

Organizational motivation, employee job satisfaction and organizational performance

An empirical study of container shipping companies in Taiwan

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Abstract

Purpose – The purpose of this study is to evaluate the effect of motivation on job satisfaction and organizational performance in the context of container shipping companies in Taiwan. Four motivation dimensions were identified based on an exploratory factor analysis, including remuneration, job achievement, job security and job environment. In addition, five job satisfaction dimensions were identified, namely: job policy, job autonomy, job workload, job performance and job status. Organizational performance dimensions included financial and non-financial performance.

Design/methodology/approach – Factor analysis was used to summarize a large number of motivation, job satisfaction and organizational performance attributes to identify the crucial factors. Reliability tests based on Cronbach's alpha and corrected item-total correlation coefficients was used to test the internal consistency of questionnaire responses. ANOVA tests were subsequently used to test for differences in respondents' perception of these factors according to selected demographics. Finally, a multiple regression model analysis was conducted to examine the relationships between motivation, job satisfaction and organizational performance.

Findings – Results indicated that remuneration and job performance had a positive effect on financial performance dimensions such as return on assets, turnover growth rate and profitability while job environment and job autonomy had a positive effect on non-financial performance dimensions, such as customer service, employee productivity and service quality.

Originality/value – This study has drawn attention to the importance of the relationships between motivation, job satisfaction and organizational performance in the container shipping context. The findings have significant implications for researchers and shipping practitioners. Despite the existence of research on the inter-relationships between motivation, job satisfaction and organizational performance in other disciplines, no empirical study was discussed in previous shipping or transportation-related research.

Keywords Motivation, Job satisfaction, Container shipping, Organizational performance

Paper type Research paper



1. Introduction

The container shipping industry plays a vital role in the world's economy. World container throughput reached 171 million TEUs in 2014 accounting for more than 85 per cent of total world trade output (UNCTAD, 2015). It helps to facilitate the seamless movement of

containerized cargoes on regularly scheduled service routes connecting countries, markets, businesses and people on a global scale. As nations become more interdependent on each other for goods and services, the container shipping industry is a crucial link generating choices, improving economies and creating employment. However, container shipping companies compete aggressively to survive in a highly volatile environment through a low-cost pricing structure with good service quality with little distinction in the types of services it provides (Lu *et al.*, 2009). As a result, companies constantly look for ways to differentiate itself from their competitors through operations management and strategy, organizational management and human resources management. Developing a well-structured motivation system is crucial for organizations to retain talent and to enable employees to produce the maximum benefits for the organizations (Al-Alawi, 2005). An organization's motivation system will directly affect employees' efficiency, morale and job satisfaction (Parsons and Broadbridge, 2006). In addition, a developed motivation system to improve employees' job satisfaction has a positive impact on organizational performance (Analoui, 1999).

In container shipping, shore-based personnel perform a variety of important functions, especially sales and marketing, which contributes to overall organizational performance. These tasks require employees to be motivated to achieve intended targets. To the author's knowledge, few empirical studies have discussed the relationships between organizational motivation on job satisfaction and organizational performance in the shipping industry. Talley (2013) summarized the different topics that has been research in the maritime academic field. Much focused has been placed on shipping performance/management with a growing emphasis on environmental protection. Accordingly, the objectives of this research are to examine the effect of organizational motivation on job satisfaction and their effects on organizational performance in container shipping firms in Taiwan.

The following section provides a theoretical background on, organizational motivation, job satisfaction and organizational performance and suggests three hypotheses. It then describes the methodological approach to the research issues. The fourth section presents the results and findings of the survey. Conclusions are drawn from the analyses and strategic implications for container shipping companies are discussed in the final section.

2. Theoretical background and hypotheses

2.1 Definition of organizational motivation

The word motivation is derived from the Latin word "movere", which means to "transfer" or "push". Robbins and Coulter (2014) describe motivation as a process by which a person's efforts are energized, directed and sustained toward attaining a goal. Sansone and Harackiewicz (2000) define motivation as an internal mechanism that guides behavior. This can be referred to the catalyzer for individual employees to enhance their working performance to achieve organizational performance (Sekhar *et al.*, 2013). Steer (1994) also argues that the goal of motivation is to enable employees to improve productivity, increase efficiency and improve overall organizational performance. It is important for organizations to find the factors to motivate employees to perform to their maximum ability. Employees are assumed to value intrinsic and extrinsic rewards. Both form of rewards contribute significantly to the levels of employees' motivation to work (Herzberg *et al.*, 1959).

