

The Effects of Perceived Organizational Support, Job Satisfaction and Organizational Commitment on Job Performance in Bulk Shipping

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Abstract

Nowadays, bulk shipping industry is extremely competitiveness. The company needs to become truly global and extracts human resource talents from all over the globe. Therefore, human resource policies play a major role to becoming more adjusted to this global reality. Practitioners and researchers have been trying to understand and influence employee attitudes because of their relationships with important employees and organizational outcomes. To the best of the author knowledge, this study was the first attempt to examine the relationships between perceived organizational support, job satisfaction, organizational commitment, and job performance from a seafarer's perspective in the bulk shipping context.

The study was examined using survey data, collected from 133 seafarers working for two bulk shipping companies in Taiwan. Regression analysis was used to examine the effects of perceived organizational support, job satisfaction and organizational commitment then the later two on job performance. The results indicated that perceived organizational support positively affect job satisfaction and organizational commitment, while job satisfaction and organizational commitment positively affect job performance. The implications for increasing seafarer job performance in bulk shipping operations and their contribution to the development of human resource management are discussed

Keywords: Perceived organizational support, Job satisfaction, Organizational commitment, Job performance.

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1. INTRODUCTION

1.1 Research Background and Motivation

Over 80 per cent of world merchandise trade by volume being carried by sea, maritime transport remains the backbone supporting international trade and globalization. In 2007, the volume of international seaborne trade reached 8.02 billion tons—a 4.8 per cent increase year-on-year. Indeed, during the past three decades, the annual average growth rate of world seaborne trade is estimated at 3.1 per cent (United Nations Conference on Trade and Development, UNCTAD, 2008).

However, maritime industry is extremely competitiveness. To succeed globally today, a private shipping company needs to become truly global, seeing itself more as a network of activities, drawing on human resource talents from all over the globe, without being restricted to just have a dominant group of people from a particular headquarters location and country of ownership. In other words, company may consider welcoming all types of human resource talents, irrespective of where they come from, as long as they can do the best possible job. Therefore, human resource policies are becoming more adjusted to this global reality. Performance, not cultural or

geographical preferences, seems to dominate more and more (Zhang and Zheng, 2009). Practitioners and researchers have been trying to understand and influence employee attitudes because of their relationships with important employees and organizational outcomes. Understanding these complex relations is important to researchers from a theoretical point of view and also interested to practitioners from financial and management perspectives. Moreover, understanding of what factors influencing job performance increases, which may likely transforms into organizational effectiveness and profitability.

The antecedents and consequences of job attitude have been of great interest to behavioral scientists for much of the last century (Maynard et al., 2006). Different studies have observed either positive, negative, or no relationships between job attitudes and job performance (Meyer et al., 1993; Zhang and Zheng, 2009). Specifically, several researchers have discussed these different relationships between employee attitudes and job satisfaction (Saari and Judge, 2004) and organizational commitment (Kirkman and Shapiro, 2001). To better understand the factors affecting job attitudes and job performance, researchers have turned their attentions to organizational and individual factors that might influence these relationships

(Brown and Leigh, 1996). One approach to test relationships between job attitudes and job performance has been developed. It tests theoretical models that integrate factors that may influence job attitudes and their relations to job performance (Maynard et al., 2006).

Research indicates that organizations obtain favorable outcome from employees' perceptions of favorable treatment. Employees who are treated well are more likely to be committed and involved to their organization (Aselage and Eisenberger, 2003; Eisenberger et al., 2001). Perceived organizational support is associated with this exchange in that employees will reciprocate favorable treatment when they trust that the organization will reward them. In other words, perceived organizational support is an employees' formation of global beliefs pertaining to how much the organization cares about their well-being and values their contributions (Eisenberger et al., 2001). This concept is based on the social exchange theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960). Social exchange theory explains why employees feel obligated to reciprocate actions directed toward them by the organization. A number of the literature regarding employee-organization relationships has focused on perceived organizational support and positive relationship with job satisfaction and

performance (Erdogan and Enders, 2007).

Perceived organizational support is a critical link between the actions and behaviors of organizations and employees. Although perceived organizational support has been deemed a concept associated with organizational commitment, it is a departure from the traditional organizational commitment and retention lines of inquiry (Eisenberger et al., 2001). As such, perceived organizational support measures the degree of commitment in the organization demonstrates towards its employees as opposed to the commitment employees demonstrate toward their organization. Moreover, Eisenberger and Fasolo (1990) found evidence for the argument that perceived organizational support is an antecedent of organizational commitment.

Despite previous research has found organizational support positively influence job attitudes and job performance (Eisenberger et al., 1986), however there is lack of study in bulk shipping. There is very little empirical evidence regarding a comprehensive framework of perceived organizational support, job attitudes, and job performance. In addition to the job attitudes and job performance, this study will consider perceived organizational support in the context of bulk shipping.

To understand factors that influence job performance of seafarer will be beneficial for shipping companies because seafarers work and live on ships involved in international trade and they have to live and work together on board a ship away from home. Moreover, access to shore facilities and shore leave are vital elements of seafarers' general well-being. Under the supervision of the captain, all in turn on navigation watch or work hard to maintain the whole ship and her equipment while sailing. Officers and deck crews in turn on safety watch and operate ship's gears to assist cargo loading/unloading at both end ports. The engineers and oilers must overhaul the engine cylinders in turn and in time limit at ports. No matter what job descriptions of individuals, they must cooperate at any time. A small neglect of any person may cause serious injury or accident even very huge losses and/or fines of the shipping company.

When applied to seafarer behavior in bulk shipping, organizational support provides a greater understanding of seafarer's job attitudes and job performance. This study investigates the role that seafarer perceptions of the human resource environment plays in encouraging organizational identification and the importance of perceived organizational support in this relationship.

