

An Analysis of the Articles Issued in the Korea Journal of Shipping and Logistics : from Vol. 31 to Vol. 40

Il-hyun YOON¹

ABSTRACT

This paper studies the research tendency of the shipping and logistics through the analysis of the articles published on *the Journal of Shipping and Logistics* from Vol. 31 through Vol. 40. From this analysis, the following facts are discovered. First, in the view of research subject, the most studied fields are port management, shipping management and logistics. Second, among the researcher groups, university professors study most actively. The researchers of institutes study more than before, though their research papers are still relatively small in number. Third, in the type of analysis method, researchers mostly depend on the literature study, mathematics analysis and contents analysis. Fourth, the level of globalization has been increasing from Vol. 31.

In the meantime, I suggest that the system of educational-industrial joint research should be built and that interdisciplinary studies be activated for the development of the study on the shipping and logistics.

Key Words : Korea Journal of Shipping & Logistics; Journal of Shipping & Logistics; contents analysis; logistics; port management.

I. Introduction

The Korean Association of Shipping Studies was founded in its inaugural meeting on August 27, 1982 and published its inaugural issue of the journal, known as "a place for expressing" reports related to shipping studies. Thereafter, the association changed its name as The Korean Association of Shipping and Logistics, Inc. on February 21, 2003 to keep pace with the tendency of the times when the shipping industry had gradually integrated into the logistics industry. Consequently, the inaugural purpose of the association(article 3) was revised, "To contribute to the theory of shipping and logistics and the development of the shipping and logistics industry for study activities on shipping and logistics and industrial-education cooperation, study exchanges and mutual cooperation among members". Simultaneously, the name of the journal was changed into The Journal of Shipping and Logistics from Vol. 37(April 2003); since then, it has been Vol. 42 up to now.

The Korean Association of Shipping and Logistics, Inc. published another journal called 「A Shipping Study: Theory and Practice」 with its first edition on April 20, 2001 in addition to The Journal of Shipping and Logistics. The latter was originally

¹ President of The Korean Association of Shipping & Logistics
Professor of International Trade & Commerce, Daejeon University

planned to carry on such essays that would be announced at the academic conference, master degree essays, preliminary theses of doctoral courses, and other practical essays related to the shipping industry but stopped issuing with the sixth edition ending, which was published on November 30, 2003. Instead, the association determined to publish *The Journal of Shipping and Logistics* quarterly from 2004.

The Journal of Shipping and Logistics became a proposed journal of registry of Korea Research Foundation on December 13, 2001, and it was officially confirmed as a registered one at the end of December 2003 after the journal having been evaluated over two years. The registry of our journal at Korea Research Foundation has become the first example of the kinds in the industry to be officially accepted in the face of many similar journals which are dealing with shipping and logistics. The journal is aimed to be a part of SSCI's essay book in the medium and long run.

The papers' contents printed on *The Journal of Korean Association of Shipping and Logistics* had won an excellent reputation in terms of its quality level after its strict examination being taken by the judges composed by experts. Thus, it could be safe to say that the journal in the interim has greatly contributed in many ways to establishing the theory about shipping and logistics, presenting policy directions for Korean government, setting up an educational goal and indicating its direction, educational-industrial cooperation, etc.

Since professor OH had already analyzed the tendency of shipping studies,² the analytic subjects of this paper are limited to Vol. 31 through Vol. 36 of *The Journal of Korean Association of Shipping Studies* and Vol. 37 through Vol. 40 of *The Journal of Shipping and Logistics*, and excluded essays on *Shipping Study: Theory and Practice* from this analysis.

II. The Reason of the Name of the Journal Changed into *The Journal of Shipping and Logistics*?

The Korean Association of Shipping Studies Inc., which was established in 1982, changed its name into *The Journal of Korean Association of Shipping and Logistics* in 2003 and also changed its journal name from *The Journal of Korean Association of Shipping Studies* to *The Journal of Shipping and Logistics*. It aimed to keep pace with the tendency of the times when the shipping industry has gradually integrated into the logistics industry.

The terminology called 'logistics' is an integrated one that the word of "physical distribution" was used in America in the early 1960's and translated to be used in Japan.³ Meanwhile, in Korea, the word, 'freight distribution', 'integrated freight distribu-

² S. Y. OH, "A Trend Analysis of Shipping Studies-Vol. 1 through Vol. 30 of *The Journal of the Korean Association of Shipping Studies*", *The Journal of the Korean Association of Shipping Studies*, Vol. 31, July 2000, pp.1~16.

³ There are business logistics, physical supply, materials management, market supply, logistics of distribution, and rhochrematics in addition to physical distribution as a terminology which has been used in America, the representative one that has been using in America is 'physical distribution'(日通総合研究所, 『物流の知識』, 東洋經濟新報社, 1994, pp.1~3).

tion', etc. had been used instead; since the late 1970's, 'logistics' has come to be used ubiquitously. According to American Marketing Association, 'logistics' is defined as the management of a product's movement and handling from its production stage to its consumption or use'.⁴ Hence, we hold that logistics ①takes place throughout distribution channels from producers to consumers and users, ②takes objects, whether they are tangible goods or intangible service, ③takes the contents of packing, transport, storage, cargo working and others related to any physical distribution, and ④ plan and control all relevant activities in a comprehensive way.

