Job Performance of Shipyard Workforce in the Shipbuilding and Ship Repair Industry: Do Competencies Matter in Malaysian Shipyards?

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Abstract
Malaysia's Shipbuilding and Ship Repair (SBSR) Industry provides the backbone for the development of the maritime sector. Malaysian shipyards are capable of building various types of small- to medium- sized vessels. Lately, SBSR is attributed as demonstrating poor performance due to the delayed vessel delivery as per contract, and despite using technology, there has been no change. It is thought that using competencies might improve the job performance of the shipyard workforce. Therefore, this study seeks to investigate the influence of competencies on job performance in the SBSR industry. A cross-sectional design was adopted and 100 respondents were selected as the population. The data was collected using semi-structured questionnaires and they were analyzed through descriptive, correlation and regression analyses. The study results revealed a strong positive and significant influence between competencies and job performance. The study recommended that Shipbuilding and Ship repair industry players develop competencies in order to increase their performance.
Keywords: Competencies, Job Performance, Shipbuilding and Ship Repair Industry.

Introduction
The maritime industry has a role to play in supporting Malaysia's economic growth. This is due to the fact that the Shipbuilding and Ship Repair (SBSR) industry has specifically been identified in the Third Industrial Master Plan (IMP3) (MIDA, 2019), as an industry which can contribute to the country's wealth from the transportation sector. Similar to other parts of the world, the Malaysian shipping industry has suffered amid the global recession and performance decline in major shipping trades (SBSR Industry Report, 2015/2016). As the demand for shipping services fell, SBSR industry players faced very challenging market conditions. Lately, this industry has been associated with the problem of delays in completing ships. This study is set to analyze the competencies and impact on the job performance of the shipyard workforce. It aims to see the extent of the impact given by competencies to the job

performance of the employees, at the same time giving an impact to the overall performance of the company. It also aims to look at the levels of the competencies and job performance of the workers, and how the competencies contribute to the delay in completing the Malaysian Royal Navy vessel.

Competencies is a basic characteristic of a person consisting of knowledge, skills and attitudes that are related to one's performance (Spencer & Spencer, 1993). It is emphasized that the performance of individuals, as well as the company performance and success depend on individual competencies. Various methods are used for the purpose of increasing the performance of the company. Some of these methods rank among the area of human resource management. This article focuses on this method, particularly on the evaluation of employee competencies on job performance. The intention of this paper is to quantify the influence between employee competencies and job performance.

The Objectives and Hypotheses of Study
These are the specific objectives:
- Level of competencies of Boustead Naval Shipyard's Workforce.
- Level of job performance of Boustead Naval Shipyard's Workforce.
- Influence of competencies towards job performance among Boustead Naval shipyard Supervisor workforce

The research hypothesis is:
H1 Competencies has influence on a job performance.

Review of Literature
This section presents the theoretical and empirical reviews as related to the study and identifies the research gaps that the study seeks to address.

Theoretical Review
The term competencies were probably first introduced to psychology literature in 1973 when David McCleland argued in his article "Testing for competence rather than for intelligence" that traditional tests of academic aptitude and knowledge content, in fact, predicted neither job performance nor success in life. Thus, the quest for the theory and tools that could reliably predict effectiveness in the workplace began (McCleland,1973). In 1982 it was Boyatzis who first drew together the comprehensive data that had been collected in the USA using the McBer & Company "Job Competence Assessment" method. Since then, competency has become a significant factor in human resource development practices. The development and application of competencies model is the proven approach to the investment in human resources in order to achieve a more affective and productive workforce (Chouhan & Srivastava, 2014).

The concept of technical competency is analogized by Spencer and Spencer's (1993) theory as an iceberg in the middle of the sea, with only a small portion of the ice visible on the surface. The major portion of the cube, however, is hidden underneath and cannot be seen with the naked eye (Spencer & Spencer, 1993). According to Wilson (1995) in Hamzah et al (2021) technical competencies can be applied as part of the technical skills and expertise.