1.2 Research Objectives

To the best of the author knowledge, this study was the first attempt to investigate the factors such as perceived organizational support, job satisfaction, organizational commitment and job performance, to provide a more comprehensive assessment and understanding of seafarer's behavior in bulk shipping. Considering the tremendous growth of intercollegiate seafarers, it is quite evident that in a highly competitive environment shipping companies must demonstrate the significance of employees so as to garner certain outcomes such as employee commitment, satisfaction, and performance. Much of these outcomes can be attributed to employees' perceptions of organizational support. Therefore, this study also aims to examine seafarer's perceptions of organizational support. In particular, this study examines how the perceived organizational support impacts seafarer's job satisfaction, organizational commitment, and job performance in bulk shipping. Accordingly, the research objectives focus on examining the effect of perceived organizational support on seafarer's job satisfaction, organizational commitment and job performance in bulk shipping and examining the effect of job

satisfaction and organizational commitment on seafarer's job performance in bulk shipping

2. LITIRATURE REVIEW AND HYPOTHESES

2.1 Bulking Shipping

Shipping can be defined as the transport of cargo between seaports by ships, typically large steel vessels powered by diesel engines or steam turbine plants and groups aggregate into oil tankers, bulk carriers, general cargo ships, container ships, and other ships (UNCTAD, 2008). A bulk carrier nowadays is a specially designed ocean-going vessel used to transport bulk cargo items such as ore or grain. It can be recognized by the large box-like hatches on its deck; the watertight hatch covers designed can slide outboard for loading and unloading and then close to protect cargo.

Bulk shipping concentrates in the business of bulk carriers. Bulk shipping are primarily long distance moves of low-value, high density cargos that mechanical devices easily load and unload. Mineral, agricultural, and crude oil products are the major commodity transported. Bulk shipping carries move these products in large quantities. The principle advantage of using bulk shipping

transport is its low cost. The freight rate is lower than rail, motor, and air. It can be either liner service or mostly tramp shipping.

In 2007, world seaborne trade was estimated at 32,932 billion ton-miles. This represents an increase of 4.7 per cent over the previous year (UNCTAD, 2008). With China and others seeking to diversify their energy suppliers by tapping into distant markets, ton-miles for crude oil and oil products increased by 2.5 per cent. The share of crude oil imports into China from sources other than the Middle East and the Russian Federation is growing. For example, China's oil imports from Angola raised from 14 per cent in 2004 to 17 per cent in 2007 (UNCTAD, 2008).

2.2 Perceived Organizational Support (POS)

Perceived organizational support is the employees' perception or judgment of how much the organization values their contribution and cares about them (Eisenberger et al., 1986). Employees see their employment as a reciprocal exchange relationship that reflects relative dependence and extends beyond a formal contract (Eisenberger et al., 2001). Employees need to determine whether, and to what extent, an organization will recognize

and reward their effort, support their socio-emotional needs, and help them on request. Unlike previous literatures, which focused mainly on the employee's commitment to the organization, POS introduced the idea that employees have opinions regarding the organization's commitment to them (Erdogan and Enders, 2007). This perspective is important in organizational research because employees and organizations are involved in a reciprocal relationship. It is not sufficient only examine one side of this relationship but also consider the support which the organization gives to its employees (Chen and Mau, 2009).

The theoretical foundation of POS is organizational support theory (Aselage and Eisenberger, 2003; Eisenberger et al., 1986), which itself builds on social exchange and attribution processes (Blau, 1964). Organizational support researchers contend that individuals monitor their environments and make attributions for the organization's benevolent or malevolent motives and behaviors (Eisenberger et al., 1986). In this regard, employees habitually view the actions of organizational agents as indications of the organization's intent rather than the agents' personal motives. In other words, employees tend to anthropomorphize their work organizations and regard the favorable or unfavorable treatments that

they receive from organizational agents as indicative of whether they are favored or disfavored by the organization (Rhoades and Eisenberger, 2002).

2.3 Job Satisfaction

Job satisfaction is one of the most widely studied and measured constructs in the organizational behavior and management literature. Job satisfaction has been defined simply as a worker's positive or negative attitudes toward ones job (Greenberg and Baron, 2003). Robbins and Judge (2007) also defined job satisfaction as ones positive feeling about his or her job, but also further stated that the assessment was based on an evaluation of job characteristics. Each individual of values, attitudes, and expectations differ; thus, motivational factors may be quite different. The most used research definition of job satisfaction is by Locke (1976), who defined it as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences". Implicit in Locke's definition includes evaluative or expectancy components and the importance of both affect, or feeling, and cognition, or thinking. Similarly, job satisfaction is an employee effective response resulting from an evaluation of the work situation.

According to Herzberg (1966), the factors associated with work considered to be motivators include: achievement; recognition; tasks (the work itself); responsibility; advancement; and personal growth. The factors associated with work considered to be hygiene include: policies and administration; supervision/managerial relationships; salary; working conditions; status; security; and coworker relationships. Herzberg's work (1966) is considered a major advancement in the literature. Befittingly, it has also been used recently by researchers in the study of job satisfaction (DeShields et al., 2005; Sledge et al., 2008) with support for the theory.

2.4 Organizational Commitment

The definitions of organizational commitment include an identification with the organization, shared goals and values between the organization and the individual, continuing membership in the organization, and attachment to social relationships in the organization (Meyer et al., 1993). Maynard et al. (2006) pointed out that basically organizational commitment is a structural phenomenon of a transaction between an individual and an organization, and its non-transferable investment result shall increase as

time goes on; employees are reluctant to leave the organization because of the salary, status, position, and friendship among colleagues.

Organizational commitment is typically conceptualized as being comprised of three parts: a mental state that reflects the necessity (affective commitment), perceived cost associated with leaving the organization; the desire (continuance commitment), and/or the obligation (normative commitment) to remain in the organization (Allen and Meyer, 1990; Meyer and Allen, 1997). Somers (2009) suggested that commitment processes might be more complex than previously thought. Specifically, it appears that the relative levels of commitment for each employee affect how the more general psychological state of commitment is experienced. For example, when affective commitment and normative commitment are high, the potentially negative effects of continuance commitment are attenuated possibly because employees do not feel stuck in their organizations, but rather invested in them.

2.5 Job Performance

Job performance refers to the overall evaluation of how well an individual fits the organization's expectation (Allen et al., 2003). Organizations have been seeking to optimize

the job performance of their employees to achieve high levels of productivity, efficiency and effectiveness (Allen and Griffeth, 1999). Therefore, job performance must be clearly defined and fully understood by the employees who are expected to perform well at work.

From a more conceptual perspective, job performance can be generally separated into two parts: (1) task performance and (2) contextual performance (Ng and Feldman, 2009). Task performance refers to the role prescribed functions specific to each job title. In contrast to task performance, which utilizes knowledge about facts and principles related to an organization's technical core, contextual performance utilizes knowledge of facts, principles, and procedures, all of which relate to situations that call for helping and cooperating with others. It consists of organizational behaviors that, implicitly or explicitly, are important for organizational effectiveness (Motowidlo, 2003). In this study, we measure job performance with only task performance from the perspectives of seafarers.