With the contents of physical distribution expanding, the term that is used now in America is logistics. The terminology of logistics appeared first on the documents dates back to 1897. It is a derivative from a French word, *logistique*. The etymology is *loger*, meaning in English, a quarter or lodge connoting a billeting or quartering place. An officer in charge of preparing for a military quarter, or transporting provisions has been called a quartermaster in English; the term, quarter is meaning billeting or lodging.⁵ The Council of Logistics Management defined the term, logistics as follows: "Logistics is the part of supply chain management as a process of planning, implementing and controlling the efficient use and storage of goods, service and related information from point-of-origin to point-of-consumption for the purpose of conforming to customer requirements." Included within this definition are not only the movement of raw materials and transport, storage, cargo-working, packing, but also order processing, market forecast and customer service from producers to production lines.

The terms, physical distribution and logistics, are now interchangeably used as a same concept. Although these two terms are similar on the side of function, the concept of logistics is greater on the side of scope. Logistics has come to mean that it is 'the management to seek synchronization of market and production, purchase to match production, purchase and physical distribution with market demands and reducing unnecessary stocks through market forecast'.⁶

The early definition about physical distribution was based on the traditional viewpoint that business organizations were almost production-oriented. This viewpoint has been descended from part of scholars such as Adam Smith in 18 century, Alfred Marshall in 19 century, and Michael Porter in 20 century. The interest of enterprises in those days was product design, production, and distribution of finished products. Logistics was to supply market with finished products at a minimum price in order to support it. Since the 1920's when marketing began to take the place of an independent branch of study, logistics was classified as a part of marketing by marketing scholars but marketing's aspect of physical distribution did not attract much attention. Until the 1950's was a production- and sale-centered age. And the profits of enterprises in those days

⁴ James R. Stock and Douglas M. Lambert, *Strategic Logistics Management*, Irwin Inc., 1987, p.4.

⁵ 谷光太郎, 『ロジステイクス』, 同文書院, 1993, pp.8~9.

⁶ M. S. PARK, *Understanding of International Logistics*, Beobmoonsa, 2003, p.11.

were so great that the inefficiency of physical distribution connoted an era when it was compensated by market expansion.

Logistics in the 1960's approached to its concept as physical distribution included the process of procuring raw materials, etc. Yet, the major interest of physical distribution was to move production goods to markets at a minimum price and the activities of physical logistics were regarded as part of production activities.

Since then, in the 1970's when the world's business environments including America were effected by oil crisis, inflation, interest rates, etc., cost reduction became a great concern in physical distribution management. And the scope of physical distribution has enlarged into wider activities covering in-bound and out-bound materials, that is, the notion of logistics. It was the time when the concept of supply chain management began appearing on the horizon and costs and time cycle had become basic components of measuring the efficiency of physical distribution.

As entered into the 1980's, consumers selected a variety of products due to the increased trade on a world scale, explosive increase of information flows, etc. Therefore, the influence on products supplies was also increased. Enterprises also became more sensitive to market movements and had more interest in external logistics.

From the end of 20 century, as physical distribution activities were proceeding gradually centering on customer service, the tendency of interpreting physical distribution connecting with marketing was increased. Ballou classified business activities largely into production logistics and marketing and viewed that such logistics activities as production scheduling, selecting a plant site, and purchasing materials were overlapping with production activities and consumer service standards, pricing, packing, selecting a retailers' site, and others were overlapping with marketing activities.⁷ Hence, logistics is an activity connecting production with marketing, placed itself between them.⁸ Likewise, the concept of physical distribution being expanded, the concept of physical distribution in the section of manufacturing and commerce was also expanded to cover freight transportation, storage, cargo-working, market forecast, and customer service.

Meanwhile, Korean government which once adopted its propaganda of 'participation', so called, 'Participation government' made public that it would foster Korea as a logistics hub in the Northeast Asia. To do this, it decided to develop a world-class air port and sea ports to promote global-class integrated logistics firms with competition,⁹

⁷ Ronald Ballou, *Business Logistics Management*, second edition, Prentice Hall, New Jersey, 1985, p.24.

⁸ H.I. CHIN · H.J. JEONG, *Understanding of International Logistics*, Pakyeongsa, 2003, pp.4-8.

⁹ As a specific scheme for this policy, Presidential Committee on Northeast Asian Cooperation Initiative declared 'A Scheme for Fostering Logistics Expert Companies to Actualize a Northeast Asian Logistics Hub on August 20, 2004'. According to this declaration, in order to promote the logistics expert companies, Korean government permitted cargo owners like manufacturing companies to exempt them from corporate taxes by 2~3% of the logistics expenses for external payment for 3~5 years when the cargo owners consign more than 70% of logistics expenses to integrated logistics companies. For the integrated companies that can compete against global lo-

and cultivate logistician force.

With the expression of strong will on the part of Korean government to foster the logistics industry and the times' changing penchant for learning, the researchers who want to study about the logistics section have increased in number. Under these circumstances in domestic and abroad, there was an indication of the shipping industry gradually being integrated into the logistics industry. In respect of this tendency, both names of the academic association and its journal have been changed.

