

Extended Editorial
Special Issue

Toward Efficient and Quality Shipping Management

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Shipping, as an international service industry, plays an important role in economic development. Around 80 per cent of global trade by volume is carried by sea. However, the current business environment in shipping services is dynamic and remains complex and unpredictable. Current concerns include the mismatch between demand and supply, rising operating costs, safety and security issues, compliance with international conventions and regulations, the effects of financial crisis, as well as environmental sustainability requirements. These developments require businesses to understand contemporary issues of shipping and logistics services and explore their underlying interconnections.

This present operating environment amplifies the need for new services from the shipping and logistics sector. Overcoming increasingly multifaceted challenges requires comprehensive skills and knowledge from a range of management domains include shipping finance, fleet management, maritime insurance, risk management, legal services, terminal operations, arbitration, information technology, customer relationship management, and so on. Shipping businesses have already extended their range of services from basic shipping activities to all-round shipping management and operations.

Contemporary value-added services involve cargo consolidation, multi-modal transportation, warehousing, re-packing, labelling, customs clearance, inventory management, and distribution activities. In an internationally competitive environment, it is important to work through strategic networks to provide efficient and high-quality services to meet market demands.

This special issue presents 6 outstanding papers selected from 70 full papers in IFSPA 2014. Our selection of papers in this special issue discuss solutions for the shipping and transport logistics industry from a broad spectrum of service management so as to be effective under dynamic operating environments. These papers have several important shipping implications as follows.

Those who are not aware of risk may behave unsafely. Therefore, how employees understand risk and perceive risk is crucial for each shipping company. Companies are making efforts to raise awareness of risk. *Chang, Xu and Song* investigate the risk perception of employees in container shipping companies. Their findings reveal that risk perceptions are high among new and experienced workers. New workers are not familiar with the workplace and are careful about taking risks. Experienced workers have likely experienced risky incidents before, and have a higher perception of risks than those who have not. Such understanding provides managerial insights for safety management of shipping service.

Success factors evaluation is always on a managers' agenda. *Jeon et al.* evaluate the success factors of ship management companies. The use of fuzzy evaluation method overcomes the problem of combining tangible and intangible factors in one single evaluation framework. Intangible quantities and values are very sensitive to the definition when an intangible quantity is interpreted tangibly. They identify that the shipowning companies and shipping management companies have different priorities

when defining success. Their approach creates a basis for researchers to analyse tangible and intangible success factors in shipping management.

The bullwhip effect results in a mismatch between supply and demand, and the shipping companies suffer unused shipping capacity. If the operators can better manage the bullwhip effect, they can reduce costs of operation substantially. *Li, et al.* analyse the bullwhip effect of the container shipping market and address the problem by considering two strategies: information sharing and risk pooling. They find that either strategy accomplishes a win-win situation with the bullwhip effect being reduced significantly. The findings of this study can help shipping companies reduce the negative impacts of unplanned fluctuations of demand for their shipping service.

High levels of uncertainty when a new generation of technology is being introduced often leads to slow transition. Electronic chart display and information system (ECDIS) has been recognised as reliable device and one of the salient features of contemporary navigation aids. ECDIS can systematically aggregate multiple navigation related indicators into one single display. *Tsai* derives a model showing the relationship of technology change. The model illustrates that the support of top management improves the acceptance of new technologies among the frontline users.

The shipping industry offers the round-the-clock service, and fatigue is inevitable. However, the effects of fatigue are particularly dangerous in this industry. Fatigue in general can be divided into two elements: physical fatigue and mental fatigue. *Yen et al.* conduct the structural equation analysis of vessel traffic controller's fatigue factors. Their analysis contains information on the causes of fatigue and further addresses possible solutions to combat fatigue to improve the shipping quality.

Often managers must estimate risk and return in their decision-making. These are often difficult to ascertain, and the risk may only be good if the return is high. *Kuo, Chou and Chang* analyse the risk-return relations in dry bulk shipping. From their econometrics analysis, they illustrate that the AR-EGARCH-M model can be used to improve investment decision-making. Using dry bulk shipping as examples, they demonstrate that the AR-EGARCH-M model has the advantages of being more statistically robust and easier to interpret the freight risk in practice.

Overall, this collection of papers addresses efficiency and quality of shipping management through the employee management, success factors evaluation, information sharing, technology adoption, fatigue management, quality management, and risk management. The papers represent some of the latest findings that will help to develop a more efficient and quality shipping service. It is anticipated that this issue will stimulate more research in the area of shipping management.

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List of Accepted Papers

Chang, C.H., Xu, J.J., and Song, D.P. (2015). Impact of different factors on the risk perceptions of employees in container shipping companies: A case study of Taiwan.

Jeon, J.W., Yeo, G.T., Thai, V.V., and Yip, T. L. (2015). An evaluation of the success factors for ship management companies using fuzzy evaluation method.

Li, S., Chen, J., Liao, Y., and Shi, Y. (2015). The impact of information sharing and risk pooling on bullwhip effect avoiding in container shipping markets.

Tsai, C.L. (2015). An empirical study of the acceptance of electronic chart display and information system in the shipping context.

Yen, J.R., Wang, Y.Y., Chang, C.C., and Chang, C.Y. (2015). A structural equation analysis of vessel traffic controllers' fatigue factors.

Kuo, C.C., Chou, H.C., and Chang, C.C. (2015). Exploring risk-return relations in dry bulk shipping.