Eisenberger et al. (2001) suggested that employees develop global beliefs about the extent to which their employing organization both values their contributions and cares about their well-being. Employees that benefit from the organization's support will

increasingly feel a sense of praise, support, or approval from their organization (Aselage and Eisenberger, 2003). Riggle et al. (2009) conducted a meta-analysis of 167 studies examining the effects of between perceived organizational support and job satisfaction. They suggested that employees who perceive the organization to be high in the level of support provided will be significantly less likely to leave the organization. Findings from the study indicated that perceived organizational support has a strong and positive effect on job satisfaction, and a strong but negative effect on intention to leave (Maertz et al., 2007). Research thus made the following hypothesis:

H₁: Perceived organizational support has positively significant effect on job satisfaction of seafarers in bulk shipping.

Eisenberger et al. (1986) proposed that high POS elicits the expectation that effort on behalf of the organization will be rewarded by the organization and engenders an obligation to repay the organization for the support received. POS has been shown to be related to a range of positive employee attitudes and behaviors at work, including, for example, job satisfaction, organizational commitment, various forms of citizenship and discretionary

behavior, attendance and intention to stay. Thus, higher POS should be associated with greater commitment to the organization. Consistent with the social exchange analysis of commitment, there is ample evidence that POS is positively related to affective commitment (Rhoades and Eisenberger, 2002). POS should thus contribute to employees' sense of purpose and meaning. Additionally, Shore and Tetrick (1991) suggested that POS might reduce feelings of entrapment (i.e., continuance commitment) that occur when employees are forced to stay with an organization because of the high costs of leaving. Thus, POS is positively related to continuance commitment which lower turnover intentions and lower levels of psychological stress (Somers, 2009). The positive relationships between POS and normative commitment are consistent with a social exchange perspective on employment relationships (Maertz et al., 2007; Panaccio and Vandenberghe, 2009). Based on the above discussion, research proposes the following hypotheses:

H_{2a}: Perceived organizational support has positively significant effect on affective commitment of seafarers in bulk shipping.

H_{2b}: Perceived organizational support has positively significant effect on

continuance commitment of seafarers in bulk shipping.

H_{2c}: Perceived organizational support has positively significant effect on normative commitment of seafarers in bulk shipping.

According to social exchange accounts that emphasize the norm of reciprocity, the obligation to repay organizational support with performance is considered to be a motive that drives work performance (Eisenberger et al., 1986). Moreover, supervisors' perceptions that the organization valued their contribution and cared about their wellbeing were found positively related to subordinates' perceptions of support by the supervisor, which in turn, was related to subordinates' POS, in-role performance, and extra-role performance (Shanock and Eisenberger, 2006). The finding from 167 studies in the meta-analysis indicate that POS has a moderate, positive effect on both task and contextual performance (Riggle et al., 2009). Research thus made the following hypothesis:

H₃: Perceived organizational support has positively significant effect on job performance of seafarers in bulk shipping.

The study of the relationship between job satisfaction and job performance is one

of the most venerable research traditions in industrial-organizational psychology. The positive relationship between job satisfaction and job performance has been found in numerous studies (Gittell et al., 2008; Riggle et al., 2009; Zhang and Zheng, 2009). Moreover, the relationship between job satisfaction and performance was found to be even higher for complex (e.g., professional) jobs than for less complex jobs. Thus, contrary to earlier reviews, it does appear that job satisfaction is, in fact, predictive of performance, and the relationship is even stronger for professional jobs. Thus, research proposes the following hypothesis:

H₄: Job satisfaction has positively significant effect on job performance of seafarers in bulk shipping.

The dominant framework in the literature, Meyer and Allen's (1991) three component model, provides a strong basis for delineating the proposed effects of commitment on job performance. Affective commitment indicates an emotional bond between the employee and the organization that is based on identification with the organization's goals and values. In the study of Spanish blue collar workers employed by a bus company and a water supply company, affective commitment to the organization exerted a positive influence on

job performance (Anton, 2009). Research thus made the following hypothesis:

H_{5a}: Affective commitment has positively significant effect on job performance of seafarers in bulk shipping.

Continuance commitment reflects commitment based on the perceived costs of leaving the organization (Meyer and Allen, 1991). In general, people who evaluate an attitude object favorably tend to engage in behaviors that foster or support it, and people who evaluate an attitude object unfavorably tend to engage in behaviors that hinder or oppose it (Somers, 2009). Following this logic, continuance attitudes toward the job should be related to behaviors on the job, the most central of which is performance on the job. Accordingly, research expected continuance commitment to be positively related to job performance in the present study. Accordingly, it is straightforward to address the following hypothesis:

H_{5b}: Continuance commitment has positively significant effect on job performance of seafarers in bulk shipping.

Normative commitment is the last commitment form and has received the least attention. Normative commitment refers to a loyalty driven by a sense of moral

obligation toward the organization (Meyer and Allen, 1991). Research has shown that it is positively associated with in-role and extra-role performance (Meyer et al., 2002). However, their motivated behavior is sustained by the sense of self-worth they derive from gaining the organization's respect. Although the motivational basis underlying normative commitment is less strong than the identification motive underlying affective commitment, its effect on behavior should nonetheless be positive on job performance. The preceding discussion leads to the following hypothesis:

H_{5c}: Normative commitment has positively significant effect on job performance of seafarers in bulk shipping

3. METHODOLOGY

3.1 The Conceptual Model

The objectives of this study are to examine the effect of perceived organizational support on seafarer job satisfaction and organizational commitment and the effect of job satisfaction and organizational commitment on seafarer job performance in bulk shipping. Based on the literature review, the conceptual model of this study is shown in Figure 1.