III. Contents Analysis

3.1 Research Tendency by Research Subjects

3.1.1 Subjects with High Frequency

We could not find any formalized subject classification for the tendency analysis of shipping studies. But, in general, the research subjects of shipping could be divided into three parts of shipping economy, shipping policy and shipping management.¹⁰ "A Seminar on the Establishment of a Learning System about Shipping" was held in December 1987 by the Korea Association of Shipping Studies Inc., in which we discussed about the learning system

Table 1 Subject Classification

| No | Subject | Detailed Contents |
|----|---------------------|---|
| 1 | General Shipping | A basic concept of shipping, function of shipping, scope and method of shipping theory, shipping education, etc |
| 2 | Shipping Economy | Shipping market, supply of and demand for shipping service, freight theory, freight of maritime transportation, etc |
| 3 | Shipping Policy | Shipping policy, shipping administration, shipping-related international organization, maritime law |
| 4 | Shipping Management | Shipping environment, types of shipping management, types of shipping enterprises, organization of shipping management, planning and control of shipping management, operation and management of vessels, management of seamen, etc |

gistics companies, they will be granted for exceptional tax benefits such as exception from 100% of corporate taxes for the first 3 years until 2014; thereafter, 50% for 2 years. Moreover, world-class logistics companies combine 3~4 business categories of 7 logistics-related industries in total such as transport, storage, cargo working, packing, forwarding, customs clearance, and simple assembly process. In the mean time, since Korean logistics companies have provided mostly transport-centered logistics service, The government guide line is to designate those providing logistics functions with over 3 categories such as transport, stowage and cargo working as logistics expert companies([http:// www.nabh.go.kr](http://www.nabh.go.kr)).

¹⁰ Masao ODA(織田政夫), *Shipping Economics*(『海運經濟論』), Seisanto, 1975.

| | | |
|----|---------------------------|--|
| 5 | Shipping Law and Custom | Maritime transport contract, bill of lading, charter party, shipping practice, etc |
| 6 | Marine Risk and Insurance | Hull insurance, cargo insurance, P & I insurance, general average, disposal of marine accidents, seamen's insurance, marine pollution, ship safety, etc |
| 7 | Port Management | Port in general, container terminal, ship's entry and leaving of ports, etc |
| 8 | Shipping History | Shipping history of Korea, the Orient, the Occident. |
| 9 | Logistics | Logistics policy, logistics industries, logistics enterprises, logistics networks, logistics information, multimodal transport, air transport, road transport, railroad transport, etc |
| 10 | e-Business | Shipping? logistics enterprises' e-Business, e-Logistics, electronic trade, e-commerce, etc |
| 11 | Others | Subjects other than the above categorization |

Attempting to divide it into four, that is, shipping economy, shipping management, maritime transport contract, and marine insurance. But such an approach to dividing various subjects into three to four would not only be sufficient enough to analyze so many essays but also much less expect of its result.

Further, it is a reality that the shipping industry has tended to be integrated into the logistics industry and also e-Business has gradually been used in the shipping and logistics industries besides the existing traditional transaction method due to the advancement of internet and development of website.¹¹

Hence, this study is to analyze other two subjects of logistics in addition to the subjects in which professor OH classified the research tendency of shipping studies from Vol. 1 through Vol. 30 on the journal. This classification was pointed out by professor OH when he divided the subjects, but entirely a researcher's option. So the standard classification is to be reviewed in depth, centering on the academic association in the future. But I chose this method of subject classification because, with conforming to the subject classification in the previous study, I thought it easy to compare the research tendencies from Vol. 1 through Vol. 30, and Vol. 31 through Vol. 40 on the journal to be analyzed this time.

Table 2 shows the classification that divided total 95 articles published on the

¹¹ A grand prize has been awarded since 2002 by the Korean Association of Shipping and Logistics, Inc. in order for Korea's shipping and logistics enterprises to build a given condition that can lead e-Business properly.

journal according to the subjects of Table 1. But there were sometimes articles overlapping the existing subjects with those of e-Business. For example, the articles on the electronic bill of lading were classified into e-Business instead of the existing shipping laws and customs and those essays tried to analyze the research tendency. The essays whose contents were mixed with shipping and logistics were classified into logistics for the contents centered on logistics. Only two essays were those belonging to others' category. They were the subject articles of "The Trend Analysis of Shipping Studies" and "The 20-year History of the Korean Association of Shipping Studies", which were determined by the academic commission. The remained 93 essays were classified by the selection of one of 10 subjects from one through ten listed on Table 1.

According to Table 2, the most studied subjects of the essays published on the Journal of Shipping and Logistics, from Vol. 31 to Vol. 40 range in order from port management(26.3%), shipping management(15.8%), logistics(14.7%), shipping risk(8.4%) and e-Business(8.4%). The ratio dealt with top five subjects of the total essays accounts for 73.6%. This order is somewhat different from the last one when we compare with the essays, Vol. 1 through Vol. 30, in which they range in order from shipping management(24.3%), shipping policy(16.5%), shipping law and custom(14.5%), port management(13.3%), shipping risk and insurance(12.8%).

Especially, the essays on port management almost doubled the previous one, whose increase shows from 13.3% to 26.3%. It can be seen that the interest in this field has been increased. Logistics and e-Business which are the newly added fields in this analysis occupy 14.7% and 8.4%, respectively. It can be said that such phenomenon was related to the policy of government to foster Korea as a hub of Northeast Asia's logistics and the national interest in the port infrastructure and logistics promoted the research work in these fields. In the shipping and logistics industries similar to the other ones, we could see that there have been increasing researches in e-Business which is a new management mod in Korea.

