



Study on Strategic Performance Measurement of Liner Shipping Company

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論文内容の要旨

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論文題目 (外国語の場合は、その和訳を併記すること。)

Study on Strategic Performance Measurement of Liner Shipping Company

(定期船海運業の戦略的経営成果の評価に関する研究)

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(注) 2, 000 字~4, 000 字でまとめること。

International trade proliferation depends to a very large extent on the efficient movement of cargoes from production sources to points of consumption. Shipping business is essential and desirable part in the development process of international trade. Since as a cost-effective means, it provides service to transport large volumes of cargo around world. According to UNCTAD, around 90% of world trade is carried by the international shipping industry. The liner shipping companies as carriers of cargoes transport representing approximately one-third of the total value of global trade (World Shipping Council). They play a prominent role in facilitating international trade. Liner shipping market has changed tremendously in past several decades because of globalization and containerization. The concentration resulting from both horizontal and vertical integration in the liner shipping industry has led to poor financial results and increased the pressure in the liner shipping industry. In 2011, the profit margin deficits are presented in the most of major liner shipping companies. In addition, it is concluded that competitive rivalry shows a relatively strong force in liner shipping industry by analyzing industrial structure.

Under such a stressful and competitive circumstance, for the survival and development by effective management and striving to improve the competitive power in market, the performance measurement is becoming increasingly important to liner shipping companies. The traditional financial performance measures based on simple and consistent factors such as financial returns and returns on investment (ROI) have long been used as the primary criteria to measure performance of organizations. However, the traditional cost management systems are not so comprehensive to cope with all those competitive criteria. By the early 1980s, the shortcomings of traditional measurement systems have triggered a revolution in the field of performance management. Many of the studies investigate the non-financial measures for the performance measurement and the multi-attribute performance measurement methods play an increasingly critical role to combine many aspects of the business. However, a limited number of studies discuss the performance measurement of liner shipping industry in existing literatures. In particular, a multi-attribute performance measurement for liner shipping industry has been rarely discussed. In fact this is precisely what the most important is for improving the competitiveness of liner shipping companies in fierce market competition. The present study aims to fill this gap.

This study investigates the development trends and status quo of liner shipping industry over the past several decades in order to select explicit strategies and measure

performance better. Liner shipping market is in a constant state of flux with economic development. Five main trends in liner shipping industry are discussed in chapter 2. They are bigger container ships, strategic alliance, mergers and acquisitions of global carriers, e-commerce and logistics service. Generally, concentration, widespread use of Information Technology (IT) and providing logistics services are development features of liner shipping market. In addition, liner shipping industrial structure are analysed by Porter's five forces analysis. Competitive rivalry and bargaining power of buyers show a relatively strong force in liner shipping industry by the five forces analysis of industrial structure. For striving for a competitive position in market, liner shipping companies have to take into account of these critical forces in its strategic planning. In such a constantly changing environment and violent competition, the financial status of liner shipping companies is investigated. The result shows that the profit margin deficits are presented in the most of major liner shipping companies in 2011. Liner shipping companies are taking series of positive measures to make it recently. However, they are still facing high pressure because of global political and economic instability.

Performance measurement is studied as an effective means to improving liner shipping companies' performances and competitive advantages in chapter 3. This study measures performance of liner shipping companies based on a multidimensional framework that includes financial, customer, internal business process, and learning and growth perspectives. The subject of measurement is traditional liner shipping companies as well as liner shipping companies as logistics service providers in order to provide a more comprehensive performance measurement system. Since more and more liner shipping companies consider providing logistics services as an important development strategy.

The study defines the priority weight of strategies and the degree of relationship between every single strategy and the performance measure for traditional liner shipping companies. The measurement result shows that profitable growth is the major requirement for traditional liner shipping companies. The second important strategy is the improved service coverage and increased customer satisfaction, reduction of costs, improved internal business process, improving convenience and IT based interfaces and increased satisfaction of internal customers are following indicators, respectively. Market share, customer satisfaction, cargo missing / damage rate and No. of employed researchers is the important performance indicator for financial, customer, internal business process and learning and growth perspectives, respectively.

Different strategies and measures are set when liner shipping companies are acting as logistics service providers. This section puts particular emphasis on priority weights of technical measures, the result shows that the return on investment, cost saving measure, safety and reliability, increased market share, and on time delivery are most important indicators. Return on investment, safety and reliability, administrative performance, and employee satisfaction play the most significant role for each perspective of BSC, respectively.

Results show that liner shipping companies should pay attention on financial and customer perspective because priority weights of two perspectives are found superior than others in both traditional liner shipping companies and logistics service providers. However, other two perspectives, internal business process and learning and growth perspective cannot be neglected either in development of liner shipping companies. Since the performance of nonfinancial indicators will directly affect the financial performance. In addition, liner shipping companies also require attention to the important indicators that affect logistics service providers, thereby offering a more comprehensive performance measurement system to improve companies' performances.