Different motivation theories (e.g. content theories and process theories) describe why and how human behavior is activated and directed (Seiler *et al.*, 2012). These motivation theories have been discussed extensively in prior literature (Latham and Ernst, 2006; Sekhar *et al.*, 2013). Organizations utilize various motivation and reward system to motivate employees. Organizational motivation can be divided into financial or non-financial and intrinsic and extrinsic systems. The majority of the research on motivation studies tends to

use Herzberg's model of intrinsic and extrinsic factors. [Parsons and Broadbridge \(2006\)](#) investigated the role of job characteristics and communication in relation to job motivation and satisfaction among UK charity shop managers. Their study found that managers exhibit low levels of satisfaction in relation to pay, job status and working conditions. [Islam and Ismail \(2008\)](#) identified high wages, job security, promotion and good working conditions as the top motivators among Malaysian employees. [Kubo and Saka \(2002\)](#) concluded that monetary incentives, human resource development and job autonomy act as motivators to knowledge workers in the Japanese financial industry. [Al-Alawi \(2005\)](#) explored the motivating factors of information technology employees in the Bahrain hotel industry. They found that supervisor's appreciation, prizes, salary increase and bonus as important factors.

2.2 Definition of job satisfaction

Job satisfaction describes how contented an individual is with his or her job ([Parvin and Kabir, 2011](#)). Job satisfaction is often assumed to be a pleasurable or positive emotional state resulting from evaluation or appraisal of one's job or job experience ([Locke, 1975](#)). [Spector \(1997\)](#) referred to job satisfaction in terms of how people feel about their jobs and different aspects of their jobs. Job satisfaction is closely related with many organizational phenomena such as motivation, performance, leadership, attitude, conflict, etc. ([Parvin and Kabir, 2011](#)). [Saari and Judge \(2004\)](#) concluded through their research on numerous studies that intrinsic job characteristics are the most notable factor affecting job satisfaction. Job satisfaction is said to be complex phenomenon with multiple facets ([Parvin and Kabir, 2011](#)). The factors include salary, working environment, autonomy, communication and organizational commitment ([Sansone and Harackiewicz, 2000](#); [Vidal et al., 2007](#); [Lane et al., 2010](#)).

2.3 Definition of organizational performance

For organizations, performance is one of the ways to measure the extent of its effectiveness. The need for the ability to set goals and objectives to achieve its performance and how to improve the overall organizational performance is undoubtedly the most important organizational goals and objectives. Definition and measurement of performance is a challenge for researchers because organizations have many, frequently conflicting, goals ([Chow et al., 1994](#)). [Sarah and Tricia \(2005\)](#) indicated that performance is often used to measure the overall status of the organization and its related policies. Organizational performance can be measured by both financial and non-financial performance ([Yang et al., 2009](#)). [Venkatraman and Ramanujam \(1986\)](#) considered three factors to corporate performance measurement, namely, financial performance (i.e. return on investment, earnings per share, etc.), operational performance (i.e. market share, product quality, etc.) and organizational effectiveness (i.e. employee's morale, work atmosphere, etc.). [Stella \(1987\)](#) explored the relationship between human resource planning and organizational performance. From a human resources viewpoint, six financial factors were found to be the main determinants of organizational performance – turnover growth rate, profitability, earnings per share, return on assets, average annual profitability per employee and proportion of company assets per employee.

2.4 Organizational motivation and job satisfaction

Many organizations will use appropriate reward systems to improve the incentives to improve employees' job satisfaction. Literature discusses the relationship between motivation and job satisfaction ([Springer, 2011](#)). [Igalens and Roussel \(1999\)](#) argued that employees' behavior and feelings are affected by motivation and job satisfaction. When

organizations place more emphasis on implementing the incentive system with a high level of equity, employees' job satisfaction will increase. [Parsons and Broadbridge \(2006\)](#) revealed that organizations, in the development of incentives, need to consider the differences in nature of each industry and background of each organization. They concluded that there is a positive effect of organizational motivation on employee job satisfaction. According to the literature, this study proposes the following hypothesis:

H1. Organizational motivation is positively related to job satisfaction.

2.5 Organizational motivation and organizational performance

According to [Lawler \(2005\)](#), the relationship between organizations and employees should not only focus on the task itself. Organizations should take initiative to develop an effective motivation system to increase employees' motivation towards their work. This in turn will help to improve the efficiency and quality of work, enabling organizations to meet their performance outcomes. [Urbanski \(1986\)](#) used salary increment as a motivation tool, found that it effectively motivates employees and increase organizational performance. The flexibility in salary increment was also found to have a positive effect. [Bhatti et al. \(2011\)](#) studied the effect of motivation on individuals and how it contributes towards organizational performance with the conclusion that organizations should define clear strategy to link performance with rewards. [Aguinis et al. \(2013\)](#) established that monetary incentives were important factors of employee motivation and achievement which contributes significantly to organizational-level performance returns. This study proposes the second hypothesis:

H2. Organizational motivation is positively related to organizational performance.

