

✓ An Evaluation of Existing Government Policies and Measures for the Development of the Thai Merchant Fleet: A Survey of Thai Ship Operators

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A survey of Thai government policies and measures for the development of the Thai merchant fleet was conducted, so as to evaluate the existing government policies and measures as well as to identify key problems and obstacles. Remedial measures for Thai merchant fleet improvement were then presented, which would lead to more useful policies and measures, and to a more effective operation of the Thai merchant fleet in the global market. Relevant information was obtained by exploratory research from various published reports and official documents. Primary data was gathered using mail survey and face-to-face interviews of twenty-three Thai shipping operators. Results indicated that financial support, marketing and taxation incentives were the most important areas. Presently, there are fourteen government measures for the promotion of maritime transport, which cover six important areas; namely, financial support, tax incentives, ship registration, seafarers, national shipping line, are considered useful and should be retained. Most shipping operators strongly opposed the establishment of a national shipping line and suggested that it should be abolished. However, this study is restricted to the views of Thai ship operators only.

1. Introduction

In formulating maritime policies and measures, government policy-makers require detailed knowledge of international and regional shipping environments, shipping market trends, and shipping policy trends. Shipping policy objectives need to be determined and reviewed. Policy options and tools need to be considered. Experiences on maritime development policies from developed maritime

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countries could be used as a starting point. The problems and obstacles associated with the implementation of existing policies and measures, which impede the development of the national merchant fleet should be assessed and analyzed. Each country has to work out its own policies in the overall context under the framework of its economic objectives and shipping potential. A policy that works well for one country may not work effectively for another (ESCAP 1999).

In developing shipping policies, the Thai government initiated a maritime master plan in 1996, which laid down the necessary objectives, fleet expansion targets and strategies. Promotional measures were basically concentrated on financial and tax incentives (Thai Engineering Consultants, *et al.* 1999). Updating and re-drafting of the Thai Vessel Act 1938; the establishment of a national shipping line; improvement of outdated maritime laws; and participation in international conventions and conferences were suggested in the master plan. Some of these items (section 2.2) have been implemented. At the end of the year 2001, the market share of the Thai merchant fleet was 11 %, and it failed to reach the target of 18 % as set by the master plan. Therefore, these existing policies and measures need to be examined so as to determine key problems and obstacles, before laying down any new policies and measures to improve the national merchant fleet. The main objectives of the study are to evaluate the usefulness and effectiveness of the existing policies and measures, and to identify their associated problems and obstacles. Thai ship operators who are directly affected by the policies are the most appropriate target group to provide useful evaluative opinions on Thai shipping policies and measures.

This paper comprises six sections. Following the introduction, the second section provides the background on the present situation of the Thai merchant fleet. The third section covers research methodology adopted: questionnaire design and data collection. Data analysis and findings are presented in the fourth section. Conclusions and recommendations are drawn in the fifth

section. The final section elucidates limitations and recommendations for further research. The research outcomes are expected to provide basic input to improve the ineffective policies and measures as well as for solving problems and obstacles of the Thai merchant fleet.

2. Research Background

2.1 Thai Merchant Fleet Situation

During 1991 to 2000, more than 90 % in volume, as well as more than 70 % in value of Thailand's international trade relied on maritime transportation (Bureau of Information Technology 2000). The Thai merchant fleet has a market share of 11.5 % in volume and 8.72% in value of Thailand's international maritime transportation (Srisingchome, *et al.* 1997).

From Transport Statistical Data of the Year 2000, the Thai merchant fleet comprised of liquid bulk tankers, dry bulk carriers, general cargo ships, container carriers, and other vessels with a total capacity of approximately 2.4 million DWT. The highest proportions were general cargo ships, followed by dry bulk carriers, liquid bulk tankers, and container carriers, respectively. The size of the Thai fleet ranged from 500 to 4,900 DWT, whilst the world fleet had many vessels larger than 20,000 DWT. About 50 % of Thai vessels were between 20 to 24 years in age, compared to those of the world fleet of about 1 to 25 years (Bureau of Information Technology 2000). The majority of the Thai fleet and the world fleet operated as tramps¹. The average number of seafarers in the Thai vessels was less than 10 persons, whilst those in the larger world fleet accommodated between 20 to 29 persons since the average size of Thai vessels is smaller than that of the world fleet. These statistical data show that the Thai fleet, in general, transports a smaller share of Thailand's

¹ Tramps are vessels operating on irregular routes.

international trade using a smaller size and older vessels than those of the world fleet.