3.2 Construct Measurement

There are seven items to measure perceived organizational support from the

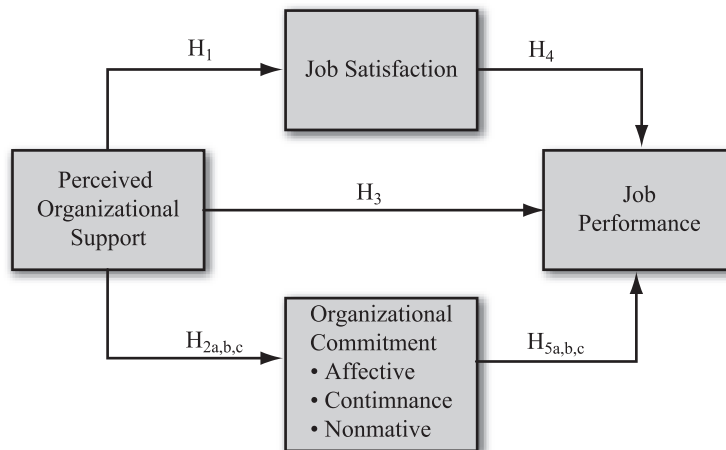


Figure 1 Conceptual research model

perceptive of seafarer in bulking shipping. The questionnaire items were adopted from Eisenberger et al. (1986), and Aselage and Eisenberger (2003) studies with some modification according to the objectives of this study.

There are twenty items to measure job satisfaction from the perceptive of seafarers in bulking shipping. The questionnaire items were adopted from the Minnesota Satisfaction Questionnaire (MSQ) (Gillet and Schwab, 1975), with some modification according to the objectives of this study. For the organizational commitment questionnaire items, this study used the revised version of Allen and Meyer's (1990) Three Component Organizational Commitment Questionnaires (OCQ), including affective, continuance and normative commitments. There are total fifteen items to measure organizational commitment. The measures of job satisfaction items are described as follows:

Job performance is measured in terms of the degree to which respondents felt that they performed their work well including quality, quantity, and creativity aspects. There are eleven items to measure job performance. The questionnaire items were based on Deadrick and Garbner's (2008) study, with some modification according to the objectives of this study.

3.3 Data Analysis Methods

In order to test the hypotheses, this study employed Statistical package for the Social Sciences (SPSS) 15.0 software as major tool to help analyze the collected data. Data analysis methods, including the descriptive statistics analysis, reliability analysis, and simple linear regression analysis are adopted to analyze the retrieved questionnaires and find out the relationship of each construct according to the research objectives. They are introduced in the following subsections.

In this study, the mean and standard deviation are used for examining the central tendency and dispersion of the data. Generally, mean is the most often used descriptive statistic. It is a particularly informative measure of the central tendency of the variable if it is reported along with its confidence intervals. On the other hand, the standard deviation measures the dispersive extent of the data, i.e. the spread of the values around the central tendency (Hair et al., 2006).

Factor analysis takes a large number of variables, and puts them into a small number of factors, within which all of the variables are related to each other. Factor analysis can identify the basic underlying variables which account for the correlations between actual test scores. The purpose of factor analysis is to

explore the underlying variance structure of a set of correlation coefficients. Factor analysis can be used to not only summarize or reduce data but also exploratory or confirmatory purpose.

Reliability is the correlation of a scale or instrument with a hypothetical one which truly measures what it is supposed to. Since the true instrument is not available, reliability should be estimated to demonstrate the instrument is reliable. In this study, the commonly used internal consistency is adopted for the reliability analysis. The Cronbach's coefficient, the most common form of internal consistency reliability coefficient, is employed for the examination, which is based on the correlation among the variables comprising the set.

Cronbach's α can be interpreted as the percent of variance the observed scale would explain in the hypothetical true scale composed of all possible items in the universe. Alternatively, it can be interpreted as the correlation of the observed scale with all possible other scales measuring the same thing and using the same number of items. Typically, a good scale requires at least the value of α higher than 0.8 (Krzanowski and Marriott, 1995).

Simple linear regression analysis and enter method regression analysis were used

to analyze the relationship between single dependent variable and independent variable. In other words, it is concerned with the study of relationship between one explained and one explanatory variable. The objective of this technique is to use the independent variable whose value is known to predict the single dependent variable selected by the researcher.

4. RESULTS of ANALYSES

4.1 Descriptive Analysis

4.1.1 Data Collection

The survey questionnaire was given to seafarers who are working in two bulk shipping companies in Taiwan starting from beginning of May and in the end of July 2008. The two shipping companies name are "*First Steamship Company Ltd*" and "*Chinese Maritime Transport Ltd*". As the questionnaire was originally written in English, it is necessary to translate it into Chinese by a bilingual professional translator, and then back translate to English independently. This process was conducted to ensure that both versions are identical. A total of 150 questionnaires were collected, 133 questionnaires were usable for the data analysis and whereas 17 were ineffective. The effective rate was eighty-nine percent.

4.1.2 Profile of Respondents

The basic attributes of the respondents, including six major variables in this study are (1) marital status, (2) age, (3) education, (4) tenure on company, (5) tenure on board, and (6) job position. As shown in Table 1, 68.4% of the seafarers were married and 40% of respondents were between 20 to 29 years old. Almost half of the seafarers were college or university education level. Moreover, less than 5 years tenure on board was 49%. AB/OS job position was around 20% and officer was the second highest 12% of all the respondents.

4.1.3 Measurement Results for Relevant Research Variables

The results of means and standard deviations for perceived organizational support, job satisfaction, job commitment, and job performance are shown in Tables 2, 3, 4 and 5, respectively. Results indicated that, all the constructs of perceived organizational support, job satisfaction, job commitments and job performance, respondents tend to perceive very high levels of agreement on the measurement items with mean scores over 4.0 in a 7-range scale for all of the variables. These results seem to indicate that the respondents have positive evaluations that describe the organization care about their opinions, well-being and concerns, satisfy on

Table 1 Profile of Respondents

| Categories | Frequency | Percent (%) |
|----------------------------|-----------|-------------|
| Marital status | | |
| Single | 42 | 31.60% |
| Married | 91 | 68.40% |
| Age | | |
| less than 20 | 2 | 1.50% |
| 20–29 | 53 | 39.80% |
| 30–39 | 44 | 33.10% |
| 40–49 | 27 | 20.30% |
| more than 49 | 7 | 5.30% |
| Education | | |
| Junior high school or less | 21 | 15.80% |
| Senior high school | 32 | 24.10% |
| Vocational school | 17 | 12.80% |
| College/University | 61 | 45.90% |
| Master's degree or above | 1 | 0.80% |
| Others | 1 | 0.80% |
| Tenure on Board | | |
| Less than 5 years | 65 | 48.90% |
| 5 to 10 years | 41 | 30.80% |
| 11 to 15 years | 15 | 11.30% |
| 16 to 20 years | 9 | 6.80% |
| More than 20 years | 3 | 2.30% |
| Job position | | |
| Master | 8 | 6.02% |
| Chief Officer | 7 | 5.26% |
| Officer | 16 | 12.03% |
| Bosun | 5 | 3.76% |
| AB/OS | 26 | 19.55% |
| Chief Engineer | 10 | 7.52% |
| 2nd Engineer | 5 | 3.76% |
| Engineer | 10 | 7.52% |
| Fitter | 4 | 3.01% |
| Motor Man/Oiler | 14 | 10.53% |
| Cook | 5 | 3.76% |
| Mess boy | 8 | 6.02% |
| Others | 15 | 11.28% |

