Works	3	1.266666667	0.115470054	0.066666667	0.979823151	1.553510182	1.2	1.4
	Project Manager	2	2.1	0.707106781	0.5	-4.253102368	8.453102368	1.6	2.6
	Developer	4	2.3	0.808290377	0.404145188	1.013829638	3.586170362	1.6	3
	Total	39	2.071794872	0.792713102	0.126935686	1.814827011	2.328762733	0.6	3.4
Efficacy	QS	16	3.083333333	0.90929358	0.227323395	2.598804986	3.56786168	1.666666667	4.833333333
	Engineer	3	2.888888889	0.384900179	0.222222222	1.932743839	3.845033939	2.666666667	3.333333333
	Finance	2	5.166666667	0.942809041	0.666666667	-3.304136489	13.63746982	4.5	5.833333333
	Land Surveyor	9	4.444444444	1.224744872	0.408248291	3.503022198	5.38586669	1.833333333	5.666666667
	Works	3	2.966666667	0.057735027	0.033333333	2.823244909	3.110088424	2.9	3
	Project Manager	2	2.25	0.353553391	0.25	-0.926551184	5.426551184	2	2.5
	Developer	4	2.708333334	0.62915287	0.314576435	1.70721072	3.709455947	1.833333333	3.166666667
	Total	39	3.399145299	1.152533116	0.184553	3.025537283	3.772753315	1.666666667	5.833333333
Total job satisfaction	QS	16	141.875	21.64524582	5.411311455	130.3410627	153.4089373	101	178
	Engineer	3	121.6666667	10.21436896	5.897268671	96.29276752	147.0405658	110	129
	Finance	2	130.5	19.09188309	13.5	-41.03376394	302.0337639	117	144
	Land Surveyor	9	136.2222222	18.71348296	6.237827653	121.8377659	150.6066786	113	173
	Works	3	136.6666667	5.507570547	3.179797338	122.985103	150.3482304	133	143
	Project Manager	2	144	14.14213562	10	16.93795264	271.0620474	134	154
	Developer	4	135.25	17.5	8.75	107.4035948	163.0964052	109	144
	Total	39	137.4615385	18.39600379	2.945718124	131.4982439	143.424833	101	178

(b) Occupation (Con't)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Total_divergence	Between Groups	8643.506	6	1440.584	2.986	.020
	Within Groups	15436.083	32	482.378		
	Total	24079.590	38			
Exhaustion	Between Groups	3.459	6	.577	.988	.449
	Within Groups	18.664	32	.583		
	Total	22.123	38			
Cynicism	Between Groups	4.499	6	.750	1.238	.313
	Within Groups	19.380	32	.606		
	Total	23.879	38			
Efficacy	Between Groups	23.570	6	3.928	4.672	.002
	Within Groups	26.907	32	.841		
	Total	50.477	38			
Total_job_satisfaction	Between Groups	1277.803	6	212.967	.588	.737
	Within Groups	11581.889	32	361.934		
	Total	12859.692	38			

(c) Years

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Culture divergence (0,1)	<5	4	.00	.000	.000	.00	.00	0	0
	5-<10	3	1.00	.000	.000	1.00	1.00	1	1
	10-<15	14	.50	.519	.139	.20	.80	0	1
	15-<20	7	1.00	.000	.000	1.00	1.00	1	1
	20-<25	4	.50	.577	.289	-.42	1.42	0	1
	25 or above	5	1.00	.000	.000	1.00	1.00	1	1
	Total	37	.65	.484	.080	.49	.81	0	1
Total divergence	<5	4	47.0000	23.46629	11.73314	9.6599	84.3401	26.00	72.00
	5-<10	3	85.3333	41.10150	23.72996	-16.7685	187.4351	38.00	112.00
	10-<15	14	54.2857	18.04025	4.82146	43.8696	64.7018	18.00	88.00
	15-<20	7	80.8571	19.31691	7.30110	62.9920	98.7223	48.00	102.00
	20-<25	4	36.5000	26.80174	13.40087	-6.1476	79.1476	6.00	60.00
	25 or above	5	46.0000	17.83255	7.97496	23.8580	68.1420	30.00	70.00
	Total	37	58.0000	25.85859	4.25113	49.3783	66.6217	6.00	112.00
Exhaustion	<5	4	2.1000	.11547	.05774	1.9163	2.2837	2.00	2.20
	5-<10	3	1.9333	.61101	.35277	.4155	3.4512	1.40	2.60
	10-<15	14	1.8643	.53148	.14204	1.5574	2.1712	1.00	3.00
	15-<20	7	2.1714	.66762	.25234	1.5540	2.7889	.80	2.60
	20-<25	4	2.9750	1.64595	.82298	.3559	5.5941	1.50	4.40
	25 or above	5	2.1000	.78102	.34928	1.1302	3.0698	1.20	2.80
	Total	37	2.1054	.77565	.12752	1.8468	2.3640	.80	4.40
Cynicism	<5	4	1.9000	.87178	.43589	.5128	3.2872	1.20	3.00
	5-<10	3	2.4000	.87178	.50332	.2344	4.5656	1.40	3.00
	10-<15	14	1.8857	.80274	.21454	1.4222	2.3492	.60	3.40
	15-<20	7	2.0571	.78072	.29508	1.3351	2.7792	.60	2.80
	20-<25	4	2.4000	.92376	.46188	.9301	3.8699	1.60	3.20
	25 or above	5	2.0800	.94446	.42237	.9073	3.2527	.80	3.00
	Total	37	2.0432	.80434	.13223	1.7751	2.3114	.60	3.40
Efficacy	<5	4	2.9575	.43569	.21784	2.2642	3.6508	2.50	3.33
	5-<10	3	3.0000	.33000	.19053	2.1802	3.8198	2.67	3.33
	10-<15	14	3.5629	.97758	.26127	2.9984	4.1273	2.67	5.83
	15-<20	7	4.2657	1.09783	.41494	3.2504	5.2810	2.70	5.67
	20-<25	4	3.7075	1.97287	.98644	.5682	6.8468	2.00	5.50
	25 or above	5	2.5980	1.00482	.44937	1.3503	3.8457	1.83	4.00
	Total	37	3.4700	1.13592	.18674	3.0913	3.8487	1.83	5.83
Total job satisfaction	<5	4	140.0000	43.32051	21.66026	71.0674	208.9326	101.00	178.00
	5-<10	3	129.3333	3.51188	2.02759	120.6093	138.0573	126.00	133.00
	10-<15	14	137.3571	12.86383	3.43800	129.9298	144.7845	109.00	148.00
	15-<20	7	141.8571	20.03687	7.57323	123.3261	160.3882	117.00	173.00
	20-<25	4	136.2500	21.09305	10.54652	102.6863	169.8137	117.00	155.00
	25 or above	5	136.6000	15.19210	6.79412	117.7365	155.4635	113.00	154.00
	Total	37	137.6216	18.88614	3.10486	131.3247	143.9186	101.00	178.00