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論文題目	Study on Strategic Performance Measurement of Liner Shipping Company 定期船海運業の戦略的経営成果の評価に関する研究		
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要 旨			
<p>本論文は、BSC(Balanced Scorecard)を用いて定期船会社の経営成果の評価方法に関して伝統的な定期船事業レベルとロジスティクス事業レベルで行った研究である。論文構成とその概要は次の通りである。</p> <p>第1章 序論においては、研究の背景及び目的を説明した後、研究方法及び論文構成について述べている。</p> <p>第2章は、定期船海運業のトレンドと現状について分析している。まず、最近の定期船海運業にみられる戦略的に重要な特徴を5つの要因にまとめている。つぎに、定期船海運業の産業構造をマイケル・ポーターの分析枠組みに基づいて解明した後、世界の定期船会社の経営実態を明らかにしている。</p> <p>第3章は、まず分析方法について説明した後、伝統的な定期船会社の経営成果の評価を行い、つぎにロジスティクスサービスプロバイダーとしての定期船会社の経営成果を評価し、ふたつの評価結果から定期船会社に対するインプリケーションを論じている。</p> <p>経営成果の評価方法は、従来は財務データを中心とする比率分析で行われるのが一般的であったが、近年は非財務データを考慮した分析法が開発されており、そのひとつがBSCである。ただ、BSC分析において、多様な経営戦略やそれを実現する4つのPerspective(Financial, Customer, Internal Business Process, Learning and Growth)を構成する技術的要因をどのようにウエイト付けするかが重要な問題であった。本研究では、この問題に対してファジー型AHPを利用している。そして、この分析方法を定期船会社の定期船サービス(事業)レベルとロジスティクスサービス(事業)レベルでの経営成果の評価に適用し、二つの事業レベルでの評価の違いを明らかにしている。</p> <p>第4章の結論においては、研究結果と本研究が抱える問題点及び残された課題について言及している。</p> <p>本研究の成果は、次の通りである。まず、方法論上、BSCにファジー型AHPを導入することによって経営成果を決める技術的要因や戦略タイプの重要性に関して多次元レベルでの相対的評価を提示することが可能になったことである。経営成果の具体的な評価に関しては、定期船事業レベルでの分析結果では、利潤成長が最も重要であり、つぎにサービスカバレッジと顧客満足度が重要であった。これに対してロジスティクスプロバイダーレベルでは、財務要因とともに顧客満足度がより重要であることが明らかにされた。財務・顧客要因以外の要因については、定期船海運業では相対的に重要性が低く、このことはBSCの基本的な枠組みの修正を示唆するものである。これらの研究成果は、定期船経営にとって重要な意思決定問題に対して示唆を与えるものであり、また海運・物流研究においても寄与しているといえよう。</p> <p>このように本論文は、研究内容の新規性、独自性ならびに博士論文としての体裁等の観点から博士(海事科学)の学位を得る資格があると認める。</p> <p>なお本論文に関連する有審査論文は以下の3編(すべて第1著者、英文)である。</p> <p>1. Gao, Z.Y., Duru, O., Bulut, E. and Yoshida S. (2013), "Performance Assessment for Liner Shipping Industry: a Multi-attribute Analysis by the Balanced Scorecard (BSC)", <i>Journal of International Logistics and Trade</i>, Vol. 11(2), pp. 3-28.</p>			

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2.	Gao, Z.Y. and Yoshida, S. (2013), "Analysis on Industrial Structure and Competitive Strategies in Liner Shipping Industry", <i>Journal of Management and Strategy</i> , Vol.4 No. 4, pp.12-20.
3.	Gao, Z.Y., Bulut, E., Huang, S.T., and Yoshida S. (2013), "Strategy Planning and Management for Logistics Companies with BSC and GF-AHP", <i>Journal of Maritime Faculty</i> , Vol.5, No.1, pp.55-74. また、口頭発表論文は以下の2編の他1編あり、すべて国際学会でのものである。
1.	Gao, Z.Y., Duru, O., Bulut, E. and Yoshida S. (2012), "Performance Assessment for Liner Shipping Industry: a Multi-attribute Analysis by the Balanced Scorecard (BSC)", <i>Proceeding of LAME 2012 conference</i> , Taipei, Taiwan.
2.	Gao, Z.Y. and Yoshida S. (2012), "Port Strategy Analysis and Performance Assessment Based on the Balanced Scorecard (BSC): The case of Qingdao, China", <i>Proceeding of WCTRS SIG2 Maritime and Ports Conference 2012</i> , Antwerp, Belgium.