The Effects of Perceived Organizational Support, Job Satisfaction and Organizational Commitment on Job Performance in Bulk Shipping

Table 2 Descriptive Analysis for Perceived Organizational Support

| Items | Description | Mean | Std. |
|---|--|------|------|
| Perceived Organizational Support (7-point scale) | | | |
| PS1 | My organization cares about my opinions. | 4.74 | 2.00 |
| PS2 | My organization really cares about my well-being. | 4.56 | 2.08 |
| PS3 | My organization strongly considers my goals and values. | 4.75 | 1.92 |
| PS4 | Help is available from my organization when I have a problem. | 4.56 | 1.97 |
| PS5 | My organization would forgive an honest mistake on my part. | 4.80 | 1.76 |
| PS6 | My organization shows concern for me. | 5.11 | 1.98 |
| PS7 | My organization is willing to help me if I need a special favor. | 4.86 | 1.91 |

Table 3 Descriptive Analysis for Job Satisfaction

| Items | Description | Mean | Std. |
|---|---|------|------|
| Job Satisfaction (7-point scale) | | | |
| JS1 | The chance to make use of abilities. | 5.44 | 1.54 |
| JS2 | The feeling of accomplishment I get from the job. | 5.44 | 1.54 |
| JS3 | Being able to keep busy all the time. | 5.65 | 1.12 |
| JS4 | The chance for advancement on the job. | 5.49 | 1.62 |
| JS5 | The chance to tell other people what to do. | 5.05 | 1.62 |
| JS6 | The way company policies are put into practice. | 4.95 | 1.87 |
| JS7 | My pay and the amount of I do. | 4.52 | 1.84 |
| JS8 | The way my co-workers get along with each other. | 5.92 | 1.41 |
| JS9 | The opportunity to try my own methods of doing the job. | 5.24 | 1.61 |
| JS10 | The chance to work alone on the job. | 5.25 | 1.67 |
| JS11 | Being able to do things that do not go against my conscience. | 5.75 | 1.43 |
| JS12 | The praise I get for doing a good job. | 5.23 | 1.52 |
| JS13 | The freedom to use my own judgment. | 5.53 | 1.56 |
| JS14 | The way my job provides for steady employment. | 5.82 | 1.32 |
| JS15 | The chance to do things for other people. | 5.56 | 1.47 |
| JS16 | The chance to be "somebody" in the community. | 5.26 | 1.57 |
| JS17 | I feel reasonable relationship between supervisors and employees. | 5.57 | 1.71 |
| JS18 | The competence of my supervisor in making decisions is rational. | 5.53 | 1.70 |
| JS19 | I have right to do different things from time to time. | 5.22 | 1.72 |
| JS20 | The working condition is quite good. | 4.85 | 1.87 |

Table 4 Descriptive Analysis for Organizational Commitment

| Items | Description | Mean | Std. |
|--|--|------|------|
| Organizational Commitment (7-point scale) | | | |
| OCAF1 | I really feel as if this organization's problems are my own problems. | 5.26 | 1.67 |
| OCAF2 | I feel a strong sense of belongingness to my organization. | 5.14 | 1.69 |
| OCAF3 | I feel emotionally attached to this organization. | 5.08 | 1.79 |
| OCAF4 | I feel like part of the family at my organization. | 5.29 | 1.77 |
| OCAF5 | This organization has a great deal of personal meaning for me. | 5.25 | 1.77 |
| OCCC1 | I feel that I have too few options to consider leaving this organization. | 5.56 | 1.59 |
| OCCC2 | One of the few consequences of leaving this organization would be the scarcity of available alternatives. | 5.42 | 1.68 |
| OCCC3 | For me personally, the costs of leaving this organization would be far greater than the benefit. | 5.73 | 1.40 |
| OCCC4 | I would not leave this organization because of what I would stand to lose. | 5.62 | 1.51 |
| OCCC5 | If I decided to leave this organization, too much of my life would be disrupted. | 5.42 | 1.68 |
| OCNC1 | I feel that I have obligation to remain with my current employer. | 5.63 | 1.55 |
| OCNC2 | Even if it were to my advantage, I do not feel it would be right to leave my organization now. | 5.80 | 1.28 |
| OCNC3 | I would feel guilt if I left this organization now. | 5.18 | 1.71 |
| OCNC4 | If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization. | 5.47 | 1.44 |
| OCNC5 | I would feel like breaking a trust if I quit my job with this organization now. | 5.48 | 1.51 |

Table 5 Descriptive Analysis for Job Performance

| Items | Description | Mean | Std. |
|--|--|------|------|
| Job Performance (7-point scale) | | | |
| JP1 | I cooperate with the company to sustain higher productivity. | 5.94 | 1.11 |
| JP2 | I complete my work before the due date. | 6.35 | 0.87 |
| JP3 | I actively strive to increase for productivity improvement. | 6.35 | 0.87 |
| JP4 | I actively strive to look for ways on how to simplify my work in increase productivity. | 6.20 | 0.94 |
| JP5 | I always make an effort to increase company competitiveness. | 5.89 | 1.22 |
| JP6 | I am interested in continuing my education and training provided by the company. | 6.14 | 1.27 |
| JP7 | I have never delayed and done harm to the work because of my carelessness. | 5.98 | 1.25 |
| JP8 | I have never been complained about bad performance in my job. | 5.80 | 1.30 |
| JP9 | My supervisor is always satisfied with my performance. | 5.80 | 1.32 |
| JP10 | I always cooperate with my colleagues and receive their affirmation. | 5.97 | 1.26 |
| JP11 | I always have good relationship with my co-workers from other departments and receive their affirmation and recognition. | 6.06 | 1.17 |

their job, high commitments and supervisors are always satisfied on their performance.