(c) Years (Con't)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Culture divergence (0,1)	Between Groups	3.932	5	.786	5.418	.001
	Within Groups	4.500	31	.145		
	Total	8.432	36			
Total divergence	Between Groups	9144.619	5	1828.924	3.798	.008
	Within Groups	14927.381	31	481.528		
	Total	24072.000	36			
Exhaustion	Between Groups	3.958	5	.792	1.386	.256
	Within Groups	17.701	31	.571		
	Total	21.659	36			
Cynicism	Between Groups	1.329	5	.266	.375	.862
	Within Groups	21.962	31	.708		
	Total	23.291	36			
Efficacy	Between Groups	10.294	5	2.059	1.765	.149
	Within Groups	36.158	31	1.166		
	Total	46.451	36			
Total job satisfaction	Between Groups	368.015	5	73.603	.183	.967
	Within Groups	12472.688	31	402.345		
	Total	12840.703	36			

(d) Age

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Culture divergence (0,1)	Below 25	4	.00	.000	.000	.00	.00	0	0
	25-30	2	1.00	.000	.000	1.00	1.00	1	1
	30-35	11	.45	.522	.157	.10	.81	0	1
	35-40	6	.67	.516	.211	.12	1.21	0	1
	40-45	7	1.00	.000	.000	1.00	1.00	1	1
	50-55	7	.57	.535	.202	.08	1.07	0	1
	Above 55	1	1.00	.	.	.	.	1	1
	Total	38	.61	.495	.080	.44	.77	0	1
Total_divergence	Below 25	4	47.0000	23.46629	11.73314	9.6599	84.3401	26.00	72.00
	25-30	2	109.0000	4.24264	3.00000	70.8814	147.1186	106.00	112.00
	30-35	11	50.0000	8.09938	2.44206	44.5588	55.4412	38.00	62.00
	35-40	6	69.6667	19.36664	7.90640	49.3426	89.9907	38.00	88.00
	40-45	7	78.8571	18.32511	6.92624	61.9092	95.8050	58.00	102.00
	50-55	7	34.2857	22.49233	8.50130	13.4838	55.0876	6.00	68.00
	Above 55	1	34.0000	.	.	.	.	34.00	34.00
	Total	38	57.8947	25.47685	4.13289	49.5207	66.2688	6.00	112.00
Exhaustion	Below 25	4	2.1000	.11547	.05774	1.9163	2.2837	2.00	2.20
	25-30	2	2.2000	.56569	.40000	-2.8825	7.2825	1.80	2.60
	30-35	11	1.7909	.50686	.15282	1.4504	2.1314	.80	2.60
	35-40	6	2.0667	.58878	.24037	1.4488	2.6846	1.40	2.60
	40-45	7	2.0286	.57363	.21681	1.4981	2.5591	1.30	2.60
	50-55	7	3.1143	.92993	.35148	2.2542	3.9743	2.00	4.40
	Above 55	1	1.2000	.	.	.	.	1.20	1.20
	Total	38	2.1605	.74997	.12166	1.9140	2.4070	.80	4.40
Cynicism	Below 25	4	1.9000	.87178	.43589	.5128	3.2872	1.20	3.00
	25-30	2	2.9000	.14142	.10000	1.6294	4.1706	2.80	3.00
	30-35	11	1.8545	.58713	.17703	1.4601	2.2490	.60	2.60
	35-40	6	2.1000	.91869	.37506	1.1359	3.0641	1.20	3.00
	40-45	7	1.9714	.50897	.19237	1.5007	2.4421	1.60	2.80
	50-55	7	2.6286	1.00285	.37904	1.7011	3.5561	.60	3.40
	Above 55	1	.8000	.	.	.	.	.80	.80
	Total	38	2.0895	.79552	.12905	1.8280	2.3510	.60	3.40
Efficacy	Below 25	4	2.9583	.43833	.21916	2.2609	3.6558	2.50	3.33
	25-30	2	3.0000	.47140	.33333	-1.2354	7.2354	2.67	3.33
	30-35	11	3.4515	1.12855	.34027	2.6933	4.2097	1.67	5.67
	35-40	6	3.1222	.69175	.28241	2.3963	3.8482	2.67	4.50
	40-45	7	2.9810	1.20598	.45582	1.8656	4.0963	2.00	4.83
	50-55	7	3.9048	1.57779	.59635	2.4456	5.3640	1.83	5.50
	Above 55	1	4.0000	.	.	.	.	4.00	4.00
	Total	38	3.3351	1.09539	.17770	2.9750	3.6951	1.67	5.67
Total_job_satisfaction	Below 25	4	140.0000	43.32051	21.66026	71.0674	208.9326	101.00	178.00
	25-30	2	127.5000	2.12132	1.50000	108.4407	146.5593	126.00	129.00
	30-35	11	144.2727	11.27910	3.40078	136.6953	151.8501	129.00	173.00
	35-40	6	124.3333	14.22205	5.80613	109.4082	139.2585	109.00	143.00
	40-45	7	145.5714	13.93864	5.26831	132.6803	158.4625	117.00	155.00
	50-55	7	130.8571	14.06448	5.31587	117.8497	143.8646	113.00	147.00
	Above 55	1	134.0000	.	.	.	.	134.00	134.00
	Total	38	137.2895	18.61111	3.01912	131.1722	143.4068	101.00	178.00