Empirical Literature Review
Competencies
Competent employees are the main resource of any organization in acquiring a competitive advantage. Land, building or material do not yield company productivity, but instead, it is "people capital" that runs a business and procedures value from the existing resource. In the scientific literature, the competency is divided into hard and soft competency. Being a hard competency, professional competency is determined by organizational performance. Soft competency is defined by the personal features of an employee, his or her behaviour, necessary for a good job performance and it can be professional, social or conceptual. Many definitions of term "competency" have risen over the past decade. The definition that is most preferred is that competencies include the collection of success factors as the combination of knowledge, skills and abilities (more historically called "KSA's) that are described in terms of specific behaviour and demonstrated by superior performers in those jobs or work roles (Chauhan & Srivastava, 2014). A competency is the capability of applying or using knowledge, skills, abilities, behaviors, and personal characteristics to successfully perform critical work tasks, specific functions or to operate in a given role or position. Thus, competencies are the underlying characteristics of people that indicate ways of behaving or thinking, which generalize across a wide range of situations and persist for long periods of time (Chauhan & Srivastava, 2014).

Katz and Kahn (1986) in Chauhan & Srivastava (2014) grouped competency into three areas which later expanded into the following four:

   i.   Technical or functional
  ii.   Managerial
 iii.   Human
  iv.   Conceptual

Carrol and McCrackin (1988) in Chauhan & Srivastava (2014) organized competencies into three main categories:

   i.   Core competencies
  ii.   Leadership/ managerial competencies
 iii.   Functional competencies

Job Performance
Nowadays, the importance of employee job performance for the organization's success cannot be overstated. Employees are the human capital of organizations and their performance is a key indicator for organizations to achieve goals (Zeb et al., 2018). Job performance is a record of the result or outputs (outcomes) resulting from a specific job function or activity within a certain period of time. Meanwhile, performance measurement is a way to measure the level of individual contribution to the organization (Gomez-Mejia & Cardy, 2011). According to Vroom in Greene (2003) the extent of a person's success in completing his job is called the level of performance. Basically, people with a high level of performance are called productive people and on the other hand, people with levels that do not reach the standard are said to be unproductive or underperforming (Fuad & Aminudin, 2021).

Competencies and Job Performance

A theory of performance is the basis for the concept of competency (Boyatzis, 2008). The performance is based on competency (Tutu & Constantin, 2012). The competencies of an individual is something inherent in him or her that can be used to predict his level of performance (Fuad & Aminuddin, 2021). Competencies is closely related to performance, both individual performance and organizational performance. According to Armstrong, (2001) in Fuad & Aminuddin, a person's performance is based on understanding the skills and knowledge needed to do a job well. Meanwhile, the performance of the organization is based on how the company's management responds to external and internal conditions; with a certain benchmark, it will be possible to know the level of turbulence and the level of ability to anticipate. Fuád and Aminuddin discussed the importance of competencies and work motivation and analysed the effect of these two variables on performance. Their research sought to understand more about the manager's performance of microfinance institutions, thus, the selected sample was cooperative managers. The data collected from 88 questionnaires were analysed using PLS-SEM with SMART PLS software. The finding of the research showed that competencies has a significant effect on motivation and manager performance (Fua'd and Aminuddin, 2021).

A study by Niazi et al (2020) supported this by empirically investigating the impact of managerial competency and learning orientation on job performance of individuals working in the software industry of Pakistan. Social skills have been introduced as a moderator alongside entrepreneurial leadership which acts a mediator in both relationships. The data from 384 respondents, collected through a survey, was analyzed using Structural Equation Modelling (SEM) through SmartPLS. The results suggested that managerial competency and learning orientation are positively related to job performance. To the best of our knowledge, this is the first investigation of its kind, incorporating technical and behavioral aspects (social skills) in a single framework. The study contributes to the existing literature by analyzing the impact of the aforementioned relationships in the Pakistani organizational context. The study may present a vital insight for organizations to prioritize the development of managerial competencies, learning orientation, entrepreneurial leadership and social skills for improved job performance.

Research Methodology

The study employed a cross sectional design. According to Lewis (2015), the design was chosen because of its suitability in describing the characteristics of a particular individual or a group of individuals since the researcher did not have any control over the variables. The designs gave the researcher an opportunity to capture a population's characteristics. Muathe (2010), Makau, Wawira and Ofafa (2013) in Moga & Muathe (2021) also adopted the same design.

The descriptive research design was chosen because of its suitability in describing the characteristics of a particular individual, or group of individuals since the researcher did not have control over the variables. The study target population was 100 supervisors of Boustead Naval Shipyard. Primary data was collected using questionnaires and the instrument was tested to ensure reliability using the Cronbach's alpha, reliability coefficient Cooper and Schindler (2010) who noted that Cronbach Alpha values equal or greater than 0.7 are an indication of reliability of the instrument (Cooper & Schindler, 2010). Quantitative techniques for data analysis on the collected data were done using the descriptive analysis with means

and standard deviations and inferential statistics with correlation and regression analyses. The findings were presented in tables, figures and discussions.