4.2 Factor Analysis

An exploratory factor analysis is conducted to condense a group of empirical measures into smaller set of composite factors. Factor analysis enables us to assess the convergence within and divergence between the instruments. It can be viewed as a statistical procedure for grouping variables into subsets such that the variables with each set are mutually highly correlated, whereas at the same time variables in different subsets are relatively uncorrelated (Haig, 2005).

The specific method applied in the current study is factor analysis of principal component extraction with varimax rotation. Varimax rotation is used because it is the most commonly used method for rotation, and it maximizes the squared ratio of each factor loading and minimizes the number of variables that have high loadings on each factor and even simplifies the interpretations of the factors. Besides, the eigenvalue of 1 is the arithmetic mean of the eigenvalues. Hence the eigenvalue-one-criterion suggests a factor retained if it explains at least as much as a single variable. $Eigenvalue > 1$ was used to determine the number of dimensions to be extracted from the principal component factor

analysis.

The criteria for factor analysis are: factor loading ≥ 0.6 , Eigenvalue ≥ 1 , cumulatively explain variance ≥ 0.6 , Item-to-total correlation ≥ 0.5 , and coefficient alpha ≥ 0.6 (Hair et al., 2006). Before factor analysis is conducted, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy should be taken to verify whether the item could be considerable adapt to factor analysis or not. The KMO measure takes values between 0 and 1, and should be greater than 0.5 for a satisfactory factor analysis to proceed. Exploratory factorial is undertaken on each constructs for all the variables with the aim of reducing their dimensions and identifying the set of underlying factors that summarize the essential information in the variables.

The measure of perceived organizational support was adopted from previous studies (Eisenberger et al., 1986; Aselage and Eisenberger, 2003) and thus one factor was identified and can be seen as reliable. Moreover, the Cronbach's Alpha value of this factor is as high as 0.973, which was further considered adequate for confirming a satisfactory level in this factor.

Table 6 presents the results of factor analysis for measurement of job satisfaction. Eight variables "The feeling of accomplishment I get from the job" (JS2),

Table 6 Factor Analysis of Job Satisfaction

| Research items | | Factor 1 | Factor 2 | Factor 3 |
|-----------------------------------|--|--------------|--------------|--------------|
| JS7 | My pay and the amount of I do. | 0.840 | 0.276 | -0.003 |
| JS20 | The working condition is quite good. | 0.804 | 0.234 | 0.295 |
| JS17 | I feel reasonable relationship between supervisors and employees | 0.721 | 0.291 | 0.434 |
| JS1 | The chance to make use of abilities. | 0.666 | 0.274 | 0.463 |
| JS4 | The chance for advancement on the job. | 0.647 | 0.345 | 0.228 |
| JS10 | The chance to work alone on the job. | 0.321 | 0.816 | 0.117 |
| JS9 | The opportunity to try my own methods of doing the job. | 0.214 | 0.805 | 0.319 |
| JS15 | The chance to do things for other people. | 0.206 | 0.739 | 0.238 |
| JS16 | The chance to be “somebody” in the community. | 0.441 | 0.705 | 0.224 |
| JS8 | The way my co-workers get along with each other. | 0.064 | 0.193 | 0.906 |
| JS14 | The way my job provides for steady employment. | 0.350 | 0.304 | 0.753 |
| JS13 | The freedom to use my own judgment. | 0.425 | 0.248 | 0.693 |
| Eigenvalue | | 6.849 | 1.146 | 1.023 |
| Explained variance (%) | | 57.08 | 9.55 | 8.52 |
| Cumulative explained variance (%) | | 57.08 | 66.63 | 75.15 |

“Being able to keep busy all the time” (JS3), “The chance to tell other people what to do” (JS5), “The way company policies are put into practice” (JS6), “Being able to do things that do not go against my conscience” (JS11), “The praise I get for doing a good job” (JS12), “The competence of my supervisor in making decisions is rational” (JS18), and “I have right to do different things from time to time” (JS19) were discarded till factor loading is greater than 0.5. Finally, as can be seen in Table 6, job satisfaction was split into three factors, job satisfaction into three factors. Each factor had an eigenvalues above one which could have been submitted to factor rotation and in sum the 3 factors accounted for 75.15 percent of

cumulative variance. All the variables have significantly high loading score (above 0.647).

The internal consistency of these factors shown all variables tend to have a high coefficient of item-to-total correlation (above 0.652) that suggests a high degree of internal consistency for each dimension. Nevertheless, the Cronbach’s α of each factor are 0.897, 0.875 and 0.850 respectively exceed the generally accepted guideline of 0.60 (Hair et al., 2006).

Fifteen variables are used to measure the organizational commitment. No items are deleted from the construct. The results of the factor analysis for measurement of organizational commitment were shown in

The Effects of Perceived Organizational Support, Job Satisfaction and Organizational Commitment on Job Performance in Bulk Shipping

Table 7. Each factor had an eigenvalues above one which could have been submitted to factor rotation and in sum the 3 factors accounted for 71.73 percent of cumulative variance. All the variables have high loading score (above 0.610). The internal consistency of this construct shown all variables tend to have a high coefficient of item-to-total correlation (above 0.522). In addition, Cronbach's alpha ($\alpha \geq 0.860$) for each factors exceed the generally accepted guideline of 0.60 (Hair et al., 2006),

which further confirms the reliability of the measurement variables.

Eleven variables are used to measure the job performance. No items are deleted from the construct. The results of the factor analysis for measurement of job satisfaction as shown in Table 8. Each factor had an eigenvalues above one which could have been submitted to factor rotation and in sum the 3 factors accounted for 77.14 percent of cumulative variance. All the variables have high loading