(d) Age (Con't)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Culture divergence (0,1)	Between Groups	3.304	6	.551	2.956	.021
	Within Groups	5.775	31	.186		
	Total	9.079	37			
Total_divergence	Between Groups	14763.960	6	2460.660	8.245	.000
	Within Groups	9251.619	31	298.439		
	Total	24015.579	37			
Exhaustion	Between Groups	8.986	6	1.498	3.926	.005
	Within Groups	11.825	31	.381		
	Total	20.811	37			
Cynicism	Between Groups	5.860	6	.977	1.725	.148
	Within Groups	17.556	31	.566		
	Total	23.416	37			
Efficacy	Between Groups	4.805	6	.801	.627	.707
	Within Groups	39.590	31	1.277		
	Total	44.395	37			
Total_job_satisfaction	Between Groups	2545.229	6	424.205	1.280	.295
	Within Groups	10270.587	31	331.309		
	Total	12815.816	37			

(e) Education

Oneway

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Cutlure divergence (0,1)	below	14	.79	.426	.114	.54	1.03	0	1
	undergraduate	17	.47	.514	.125	.21	.74	0	1
	above	8	.63	.518	.183	.19	1.06	0	1
	Total	39	.62	.493	.079	.46	.78	0	1
Total_divergence	below	14	51.2857	26.85124	7.17630	35.7823	66.7892	6.00	88.00
	undergraduate	17	51.2941	14.42119	3.49765	43.8794	58.7088	26.00	72.00
	above	8	84.5000	24.97427	8.82974	63.6210	105.3790	48.00	112.00
	Total	39	58.1026	25.17287	4.03089	49.9425	66.2627	6.00	112.00
Exhaustion	below	14	2.4143	1.03616	.27693	1.8160	3.0125	.80	4.40
	undergraduate	17	1.7824	.45171	.10956	1.5501	2.0146	1.00	2.60
	above	8	2.3750	.42003	.14850	2.0238	2.7262	1.60	2.60
	Total	39	2.1308	.76301	.12218	1.8834	2.3781	.80	4.40
Cynicism	below	14	2.1571	1.00209	.26782	1.5786	2.7357	.60	3.40
	undergraduate	17	1.8118	.65372	.15855	1.4757	2.1479	.80	3.00
	above	8	2.4750	.45277	.16008	2.0965	2.8535	1.80	3.00
	Total	39	2.0718	.79271	.12694	1.8148	2.3288	.60	3.40
Efficacy	below	14	4.0048	1.31928	.35259	3.2430	4.7665	1.83	5.67
	undergraduate	17	3.0471	.90224	.21883	2.5832	3.5109	2.00	5.83
	above	8	3.0875	.98608	.34863	2.2631	3.9119	1.67	4.50
	Total	39	3.3991	1.15253	.18455	3.0255	3.7728	1.67	5.83
Total job satisfaction	below	14	135.7857	15.90442	4.25063	126.6028	144.9687	113.00	173.00
	undergraduate	17	139.4118	22.86389	5.54531	127.6562	151.1673	101.00	178.00
	above	8	136.2500	12.48714	4.41487	125.8105	146.6895	117.00	153.00
	Total	39	137.4615	18.39600	2.94572	131.4982	143.4248	101.00	178.00

(e) Education (Cont't)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Culture divergence (0,1)	Between Groups	.763	2	.382	1.623	211
	Within Groups	8.467	36	.235		
	Total	9.231	38			
Total_divergence	Between Groups	7013.203	2	3506.602	7.397	.002
	Within Groups	17066.387	36	474.066		
	Total	24079.590	38			
Exhaustion	Between Groups	3.666	2	1.833	3.575	.038
	Within Groups	18.457	36	.513		
	Total	22.123	38			
Cynicism	Between Groups	2.552	2	1.276	2.154	.131
	Within Groups	21.327	36	.592		
	Total	23.879	38			
Efficacy	Between Groups	8.019	2	4.010	3.400	.044
	Within Groups	42.457	36	1.179		
	Total	50.477	38			
Total job satisfaction	Between Groups	115.718	2	57.859	.163	.850
	Within Groups	12743.975	36	353.999		
	Total	12859.692	38			