2.2 Past Development Plans of the Thai Merchant Fleet

It was not until 1976 that the government included development plans for the Thai merchant fleet in the Fourth to the Eighth National Economic and Social Development Plans (Chaimankong 1995; National Economics and Social Development Commission 1997). The NESD Plans had encouraged and supported investments of the private sector in the expansion of the Thai merchant fleet, and promoted shipbuilding and ship-repair yards. Tax incentives and financial support measures, a cargo reservation scheme, legislation mechanisms, ship alliances, and maritime human resource development were imposed in the plans. Induction of foreign investment, initiation of new routes, establishment of a freight booking center and maritime infrastructure services were contained in the plans. The Eighth NESD Plan emphasized on the modernization and improvement on the efficiency of the Thai fleet.

In the year 1999, the Thai maritime master plan was first imposed with the objectives to increase the market share of sea transport and to increase the freight earning as well as to enhance efficiency and competitiveness. The definitive target for fleet expansion was set to increase in size and to improve its performance by not less than 18 % of the country's total sea-borne trade in volume by the end of the Eighth NESD Plan (by the year 2001). This target was also set to increase to 25 % by the end of the Ninth NESD Plan (by the year 2006). The recommended measures were financial support and tax incentives, simplification of ship registration process, establishment of a national shipping line, amendment of outdated maritime laws, and participation in international conventions and conferences. (Thai Engineering Consultants, *et al.* 1999). Thus, past development of the Thai merchant fleet emphasized financial support, tax incentives, law and regulation, and maritime personnel

areas. However, many problems have been encountered.

2.3 Problems to the Development of the National Merchant Fleet

Since the beginning, the maritime business in Thailand has encountered various problems. These involved eight important areas, namely: financial support, taxation incentives, marketing support, ship registration, cargo reservation, maritime personnel, legislation, and government administration and operation.

(a) Financial problems. Financial problems included insufficient maritime funds with uncompetitive conditions such as high interest rates, short grace period, short repayment period, and low loan to asset ratio (Sakulratana 1998; Thai Ship Owners Association 2003). The financial institutions also did not truly understand the maritime business (OMPC 2001b) and were therefore reluctant to provide loans to shipping companies.

(b) Taxation problems. There were higher operating costs incurred from taxation than those of other countries such as personal income tax for crews, ship import duty, tax on vessel rental revenue, income tax from selling ship or rebates from insurance companies (Chaimongkol 1995; Sakulratana 1998; Thai Ship Owners Association 2003). Other problems included unclear definitions in tax privilege issues resulting in complications of tax collection and slow process of getting value-added tax refunds. Moreover, there were different definitions of personal income tax for crews in each area (OMPC 2001b).

(c) Marketing problems. Thai importers and exporters preferred to purchase goods at Cost, Insurance, and Freight (CIF) prices and to sell at Free on Board (FOB) prices, and therefore did not choose to use Thai vessels (Chaimongkol 1995). Lack of a good marketing network, which covered both inbound and outbound trips was also considered another major problem (OMPC 2001a). Frequency of services was low since Thailand is not located on the

main shipping routes of the world (Sakulratana 1998).

(d) Ship registration problems. A large number of Thai ships were flagging out (Chaimongkol 1995). Custom laws, rules and regulations were found to be inappropriate (Sakulratana 1998; Thai Ship Owner Association 2003). The Ship registration process was generally complicated (OMPC 2001b; Russameeted 2000). In examining a ship's classification, the Marine Department needs to inspect the ship and this procedure had caused unnecessary complications and wasted time (Russameeted 2000).