Table 7 Factor Analysis of Organizational Commitment

| Research items | | AFF* | CON* | NOR* |
|-----------------------------------|--|--------------|--------------|--------------|
| OCAF2 | I feel a strong sense of belongingness to my organization. | 0.906 | 0.146 | 0.134 |
| OCAF3 | I feel emotionally attached to this organization. | 0.872 | 0.131 | 0.259 |
| OCAF4 | I feel like part of the family at my organization. | 0.818 | 0.293 | 0.106 |
| OCAF1 | I really feel as if this organization's problems are my own problems. | 0.795 | 0.055 | 0.169 |
| OCAF5 | This organization has a great deal of personal meaning for me. | 0.690 | 0.221 | 0.218 |
| OCCC2 | One of the few consequences of leaving this organization would be the scarcity of available alternatives. | 0.232 | 0.857 | 0.207 |
| OCCC4 | I would not leave this organization because of what I would stand to lose. | 0.195 | 0.845 | 0.266 |
| OCCC5 | If I decided to leave this organization, too much of my life would be disrupted. | -0.003 | 0.820 | 0.359 |
| OCCC3 | For me personally, the costs of leaving this organization would be far greater than the benefit. | 0.248 | 0.715 | 0.231 |
| OCCC1 | I feel that I have too few options to consider leaving this organization. | 0.217 | 0.707 | 0.323 |
| OCNC3 | I would feel guilt if I left this organization now. | 0.114 | 0.274 | 0.793 |
| OCNC2 | Even if it were to my advantage, I do not feel it would be right to leave my organization now. | 0.206 | 0.226 | 0.784 |
| OCNC5 | I would feel like breaking a trust if I quit my job with this organization now. | 0.198 | 0.395 | 0.628 |
| OCNC1 | I feel that I have obligation to remain with my current employer. | 0.505 | 0.281 | 0.625 |
| OCNC4 | If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization. | 0.257 | 0.378 | 0.610 |
| Eigenvalue | | 7.499 | 2.225 | 1.034 |
| Explained variance (%) | | 50.00 | 14.83 | 6.90 |
| Cumulative explained variance (%) | | 50.00 | 64.83 | 71.73 |

*AFF = Affective, CON = Continuance, NOR = Normative

Table 8 Factor Analysis of Job Performance

| Research items | | Factor 1 | Factor 2 | Factor 3 |
|-----------------------------------|--|--------------|--------------|--------------|
| JP11 | I always have good relationship with my co-workers from other departments and receive their affirmation and recognition. | 0.865 | 0.242 | 0.189 |
| JP10 | I always cooperate with my colleagues and receive their affirmation. | 0.864 | 0.258 | 0.066 |
| JP9 | My supervisor is always satisfied with my performance. | 0.779 | 0.181 | 0.401 |
| JP8 | I have never been complained about bad performance in my job. | 0.771 | 0.174 | 0.448 |
| JP7 | I have never delayed and done harm to the work because of my carelessness. | 0.641 | 0.435 | -0.028 |
| JP3 | I actively strive to increase for productivity improvement. | 0.228 | 0.837 | 0.285 |
| JP2 | I complete my work before the due date. | 0.315 | 0.821 | 0.050 |
| JP4 | I actively strive to look for ways on how to simplify my work in increase productivity. | 0.174 | 0.733 | 0.398 |
| JP1 | I cooperate with the company to sustain higher productivity. | 0.318 | 0.592 | 0.412 |
| JP6 | I am interested in continuing my education and training provided by the company. | 0.198 | 0.206 | 0.855 |
| JP5 | I always make an effort to increase company competitiveness. | 0.167 | 0.270 | 0.854 |
| Eigenvalue | | 6.063 | 1.363 | 1.059 |
| Explained variance (%) | | 55.12 | 12.39 | 9.63 |
| Cumulative explained variance (%) | | 55.12 | 67.51 | 77.14 |

score (above 0.592). The internal consistency of this construct shown all variables tend to have a high coefficient of item-to-total correlation (above 0.606). Nevertheless, the Cronbach's α of each factor are 0.908, 0.867 and 0.834 respectively exceed the generally accepted guideline of 0.60 (Hair et al., 2006), which further confirms the reliability of the measurement variables.

4.3 Regression Analysis

For the purpose of empirically investigating the influences of perceived organizational support on job satisfaction, simple linear regression analysis enter method

was conducted in this study. The results of the regression analysis as shown in Table 9 indicated that perceived organization support is significantly impact on the level of job satisfaction ($R^2 = 0.604$, $F = 199.728$, $P < 0.000$, $D-W = 1.896$). The β values indicated the relative influence of the entered variables, that is, perceived organizational support had the greatest influence on job satisfaction ($\beta = 0.777$). The direction of influence for job satisfaction was positive. It implied that the more employees perceived organization support, the greater fulfill the job satisfaction. Based on this result, hypothesis H₁ is supported.

The Effects of Perceived Organizational Support, Job Satisfaction and Organizational Commitment on Job Performance in Bulk Shipping

On the other hand, the result of the regression analysis of perceived organizational support and affective commitment was also examined and shown in Table 9. The adjusted R^2 value signified that about 56.5% of the variance in affective commitment is explained by the predictor value of perceived organizational support.

The regression results as shown in Table 9, indicated that perceived organization support is significantly impact on the level of affective commitment ($P < 0.000$, $F = 172.277$, $D-W = 1.983$). Further, the result of the regression analysis of perceived organizational support and continuance commitment was found. Results indicated that perceived organization support is significantly impact on the level of continuance commitment ($R^2 = 0.107$, $F = 15.628$, $P < 0.000$, $D-W = 1.325$).

Finally, Table 9 also shows that perceived organization support is significantly impact on the level of normative commitment ($R^2 = 0.218$, $F = 36.423$, $P < 0.000$, $D-W = 1.456$). Based on this result, hypotheses H_{2a} , H_{2b} and H_{2c} are supported. The results of the linear regression analyses indicate that perceived organizational support is significantly and positively related to affective commitment, continuance commitment, and normative commitment.

For the purpose of empirically investigating the influences of perceived organizational support on job performance, simple linear regression analysis enter method was conducted in this study. The results of the regression analysis are shown in Table 9. It shows the regression results using perceived organization support as the independent variable and job performance using as the

Table 9 Result of Regression Analysis

| Path Relations | Beta | R^2 | Adjusted R^2 | F-value | P-value | D-W |
|----------------|----------|-------|----------------|---------|---------|-------|
| POS → JS | 0.777*** | 0.604 | 0.601 | 199.728 | 0.000 | 1.986 |
| POS → AC | 0.754*** | 0.568 | 0.565 | 172.277 | 0.000 | 1.983 |
| POS → CC | 0.326*** | 0.107 | 0.100 | 15.628 | 0.000 | 1.325 |
| POS → NC | 0.466*** | 0.218 | 0.212 | 36.423 | 0.000 | 1.456 |
| POS → JP | 0.518*** | 0.269 | 0.263 | 48.140 | 0.000 | 1.754 |
| JS → JP | 0.661*** | 0.437 | 0.433 | 101.805 | 0.000 | 1.850 |
| AC → JP | 0.648*** | 0.420 | 0.415 | 94.733 | 0.000 | 1.739 |
| CC → JP | 0.623*** | 0.389 | 0.384 | 83.244 | 0.000 | 1.852 |
| NC → JP | 0.616*** | 0.380 | 0.375 | 80.199 | 0.000 | 1.933 |

Note: ***: P value < 0.01

dependent variable. The regression results indicate that perceived organization support is significantly impact on the level of job satisfaction ($R^2 = 0.269$, $F = 48.140$, $P < 0.000$, $D-W = 1.754$). The β values indicated the relative influence of the entered variables, that is, perceived organizational support had the greatest influence on job satisfaction ($\beta = 0.518$). The direction of influence for job performance was positive. It implied that the more employees perceived organization support, the greater fulfill the job performance. Based on this result, hypothesis H₃ is supported.