Table 2 Cross Analysis between Research Subject and Year

() shows %

| Division | Year 2000 | 2001 | | 2002 | | | 2003 | | | 2004 | Total | Total |
|------------------|-----------|------|----|------|----|----|------|----|----|------|----------|----------|
| Division | Vol. 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 31~40 | 1~30 |
| General Shipping | | | | | 1 | | | | | | 1(1.0) | 11(3.2) |
| Shipping Economy | | 1 | | 1 | 1 | | 2 | | | 1 | 7(7.4) | 33(9.6) |
| Shipping Policy | | 2 | | | | 1 | 1 | | | 1 | 5(5.3) | 57(16.5) |
| Shipping | 3 | 1 | 1 | 2 | | 1 | | 4 | 2 | 1 | 15(15.8) | 84(24.3) |

| | | | | | | | | | | | | |
|------------------|---|----|---|---|----|---|---|----|----|--------|----------|----------|
| Management | | | | | | | | | | | | |
| Shipping Law | | 1 | | | | | | 1 | 1 | 3(3.2) | 50(14.5) | |
| Marine Risk | 1 | 1 | 2 | 1 | | | | 1 | 2 | 8(8.4) | 44(12.8) | |
| Port Management | 3 | 2 | 2 | 2 | 5 | 2 | | 3 | 2 | 4 | 25(26.3) | 46(13.3) |
| Shipping History | | 1 | | 1 | | | 2 | 1 | 1 | 1 | 7(7.4) | 14(4.1) |
| Logistics | 1 | | 1 | | 2 | 4 | 3 | 1 | 2 | | 14(14.7) | - |
| e-Biz. | | 1 | 3 | 1 | 1 | 1 | 1 | | | | 8(8.4) | - |
| Others | 1 | | | | 1 | | | | | | 2(2.1) | 6(1.7) |
| Total | 9 | 10 | 9 | 8 | 11 | 9 | 9 | 10 | 11 | 9 | 95(100) | 345(100) |

Shipping companies which should overcome the shipping crisis in the 1980's were requested for the rationalization of management. So there were somewhat brisk activities of studying about shipping management. It would be hard to say now anything definite, only based on the analysis of three to four years' essays. But it could be said that researchers on shipping and logistics were well adapting themselves to the demand for the times as to the fact that in the 2000's, brisk research activities about port, logistics and e-Business have occurred while those about shipping management were decreased to 15.8% from 24.3%.

Meanwhile, shipping risk and insurance, and shipping and customs are the fields most closely connected with practical business. The research on the former was decreased to 8.4% from 12.8% of the last analysis, but the latter case was greatly decreased to 3.2% from 14.5%. These circumstances may suggest us a sign that a journal related to shipping laws has appealed for a registry at Korea Research Foundation a or two years ago, and there were few essays registered at the Korean Association of Shipping and Logistics, Inc. It also sounds plausible that the decreased ratio of frequency in the study of maritime transport contract or shipping practice leads to the tendency that researchers are usually taking up e-Business instead of traditional subjects.

And the research tendency of shipping economy, which is known to serve providing theoretical foundations for management and policies to government and enterprises, lays far behind other subjects as in the previous analysis(7.4%).

Finally, shipping policy was one of the most activated research subjects in the 1980's. But in the 1990's, the frequency ratio was relatively decreased and it has become far worse in the 2000's(5.3%). What has caused to make this ratio so small is presumed to have come from the decreasing interest in policy subjects since advanced shipping

countries in particular are now implementing deregulation, laissez-faire and autonomous policies in the shipping industry.

3.1.2 Cross Analysis of the Central Research Body and Researchers

Table 3 shows the frequency analysis of researchers' type to know how many essays had been made by whom and especially, about what subjects. Researchers' status is based on the current occupation they held at the time when they presented their papers and their detailed status is as follows: Professors are those lecturing in colleges and universities, researchers are those working at research institutes/organizations, students refer to those enrolled at graduate schools or in the process of preparing for a doctoral thesis after graduation, professors/students classification indicates the case of professors and students working together for a joint-essay.

Table 3 Frequency Analysis for Researchers by Type

| Division | Vol. 31~Vol. 40 | | Vol. 1~Vol. 30 | |
|---------------------------|-----------------|----------|----------------|----------|
| | Frequency | Ratio(%) | Frequency | Ratio(%) |
| 1. Professor | 60 | 63.2 | 237 | 68.7 |
| 2. Professor/The industry | 0 | 0 | 10 | 2.8 |
| 3. Professor/Researcher | 6 | 6.3 | 12 | 3.5 |
| 4. Researcher | 19 | 20.0 | 44 | 12.8 |
| 5. The industry | 3 | 3.2 | 30 | 8.7 |
| 6. Student | 1 | 1.0 | 4 | 1.2 |
| 7. Professor/Student | 6 | 6.3 | 8 | 2.3 |
| Total | 95 | 100.0 | 345 | 100 |

According to Table 3, professors presented 63.2% of total essays and studied most actively as in the last analysis(68.7%). If we put all university-related researchers such as professors, students, and professors/students working together into one, the ratio comes to 76.8%, whose ratio in shipping • logistics studies is very high, followed by research institutes accounting for 20% which shows a little higher than that of the last analysis(12.8%). However, the frequency ratio of business enterprises is merely 3.2%, which is getting worse compared to the former one. Since there was no joint-study between professors and business fields in this analysis, it is necessary for us to develop the joint-study projects or to create environments by both ideas of the education world and the industry.

Table 4 shows the distribution of researchers by type to know how many times a certain subject had been dealt with in the essays targeted at by whom in what status. Taking the whole as a unit, 83.2% of the essays was conducted by a single study categorized under two subjects of professors and research institutes and they received the

first place to be analyzed.

Professors were playing a spearhead role usually taking up almost every subject in the list. The most studied subject by professors is port management, accounting for 23.3%. According to the analysis of Vol. 1 through Vol. 30 on the journal, the subjects of port management written by professors was only 11.0% among professors' essays. It is shown that compared with the most studied subject which accounted for 25.7% in shipping management, the research tendency by professors turned to port management from shipping management. The reason is to be judged that the existing scholars and the researchers from Korea Maritime Institute(KMI) wrote for a lot of essays in these fields to keep pace with the national policy on the port infrastructure.