(e) Cargo reservation problems. All Thai ships should receive privileges from cargo reservation measures; however in practice, only the Thai Maritime Navigation Co., Ltd. (TMN) received all the contracts from the Thai government. TMN did not have its own ships but operated by chartering foreign ships in the form of slot charter. During a seminar on the usage of Thai ships for the carriage of Thai government cargo, many issues were raised and some weak points were identified in the cargo reservation scheme that allowed the operators to avoid the use of Thai ships (OMPC 2002). Most government cargo was imported at CIF prices without insisting on the condition that Thai ships actually carried the cargo. There is a lack of genuine support from the Thai government. In addition, the government contractor might choose to import cargo in advance before signing the contract to avoid using Thai ships. Thus, the Thai ships never really benefit from this cargo reservation scheme.

(f) Maritime personnel problems. There was a shortage of maritime personnel for both onshore and offshore work (Sakulratana 1998). This situation occurred at every level due to a problem from the Standards of Training, Certificate and Watch-keeping for Seafarers (STCWS) 95 guideline promulgated by the International Maritime Organization (IMO) of the United Nations and policed by Port State Controls (PSC). Moreover, the quality of Thai maritime personnel did not meet international standards. This was due to a lack of co-operation between the government units in controlling and supporting the maritime education and training institutions.

Consequently, its production capability is unable to meet the demand of seafarers in the future. Lack of cooperation between ship owners and the training center also made the qualification of trainees out of line with the requirements of the ship owners, thus resulting in a lack of ships for training - both training ships for cadets and cargo ships for apprentices. The knowledgeable quality of maritime personnel, weakness of the articulated education system, lack of maritime textbooks in Thai language, high wages and short sea service life were also considered maritime personnel problems (Southeast Asia Technology 2000).

(g) Legislation problems. Although Thailand had some legislation in accordance with the International Conventions, several legislation problems still remained. There is no announcement of the cancellation or amendment of laws to the relevant groups.

(h) Government administration and operation problems. Many government units exercised authority of policy formulation, control, administration, and operations (Chaimongkol 1995; Sakulratana 1998; Thai Ship Owners Association 2003). After the government administration reform in the year 2002, Thai ship operators still maintain their collective view that there was no exclusive government department to support them as in the past.

2.4 Existing Measures for the Development of the Thai Merchant Fleet

The Thai government has implemented many policies and measures for the development of the Thai merchant fleet to counter problems identified. An establishment of a maritime fund was temporary initiated in 1998 (OMPC 2001a). This maritime fund, consisting of four billion baht issued by the Bank of Thailand and another four billion baht by the Industrial Finance Corporation of Thailand (IFCT) and Export-Import Bank of Thailand (EXIM Bank), was lent to the maritime industry (Sakulratana 1998).

Measures in the taxation incentive area included exemption

on ship import duties and corporate income tax for up to eight years for companies granted promotional privileges under the Investment Promotion Act (Chaimankong 1995). The corporate income tax, ship selling income tax, personal income tax for crews of Thai ships, vessel rental income tax for Thai owners, ship import duties, and income tax from dividends to Thai and foreign investors were also exempted (Thai Engineering Consultants, *et al.* 1999). Furthermore, withholding tax on income earned from using a foreign ship for international transportation was also waived (Sakulratana 1998).

Measures to produce more maritime personnel both for onshore and offshore work, the reduction in number of Thai seafarers from seventy-five to fifty percent, the amendment of laws, rules and regulations and other related maritime measures, were implemented. (Chaimankong 1995; Sakulratana 1998).

The cargo reservation scheme was a marketing measure initiated by the Thai government to support the Thai merchant fleet. The scheme covers 7 routes between Thailand to Japan, Korea, Taiwan, Hong Kong, Europe, U.S.A. and Singapore (Chaimankong 1996).

In response to the government policy to develop the Thai merchant fleet, the Ministry of Transport had proposed the establishment of a national shipping line and this proposal was subsequently approved by the cabinet (Thai Engineering Consultants, *et al.* 1999). However, the national shipping line has not yet been, up to now, fully established.