Finding and Discussion
The section presented the findings of the analysis including the background of responses, descriptive and inferential analyses. The 100 questionnaires were distributed among supervisors in Boustead Naval Shipyard. The study respondents included both genders, and the respondents were skilled, experienced and knowledgeable as they had worked at Boustead Naval Shipyard for more than three years. On the level of education, the majority had *Sijil Kemahiran Malaysia* (SKM) or Malaysian Skill Certificate, meaning that they could read, understand and interpret the research questions.

Reliability Test
Reliability test was conducted to ensure that the instrument used would deliver the same outcomes every single time the results are obtained. It also measures the uniformity of the instrument in research such that it exhibits the same outcome, and each instrument is used under the same circumstance and follows the same process. The Cronbach Alpha results are an indication that the instrument is reliable. The results are as shown in Table 1.

Table 1
Reliability Analysis

Variable	Number of Items	Cronbach Alpha
Competencies	53	0.82

Source: Survey Data 2022

The result from the reliability test shows that competencies had a Cronbach alpha result of 0.81. The Cronbach Alpha result was greater than 0.7 which is an indication that the questionnaire was reliable in conducting the study. This is in agreement with Cooper and Schindler (2010) who noted that Cronbach Alpha values equal or greater than 0.7 are an indication of instrument reliability.

Descriptive Analysis
The study conducted descriptive statistics on the variable and this is where the means and standard deviation were obtained. The mean tells us the extent of agreement that the respondents had with the statements and the overall mean is an aggregate of variable. The standard deviation showed the dispersion and spread of the data from the mean. The researcher did the descriptive analysis to show the extent of agreement with the variable and spread of the data. The findings are as shown in Table 2.

The guideline or cut-off point of the mean score was provided for further discussion in this section. The mean score ranging from 1.00 to 2.33 is low, and the mean score ranging from 2.34 to 3.66 is moderate. Finally, the mean score ranging from 3.67 to 5.00 is high. Table 2 shows the guide line or cut – off point for the mean score.

Table 2
Guide line or Cut-off point for Mean Score

Mean Score	Indicator or Mean Score
1.00 to 2.33	Low
2.34 to 3.66	Moderate
3.67 to 5.00	high

Table 3
Competencies

	Mean	Std. Dev
	4.29	0.18

Source: Survey Data 2022

Table 3 reports that the mean score was 4.29 and the standard deviation 0.18 indicating that the competencies at Boustead Naval Shipyard led to the shipyard workforce's improved job performance. As seen in Table 3, the mean values range from 3.67 to 5.00 which is good competency level. This answers objective 1, where the result shows that the level of competencies is high.

Table 4
Job Performance

	Mean	Std. Dev
	4.74	0.13

Source: Survey Data 2022

Table 4 establishes that the aggregate score of 4.74 for mean and standard deviation 0.13 give an indication that competencies had improved job performance. As seen in Table 4, the mean values range from 3.67 to 5.00 which indicates good job performance level. Report shows that job performance is at the highest level. This answers objective 2, where the result shows that the level of job performance is high.

Correlation Analysis
The study conducted a correlation analysis to show the link between the variables. The correlation analysis shows how competencies influenced job performance for the shipyard workforce. The results of the analysis are as indicated in table 5. In analyzing the relationship between competencies and job performance, researcher has used the correlation analysis to achieve the objective. The explanation for the coefficient value is based on the Correlation Coefficient Interpretation Table by (McBurney, 2001).

Table 5
Correlation Coefficient Interpretation Table by McBurney (2001)

Coefficient Value	Explanation
0.81 or more	Strong association
0.61 – 0.80	Moderately strong association
0.41 – 0.60	Moderate association
0.21 – 0.40	Moderately weak association
Less than 0.2	Weak association

Table 6
Correlation Analysis

Variable:	Job Performance	
	r	p
Competencies	0.63	0.00**

**p<0.01

Table 6 on the correlation analysis shows that the relationship between competencies and job performance is positive and significant where r -0.63 and p-values 0.000. This finding shows that the relationship between competencies and job performance is strongly positive and significant at r-0.63and p-value of 0.00.

Regression Analysis
The researcher conducted the regression analysis so as to be able to describe the relationship between the independent variables and the dependent variable. The model summary, ANOVA and regression coefficient results are shown in Tables 7-9.