(f) Marital status

Oneway

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Culture divergence (0,1)	single	12	.50	.522	.151	.17	.83	0	1
	married	25	.72	.458	.092	.53	.91	0	1
	divorced	2	.00	.000	.000	.00	.00	0	0
	Total	39	.62	.493	.079	.46	.78	0	1
Total_divergence	single	12	66.6667	27.63836	7.97851	49.1061	84.2272	26.00	112.00
	married	25	53.6800	24.39044	4.87809	43.6121	63.7479	6.00	102.00
	divorced	2	62.0000	.00000	.00000	62.0000	62.0000	62.00	62.00
	Total	39	58.1026	25.17287	4.03089	49.9425	66.2627	6.00	112.00
Exhaustion	single	12	1.9667	.51050	.14737	1.6423	2.2910	1.00	2.60
	married	25	2.1720	.87679	.17536	1.8101	2.5339	.80	4.40
	divorced	2	2.6000	.00000	.00000	2.6000	2.6000	2.60	2.60
	Total	39	2.1308	.76301	.12218	1.8834	2.3781	.80	4.40
Cynicism	single	12	1.9833	.77908	.22490	1.4883	2.4783	1.20	3.00
	married	25	2.0400	.80000	.16000	1.7098	2.3702	.60	3.40
	divorced	2	3.0000	.00000	.00000	3.0000	3.0000	3.00	3.00
	Total	39	2.0718	.79271	.12694	1.8148	2.3288	.60	3.40
Efficacy	single	12	3.0611	.99207	.28639	2.4308	3.6914	1.67	5.83
	married	25	3.6200	1.22452	.24490	3.1145	4.1255	1.83	5.67
	divorced	2	2.6667	.00000	.00000	2.6667	2.6667	2.67	2.67
	Total	39	3.3991	1.15253	.18455	3.0255	3.7728	1.67	5.83
Total job satisfaction	single	12	136.5000	23.29846	6.72569	121.6969	151.3031	101.00	178.00
	married	25	140.1600	14.62213	2.92443	134.1243	146.1957	113.00	173.00
	divorced	2	109.5000	.70711	.50000	103.1469	115.8531	109.00	110.00
	Total	39	137.4615	18.39600	2.94572	131.4982	143.4248	101.00	178.00

(f) Marital status (Con't)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Cutlure divergence (0,1)	Between Groups	1.191	2	.595	2.666	.083
	Within Groups	8.040	36	.223		
	Total	9.231	38			
Total_divergence	Between Groups	1399.483	2	699.742	1.111	.340
	Within Groups	22680.107	36	630.003		
	Total	24079.590	38			
Exhaustion	Between Groups	.806	2	.403	.681	.513
	Within Groups	21.317	36	.592		
	Total	22.123	38			
Cynicism	Between Groups	1.842	2	.921	1.505	.236
	Within Groups	22.037	36	.612		
	Total	23.879	38			
Efficacy	Between Groups	3.664	2	1.832	1.409	.258
	Within Groups	46.813	36	1.300		
	Total	50.477	38			
Total job satisfaction	Between Groups	1756.832	2	878.416	2.848	.071
	Within Groups	11102.860	36	308.413		
	Total	12859.692	38			

Appendix 6 T-test of demographic variables with cultural divergence, job burnout and job satisfaction

(a) Gender

Group Statistics

	gender	N	Mean	Std. Deviation	Std. Error Mean
Culture divergence	male	30	.70	.466	.085
	female	9	.33	.500	.167
Total_divergence	male	30	55.9333	26.24281	4.79126
	female	9	65.3333	20.90454	6.96818
Exhaustion	male	30	2.1233	.82323	.15030
	female	9	2.1556	.55478	.18493
Cynicism	male	30	2.0400	.82613	.15083
	female	9	2.1778	.70317	.23439
Efficacy	male	30	3.4233	1.17568	.21465
	female	9	3.3185	1.13555	.37852
Total job satisfaction	male	30	139.4333	15.85861	2.89537
	female	9	130.8889	25.15176	8.38392

(b) Gender (Con't)

T-Test

Independent Samples Test

		Equality of Variances		t-test for Equality of Means						
									Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Culture_divergence	Equal variances assumed	.124	.726	2.037	37	.049	.367	.180	.002	.731
	Equal variances not assumed			1.959	12.481	.073	.367	.187	-.039	.773
Total_divergence	Equal variances assumed	1.190	.282	-.982	37	.332	-9.40000	9.57164	-28.79399	9.99399
	Equal variances not assumed			-1.112	16.345	.282	-9.40000	8.45646	-27.29621	8.49621
Exhaustion	Equal variances assumed	1.361	.251	-.110	37	.913	-.03222	.29383	-.62759	.56314
	Equal variances not assumed			-.135	19.690	.894	-.03222	.23830	-.52981	.46537
Cynicism	Equal variances assumed	.583	.450	-.453	37	.654	-.13778	.30448	-.75471	.47916
	Equal variances not assumed			-.494	15.275	.628	-.13778	.27873	-.73094	.45538
Efficacy	Equal variances assumed	.294	.591	.236	37	.815	.10481	.44358	-.79395	1.00358
	Equal variances not assumed			.241	13.585	.813	.10481	.43514	-.83116	1.04079
Total job satisfaction	Equal variances assumed	4.421	.042	1.230	37	.226	8.54444	6.94477	-5.52700	22.61588
	Equal variances not assumed			.963	9.983	.358	8.54444	8.86980	-11.22329	28.31218

(c) Education level

i. Below undergraduate and undergraduate

Group Statistics

	education	N	Mean	Std. Deviation	Std. Error Mean
Culture_divergence (0,1)	below undergraduate	14	.79	.426	.114
	undergraduate	17	.47	.514	.125
Total_divergence	below undergraduate	14	51.2857	26.85124	7.17630
	undergraduate	17	51.2941	14.42119	3.49765
Exhaustion	below undergraduate	14	2.4143	1.03616	.27693
	undergraduate	17	1.7824	.45171	.10956
Cynicism	below undergraduate	14	2.1571	1.00209	.26782
	undergraduate	17	1.8118	.65372	.15855
Efficacy	below undergraduate	14	4.0036	1.31996	.35277
	undergraduate	17	3.0476	.90136	.21861
Total_job_satisfaction	below undergraduate	14	135.7857	15.90442	4.25063
	undergraduate	17	139.4118	22.86389	5.54531