All the above measures, except the establishment of the national shipping line, have since been implemented, resulting in improvement or easing of some existing problems. The market share of the Thai merchant fleet, however, remained at 11% and would not reach the target set by the Master Plan. This indicated the ineffectiveness of the policies and measures. The surveys reported in the next sections explored the problems and obstacles, which had affected the effectiveness of existing government measures. Moreover, recommendations of necessary improvements for the development of the

national merchant fleet will be presented.

3. Research Methodology

A survey of the opinions of Thai ship operators was conducted to evaluate the degree of usefulness and effectiveness of existing government measures as well as the problems and obstacles to the development of the Thai merchant fleet. This survey was conducted by face-to-face interviews and mailed questionnaires. Face-to-face interviews can clarify doubts and ensures that the responses are properly understood. Mailed questionnaires were utilised in case that the respondents were required to complete questionnaire at their own convenience (Sekaran 2000). Both approaches used the same questionnaire, which was divided into three sections:

Section A To rank the important areas for the development of the national merchant fleet;

Section B To evaluate the usefulness and effectiveness of existing government measures;

Section C To identify the remaining important problems and obstacles to the development of the national merchant fleet.

This questionnaire was designed with information gathered from a number of sources; namely, Chaimongkol 1995; Cho 2002; ESCAP 1999; Iheduru 1992; Jenssen 1993; Kwanchai, *et al.* 1996; Ledger and Roe 1992; OMPC 1998; OMPC 2001; Sakulrattana 1998; Sawsar 1998; Thai Engineering Consultants, *et al.* 1999; Thai Ship Owners Association 2003. In the questionnaire, the government policies and measures as well as the problems and obstacles were grouped into twelve areas (Table B-1 in Appendix B). However, only six of these areas are covered by existing Thai government measures (Table B-2 in Appendix B). Variables were measured using an ordinal scale to rank the important areas in Section A; 12 = the most important area, to 1 = the least important area. A Likert scale was used to rate the government policies and measures in Section B; 5 =

very useful/effective, to 1 = not useful/effective at all, and the remaining problems and obstacles in Section C; 5 = very important, to 1 = not important at all.

Thai ship operators are considered to be the appropriate target groups to answer the questions. This survey covered a total number of thirty-four Thai ship operators², which comprised two groups: (a) fifteen operators of dry bulk carriers, general cargo ships and container carriers, and (b) nineteen operators of liquid bulk tankers (Table A-1 in Appendix A). Questionnaires were then sent to the chief executive officers of thirty-four Thai ship operators and twenty-three responses were received from managing directors, general managers or managers. Of these twenty-three respondents, fifteen participated in the mail survey, seven were personally interviewed, and one responded via electronic mail. This represents a response rate of 67.65 percent and confidence level of 93 %. Data were collected over a two-month period from October to November 2002. Frequencies ranking for the ordinal scale and arithmetic means for the Likert scale were used in the data analysis to describe central tendencies of the distribution, and standard deviation was used to measure dispersions (Zigmund 1997).

4. Data Analysis and Results

The section is divided into four parts. Important areas for the development of the national merchant fleet are firstly ranked in order of priority. The usefulness and the effectiveness of existing government measures are then evaluated before which the important problems and obstacles are identified. The last two parts are a discussion of the results of existing government policies and measures.

² Thai ship operator means a company or a group of companies of the some owner who owns and operates Thai ships.

4.1 Important Areas for the Development of the National Merchant Fleet

Based on the literature review presented earlier (Wannakrairoj 2004a), twelve areas have been identified as being important to the development of the national merchant fleet. Thai ship operators who participated in this research were therefore asked to rank twelve areas in ascending order from 1 (least important) to 12 (most important). The number of respondents in each rank was then counted and summed up into four classification, as follows:

- (1) Very important: Ranking from 10 to 12
- (2) Important: Ranking from 7 to 9
- (3) Less important: Ranking from 4 to 6
- (4) Not important: Ranking from 1 to 3

The importance of each area was then classified according to the maximum number of frequency in the four ranges of ranking (Table 1).