2.6 Job satisfaction and organizational performance

The relationship between job satisfaction and organizational performance has attracted considerable attention and discussion. When organizations review its performances, it uses job satisfaction as one of the measures. An employee who has a positive attitude toward his or her job will have job satisfaction and a willingness to commit to his or her organization, thus increasing organizational performance ([Wu et al., 2013](#)). Under reasonable conditions, managers will meet employees' needs to enhance their job satisfaction so that employees will increase their efforts to attain a good organizational performance ([Pettit et al., 1997](#)). According to [Shiu and Yu's \(2010\)](#), job satisfaction has a significant positive relationship on organizational performance, which includes financial performance, service performance and behavior performance. From the above literature, this study proposes the third hypothesis:

H3. Job satisfaction is positively related to organizational performance.

3. Methodology

3.1 Sample

The sample of container shipping firms was selected from employees working for companies from the *Directory of the National Association of Shipping Agencies and Companies in Taiwan*. The sample included container shipping companies and container shipping agencies. A total of 96 questionnaires were sent to shipping firms and 40 usable questionnaires were returned. A follow-up mailing was sent three weeks after the initial

mailing and 19 usable responses. The total number of usable questionnaires was 59 with a response rate of 61.5 per cent.

To test for non-response bias (Armstrong and Overton, 1977), this study compared the first (40 respondents) and second data (19 respondents) set. *T*-tests were performed on the two groups' responses across 48 measurement items and the results indicated that, at the 5 per cent significance level, there were three items showing significant differences. Results of the non-response bias test suggested that it was appropriate to combine both data sets.

With regards to the respondent profiles, more than 73 per cent of respondents were classified according to the title of being either general manager or above or manager/assistant manager, reinforcing the reliability of the survey findings. In all, 64 per cent of the respondents had worked in the liner shipping industry for more than 10 years, suggesting that they had abundant practical experience to answer the questions. Table I shows that

Characteristics	No. of respondents	Percentage of respondents
<i>Job title</i>		
General manager	11	18.6
Manager/Assistant manager	32	54.2
Supervisor	9	15.3
General employee	4	6.8
Sales representative	3	5.1
<i>Years of tenure in company</i>		
<5 years	7	11.9
6-10 years	13	22.0
11-15 years	9	13.5
16-20 years	14	23.7
>20 years	16	27.1
<i>Number of employees</i>		
<20	18	30.6
21-50	12	22.0
51-100	12	22.0
101-500	8	13.6
>500	9	15.3
<i>Ownership</i>		
Local firm	40	67.8
Foreign-local firm	9	15.3
Branches of foreign firm	10	16.9
<i>Type of company</i>		
Shipping company	8	13.6
Shipping agency	51	86.4
<i>Revenue (Million NT\$)</i>		
<10	9	15.3
10-50	18	30.5
50-100	7	11.9
100-1,000	10	16.9
1,000-5,000	3	5.1
5,000-10,000	3	5.1
10,000-50,000	4	6.8
>50,000	5	8.5

Table I.
Profile of
respondents

Note: One USD = NT\$31

15 per cent of the respondents employed over 500 employees, whereas 30 per cent had less than 20 employees. In terms of ownership pattern, local firm was 68 per cent followed by foreign-owned firm which was 17 per cent. 74.5 per cent of the respondents reported their company's turnover was less than NT\$1bn, while 15.3 per cent respondents' company turnover was more than NT\$10bn.

3.2 Measures

The measurement items for this study were mainly adapted from extensive review of published literature on organizational motivation, job satisfaction and organizational performance. Organizational motivation dimensions consisted of 19 items, namely, bonus (Urbanski, 1986), dividend (Greenberg and Liebman, 1990), promotion opportunity (Analoui, 1999), salary increment (Al-Alawi, 2005), education and job training (Smyth, 1986), job recognition (Robbins and Coulter, 2014), staff travel allowance (Hemsi *et al.*, 2003), allowance (Urbanski, 1986), job autonomy (Robbins and Coulter, 2014), personal development (Parsons and Broadbridge, 2006), workplace (Urbanski, 1986), annual leave (Al-Alawi, 2005), prize (Urbanski, 1986), job diversification (Robbins and Coulter, 2014), job rotation (Al-Alawi, 2005), job responsibility (Al-Alawi, 2005), job safety (Hemsi *et al.*, 2003), employee insurance (Robbins and Coulter, 2014) and stock allocation (Al-Alawi, 2005). These items were measured using a five-point Likert scale with "1 = Least Important" to "5 = Most Important".

Job satisfaction dimensions used the Minnesota Satisfaction Questionnaire (MSQ) developed by Weiss *et al.* (1967) with 20 short questions. This questionnaire is well-developed and tested in other studies (Hancer and George, 2003; Martins and Proenca, 2012; Abugre, 2014). For each job satisfaction item, respondents were asked to indicate the extent to indicate their implementation for each item using five-point scale, where "1 = strongly dissatisfied" and "5 = strongly satisfied".