The next frequently treated subject by professor is that of shipping management with 18.3% share of the frequency ratio and mainly the scholars from the subject of management contribute lots of essays to the journal. Especially, in the interim, it may be an encouraging phenomenon that some articles on such subjects as shipping finance, shipping account, and the system of shipping business were printed on the journal because these subjects in shipping management have been lacked. And then other subjects with high frequency rate include e-Business with 13.3% and logistics with 11.7%, showing us an indication that professors are rapidly responding the times' needs.

The total number of essays published by the research fields accounts for 20% of the total articles, and the ranking order within these essays are port management(36.8%), logistics(15.8%), shipping policy(10.5%), shipping management(10.5%), shipping history(10.5%). Here, if we put together port management and logistics, the accumulated frequency ratio comes to 52.6%. Meanwhile, it is interesting that there was not a single essay in general shipping, shipping law, and especially e-Business which have been frequently taken up by professors in recent years. It is because the researchers are mostly employed in national research institutes related to port and shipping logistics.

Table 4 Cross Analysis of the Subject of Research and Researchers

| Division | Pro- fessor | Prof/ industry | Prof/ Re- searcher | Re- searcher | The in- dustry | Stu- dents | Profes- sor/Stud- -ent | Total |
|---------------------|----------------|-------------------|--------------------------|-----------------|-------------------|---------------|------------------------------|------------|
| General Shipping | 1 (1.7) | | | | | | | 1 (1.0) |
| Economy | 6 (10.0) | | | 1 (5.3) | | | | 7 (7.4) |
| Policy | 3 (5.0) | | | 2 (10.5) | | | | 5 (5.3) |

| | | | | | | | |
|------------------|--------------|-------------|-------------|-------------|------------|-------------|--------------|
| Management | 11 (18.3) | | 2 (10.5) | 1 (33.3) | | 1 (16.7) | 15 (15.9) |
| Shipping Law | 3 (5.0) | | | | | | 3 (3.1) |
| Shipping Risk | 5 (8.3) | 2 (33.3) | 1 (5.3) | | | | 8 (8.4) |
| Port Mgt | 14 (23.3) | 1 (16.7) | 7 (36.8) | | | 3 (50.0) | 25 (26.3) |
| Shipping History | 1 (1.7) | 1 (16.7) | 2 (10.5) | 2 (66.7) | | 1 (16.7) | 7 (7.4) |
| Logistics | 7 (11.7) | 2 (33.3) | 3 (15.8) | | 1 (100) | 1 (16.7) | 14 (14.7) |
| e-Biz. | 8 (13.3) | | | | | | 8 (8.4) |
| Others | 1 (1.7) | | 1 (5.3) | | | | 2 (2.1) |
| Total | 60 (100) | 6 (100) | 19 (100) | 3 (100) | 1 (100) | 6 (100) | 95 (100) |

The joint essays published by professors and researchers occupy 6.3% of the total ones. Among them, logistics and shipping risk accounted for 33.3%, respectively; port management and shipping history 16.7%, respectively. The essays conducted by professors and the outside research institutes came to 66.7% and those by professors and the research institutes affiliated with their universities 33.3%. It showed much more brisk activities of joint-studies between professors and the outside research institutes than those between professors and the institutes affiliated with the universities.

The joint-essays published by professors and students occupied by 6.3%; among them port management accounted for 50%, shipping management, shipping history and logistics 16.7%, respectively. The essays which professors directed their graduate students amounted to only 16.7%, and the rest 83.3% was belonging to the joint-study by professors and students with the research fund supported from the external institutes.

Essays presented by the industry were merely three out of total 95 works, taking only 3.2% share. Among three essays, two papers(66.7) were submitted from shipping history by the parties independently interested and the rest was the one in shipping management(33.3%) presented by the CEO of a foreign shipping company. It is a real condition that no single essay was published in our shipping & logistics industry except

for the shipping history field.

Looking into the above analyzed data, it was not consistent with the common idea that the learned world would conduct researches centering a theory and the research field would make studies centering on a policy. Both the academic circles and the study world conducted lots of researches on port management. This research tendency vividly shows that the researchers from both fields are anxiously responding to the times' needs demanding academic answers in relation with the national policy to construct port infrastructures by Korea government.

3.2 Trend by Research Method

3.2.1 Cross Analysis of Research Subject and Research Method

As shown on Table 5, the type of research subjects was classified into six items: literature study, contents analysis, questionnaire survey analysis, case studies, mathematical/quantitative analysis and system analysis.

Table 5 Frequency Analysis of Research Method Type

| Division | Vol. 31~Vol. 40 | | Vol. 1~Vol. 30 | |
|----------------------------------|----------------------------|----------|----------------------------|----------|
| | Frequency (# of essays) | Ratio(%) | Frequency (# of essays) | Ratio(%) |
| 1. Literature survey | 33 | 34.7 | 191 | 55.5 |
| 2. Contents analysis | 13 | 13.7 | 58 | 16.8 |
| 3. Questionnaire survey analysis | 12 | 12.6 | 27 | 7.8 |
| 4. Case study | 6 | 6.3 | 6 | 1.7 |
| 5. Meth./quantitative analysis | 20 | 21.1 | 46 | 13.3 |
| 6. System analysis | 11 | 11.6 | 17 | 4.9 |
| Total | 95 | 100.0 | 345 | 100.0 |

Looking into the whole, the most studied method was literature study(34.7%), followed by mathematical/quantitative analysis(21.1%), contents analysis(13.7%), questionnaire survey analysis(12.6%), system analysis and case studies(6.3%). There was no single empirical study as in the last analysis.