From the result shown above, three areas are considered very important since the maximum number of Thai ship operators ranked

Table 1 Frequencies of ranking of important areas by Thai ships operators

Important Area		12-10	9-7	6-4	3-1	Classification
1	Financial support	17	5	1	0	Very important
2	Marketing	11	4	8	0	Very important
3	Taxation incentives	9	6	6	2	Very important
4	Seafarers	7	10	1	5	Important
5	Legislation	5	10	5	3	Important
6	Ship registration	6	7	7	3	Important
7	Government administration and operations	6	6	9	2	Less important
8	Related international organizations	3	4	12	4	Less important
9	Cargo reservation scheme	1	6	10	6	Less important

Important Area		12-10	9-7	6-4	3-1	Classification
10	Maritime infrastructure and facilities	4	6	5	8	Not important
11	Shipbuilding	0	3	2	18	Not important
12	National shipping line	1	1	2	19	Not important

Note: Ranking is in ascending order of importance, 12 = most important, 1 = least important.

them in the range from 10 to 12. The most important area is financial support, which has a total count of 17 in the top range of ranking. Marketing and taxation incentives are also classified as very important with corresponding maximum frequencies of 11 and 9 respectively. An other three areas, seafarer, legislation and ship registration, are considered important because the maximum frequencies of 10, 10 and 7 are in the range from 7 to 9 ranking. Government administration and operation, related international organizations and cargo reservation scheme are classified as less important with corresponding maximum frequencies of 9 to 12 and 10 in the range from 4 to 6 ranking. Many ship operators ranked national shipping line, shipbuilding, and maritime infrastructure and facilities as being not important.

4.2 Usefulness and Effectiveness of Existing Government Measures

The main objective of this part of the survey is to evaluate the usefulness and the effectiveness of government measures, which will lead to the suggestions of the necessary steps that the Thai government should take. Very useful and useful measures, which are ranked as very effective and effective, should be maintained. Moderately and less useful measures, which are ranked as very useful and useful measures, should be continued or ameliorated; whilst very useful and useful measure, should be are moderately effective, should be improved. Moderately and less useful measures,

which are moderately and less effective should be abolished.

(a) Usefulness of existing government measures

Analysis of data from the survey and results are tabulated in Appendix B (Tables B-2 and B-3). The rating of usefulness of all fourteen existing measures varied from 2.61 to 4.65. Based on the score of rating 5 = very useful, 1= not useful at all. All existing measures have been classified into five groups according to their individual mean value as follows;

(1) Very useful:	Individual mean is from 4.51 to 5.00
(2) Useful:	Individual mean is from 3.51 to 4.50
(3) Moderately useful:	Individual mean is from 2.51 to 3.50
(4) Less useful:	Individual mean is from 1.51 to 2.50
(5) Not useful:	Individual mean is from 1.00 to 1.50

Out of fourteen existing government measures, there are two very useful measures; namely, exemption on corporate income tax (4.65), ship import duty (4.61). These very useful measures are in the taxation incentives area. Nine useful measures are: personal income tax for crews (4.48), value-added tax refund (4.43), ship selling income tax (4.26), maritime loan fund endowed by the Thai government through the IFCT and EXIM Banks (4.26), vessel rental tax (4.04), ship-registration (3.91), withholding tax (3.91), income tax from dividends (3.91) and cargo reservation scheme (3.61). These measures are part of the taxation incentives, financial support, ship - registration and cargo reservation areas. Three moderately useful measures are: bilateral agreement (3.04), reduction in the number of Thai seafarers from 75% to 50% (3.00) and the establishment of a national shipping line (2.61).

In the evaluation of the usefulness of fourteen government measures, it was found that two very useful measures and nine useful measures should be continued. But three moderately useful measures of bilateral agreement, reduction in the number of Thai seafarers from 75% to 50% and the establishment of a national shipping line should be considered in more detail so as to decide

whether these should be maintained or abolished. A final decision will be drawn in conjunction with the evaluation of their effectiveness and the associated problems and obstacles resulting from these measures.