Organizational performance consisted of nine items, namely, service quality (Hax and Majluf, 1984), customer satisfaction (Youndt *et al.*, 1996), employee productivity (Youndt *et al.*, 1996), competitive position (Venkatraman and Ramanujam, 1986), return on assets (Venkatraman and Ramanujam, 1986), market share (Venkatraman and Ramanujam, 1986), operating expenses (Stella, 1987), profitability (Ghalayini *et al.*, 1997) and turnover growth rate (Stella, 1987). Respondents were asked to rate their firm's performance by indicating their choices of the items on a five-point Likert scale, where "1 = strongly dissatisfied" and "5 = strongly satisfied".

The items were tested for their accuracy and content validity through interviews conducted with five academic experts and ten experienced shipping practitioners to obtain their valuable feedback for questionnaire improvement. In addition, the resulting items were validated with a pilot field study to further ascertain their content validity as well as construct reliability and validity.

3.3 Data analysis method

Factor analysis was employed to summarize a large number of organizational motivation, job satisfaction and organizational performance attributes to identify the crucial factors. Reliability tests based on Cronbach's alpha and corrected item-total correlation coefficients was used to test the internal consistency of questionnaire responses. ANOVA tests were subsequently used to test for differences in respondents' perception of these factors according to selected demographics. Finally, a multiple regression model analysis was conducted to examine the relationships between organizational motivation, job satisfaction and organizational performance.

4. Results and analysis

4.1 Exploratory factor analysis (EFA)

Exploratory factor analysis was used to identify the dimensions of organizational motivation, job satisfaction and organizational performance. The results of the exploratory factor analysis are provided in Tables II, III and IV. Principal component analysis with VARIMAX rotation was used to extract the factors with eigenvalues greater than 1.0. According to Hair *et al.* (2009), when factor loadings are 0.50 or greater, they can be considered significant.

As shown in Table II, the results revealed four factors accounted for 67.96 per cent of the total variance and were, thus, considered to represent all the motivation attributes. They are labelled and described as follows:

- (1) Factor 1 is “remuneration” factor composed of five items. “Prize” had the highest factor loading on this factor. The other four items include “stock allocation”, “dividend”, “staff travel allowance” and “bonus”. This factor was identified as “remuneration” factor which accounted for 37.78 per cent of the total variance.
- (2) Factor 2, termed “job achievement”, consisted of five item, namely, “salary increment”, “promotion opportunity”, “job autonomy”, “job recognition” and “job responsibility”. This factor was identified as “job achievement” and it accounted for 12.91 per cent of the total variance.
- (3) Factor 3, designated “job security”, composed of two items. “Job safety” and “employee insurance” accounted for 9.82 per cent of the total variance.
- (4) Factor 4, termed “job environment”, consisted of four items. “Job variety” had the highest factor loading on this factor. The other three items include “job rotation”, “workplace environment” and “personal development”. This factor was referred to as “job environment” and accounted for 7.46 per cent of the total variance.

Motivator factor	F1	F2	F3	F4
Prize	0.777	-0.077	0.017	0.234
Stock allocation	0.768	-0.086	0.024	0.164
Dividend	0.701	0.278	0.078	-0.345
Staff travel allowance	0.595	0.176	0.388	0.353
Bonus	0.556	0.442	0.183	0.047
Salary increment	0.300	0.747	0.133	0.134
Promotion opportunity	0.442	0.695	0.224	0.181
Job autonomy	-0.104	0.663	0.064	0.316
Job recognition	0.398	0.555	0.276	0.236
Job responsibility	-0.042	0.506	0.337	0.433
Job safety	0.072	0.021	0.934	-0.028
Employee insurance	0.098	0.162	0.918	-0.092
Job variety	0.163	0.159	-0.075	0.775
Job rotation	0.150	0.196	-0.078	0.739
Workplace environment	-0.041	0.245	0.487	0.576
Personal development	0.145	0.301	0.377	0.558
Eigenvalues	6.42	2.02	1.84	1.08
Percentage variance	37.78	12.91	9.82	7.46
Cumulative variance	37.78	50.68	60.50	67.97

Table II.
Results of factor
analysis of
organizational
motivation

Table III showed the results of exploratory factor analysis of job satisfaction dimensions indicated five factors which accounted for 71.49 per cent of the total variance. They are labelled and described as follows:

- (1) Factor 1, named “reward policy”, comprised four items. “The way company policies are put into practice” had the highest factor loading on this factor. The other three items include “the praise I get for doing a good job”, “the competence of my supervisor in making decisions” and “the chances of advancement on this job”. This factor was designated “job achievement” and accounted for 39.27 per cent of the total variance.
- (2) Factor 2 consisted of five items. “The chance to do something that makes use of my own ability” had the highest factor loading on this factor. The other factors include “the freedom to use my own judgement”, “the way my co-workers get along with each other” and “the feeling of accomplishment I get from the job”. This factor was identified as “work itself” factor which accounted for 12.27 per cent of the total variance.
- (3) Factor 3 designated “job workload” consisted of three items. “Being able to keep busy all the time” had the highest factor loading on this factor. The other two items include “my pay and the amount of work I do” and “the way my boss handles his/her workers”. This factor was named “job workload” and accounted for 7.28 per cent of the total variance.
- (4) Factor 4, namely, “skill variety”, consisted of two items. “The chance to work alone on the job” and “the chance to do different things from time to time” accounted for 6.50 per cent of the total variance.
- (5) Factor 5 is “job status” composed of four items, namely, “the chance to do things for other people”, “the chance to be “somebody” in the community”, “the way my job provides for steady employment” and “the working conditions”. This factor termed as “job status” accounted for 6.17 per cent of the total variance.

Job satisfaction measures	F1	F2	F3	F4	F5
The way company policies are put into practice	0.802	0.098	0.350	0.010	0.122
The praise I get for doing a good job	0.713	0.361	-0.022	0.161	0.251
The competence of my supervisor in making decisions	0.705	0.398	0.254	0.118	0.089
The chances of advancement on this job	0.695	0.043	0.236	0.325	0.281
The chance to do something that makes use of my own ability	0.136	0.769	0.414	0.252	0.061
The freedom to use my own judgment	0.088	0.703	0.217	0.277	0.234
The chance to try my own methods of doing the job	0.350	0.688	-0.057	0.068	-0.173
The way my co-workers get along with each other	0.091	0.641	0.293	-0.072	0.277
The feeling of accomplishment I get from the job	0.444	0.506	-0.011	0.373	0.149
Being able to keep busy all the time	0.027	0.060	0.868	0.126	0.284
My pay and the amount of work I do	0.405	0.077	0.686	0.005	-0.044
The way my boss handles his/her workers	0.783	0.323	0.622	-0.001	0.207
The chance to work alone on the job	0.195	0.132	-0.048	0.989	0.046
The chance to do different things from time to time	0.091	0.161	0.159	0.863	0.020
The chance to do things for other people	0.054	0.144	0.019	0.250	0.774
The chance to be “somebody” in the community	0.450	0.086	0.385	-0.108	0.645
The way my job provides for steady employment	0.227	0.045	0.328	-0.323	0.572
The working conditions	0.423	0.356	0.088	0.109	0.528
Eigenvalues	7.07	2.21	1.31	1.17	1.11
Percentage variance	39.27	12.27	7.28	6.50	6.17
Cumulative variance	39.27	51.54	58.81	65.32	71.49

Table III.
Results of factor
analysis of job
satisfaction

Table IV shows the results of exploratory factor analysis of organizational performance dimensions indicated two factors accounted for approximately 64.26 per cent of the total variance and were thus considered to represent all the organizational performance. Factor 1, named “financial performance” dimension, comprised four items and accounted for 44.27 per cent of the total variance. Factor 2, termed “non-financial performance”, consisted of four items, which accounted for 19.99 per cent of the total variance.

4.2 Reliability test

Cronbach’s alpha statistics and corrected item-total-correlation coefficients were conducted to examine the consistency and reliability of the measurement items. The high level of item reliability indicated the items are strongly affected by each measure construct and implied set of items are unidimensional (Hair et al., 2009). Table V reveals the Cronbach’s alpha values and corrected item-total correlation coefficients of each measurement scale are all above the suggested threshold of 0.8 and 0.5, respectively (Nunnally, 1978).

Table IV.
Results of factor
analysis of
organizational
performance

Organizational performance factors	F1	F2
Turnover growth rate	0.865	-0.031
Return on assets	0.837	0.085
Profitability	0.823	0.173
Market share	0.630	0.550
Customer satisfaction	0.055	0.849
Service quality	-0.374	0.728
Competitive position	0.488	0.725
Employee productivity	0.365	0.646
Eigenvalues	3.71	1.85
Percentage variance	46.95	23.18
Cumulative variance	46.95	69.63

Table V.
Results of reliability
testing

Measurements	Items	Mean	SD	Cronbach’s alpha	Range of corrected item-total-correction
<i>Organizational motivation</i>					
Remuneration	5	3.44	0.92	0.79	0.508-0.626
Job achievement	5	3.76	0.74	0.78	0.480-0.668
Job security	2	4.13	0.80	0.92	0.860
Job environment	4	3.61	0.77	0.73	0.519-0.543
<i>Job satisfaction</i>					
Reward policy	4	3.58	0.74	0.84	0.643-0.716
Work itself	5	3.82	0.61	0.80	0.499-0.759
Job workload	3	3.50	0.72	0.77	0.578-0.618
Skill variety	2	3.88	0.59	0.76	0.616
Job status	4	3.87	0.63	0.75	0.477-0.670
<i>Organizational performance</i>					
Financial performance	4	3.51	0.61	0.83	0.567-0.718
Non-financial performance	4	3.68	0.62	0.77	0.457-0.705

4.3 ANOVA result

Table VI shows the results of the ANOVA test of the differences in the level of satisfactory assigned to organizational motivation, job satisfaction and organizational performance according to firm size. A comparison of the factor mean scores showed that all three firm size segments had their highest centroid scores on “job security” with no significant difference between these three segments. Differences were found among four dimensions including “remuneration”, “job workload”, “skill variety” and “financial performance”. Overall, the level of satisfaction accorded to organizational motivation, job satisfaction and organizational performance by large firms (with more than 500 employees) was greater than that indicated by small size firms (with less than 50 employees) and medium size firms (between 51 and 500 employees).