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Culture_divergence (0,1)	Equal variances assumed	7.407	.011	1.831	29	.077	.315	.172	-.037	.667
	Equal variances not assumed			1.866	28.996	.072	.315	.169	-.030	.661
Total_divergence	Equal variances assumed	9.370	.005	-.001	29	.999	-.00840	7.55269	-15.45540	15.43859
	Equal variances not assumed			-.001	19.037	.999	-.00840	7.98328	-16.71540	16.69860
Exhaustion	Equal variances assumed	6.198	.019	2.272	29	.031	.63193	.27812	.06311	1.20075
	Equal variances not assumed			2.122	17.048	.049	.63193	.29781	.00375	1.26012
Cynicism	Equal variances assumed	6.002	.021	1.155	29	.257	.34538	.29890	-.26595	.95671
	Equal variances not assumed			1.110	21.558	.279	.34538	.31123	-.30085	.99160
Efficacy	Equal variances assumed	6.677	.015	2.389	29	.024	.95592	.40015	.13753	1.77431
	Equal variances not assumed			2.303	22.237	.031	.95592	.41502	.09576	1.81609
Total_job_satisfaction	Equal variances assumed	1.734	.198	-.501	29	.620	-3.62605	7.23440	-18.42206	11.16996
	Equal variances not assumed			-.519	28.301	.608	-3.62605	6.98701	-17.93145	10.67934

(b) education level (Con't)

ii. Undergraduate and above undergraduate

Group Statistics

	education	N	Mean	Std. Deviation	Std. Error Mean
Culture_divergence (0,1)	undergraduate	17	.47	.514	.125
	above undergraduate	8	.63	.518	.183
Total_divergence	undergraduate	17	51.2941	14.42119	3.49765
	above undergraduate	8	84.5000	24.97427	8.82974
Exhaustion	undergraduate	17	1.7824	.45171	.10956
	above undergraduate	8	2.3750	.42003	.14850
Cynicism	undergraduate	17	1.8118	.65372	.15855
	above undergraduate	8	2.4750	.45277	.16008
Efficacy	undergraduate	17	3.0476	.90136	.21861
	above undergraduate	8	3.0875	.98520	.34832
Total_job_satisfaction	undergraduate	17	139.4118	22.86389	5.54531
	above undergraduate	8	136.2500	12.48714	4.41487

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Culture_divergence (0,1)	Equal variances assumed	.827	.373	-.699	23	.492	-.154	.221	-.612	.303
	Equal variances not assumed			-.697	13.726	.497	-.154	.221	-.630	.322
Total_divergence	Equal variances assumed	7.016	.014	-4.235	23	.000	-33.20588	7.84151	-49.42727	-16.98449
	Equal variances not assumed			-3.496	9.269	.006	-33.20588	9.49725	-54.59540	-11.81636
Exhaustion	Equal variances assumed	.087	.771	-3.125	23	.005	-.59265	.18964	-.98495	-.20035
	Equal variances not assumed			-3.211	14.778	.006	-.59265	.18454	-.98651	-.19879
Cynicism	Equal variances assumed	1.058	.314	-2.579	23	.017	-.66324	.25713	-1.19516	-.13131
	Equal variances not assumed			-2.944	19.331	.008	-.66324	.22531	-1.13426	-.19221
Efficacy	Equal variances assumed	.415	.526	-.100	23	.921	-.03985	.39774	-.86264	.78294
	Equal variances not assumed			-.097	12.736	.924	-.03985	.41124	-.93016	.85045
Total_job_satisfaction	Equal variances assumed	2.089	.162	.364	23	.719	3.16176	8.69324	-14.82157	21.14510
	Equal variances not assumed			.446	22.265	.660	3.16176	7.08812	-11.52797	17.85150

(b) Education level (Con't)

iii. Below undergraduate and above undergraduate

Group Statistics

	education	N	Mean	Std. Deviation	Std. Error Mean
Culture_divergence (0,1)	below undergraduate	14	.79	.426	.114
	above undergraduate	8	.63	.518	.183
Total_divergence	below undergraduate	14	51.2857	26.85124	7.17630
	above undergraduate	8	84.5000	24.97427	8.82974
Exhaustion	below undergraduate	14	2.4143	1.03616	.27693
	above undergraduate	8	2.3750	.42003	.14850
Cynicism	below undergraduate	14	2.1571	1.00209	.26782
	above undergraduate	8	2.4750	.45277	.16008
Efficacy	below undergraduate	14	4.0036	1.31996	.35277
	above undergraduate	8	3.0875	.98520	.34832
Total_job_satisfaction	below undergraduate	14	135.7857	15.90442	4.25063
	above undergraduate	8	136.2500	12.48714	4.41487

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Culture_divergence (0,1)	Equal variances assumed	2.001	.173	.788	20	.440	.161	.204	-.265	.586
	Equal variances not assumed			.746	12.459	.470	.161	.215	-.307	.628
Total_divergence	Equal variances assumed	.100	.755	-2.859	20	.010	-33.21429	11.61616	-57.44517	-8.98340
	Equal variances not assumed			-2.919	15.630	.010	-33.21429	11.37820	-57.38151	-9.04706
Exhaustion	Equal variances assumed	3.628	.071	.102	20	.920	.03929	.38628	-.76647	.84504
	Equal variances not assumed			.125	18.683	.902	.03929	.31423	-.61916	.69774
Cynicism	Equal variances assumed	9.507	.006	-.843	20	.409	-.31786	.37723	-1.10475	.46904
	Equal variances not assumed			-1.019	19.359	.321	-.31786	.31201	-.97009	.33437
Efficacy	Equal variances assumed	2.713	.115	1.703	20	.104	.91607	.53776	-.20567	2.03782
	Equal variances not assumed			1.848	18.337	.081	.91607	.49576	-.12411	1.95625
Total_job_satisfaction	Equal variances assumed	.159	.694	-.071	20	.944	-.46429	6.55869	-14.14548	13.21691
	Equal variances not assumed			-.076	17.770	.940	-.46429	6.12854	-13.35180	12.42322