(b) Effectiveness of existing government measures

Results from the survey (Table B-4 and B-5 of Appendix B) indicate that the effectiveness of each existing policy and measure ranges from 1.91 - 3.70. Based on the score of rating 5 = very effective, 1 = not effective at all, all fourteen existing measures have been classified into five groups according to their individual mean value of effectiveness.

Out of the fourteen existing government measures, three of them are considered effective; namely, exemption on corporate income tax (3.70), ship import duty (3.70), and ship selling tax (3.52). These effective measures are part of the tax incentives area. Eight moderately effective measures are: personnel income tax for crews (3.43), vessel rental tax (3.41), dividend income tax (3.26), maritime loan fund endowed by the Thai government through the IFCT and EXIM Banks (3.09), reduction of withholding tax (3.00), value-added tax refunds (2.96), ship registration measure (2.91), and seafarer measure (2.91). These measures are part of taxation incentives, financial supports, ship registration, and seafarer. Cargo reservation scheme (2.35), bilateral agreement (2.22) and establishment of a national shipping line (1.91) are considered to be the less effective measures.

In consideration of the usefulness in association with the effectiveness (Table B-6 of Appendix B), three very useful, and useful measures which are also effective: exemption on corporate income tax, ship import duties and selling ship taxes should be continued. Seven useful and moderately effective measures: a maritime loan fund, exemption on vessel rental tax, refund of value added tax for buying ships, exemption on personal income tax, reduction of withholding tax, exemption of dividends tax, ship

registration required some improvement in their implementation. One useful but less effective measure of the cargo reservation scheme should be continued with improvement. One moderately useful and moderately effective seafarers measure needs to be either improved or annulled. Abolition of two moderately useful and less effective measures: bilateral agreement and establishment of national shipping line should be considered. However, the next section will explore further the problems, which might occur from these moderately effective and less effective measures.

4.3 Problems to the Development of the National Merchant Fleet

Several problems to the development of the national merchant fleet are identified in nine areas: financial support, taxation incentives, marketing, ship registration, seafarers, national shipping line, cargo reservation, legislation, and government administration and operations. Some of these problems may arise from moderately effective or less effective implementation of various measures, whilst the others may not be related to any government measures at all. All these problems and obstacles, however, need to be remedied.

All Thai ship operators have been asked to rate the importance of each problem in a scale from 1 to 5. From the analysis of results (Table B-7 to Table B-15 in Appendix B), all 54 problems and obstacles in the 9 areas mentioned above are rated in a range from 3.22 to 4.61. Based on the score of rating 5 = very important, 1 = not important at all, all the problems have been classified into five groups according to their individual mean value. Only very important and important problems, which have individual means from 3.51 to 5.00, are listed in each areas.

(a) Financial support area:

(1) Government sector does not understand the characteristics of the maritime business (4.48).

- (2) Domestic interest rate is higher than foreign rate (3.96)
- (3) Insufficient financial support provided by the government (3.91).
- (4) Delay in establishing the permanent maritime fund (3.83).
- (5) Domestic financial institutions are reluctant to provide loans to shipping companies (3.78).
- (6) Loan repayment period is relatively short (3.74).
- (7) Grace period in Thailand is shorter than those in other countries (3.52).

(b) Marketing area:

- (1) Thai importers and exporters have low bargaining power to use Thai ships, because they buy at CIF prices and sell at FOB prices (4.27).
- (2) Ninety five percent of Government imported goods are bought in CIF terms regardless of whether the goods are carried by a Thai ship or not (4.23).
- (3) Lack of marketing network (4.09).
- (4) Thai importers and exporters do not specifically support the use of Thai ships (3.86).
- (5) Low frequency of service of Thai fleet (3.73).