Table VII presents differences between the three ownership segments. Similar to the findings in Table VI, “job security” consists of the highest centroid scores with no significant differences. Two dimensions were found to be significantly differ, that is, “job achievement” and “job environment”. In general, the level of satisfaction indicated by foreign firms was higher than expressed by local firms and foreign-local jointly operated firms.

4.4 Correlation analysis result

Table VIII presents the descriptive statistics and correlations of the study variables. The means of the four organizational motivation dimensions were obtained from the respondents based on their perceptions in terms of importance. Comparisons of the mean scores show that respondents have their highest mean scores on job security (mean = 4.13), followed by job achievement, job environment and remuneration. Respondents display their highest mean scored of job satisfaction on job status (mean = 3.87), whereas job performance receives (mean = 3.50) the lowest mean scored. High bivariate correlation coefficients between the dimensions of job satisfaction indicate high potential of multicollinearity among them, which is hardly surprising given that previous research has

Dimensions	Firm size (No. of employees)			F-ratio	p-value	Duncan test
	<50 (a) (n = 30)	51-500 (b) (n = 20)	>500 (c) (n = 9)			
<i>Organizational motivation</i>						
Remuneration	3.40	3.71	3.97	3.573	0.035*	(a,c)
Job achievement	3.66	3.84	3.97	1.523	0.227	NA
Job security	3.92	4.33	4.41	2.800	0.069	NA
Job environment	3.53	3.61	3.86	1.262	0.291	NA
<i>Job satisfaction</i>						
Reward policy	3.54	3.61	3.66	0.168	0.845	NA
Work itself	3.77	3.78	3.92	0.680	0.511	NA
Job workload	2.92	3.59	3.62	5.771	0.005**	(a,b) (b,c)
Skill variety	3.30	3.55	4.00	3.086	0.049*	(a,c)
Job status	3.79	3.92	4.02	1.092	0.343	NA
<i>Organizational performance</i>						
Financial performance	3.34	3.57	3.97	6.715	0.002**	(a,c)
Non-financial performance	3.66	3.88	3.92	1.157	0.322	NA

Notes: *Significant at level $p < 0.05$; **Significant at level $p < 0.01$

Table VI.
ANOVA analysis of
organizational
motivation, job
satisfaction and
organizational
performance between
firm size

Table VII.
ANOVA analysis of
organizational
motivation, job
satisfaction and
organizational
performance between
ownership types

Dimensions	Ownership types			F-ratio	p-value	Duncan test
	Local firm (a) (n = 40)	Foreign-local firm (b) (n = 9)	Branches of foreign firm (c) (n = 10)			
<i>Organizational motivation</i>						
Remuneration	3.46	3.64	4.02	3.013	0.057	NA
Job achievement	3.65	3.86	4.15	3.697	0.031*	(a, c)
Job security	3.98	4.25	4.61	2.722	0.074	NA
Job environment	3.48	3.80	3.94	3.553	0.035*	(a, c)
<i>Job satisfaction</i>						
Reward policy	3.42	3.54	3.94	2.060	0.137	NA
Work itself	3.60	3.82	4.04	2.381	0.102	NA
Job workload	3.45	3.46	3.77	1.130	0.330	NA
Skill variety	3.36	3.5	4.00	2.537	0.088	NA
Job status	3.79	4.02	4.03	1.682	0.195	NA
<i>Organizational performance</i>						
Financial performance	3.43	3.55	3.75	1.616	0.208	NA
Non-financial performance	3.70	3.86	4.05	1.627	0.206	NA

Notes: *Significant at level $p < 0.05$; **Significant at level $p < 0.01$

reported closer relationships among the dimensions of job satisfaction (Shore and Martin, 1989; Wanous *et al.*, 1997).

4.5 Multiple regression and hypotheses test results

Table IX presents the results of the multiple regression analysis of the relationships between organizational motivation dimensions on job satisfaction factors. Results indicate that there is a positive relationship between organizational motivation dimensions and job satisfaction in the container shipping industry in Taiwan. In the models, organizational motivation factors were the independent variables with job satisfaction factors as dependent variables to ascertain the impact of organizational motivation on job satisfaction. The Durbin–Watson statistic fell in the range of 1.565–2.220 which indicates that autocorrelation problem did not exist in this study. Results indicated that “job environment” was significant at the 0.01 level, which provide evidence of a positive influence on reward policy, job workload and skill variety. Results also indicated that “remuneration” had a positive influence on skill variety.