Examining these findings, the ratio of literature study and simple contents analysis added up to 48.4%, still occupying a high frequency ratio, but it showed much lower ratio than that of the last one(72.3%). It is considered as an encouraging phenomenon

because this means that the ratio of empirical analysis through mathematical-quantitative analysis, questionnaire survey and system analysis, etc. became higher than before.

Table 6 shows the cross analysis to find out which research method mainly being used by research subject. The study ratio by literature study is high in shipping history(100%), shipping risk(75%), shipping law(66.7%), shipping policy(60%), shipping management(46.7%) and e-Business(37.5%) in the characteristics of learning. But mathematical/quantitative analysis(85.7%) is prominent in the analysis of the shipping economy field.

It is shown that relatively various analysis methods were used like contents analysis(13.3%), case study(13.3%), mathematical-quantitative analysis(13.3%) in addition to literature study. In the field of port management, mathematical-quantitative analysis(36.0%) appeared the highest, followed by system analysis(24.0%), questionnaire survey analysis(20.0%), case study(8.0%). It indicates that the study by empirical analysis comprised the main current method. In the logistics field, questionnaire survey analysis(28.7%) was the highest, and a variety of analytic methods were used evenly among all as literature study(21.4%), mathematical-quantitative analysis(21.4%), system analysis(21.4%), etc. Finally, in the e-Business field, the highest percentage was literature study(37.5%) and contents analysis(37.5%), followed by questionnaire survey(12.5%) and system analysis(12.5%).

Research method by subject has a close relationship with the subject's learning characteristics. Literature study and contents analysis will be relatively important in the studies of shipping history, shipping risk, shipping law, etc. In the fields of shipping economy, shipping management and port management, the empirical analyses by the methods such as questionnaire survey, quantitative analysis and system analysis occupy a higher frequency rate. It is contrast to the last analysis that the research methods by literature study and contents analysis contained a considerable portion in these new study fields. This trend shows that these three study fields reflect a step-further enhancement away from simply relying on literature study or contents analysis. The recent study of e-Business, relatively a new branch, takes a considerable portion relying on literature study and contents analysis. So it is to be said that the studies by various analyses such as questionnaire survey and case study are required in the near future.

Table 6 Cross Analysis of Research Subject and research Method Type
 ()shows %

| Division | Literature Study | Contents Analysis | Survey Analysis | Case Study | Quantitative Analysis | System Analysis | Total |
|------------------|------------------|-------------------|-----------------|------------|-----------------------|-----------------|--------------|
| General Shipping | | 1 (100.0) | | | | | 1 (100.0) |

| | | | | | | | |
|---------------------|--------------|--------------|--------------|-------------|--------------|--------------|---------------|
| Shipping Economy | | 1 (14.3) | | | 5 (85.7) | | 7 (100.0) |
| Shipping Policy | 3 (60.0) | 1 (20.0) | | 1 (20.0) | | | 5 (100.0) |
| Shipping Management | 7 (46.7) | 2 (13.3) | 1 (6.7) | 2 (13.3) | 2 (13.3) | 1 (6.7) | 15 (100.0) |
| Shipping Law | 2 (66.7) | | | 1 (33.3) | | | 3 (100.0) |
| Shipping Risk | 6 (75.0) | 1 (12.5) | 1 (12.5) | | | | 8 (100.0) |
| Port Management | 1 (4.0) | 2 (8.0) | 5 (20.0) | 2 (8.0) | 9 (36.0) | 6 (24.0) | 25 (100.0) |
| Shipping History | 7 (100.0) | | | | | | 7 (100.0) |
| Logistics | 3 (21.4) | 1 (7.1) | 4 (28.7) | | 3 (21.4) | 3 (21.4) | 14 (100.0) |
| e-Biz. | 3 (37.5) | 3 (37.5) | 1 (12.5) | | | 1 (12.5) | 8 (100.0) |
| Others | 1 (50.0) | 1 (50.0) | | | | | 2 (100.0) |
| Total | 33 (34.7) | 13 (13.7) | 12 (12.6) | 6 (6.3) | 20 (21.1) | 11 (11.6) | 95 (100.0) |

3.2.2 Research Method by Year

Table 7 shows how the research method by year has been changed. However, to be on the safe side, too much weight cannot be placed on the result of the study whose subject was analyzed from Vol. 31 to Vol.40 on the journal because this study took essays spanning only for three years from December 2000 through March 2004 in contrasting with the former one for 16 years. But, about 50% of total essays in 2002(Vol. 34~36) contained the methods of mathematical/quantitative analysis and system analysis because there were many essays with the subjects of port and logistics in this period which takes about 50% of the total as shown in Table 8.

Table 7 Changes of Research Method by Year

| Division | Literature Study | Contents Analysis | Survey Analysis | Case Study | Quantitative Analysis | System Analysis | Total |
|----------|------------------|-------------------|-----------------|------------|-----------------------|-----------------|-------|
| 2000 | 4 | 3 | | | | 2 | 9 |
| 2001 | 10 | 2 | 3 | | 2 | 2 | 19 |
| 2002 | 4 | 6 | 3 | 2 | 9 | 4 | 28 |
| 2003 | 13 | 1 | 5 | 1 | 8 | 2 | 30 |
| 2004 | 2 | 1 | 1 | 3 | 1 | 1 | 9 |
| Total | 33 | 13 | 12 | 6 | 20 | 11 | 95 |