Appendix 7 T-test of organizational culture divergence (0,1) for job burnout and job satisfaction

Group Statistics

	Culture_divergence	N	Mean	Std. Deviation	Std. Error Mean
Exhaustion	no culture type difference	15	2.4933	.88112	.22751
	culture type difference	24	1.9042	.59159	.12076
Cynicism	no culture type difference	15	2.4267	.74014	.19110
	culture type difference	24	1.8500	.75585	.15429
Efficacy	no culture type difference	15	3.3673	1.12103	.28945
	culture type difference	24	3.4188	1.19450	.24383
Total_job satisfaction	no culture type difference	15	132.4667	23.74227	6.13023
	culture type difference	24	140.5833	13.76801	2.81038

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Exhaustion	Equal variances assumed	.828	.369	2.503	37	.017	.58917	.23536	.11229	1.06605
	Equal variances not assumed			2.287	21.940	.032	.58917	.25757	.05492	1.12341
Cynicism	Equal variances assumed	.000	.994	2.336	37	.025	.57667	.24684	.07653	1.07680
	Equal variances not assumed			2.348	30.350	.026	.57667	.24561	.07530	1.07803
Efficacy	Equal variances assumed	.204	.654	-.134	37	.894	-.05142	.38419	-.82986	.72702
	Equal variances not assumed			-.136	31.319	.893	-.05142	.37846	-.82297	.72014
Total_job satisfaction	Equal variances assumed	4.725	.036	-1.355	37	.184	-8.11667	5.98930	-20.25214	4.01881
	Equal variances not assumed			-1.204	19.966	.243	-8.11667	6.74373	-22.18536	5.95203

Appendix 8 Pearson correlation between culture divergence, job burnout and job satisfaction

