EFFECTIVENESS OF THE INTERNATIONAL SHIP AND PORT FACILITY SECURITY CODE AT LUMUT PORT

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ABSTRACT

The International Maritime Organization (IMO) introduced the International Ship and Port Facility Security (ISPS) Code on December 2002. The ISPS Code is a comprehensive set of guidelines to enhance the integrity of ship and port facilities. These security enhancement initiatives are undertaken to fulfil the requirement of the International Maritime Organization. The purpose and aim of this research paper are to analyse the effectiveness of International Ship and Port Facility Security (ISPS) code implementation on safety, security and screening aspects at Lumut Port. The research was conducted with the intention to clarify the employee's general awareness and understanding of the ISPS code implementation by the port and its effects based on their own observation and experience and what can be improved in relation to port safety, security and screening aspects. It is to ensure employees would acquire an insight into the effect of maritime security and the implementation should not be viewed as a hassle for employees, but as a mean to ensure workers' welfare is being taken care of. The outcome of this study shows that the port has established procedures according to ISPS Code guidelines in relation to Port Security, which has been proven in preventing theft and other criminal activities.

Keywords: effectiveness, safety aspect, security aspect, screening aspect, ISPS Code

INTRODUCTION

International Maritime Organization has stated that International Ship and Port Facility Security Code (ISPS Code) should be implemented to enhance the security of ships and port facilities by outlining minimum security standards. ISPS Code was enforced through an amendment to the International Convention on the Safety of Life at Sea (SOLAS) 1974 that focuses on minimum security arrangements for ships, ports and government maritime agencies. Years of implementation of ISPS Code has shown positive impacts that the comprehensive set of measures has proven to improve the safety and security aspects of ports around the world, in particular to ships' and port facilities in Malaysia.

The aim of this research is to study on the effectiveness of the implementation of the ISPS code in Lumut Port, which situated in Lumut, Malaysia. This is undertaken through the use of questionnaire by focusing on key persons involved in safety, security and management of Lumut Port. This research contributes towards creating awareness and comprehension among the port staff on the importance of ISPS implementation and identifies the effectiveness of the Code in the provision of a better security control.

LITERATURE REVIEW

The literatures reviewed for this study covered on the ISPS Code on safety, security and screening aspects on the effectiveness of its implementation and discussed further on the effectiveness of ISPS code in the maritime industry in general, and ports in particular. The reviews provided insights into findings, relevant theoretical methodologies that were formulated, gathered and their relationships observed for applications. Trelawny, (2005) highlighted on the ISPS Code and its Implementation in Malaysia. On a similar note, findings by Mazaheri (2008) further open up insights into how the ISPS code affects port and port activities. Further reference was also sought on the outcome of a survey conducted by Arof and Awis Khadzi (2018) that concluded a finding on Vale Malaysia Materials (VMM) employees that they had satisfactorily managed to adhere to requirements of the ISPS Code, and with some enhancement in the conduct of regular drills and regular security exercises

it is expected that the level of adherence would certainly improve.

PROBLEM STATEMENT

There is an obvious lack of understanding on the effectiveness of ISPS Code namely on Safety, Security and Screening aspects at Lumut Port of Perak. More information should be analyzed to determine the results of having the ISPS Code for the further benefits of Lumut Port in particular.

SIGNIFICANCE OF RESEARCH

This research significantly contributes to a deeper understanding on the ISPS Code at Lumut Port. Hence, the findings of this research would help the relevant parties identify the appropriate components that would make up into a more feasible concept such as increasing of security level, efficiency, effectiveness and overall competitiveness.

RESEARCH OBJECTIVES

This research is aimed to achieve the following objectives;

- To determine the effectiveness of ISPS Code on safety aspect.
- To determine the effectiveness of ISPS Code on security aspect.
- To determine the effectiveness of ISPS Code on screening aspect

RESEARCH QUESTIONS

To help address the research objectives the following research questions were formulated and developed.