Model Summary
Table 7
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.63	0.40	0.39	0.10

a. Predictors: (Constant), Competencies

The finding shows that the coefficient of correlation was 0.63, which is an indication of a strong positive correlation of the study variables. The adjusted coefficient of determination was 0.39 meaning that 39% of variations in the dependent study variables can be traced by the independent variable, the competencies. The residual effect of 61.0 would be explained by other competencies and factors that are outside the scope and limits of this present study. The findings indicate that the value of R which was 0.40 showed that competencies were positively and strongly related to job performance of the workforce in Boustead Naval

Shipyard. The R square value was 0.40, inferred to mean that 39% changes in the job performance of the shipyard workforce can be explained by the competencies adopted by the yard.

ANOVA

The study performed ANOVA at 5% significant level so as to compare the F values between F calculated and F Critical. The findings are as indicated in Table 8.

Table 8
ANOVA

Model	Sum of Squares	DF	Mean Square	F	Sig.
Regression	0.66	1	0.66	63.83	.000
Residual	1.01	98	0.01		
Total	1.67	99			

a.   Dependent Variables: Job Performance
b.   Predictors :(Constant) Competencies

Table 8 shows the ANOVA results where F Calculated was 63.83 and F Critical was 3.94 (at a degree of freedom of 1, 98) an indication that F Calculated > F Critical. This means that the overall regression model was fit in estimating the interaction between competencies and job performance. The results also show that the p-value was 0.00 which is less than the standard level of 0.05. This shows that at least one of the independent variables significantly influences the job performance of Boustead Naval Shipyard workforce.

Table 9
Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.76	0.25		11.19	.000
Competencies	0.46	0.58	0.63	7.99	.000

a.   Dependent Variable: Job performance

H1 predicted that there are strong positive and significant influence between competencies and job performance. In table 9, the standardized Beta coefficient shows the strength of the relationship between IV and DV (Hair et al., 2006). The Sig. value is less than 0.05 and this indicates that competencies are making a significant unique prediction to the dependent variable (Pallant, 2010). Competencies make a large contribution (beta=0.63) and give a significant impact to the job performance. This indicates that a supervisor with higher level of competencies tended to have higher job performance. The finding supports hypothesis H1. Competencies of shipyard's supervisor influence on job performance. Competencies with the

standardized regression value of 0.63 are predictive and responsible for explaining the depending variable.

Conclusion and Policy Recommendation
The main objective of the study is to investigate the influence of competencies on job performance for Boustead Naval Shipyard.

Conclusion
The Shipbuilding and Ship repair industry has changed drastically, thus the industry has to acquire and possess a set of competencies suitable for the yard in order to be effective and successful in their job now and in the future. The study noticed that the level of competencies for the shipyard workforce is high. This competency led to improved job performance. The report shows that the late delivery of vessel is not because of the weak competency level among the employees and low level of job performance. There are other factors that influence the delay in completing RMN vessels at Boustead Naval Shipyard namely poor management, lack of expertise of vendor, lack of technologies and etc. This research has both academic and managerial implications. Firstly, it contributes to the contemporary literature by filling the gap on the level of competencies and job performance for the shipyard workforce to possess so that every employee can succeed in their job. Secondly this study adds to the literature regarding the job performance that is influenced by competencies. It enriches the concept of job performance in organizations by considering the core competencies and functional competencies, adding value to the academia world. This will lay the background for future on the education and training programs which are needed to supply the shipyard workforce with essential competencies. For organizations, the finding of this research can help human resource management to identify the areas of competencies which are critical for the yard to acquire and enhance systematic competency profiling and design subsequent training programs accordingly. Due to the quantitative nature of the method of data collection, conducting this research using other quantitative methods such as a survey in others shipyards would help to enhance its reliability, validity and generalizability.

Policy Implications
Based on the findings of the study which include the fact that competencies led to the improved job performance of the shipyard workforce, it is recommended that the management of Boustead Naval Shipyard and human resource management adopt systematic competencies as part of their strategic plans so as to improve the job performance. Finally, the human resource management should develop policies that govern their staff development program, training and career advancement programs so as to enhance performance at the yard level.

Limitation and Future Research
This study used primary data, hence it is limited by the truthfulness of the responses on competencies and job performance. Future scholars can incorporate secondary data or a combination of primary and secondary data. This study was a survey study that focused only on one Yard, Boustead Naval Shipyard and it is recommended that future researchers use case study design in other companies. The variations in the job performance of Boustead Naval Shipyard can be explained by 39% and future researchers should focus on the residual effect of 61% of these other factors that leave an impact on job performance.

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