Table X presents the results of the multiple regression analysis of the influence of organizational motivation and job satisfaction dimensions on financial and non-financial performance. Durbin–Watson results for both models indicate that no autocorrelation between variables. Results also indicated that “remuneration” as well as “job autonomy”, were significant at the 0.01 level, which is evidence of a positive influence on financial and non-financial performance, respectively.

H1 was partially supported by the multiple regression results indicating that significant relationship existed between organizational motivation dimension, “job environment” and job satisfaction dimensions. This is consistent with the findings of Igalens and Roussel (1999) when organizations pay more attention to implantation of an effective system, especially in the areas of job variety and clear career path, employees’ job satisfaction will be higher.

Measures	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Tenure ^a	3.68	1.76													
2. Number of employees ^b	2.54	1.47	0.149												
3. Revenue ^c	3.51	2.18	0.214	**0.768											
4. Remuneration	3.58	0.65	-0.146	*0.278	0.201										
5. Job achievement	3.76	0.54	-0.158	0.169	0.045	0.644									
6. Job security	4.13	0.77	0.229	0.205	0.182	*0.321	*0.293								
7. Job environment	3.61	0.56	-0.017	0.087	0.082	*0.424	**0.586	0.224							
8. Job policy	3.58	0.61	0.026	0.001	-0.055	0.251	0.412	0.073	0.589**						
9. Job autonomy	3.82	0.45	-0.061	0.019	-0.146	0.236	0.448**	0.259**	0.461**	0.595**					
10. Job workload	3.50	0.60	0.086	-0.323*	-0.287*	0.099	0.236	0.102	0.424**	0.584**	0.431**				
11. Job performance	3.48	0.79	-0.203	0.232	0.110	0.789**	0.708**	0.352**	0.510**	0.370**	0.396**	0.201			
12. Job status	3.87	0.46	0.197	0.152	0.166	0.264*	0.363**	0.298*	0.500**	0.607**	0.404**	0.567**	0.315*		
13. Financial performance	3.51	0.50	-0.128	0.402**	0.497**	0.446**	0.200	0.036	0.242	0.239	0.056	0.009	0.337**	0.218	
14. Non-financial performance	3.86	0.43	0.089	-0.167	-0.244	0.240	0.451**	0.317*	0.475	0.564**	0.819**	0.505**	0.302*	0.524**	-0.083

Notes: ^aMeasures for years of tenure in company are based on questions using an ordinal scale: 1 represents respondents less than 5 years old; 2 represents 6-10 years, 3 represents 11-15 years, 4 represents 16-20 year, whereas 5 represents more than 20 years old. ^bMeasures for the number of employees are based on questions using an ordinal scale: 1 represents less than 20 people, 2 represents 21-50 people, 3 represents 51-100 people, 4 represents 101-500 people, whereas 5 represents more than 500 people. ^cMeasures for the revenue in terms of million are based on questions using an ordinal scale: 1 represents less than NT\$10mm, 2 represents 10-50 NT\$mm, 3 represents 50-100 NT\$mm, 4 represents 100-1,000 NT\$mm, 5 represent NT \$1,000-5,000mm, 6 represents NT\$5,000-10,000mm, 7 represents NT\$10,000-50,000 NT\$mm, whereas 8 represents more than NT\$50,000mm. One US dollar is equal 31 NT dollar. **Significant at $p \leq 0.01$; *Significant at $p \leq 0.05$

Table VIII.
Means, standard deviations, and correlation analysis

The findings also partially validated *H2* and *H3*. There was a significant positive effect between organizational motivation and financial performance and job satisfaction and non-financial performance. The results indicated that an effective motivation system using remuneration and job environment increases organization's profitability and productivity. This is consistent with previous studies (Waldrop, 1987; Al-Alawi, 2005). The results also revealed that job satisfaction dimensions have differing impacts on organization performance. Employees' satisfaction of skill variety impacts financial performance, while work itself helps to improve employee's productivity and provides better customer satisfaction and service quality. This is consistent with the finding of Shore and Martin (1989), where it was found that when employees experienced a higher level of job satisfaction, their work attitudes improved and are able to complete more tasks, thus improving organizational performance.