RQ1: Does ISPS Code implementation assures the safety of port?
RQ2: Does ISPS Code implementation by port security succeed in the prevention of theft and other criminal activities?
RQ3: Does measures taken on screening aspect help in reducing illegal activities in the port?

RESEARCH METHODOLOGY

Data and information were collected via distribution of questionnaire. A set of questionnaire was developed based on the principle of Cronbach Alpha. Cronbach Alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. A high value for Alpha does not imply that the measure is unidimensional. Nevertheless, if in addition to measuring internal consistency, it provides evidence that the scale in question is unidimensional, additional analyses can be performed. Exploratory factor analysis is one method of checking dimensionally (Institute for Digital Research and Education, 2015).

A total number of 30 respondents were randomly chosen to participate in the survey, which was conducted in the premise of Lumut Port. Data and information obtained were analyzed using the Statistical Package for Social Sciences (SPSS) software. SPSS is a statistical software program used for survey authoring and deployment, data analysis, text analytics, statistical analysis and collaboration. The program has a versatile capabilities and flexibilities of analyzing huge amount of data within a short time and generating various statistical outputs for the study. The ranges of outputs include simple and sophisticated statistical results such as frequency distribution table, distribution, and correlation and regression analysis.

DATA ANALYSIS AND FINDINGS

The relationship between effectiveness of ISPS Code and the Port Safety.

In order to have a better picture of the data collected, a set of tables, which consists of Pearson Correlation between Effectiveness of ISPS Code and Port Safety is presented in Table 1.

Table 1. Pearson Correlation between Effectiveness of ISPS Code and Port Safety.

Pearson Correlation	1	.829**
Sig. (2-tailed)		.000
N	30	30
Pearson Correlation	.829**	1
Sig. (2-tailed)	.000	
N	30	30

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

Research Question 1: Does ISPS Code implementation assure the port level of safety?

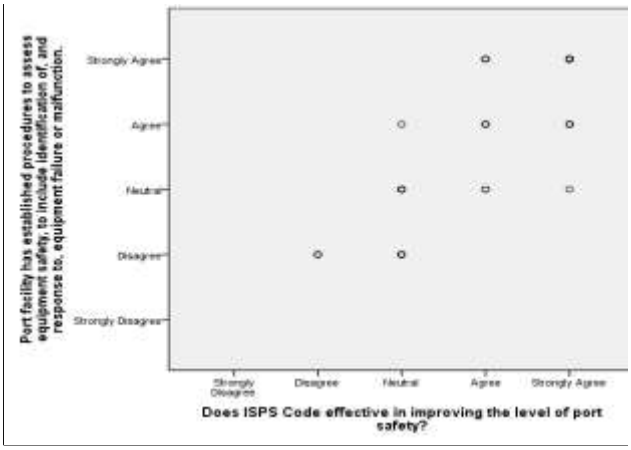

Figure 1. Scatter Dot Graph of Correlation on Port Safety

There was a positive correlation between the two variables,

r = 0.829, n = 30, p = 0.000
From the graph, it shows that there is a very strong evidence and positive correlation because staff agreed that port facility has established procedures according to ISPS Code guidelines in relation of improving Port Safety.

The relationship between effectiveness of ISPS Code and the Port Security.

In order to have a better picture of the data collected, a set of tables, which consists of Pearson Correlation between Effectiveness of ISPS Code and Port Security is presented in Table 2.

Table 2. Pearson Correlation between Effectiveness of ISPS Code and Port Security.

Port facility has established entry control procedures to restrict unauthorized access of any restricted areas.	Pearson Correlation	1	.845**
	Sig. (2-tailed)		.000
	N	30	30
Does ISPS Code implementation has proven in preventing theft and other criminal activities ?	Pearson Correlation	.845**	1
	Sig. (2-tailed)	.000	
	N	30	30

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

Research Question 2: Does ISPS Code Implementation by port security succeed in preventing theft and other criminal activities?