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	i	ii	iii	A	B	C	D	E	F	G	H	I	Total
1	Pearson	1	.358*	-.112	.221	.117	-.398*	.193	.437**	.213	.323*	-.009	.071	.274	.331*	.059	.334*	.009	.335*	-.438**	-.178	-.067	.171	-.016	-.070	-.251	-.065	-.312	.160	-.089
	Sig. (2-tailed)		.025	.499	.176	.479	.012	.240	.005	.193	.045	.958	.667	.092	.040	.719	.038	.958	.037	.005	.278	.685	.298	.922	.671	.123	.695	.054	.330	.589
	N	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
2	Pearson	.358*	1	.257	.288	.175	.243	.536**	.661**	.542**	.461**	.018	.553**	.393*	.434**	.286	.664**	-.125	-.009	.018	-.054	-.306	-.040	.138	.066	-.347*	-.146	-.349*	-.150	-.193
	Sig. (2-tailed)	.025		.114	.075	.286	.136	.000	.000	.000	.003	.912	.000	.013	.006	.077	.000	.450	.957	.913	.742	.058	.810	.401	.690	.030	.374	.029	.362	.238
3	Pearson	-.112	.257	1	.205	.074	.290	.203	.071	.071	-.019	.058	.306	-.034	-.044	.065	.244	.121	-.013	.108	.141	.093	-.070	-.069	-.065	.222	-.049	-.109	-.057	-.010
	Sig. (2-tailed)	.499	.114		.210	.656	.074	.215	.668	.666	.909	.725	.059	.837	.792	.693	.134	.465	.936	.511	.390	.573	.674	.677	.695	.174	.766	.507	.731	.953
4	Pearson	.221	.288	.205	1	.545**	.221	.171	.251	.332*	.377*	.368*	.446**	.215	.349*	.580**	.580**	-.181	.050	-.241	.196	-.182	.490**	-.046	.175	.281	.169	.039	.342*	.276
	Sig. (2-tailed)	.176	.075	.210		.000	.177	.298	.124	.039	.018	.021	.004	.189	.030	.000	.000	.271	.762	.139	.233	.268	.002	.780	.286	.083	.304	.812	.033	.089
5	Pearson	.117	.175	.074	.545**	1	.521**	.371*	.431**	.526**	.610**	.265	.223	.503**	.566**	.767**	.716**	-.083	-.069	-.104	.124	-.422**	-.085	-.212	-.062	.084	-.075	.094	.182	-.066
	Sig. (2-tailed)	.479	.286	.656	.000		.001	.020	.006	.001	.000	.103	.173	.001	.000	.000	.000	.615	.676	.530	.450	.007	.608	.195	.706	.610	.651	.568	.267	.688
6	Pearson	-.398*	.243	.290	.221	.521**	1	.471**	.330*	.516**	.378*	.288	.441**	.388*	.311	.573**	.590**	.007	-.193	.027	.119	-.410**	-.301	-.143	.084	.316	-.239	.025	-.112	-.147
	Sig. (2-tailed)	.012	.136	.074	.177	.001		.002	.040	.001	.018	.075	.005	.015	.054	.000	.000	.969	.239	.872	.470	.010	.063	.385	.611	.050	.143	.881	.496	.370
7	Pearson	.193	.536**	.203	.171	.371*	.471**	1	.468**	.645**	.480**	.354*	.425**	.613**	.402*	.534**	.729**	-.004	.132	-.189	-.258	-.294	-.370*	-.278	-.103	-.172	-.532**	-.298	-.203	-.455**
	Sig. (2-tailed)	.240	.000	.215	.298	.020	.002		.003	.000	.002	.027	.007	.000	.011	.000	.000	.981	.423	.250	.113	.070	.020	.086	.533	.294	.000	.065	.215	.004
8	Pearson	.437**	.661**	.071	.251	.431**	.330*	.468**	1	.667**	.735**	.104	.329*	.443**	.497**	.465**	.744**	-.019	.114	.014	.092	-.316*	-.225	-.072	.108	-.068	-.319*	-.240	-.124	-.222
	Sig. (2-tailed)	.005	.000	.668	.124	.006	.040	.003		.000	.000	.528	.041	.005	.001	.003	.000	.907	.490	.933	.576	.050	.169	.665	.512	.679	.048	.141	.452	.175
9	Pearson	.213	.542**	.071	.332*	.526**	.516**	.645**	.667**	1	.680**	.198	.306	.480**	.684**	.632**	.805**	.001	.125	-.038	-.173	-.549**	-.273	-.251	-.062	-.115	-.400*	-.234	-.067	-.377*
	Sig. (2-tailed)	.193	.000	.666	.039	.001	.001	.000	.000		.000	.226	.058	.002	.000	.000	.000	.996	.448	.817	.292	.000	.093	.123	.708	.484	.012	.152	.687	.018
10	Pearson	.323*	.461**	-.019	.377*	.610**	.378*	.480**	.735**	.680**	1	.267	.326*	.406*	.537**	.666**	.779**	-.153	-.098	-.252	.037	-.308	.025	-.239	.022	.038	-.139	.007	.133	-.071
	Sig. (2-tailed)	.045	.003	.909	.018	.000	.018	.002	.000	.000		.100	.043	.010	.000	.000	.000	.352	.552	.122	.825	.056	.879	.143	.893	.818	.398	.966	.420	.667
11	Pearson	-.009	.018	.058	.368*	.265	.288	.354*	.104	.198	.267	1	.298	.251	.141	.441**	.411**	-.126	.181	-.230	-.293	.011	.004	-.342*	-.027	.173	-.312	.011	-.039	-.148
	Sig. (2-tailed)	.958	.912	.725	.021	.103	.075	.027	.528	.226	.100		.066	.123	.391	.005	.009	.446	.271	.159	.070	.948	.979	.033	.868	.292	.053	.949	.816	.367
12	Pearson	.071	.553**	.306	.446**	.223	.441**	.425**	.329*	.306	.326*	.298	1	.482**	.288	.385*	.613**	-.295	-.313	-.144	.029	-.039	.236	.117	.119	.172	.072	.078	.151	.169
	Sig. (2-tailed)	.667	.000	.059	.004	.173	.005	.007	.041	.058	.043	.066		.002	.076	.015	.000	.069	.052	.381	.860	.816	.148	.478	.471	.294	.662	.637	.358	.303
13	Pearson	.274	.393*	-.034	.215	.503**	.388*	.613**	.443**	.480**	.406*	.251	.482**	1	.625**	.567**	.704**	-.347*	-.288	-.101	-.065	-.263	-.078	.218	.175	-.221	-.146	.006	.326*	-.024
	Sig. (2-tailed)	.092	.013	.837	.189	.001	.015	.000	.005	.002	.010	.123	.002		.000	.000	.000	.030	.075	.543	.692	.106	.637	.182	.286	.176	.376	.969	.043	.887
14	Pearson	.331*	.434**	-.044	.349*	.566**	.311	.402*	.497**	.684**	.537**	.141	.288	.625**	1	.385*	.696**	-.265	-.187	-.101	-.099	-.531**	.005	.064	-.029	-.158	-.066	-.114	.275	-.103
	Sig. (2-tailed)	.040	.006	.792	.030	.000	.054	.011	.001	.000	.000	.391	.076	.000		.016	.000	.104	.254	.541	.549	.001	.974	.700	.863	.338	.689	.490	.091	.533
15	Pearson	.059	.286	.065	.580**	.767**	.573**	.534**	.465**	.632**	.666**	.441**	.385*	.567**	.385*	1	.789**	-.185	.026	-.202	-.104	-.407*	-.014	-.305	.003	.046	-.192	.102	.114	-.127
	Sig. (2-tailed)	.719	.077	.693	.000	.000	.000	.000	.003	.000	.000	.005	.015	.000	.016		.000	.261	.875	.219	.527	.010	.931	.059	.985	.781	.241	.536	.490	.441
Total cultural divergence	Pearson	.334*	.664**	.244	.580**	.716**	.590**	.729**	.744**	.805**	.779**	.411**	.613**	.704**	.696**	.789**	1	-.171	-.021	-.195	-.052	-.433**	-.065	-.153	.031	-.012	-.261	-.140	.095	-.176
	Sig. (2-tailed)	.038	.000	.134	.000	.000	.000	.000	.000	.000	.000	.009	.000	.000	.000	.000		.299	.897	.234	.754	.006	.692	.354	.851	.940	.109	.395	.563	.283