Table 8 Research Subject Type by Year

| Division | General Shipping | Shipping Econ | Shipping Policy | Shipping Mgt | Shipping Law | Shipping Risk | Port Mgt | Shipping History | Logistics | e-Biz | Others | Total |
|----------|------------------|---------------|-----------------|--------------|--------------|---------------|----------|------------------|-----------|-------|--------|-------|
| 2000 | | | | 3 | | 1 | 3 | | 1 | | 1 | 9 |
| 2001 | | 1 | 2 | 2 | 1 | 3 | 4 | 1 | 1 | 4 | | 19 |
| 2002 | 1 | 2 | 1 | 3 | | 1 | 9 | 1 | 6 | 3 | 1 | 28 |
| 2003 | | 3 | 1 | 6 | 1 | 3 | 5 | 4 | 6 | 1 | | 30 |
| 2004 | | 1 | 1 | 1 | 1 | | 4 | 1 | | | | 9 |
| Total | 1 | 7 | 5 | 15 | 3 | 8 | 25 | 7 | 14 | 8 | 2 | 95 |

In 2003(Vol. 37~39), there were 13 essays approached by literature study, which accounts for 40% of total essays. It is regarded that this trend during the period is because there were many essays dealing with the subjects as shipping risk, shipping history and shipping management as shown on Table 8. Therefore, we could tell that there was a marked difference in the research method depending on the research method by type rather than the research method by year.

3.3. Trend of the Level of Globalization

It is inevitable that since the shipping and logistics industry by itself has the characteristics of international industry, the academic research on it should be also international. The Korea Association of Shipping and Logistics, Inc. has exchanged with its counterpart of Japan from early years in the past. In October 1993, the Korean association held an international seminar in Seoul for 'Asian Pacific Seatrtransportation Confer-

ence', in which a total of 23 papers were read by scholars here and abroad. Afterward April 2002, the Korean Association of Shipping and Logistics Inc. in corporation with Gwangyang City held another meeting, 'The 2nd Gwangyang Port's International Forum' under the subject of 'The Structural Changes in the Shipping Business and the Future in the Port Industry'.¹²

In order to size up the level of globalization of essays published on the Korean Journal of Shipping and Logistics, we examined the number of essays written in either Korean or English, and by domestic students or foreigners. Table 9 shows that English essays published on the journal, Vol. 1 through Vol. 30 accounted for 5%; meanwhile, those from Vol. 31 through Vol. 40 this time increased four times to 23.2%.

Table 9 Number of Essays in Korean and English

() shows %

| Division | Essays in Korean | Essays in English | Total |
|-----------------|------------------|-------------------|------------|
| Vol. 1~ Vol. 30 | 328(95.0) | 17(5.0) | 345(100.0) |
| Vol. 31~Vol. 40 | 73(76.8) | 22(23.2) | 95(100.0) |
| Total | 401(91.1) | 39(8.9) | 440(100.0) |

Table 10 Number of Domestic and Foreign Researchers

() shows %

| Division | Koreans | Foreigners | Joint study | Total |
|-----------------|-----------|------------|-------------|------------|
| Vol. 1~ Vol. 30 | 334(96.8) | 8(2.3) | 3(0.8) | 345(100.0) |
| Vol. 31~Vol. 40 | 81(85.3) | 12(12.6) | 2(2.1) | 95(100.0) |
| Total | 415(94.3) | 20(4.5) | 5(1.2) | 440(100.0) |

As Table 10 shows, the combined ratio of essays of foreigners who did it alone or jointly with some Koreans stood at 3.1% in the former study for 30 issues whereas it got quadrupled, amounting to 14.7% in this script spanning 10 issues from Vol. 31 to Vol. 40.

Table 11 shows the distribution of foreigners' essays by nation which were published in our academic journal. There were only two countries whose essays in the former study from Vol. 1 to Vol. 30 were 8(72.7%) from Japan and 3(27.3%) from U.S.A., respectively. But in this study period spanning from Vol. 31 to Vol. 40, there were

¹² For details, see W.C. Lee, "The 20 Years' Trace of the Korean Association Shipping Studies", *The Journal of Shipping and Logistics*, Vol. 5, August 2002, pp.11~17.

7(50%) from Japan, 3(21.0%) from Taiwan; the rest, each one from U.S.A., U.K., Hong Kong and Egypt, respectively, thus becoming multinational.

Table 11 Distribution of Foreigners' Essays by Nation

| Division | () Shows % | | | | | | Total |
|-----------------|-------------|-------|----------|-----------|---------|-------|-----------|
| | U. S. A. | U. K. | Japan | Hong Kong | Taiwan | Egypt | |
| Vol. 1~Vol. 30 | 3(27.3) | | 8(72.7) | | | | 11(100.0) |
| Vol. 31~Vol. 40 | 1 | 1 | 7(50.0) | 1 | 3(21.0) | 1 | 14(100.0) |
| Total | 4(16) | 1 | 15(60.0) | 1 | 3(12.0) | 1 | 25(100.0) |

When we consider the comprehensive findings from the above analyses, the number of essays written in English and contribution by foreign researchers have increased since the 31st issue published in the first half of 2000; simultaneously, our journal has made a rapid progress in its globalization. But the ratio of either the papers in English or those by foreigners is still low. Especially, they are mostly coming from one country, Japan, 60% of the total as shown in the distribution of foreigners' essays by nation. In this situation, it is to be desirable that the Korean Association of Shipping and Logistics, Inc. has to promote the academic globalization through frequent exchanges with similar organizations abroad

IV. Conclusion

So far we have examined dynamic trends of essays by classifying into research subjects, research methods, and the level of globalization. The relevant essays have been published on The Journal of Korean Association of Shipping Studies, Vol. 31 ~ Vol. 36 and The Journal of Shipping and Logistics, Vol. 37 ~ Vol. 40. The findings are as follows.