5. Discussions and conclusion

Within the shipping industry, a dedicated and motivated workforce is needed to provide excellent services and maintain a competitive advantage. This study has aimed to investigate the effects of

Table IX.
Results of the influence of organizational motivation on employee job satisfaction

Organizational motivation	Employee job satisfaction				
	Reward policy	Job autonomy	Job workload	Skill variety	Job status
Remuneration	0.251	0.236	0.099	0.789**	0.264
Job achievement	0.412	0.448	0.236	0.708*	0.363
Job security	0.073	0.259	0.102	0.352	0.298
Job environment	0.589**	0.461*	0.424**	0.510**	0.500*
Durbin-Watson	1.753	2.220	1.565	1.929	1.806
<i>F</i> -ratio	4.363	4.357	5.128	20.340	5.489
Adjusted <i>R</i> ²	0.289	0.288	0.333	0.700	0.236

Notes: *Significant at level $p < 0.05$; **Significant at level $p < 0.01$

Table X.
Results of the effects of organizational motivation and job satisfaction on organizational performance

Variables	Financial performance		Non-financial performance	
<i>Organizational motivation</i>				
Remuneration	0.464**		0.240	
Job achievement	0.200		0.451	
Job security	0.360		0.317	
Job environment	0.242		0.475**	
<i>Job satisfaction</i>				
Reward policy		0.239		0.564
Work itself		0.056		0.819**
Job workload		0.009		0.505
Skill variety		0.337**		0.302
Job status		0.218		0.524
Durbin-Watson	1.534	1.670	1.999	2.016
<i>F</i> -ratio	4.234	2.501	6.239	28.021
Adjusted <i>R</i> ²	0.182	0.115	0.265	0.700

Notes: *Significant at level $p < 0.05$; **Significant at level $p < 0.01$

organizational motivation factors on job satisfaction and their effects on organizational performance using multiple regression analysis. The main findings, derived from a survey conducted into the container shipping industry in Taiwan, are summarized below.

Exploratory factor analysis was conducted to derive four critical factors of the organizational motivation dimension, namely, “remuneration”, “job achievement”, “job security” and “job environment”. Five job satisfaction dimensions were derived, namely, “reward policy”, “work itself”, “job workload”, “skill variety” and “job status”. Two organizational performance dimensions were identified, namely, “financial performance” and “non-financial performance”. The findings are consistent with those reported in previous studies (Parsons and Broadbridge, 2006; Yang *et al.*, 2009; Robbins and Coulter, 2014).

Variation in perceived differences of organizational motivation, job satisfaction and performance in terms of years of tenure, firm size and ownership types were analyzed. Results showed that organizational motivation and job satisfaction ratings between different years of tenure differed significantly in “remuneration”, “job achievement”, “job autonomy” and “skill variety”. In terms of firm size, large shipping companies perceived job workload and financial performance as significantly higher than smaller firms. Larger firms are able to achieve greater economies of scale and efficiently utilize their resources to increase their return on assets and experience higher turnover growth rate. Findings showed that foreign-owned firms differ significantly from others in terms of job achievement and job environment, focusing more on employees’ recognition and personal development.

Multiple regression analysis was carried out to assess the influence of organizational motivation dimensions on job satisfaction as well as their relationship on organizational performance. Results indicated that “remuneration” and “job environment” had a positive effect on employees’ job satisfaction in terms of skill variety. This would imply that employees’ value monetary incentives as well as a positive workplace with job variety and rotation and personal development. Furthermore, “remuneration” and “job variety” had a positive effect on financial performance, while “job environment” and “job autonomy” had a positive effect on non-financial performance.

The findings imply that employees’ in container shipping companies perceive that providing incentives, such as more bonuses, dividends and stock allocation, as well as the chance to work alone could improve organizational performance in terms of turnover growth rate, return on assets, profitability and market share. This is might be application to employees working in sales department who normally work independently to achieve sales targets. Findings also suggest that the degree of freedom afforded to employees to use their own ability to make their own decisions and methods could improve customer satisfaction, service quality and employee productivity.

This study has drawn attention to the importance of the relationships between organizational motivation, job satisfaction and organizational performance in the container shipping context. The findings have significant implications for researchers and shipping practitioners. First, despite the existence of research on the inter-relationships between organizational motivation, job satisfaction and organizational performance in other disciplines, no empirical study was discussed in previous shipping or transportation-related research. Second, the understanding of relationships between the dimensions will encourage container shipping companies to develop a career development-oriented motivation system to increase job satisfaction and a sound financial-based motivation system to improve organizational performance. Finally, this study specifically focused on the container shipping industry. This study’s insights into shipping managers’ perceived organizational motivation and job satisfaction factors may also be of interest to other service industries

including airlines, forwarders and logistics services providers by providing a useful approach to evaluate their organizational performance.

This research was limited to an evaluation of organizational motivation factors on job satisfaction and organizational performance in the shipping industry. Future research can focus on analyzing individual departments to understand the perceptions of organizational motivation and job satisfaction factors in different departments. In addition, the research was limited to a particular industry in the Taiwan area. The container shipping industry is an international business and future research could include other nations in the study. Finally, this research only used job satisfaction as a variable in analyzing organizational performance. In future, other constructs such as leadership patterns or organizational communication could be added to strengthen the integrity of the research.

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