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 8 Pearson correlation between culture divergence, job burnout and job satisfaction (Con't)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	i	ii	iii	A	B	C	D	E	F	G	H	I	Total
i	Pearson	.009	-.125	.121	-.181	-.083	.007	-.004	-.019	.001	-.153	-.126	-.295	-.347*	-.265	-.185	-.171	1	.658**	.106	-.157	-.071	-.527**	-.241	-.257	.068	-.404*	-.651**	-.319*	-.486**
	Sig. (2-tailed)	.958	.450	.465	.271	.615	.969	.981	.907	.996	.352	.446	.069	.030	.104	.261	.299		.000	.522	.340	.667	.001	.140	.115	.679	.011	.000	.048	.002
ii	Pearson	.335*	-.009	-.013	.050	-.069	-.193	.132	.114	.125	-.098	.181	-.313	-.288	-.187	.026	-.021	.658**	1	-.035	-.435**	-.160	-.339*	-.437**	-.241	-.102	-.463**	-.608**	-.471**	-.573**
	Sig. (2-tailed)	.037	.957	.936	.762	.676	.239	.423	.490	.448	.552	.271	.052	.075	.254	.875	.897	.000		.830	.006	.331	.035	.005	.139	.538	.003	.000	.003	.000
iii	Pearson	-.438**	.018	.108	-.241	-.104	.027	-.189	.014	-.038	-.252	-.230	-.144	-.101	-.101	-.202	-.195	.106	-.035	1	.227	.058	-.288	.239	.299	-.012	.017	-.076	-.069	.026
	Sig. (2-tailed)	.005	.913	.511	.139	.530	.872	.250	.933	.817	.122	.159	.381	.543	.541	.219	.234	.522	.830		.165	.726	.076	.143	.064	.945	.918	.647	.675	.874
A	Pearson	-.178	-.054	.141	.196	.124	.119	-.258	.092	-.173	.037	-.293	.029	-.065	-.099	-.104	-.052	-.157	-.435**	.227	1	.287	.234	.507**	.575**	.420**	.581**	.404*	.237	.708**
	Sig. (2-tailed)	.278	.742	.390	.233	.450	.470	.113	.576	.292	.825	.070	.860	.692	.549	.527	.754	.340	.006	.165		.077	.151	.001	.000	.008	.000	.011	.146	.000
B	Pearson	-.067	-.306	.093	-.182	-.422**	-.410**	-.294	-.316*	-.549**	-.308	.011	-.039	-.263	-.531**	-.407*	-.433**	-.071	-.160	.058	.287	1	.297	.138	.379*	.092	.298	.430**	.226	.526**
	Sig. (2-tailed)	.685	.058	.573	.268	.007	.010	.070	.050	.000	.056	.948	.816	.106	.001	.010	.006	.667	.331	.726	.077		.066	.403	.017	.577	.065	.006	.166	.001
C	Pearson	.171	-.040	-.070	.490**	-.085	-.301	-.370*	-.225	-.273	.025	.004	.236	-.078	.005	-.014	-.065	-.527**	-.339*	-.288	.234	.297	1	.330*	.415**	.071	.682**	.466**	.589**	.768**
	Sig. (2-tailed)	.298	.810	.674	.002	.608	.063	.020	.169	.093	.879	.979	.148	.637	.974	.931	.692	.001	.035	.076	.151	.066		.040	.009	.666	.000	.003	.000	.000
D	Pearson	-.016	.138	-.069	-.046	-.212	-.143	-.278	-.072	-.251	-.239	-.342*	.117	.218	.064	-.305	-.153	-.241	-.437**	.239	.507**	.138	.330*	1	.571**	-.210	.625**	.075	.275	.579**
	Sig. (2-tailed)	.922	.401	.677	.780	.195	.385	.086	.665	.123	.143	.033	.478	.182	.700	.059	.354	.140	.005	.143	.001	.403	.040		.000	.200	.000	.651	.090	.000
E	Pearson	-.070	.066	-.065	.175	-.062	.084	-.103	.108	-.062	.022	-.027	.119	.175	-.029	.003	.031	-.257	-.241	.299	.575**	.379*	.415**	.571**	1	.106	.414**	.291	.362*	.685**
	Sig. (2-tailed)	.671	.690	.695	.286	.706	.611	.533	.512	.708	.893	.868	.471	.286	.863	.985	.851	.115	.139	.064	.000	.017	.009	.000		.521	.009	.073	.024	.000
F	Pearson	-.251	-.347*	.222	.281	.084	.316	-.172	-.068	-.115	.038	.173	.172	-.221	-.158	.046	-.012	.068	-.102	-.012	.420**	.092	.071	-.210	.106	1	.106	.190	.087	.283
	Sig. (2-tailed)	.123	.030	.174	.083	.610	.050	.294	.679	.484	.818	.292	.294	.176	.338	.781	.940	.679	.538	.945	.008	.577	.666	.200	.521		.522	.246	.600	.081
G	Pearson	-.065	-.146	-.049	.169	-.075	-.239	-.532**	-.319*	-.400*	-.139	-.312	.072	-.146	-.066	-.192	-.261	-.404*	-.463**	.017	.581**	.298	.682**	.625**	.414**	.106	1	.567**	.405*	.851**
	Sig. (2-tailed)	.695	.374	.766	.304	.651	.143	.000	.048	.012	.398	.053	.662	.376	.689	.241	.109	.011	.003	.918	.000	.065	.000	.000	.009	.522		.000	.011	.000
H	Pearson	-.312	-.349*	-.109	.039	.094	.025	-.298	-.240	-.234	.007	.011	.078	.006	-.114	.102	-.140	-.651**	-.608**	-.076	.404*	.430**	.466**	.075	.291	.190	.567**	1	.368*	.680**
	Sig. (2-tailed)	.054	.029	.507	.812	.568	.881	.065	.141	.152	.966	.949	.637	.969	.490	.536	.395	.000	.000	.647	.011	.006	.003	.651	.073	.246	.000		.021	.000
I	Pearson	.160	-.150	-.057	.342*	.182	-.112	-.203	-.124	-.067	.133	-.039	.151	.326*	.275	.114	.095	-.319*	-.471**	-.069	.237	.226	.589**	.275	.362*	.087	.405*	.368*	1	.617**
	Sig. (2-tailed)	.330	.362	.731	.033	.267	.496	.215	.452	.687	.420	.816	.358	.043	.091	.490	.563	.048	.003	.675	.146	.166	.000	.090	.024	.600	.011	.021		.000
Total job satisfaction	Pearson	-.089	-.193	-.010	.276	-.066	-.147	-.455**	-.222	-.377*	-.071	-.148	.169	-.024	-.103	-.127	-.176	-.486**	-.573**	.026	.708**	.526**	.768**	.579**	.685**	.283	.851**	.680**	.617**	1
	Sig. (2-tailed)	.589	.238	.953	.089	.688	.370	.004	.175	.018	.667	.367	.303	.887	.533	.441	.283	.002	.000	.874	.000	.001	.000	.000	.000	.081	.000	.000	.000	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).