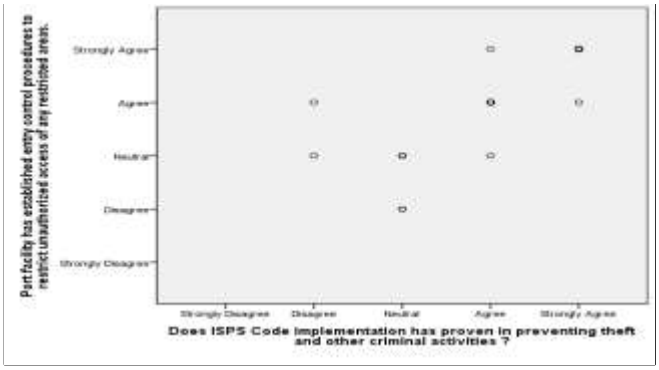

Figure 2. Scatter Dot Graph of Correlation on Port Safety

There is a positive correlation between the two variables,
r = 0.880, n = 30, p = 0.000
From the graph, it shows that there is a very strong evidence and positive correlation because the staff agreed that port facility has established procedures according to ISPS Code guidelines in relation of Port Security and proven in preventing theft and other criminal activities.

The relationship between effectiveness of ISPS Code and the Port Screening.

In order to have a better picture of the data collected, a set of tables which consists of Pearson Correlation between Effectiveness of ISPS Code and Port Screening is presented in Table 3.

Table 3. Pearson Correlation between Effectiveness of ISPS Code and Port Security.

Port facility has established measures to increase the frequency of searches of people, personal effects, and vehicles at certain identified restricted areas.	Pearson Correlation	1	.785**
	Sig. (2-tailed)		.000
	N	30	30
Does measures taken on screening aspect come in aids in reducing illegal activities in port ?	Pearson Correlation	.785**	1
	Sig. (2-tailed)	.000	
	N	30	30

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

Research Question 3: Does measures taken on screening aspect come in aids in reducing illegal activities in port?

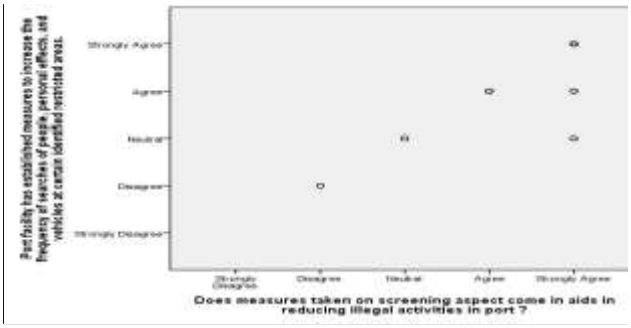

Figure 3. Scatter Dot Graph of Correlation on Port Screening

There is a positive correlation between the two variables,
r = 0.785, n = 30, p = 0.000
From the graph, it shows that there is a very strong evidence and positive correlation because the port staff agreed that port facility has established procedures according to ISPS Code guidelines in relation to Port Security and proven in preventing theft and other criminal activities.

CONCLUSION AND RECOMMENDATION

Considerable time was taken to choose suitable information to be used from ISPS Code checklist in order to construct the questionnaire to ensure employees would acquire an insight into the effects of maritime security and the implementation should not be viewed as a hassle for employees. However, it should be considered as a mean to ensure the welfare of workers is being taken good care of. The survey questions disseminated through the questionnaire cover the following areas: knowledge and pointer for ISPS Code, how employees feel, and evaluation of the company or port via employees' observation and experience with the port. Each respondent participating in the study was given the questionnaire by hand and was explained on a general overview on what is ISPS Code all about and the security measures adopted from the ISPS Code.

There were suggestions given by respondents after a brief interview with them in relation to improve port safety and security aspects. As for safety aspect, they feel safety and health personnel should be given more training and safety inspections than the current practices. As for the security aspect, respondents feel that security personnel should be given more training course and means of self-defense for security personnel such as weapon i.e. taser or stun gun that would give them a heightened sense of protection and security. Other recommendations in relation to security is to install better CCTV camera and increase the number of CCTV as the presently used CCTV is fuzzy and the updated CCTV technology would give better and much clearer image and pixels. This could also help in having better control on the ports area activities.

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