Further, linear regression analysis enter method was also conducted in this study to investigate the influences of job satisfaction on job performance. The results of the regression analysis are shown the regression results using job satisfaction as the independent variable and job performance using as the dependent variable. The adjusted R^2 value signified that about 43.3% of the variance in job performance is explained by the predictor value of job satisfaction. The regression results indicate that job satisfaction is significantly impact on the level of job performance ($F = 101.805$, $P < 0.000$, $D-W = 1.850$). The β values indicated the relative influence of the entered variables, that is, job satisfaction had the greatest influence on job

performance ($\beta = 0.661$). The direction of influence for job satisfaction was positive. It implied that the more employees perceived organization support, the greater fulfill the job satisfaction. Based on this result, hypothesis H₄ is supported.

The results of the regression analysis are revealed the regression results using affective commitment as the independent variable and job performance using as the dependent variable. The regression results indicate that affective commitments is significantly impact on the level of job performance ($R^2 = 0.420$, $F = 94.773$, $P < 0.000$, $D-W = 1.739$). The β values indicated the relative influence of the entered variables, that is, affective commitment had the greatest influence on job performance ($\beta = 0.325$, $\beta = 0.324$ and $\beta = 0.268$). Further, the result of the regression analysis of continuance commitment and job performance indicated that continuance commitment is significantly impact on the level of job performance ($R^2 = 0.389$, $F = 83.244$, $P < 0.000$, $D-W = 1.852$). Finally, the result of the regression analysis of normative commitment and job performance indicated that normative commitment is significantly impact on the level of job performance ($R^2 = 0.380$, $F = 80.199$, $P < 0.000$, $D-W = 1.933$).

The β values indicated the relative influence of the entered variables, that is,

affective commitment had the greatest influence than continuance and normative commitments ($\beta = 0.648$, $\beta = 0.623$ and $\beta = 0.616$, respectively). The directions of influence of affective, continuance and normative commitment to job performance were positive. It implied that the more employees obligate to their job, the greater fulfill their job performance organizational commitments. Based on this result, hypotheses H_{5a} , H_{5b} and H_{5c} are supported. The results of the linear regression analyses indicate that organizational commitments are significantly and positively related to job performance. The summary result of the regression analysis was illustrated in Table 9.

5. CONCLUSION AND SUGGESTION

5.1 Conclusion

The objectives of this study are to examine the effect of perceived organizational support on seafarer's job satisfaction and organizational commitments and the effect of job satisfaction and organizational commitments on seafarer's job performance in bulk shipping. Base on the research results, perceived organizational support

positively influenced to job satisfaction. The results are consistent with the previous studies (Erdogan and Enders, 2007; Riggle et al., 2009). The study also confirms that perceived organizational support significantly positive effect on affective, continuance and normative commitments in bulk shipping industry. It shows that if employees who believe that their organization supports them and cares for their well-being are more likely to feel a sense of obligation toward the organization and therefore, to reciprocate the favorable treatment with increased loyalty and commitment (Eisenberger et al., 2001; Meyer and Parfyonova, 2009).

Moreover, the results associated with previous research established a positive relationship between perceived organizational support and job performance (Lynch et al., 1999; Riggle et al., 2009) to facilitate the job performance (De Dreu and Nauta, 2009). In addition, the result of job satisfaction has significantly positive effect on job performance in bulk shipping industry, which is also consistent with the previous studies (Gittell et al., 2008; Riggle et al., 2009; Zhang and Zheng, 2009).

Furthermore, the Three-Component Organizational Commitments of affective, continuance and normative commitments have significant positively effect on job

performance in bulk shipping industry. The results are also consistent with the previous studies (Meyer and Parfyonova, 2009; Panaccio and Vandenberghe, 2009). Affective commitment captures the employees' attitude toward their organizations in general and it may influence their decision to expend efforts on their jobs. As a consequence commitment leads to the amount of effort organizational members exert on their jobs and subsequently the level of their job performance (Ng and Feldman, 2009).

5.2 Suggestion

The findings in this study showed that there is a substantial connection between self-rated job satisfaction and job performance. The results should be useful for the administration of the bulk shipping company and the government labor authority to avoid the pay-for-performance program, it may push employees to point of doing whatever it takes to get the promised monetary reward and in the process stifle their talents and creativity. According to this research finding, organization or shipping company should show recognition for seafarers' accomplishments and adapt work schedules to meet individual needs whenever possible. For example, care about their opinions, give

some necessary help when they had problems, consider their goals and values and so forth.

The study has suffered from some certain limitations. Firstly, the results are not universally since we examined only seafarers mostly from mainland China working in Taiwan shipping companies. It might have different results from other companies worldwide. Secondly, the results could be affected by self-selection bias, and the data are cross-sectional. Therefore, it might examine the long-term trend of these hypothesized relationships in future studies. Finally, the sample size of this study is relatively small. It is not efficient to run other statistical analysis to test the whole model, an integrated model such as structural equation modeling (SEM) can be employed for examining.

Some suggestions for future researchers are provided. Firstly, beside the factors discussed in this study, there are other factors which may influence the employee's attitude, organization commitments to job performance. The researchers can incorporate different factors such as psychological well-being (Panaccio and Vandenberghe, 2009) and cultural values (Zhang and Zhang, 2009) to discuss in the future research. Secondly, perceived organizational support is a good

predictor of job performance, but employees' responsiveness to the reciprocity norm provides a basis for understanding how the favorableness and perceived intentionality of treatment received from the organization influence job performance and why employees differ in their reciprocation of favorable treatment. Future researchers can add the factor of organizational spontaneity, and in-role performance to enhance the validity of the study.

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