DOCTORAL DISSERTATION INFORMATION

Dissertation title: ***"A proposal of model for estimating total container throughput at Vietnamese ports"***

Major: Organization and Transport System Management

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Supervisor: Assoc. Prof. Dr. Pham Van Cuong

Educational Institution: Vietnam Maritime University

1. Objective and research objects:

The aim of the dissertation is to develop an appropriate and highly accurate model for estimating total container throughput at Vietnamese ports as well as container throughput at some particular local ports.

The dissertation proposes a number of models and selects the most suitable ones for the container throughput at ports located in Ho Chi Minh and Haiphong as well as Cat Lai port and ports of Haiphong Port Joint Stock Company (Haiphong Port JSC). Thus, the selected models will be applied to estimate the container throughput at the above – mentioned ports in the year 2016 in order to test the effectiveness and precision of the selected models. Then, the figures for the 2020-2030 period will be predicted, applying the models.

The dissertation, also, proposes and selects a short-term model to estimate the container throughput at Cat Lai port and ports of Haiphong Port JSC. The model will be used to estimate the 2016 – 2017 monthly volume in these ports to evaluate the effectiveness and precision of the model.

Research object: model for estimating total throughput at Vietnamese ports.

2. Methodology

The research work in this dissertation was done by collecting empirical secondary data, including: total throughput, total container traffic at ports

in Vietnam as well as factors affecting them. The data was compiled mainly from official sources such as General Statistics Office of Vietnam, Statistical Office in Ho Chi Minh city, Statistical Office in Hai Phong city, Vietnam Maritime Administration, Cat Lai Port, and Hai Phong Port JSC.

Besides, the following research methods was applied to conduct the work:

- Concluding statistical figures to compile, analyzing and evaluating the data;
- Comparing and contrasting to evaluate and review;
- Inductively and relatively analyzing the influence of factors on the container throughput at Vietnamese Ports, thus selecting the most suitable estimating models.

The software Eviews was applied to calculate data.

3. Main findings

Reviewing the theory of estimation and estimation of container throughput at ports.

Assessing a role of estimation of container throughput at Vietnamese ports in policy-making and implementing Vietnam port system development strategy. Besides, the dissertation also analyzes current total container traffic at Vietnamese ports during the period between 1991 and 2006. This, in turn, provided empirical evidence for evaluating the precision of the estimators.Analyzing factors affecting total container traffic at Vietnamese ports.

Proposing 37 regression models for predicting total container volumes for Vietnam ports, ports located in Ho Chi Minh, Hai Phong, Cat Lai Port, and Haiphong Joint Stock Port. The variables are measured in Ton and TEU and the dependent variables can be imports volume, export volume and inland transported container volume. Moreover, 13 models for

estimating monthly container volumes for Cat Lai Port and Hai Phong Joint Stock Port are also introduced.

Estimated yearly and monthly container throughput at Cat Lai Port and Hai Phong Joint Stock Port in 2016 is used to evaluate the precision of the estimators. When appropriate models are chosen, they are used to estimate total container throughput in 2020 and 2030.

4. Theoretical and practical implications.

Theoretical implication: The dissertation enriches the background knowledge of econometric-model- based-estimation, especially in maritime transportation field, for container throughput at ports. Proposing the appropriate model for estimating total container throughput at Vietnamese ports.

Practical implication: the dissertation successfully develops the models for estimating total throughput at Vietnamese ports from year to year. The suitable models can be used to predict the total container volumes in Vietnam ports in 2020 and 2030 with high precision. The models and their results help policy makers in the Ministry of Transportation and Vietnam Maritime Administration to make more precise prediction and modify Vietnam Port System development strategies. These models are also useful for the managers of the ports because they can use these models to estimate near future container throughput at their ports to set up their accurate monthly or quarterly production schedules.

Supervisor	**Ph.D Candidate**
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