First, in terms of research subject, the most studied fields were in sequence port management, shipping management and logistics; relatively less studied fields were general shipping, shipping law and custom, and shipping policy. This result is somewhat different from the previous analysis on the Journal of Korean Association of Shipping Studies, Vol. 1~ Vol.30 in which the most studied fields were shipping management and shipping policy, and relatively less treated fields were general shipping and shipping history. Studying about such new subjects as e-Business, shipping risk and insurance, shipping economics and shipping history has been going on to some extent. The research tendency of shipping and logistics seems to reflect a synchronized phenomenon in which the national policy is to foster the logistics industry and to construct the port infrastructure in the year of 2000. Further, The essays on the fields of shipping laws and customs appeared in another journal related to a shipping law or the study tendency toward e-Business was more likely to be increased. But the number of essays

dealing with shipping policy seemed to fall down due to liberalization and deregulation in the shipping industry.

Second, among the researcher groups, professors studied most actively, the ratio of the research field became a little higher than that of the last analysis, but their research papers are still relatively small in number. University-related researchers including professors, students and both of them take about 76.8%. This tendency is similar to the last analysis and the importance of universities has been distinguished in the research fields of shipping and logistics. Meanwhile, the portion of a sole study type was much higher than that of a joint study type such as professors/business circles and professors/research institutes.

Third, for the type of research method, literature study was the most, followed by mathematical/quantitative analysis, contents analysis, questionnaire survey analysis, system analysis, case study with no empirical study. Literature study has taken still a higher frequency ratio(34.7%), but it became lower than the ratio(55.5%) in the last analysis. Instead, the ratios of mathematical/quantitative analysis, questionnaire survey analysis and system analysis were increased. So we could ascertain that there had been increased number of papers attempting to theorize through empirical analyses, getting out of simple literature studies or contents analyses.

Fourth, looking into the tendency of the level of globalization, essays written in English or submitted by foreigners have shown a considerable increase in number on this journal, Vol.31 ~ Vol.40 compared to the previous one. And the distribution of foreign researchers by nation has become multinational, containing Taiwan, U.K., Hong Kong and Egypt as well as U.S.A. and Japan.

Meanwhile, since the trend analysis in this shipping and logistics study has been conducted by quantitative analysis, there will be some limits to set up concrete directions for studying shipping and logistics only based on the result of this study. In spite of these limits, the following are some suggestions we have to consider.

It is urgent for us to establish the system of an industrial-educational joint study. In this analysis, there was no joint study between professors and industrial circles, but last time there was 2.8% and yet it was nearly negligible. In order to improve this situation, such development as a joint project is required including policy discussions of the problems that our shipping and logistics industry has encountered.

Second, research methods for a certain subject have a close relationship with the characteristics of the learning with its literal properties inherent in it. We consider it desirable in that the empirical analysis by questionnaire survey, quantitative analysis, system analysis and others this time takes a higher ratio than the previous one in the fields of shipping economics, shipping management and port management. But from now on, much more studies must be executed so as to solve the problems arising on the spot through a great deal of empirical analyses.

Third, there were a few instances of interdisciplinary studies in this trend analysis. It is regarded that because shipping and logistics is an integrated field of a variety of sciences such as economics, management, MIS, distribution, law, system engineering, and management science, the interdisciplinary joint study should be stimulated.

Finally, the limit of study trend analysis is that there has been no analytical effort in evaluating the way of collecting materials, the relative importance of reference here and abroad, quantitative/statistical analysis method that were utilized to write papers published on the Journal of Korean Association of Shipping Studies and The Journal of Shipping and Logistics. When a subject was overlapping with other subjects in a paper, I selected the subject whose field is over half in contents without analyzing the ratio. Further, I would like to point out another limit that this study was inclined to quantitative analysis without carrying out qualitative one.

References

1. M.S. PARK, *Understanding of International Logistics*, Beobmoonsa, 2003.
2. H.I. CHIN · C.Y. JEONG, *Understanding of International Logistics*, Pakyeongsa, 2003.
3. S.Y. OH, "The Trend Analysis of Shipping Studies - The Journal of Korean Association of Shipping Studies, Vol.1~Vol.30-", *The Journal of Korean Association of Shipping Studies*, Vol. 31, July 2000.
4. W.C. LEE, "The 20 Years' Trace of the Korean Association of Shipping Studies," *The Journal of Korean Association of Shipping Studies*, Vol.35, August 2002.
5. S.P. HAN, "The Trend Analysis of International Advertisement Studies: Contents Analyses on the Major Journals of Advertisement from 1960 to 1996", *The Advertisement Studies*, Vol. 39, 1998.
6. D.H. HAN, "The 20 Years' Retrospect of Insurance Studies and Problems of Advancement", *The Journal of Insurance*, Vol. 24, September 1984.
7. 谷光太郎、 『ロジステイクス』, 同文書院, 1993.
8. 日通総合研究所, 『物流の知識』, 東洋経済新報社, 1994.
9. 織田政夫, 『海運経済論』, 成山堂, 1975.
10. Stock James R. and Lambert Douglas M., *Strategic Logistics Management*, Irwin Inc., 1987.
11. Ballou Ronald , *Business Logistics Management*, second edition, Prentice Hall, New Jersey, 1985.
12. Coyle John J., Bardi Edward J., Langley Jr C. John, *The Management of Business Logistics*, 6th ed., West Publishing Company.
13. <http://www.nabh.go.kr>.