(c) Taxation incentives area:

- (1) Value-added tax refunds take a long time (4.61).
- (2) There are different definitions in calculating tax collection (4.39).
- (3) In considering a value-added tax refund, the Revenue Department often inspects the company account, which leads to complexity in operation (4.00).

(d) Seafarers area:

- (1) Lack of co-operation between government units in controlling and supporting the maritime training center (4.17).
- (2) Some Thai seafarers do not receive a certificate issued in

accordance with STCW 78/95 (4.09).

(3) Training expenses for seafarer program are quite high (3.83).

(4) Weakness of the articulated education system (3.78).

(5) Shortage of maritime personnel in every level (3.77).

(6) Sea service life of Thai seafarers is shorter than those in other counties (3.74).

(7) Insufficient maritime personnel knowledge and understanding (3.70).

(8) Lack of cooperation and discussion between ship owners and training centers (3.68).

(9) Lack of ships for training - both training ships for cadets and cargo ships for apprentices (3.52).

(e) Legislation area:

(1) Complicated laws and regulations, that do not follow international standards (4.41).

(2) No announcement of changes of laws and regulation to all groups concerned (4.23).

(3) Mercantile Marine Promotion Act, B.E. 2521 (3.73).

(4) Ship Mortgages and Maritime Liens Act, B.E. 2537 (3.73).

(5) Carriage of Goods by Sea Act, B.E. 2534 (3.64).

(f) Ship registration area:

(1) For the renewal of ship using license, the owner has to bring the ship certificate back to Thailand (4.00).

(2) Both the classification society and Thai Marine Department need to inspect the ship (3.78).

(g) Government administration and operation area:

(1) Thai bureaucratic system lacks co-operation among government departments (4.70).

(2) The government does not understand the needs of maritime business (4.65).

(3) Supportive maritime department (i.e., OMPC) may not have enough authority to perform its duty (4.57).

(4) Lack of expertise in planning an organization management system to international practice (4.13).

(5) Government does not perceive the importance of hiring permanent personnel (3.57).

(h) Cargo reservation scheme:

(1) In principle all Thai ships should receive privileges from this measure, but in practice only TMN receives the entire contract from the government (4.41).

(2) Most of the cargo imported by the Thai government uses CIF basis regardless whether the cargo is carried by Thai ships or not (4.30).

(3) There are some weak points in the cargo reservation scheme that allows the operators to avoid the use of Thai ships (3.90)

(4) Lack of support from government units in the cargo reservation scheme (3.78).

(i) National shipping line area:

(1) Policies and plans in establishing a national shipping line are always changed by the government in power (4.61).

(2) TMN has privileges above other private operators in the freight bidding process of government cargo (4.50).

(3) TMN does not operate its business in accordance with market mechanisms (4.41).

(4) TMN reduces the opportunity for other Thai shipping companies in the carriage of government cargo (4.32).

(5) TMN does not have its own ships (4.26).

In the shipbuilding area, the acquisition of second hand ships from other countries requires a lower initial investment cost than building new ships in Thailand. Therefore, Thai ship operators considered this area not important to their business. Maritime infrastructures and

facilities area and the related international organizations area do not directly affect their operation and thus are regarded as less important areas. No problems and obstacles are therefore put forward for these three areas.

4.4 Discussion of Results

From the above analysis and results, the classification of all 12 important areas (Table 1 of in Section 4.1), the usefulness and effectiveness of existing government measures (Table B-3 and B-5 of Appendix B), and the number of very important problems and obstacles (Table B-16 of Appendix B) are summarized and tabulated in Table 2. There are several problems associated with the nine areas of finance, taxation, marketing, seafarer, legislation, government administration and operations, and ship registration, cargo reservation scheme, and the establishment of a national shipping line. Details of these problems can be discussed below.

(a) Financial support area.

Thai ship operators ranked financial support as the most important area for the development of the national merchant fleet, since the success of their fleet expansion depends on ship financing. This situation is also found true in other maritime developed countries such as in Korea (Cho 2002) and China (Sun and Zhang 1999; Cullinane and Gong 2002).

Table 2: Summary of Data Analysis and Results

Area	Classification			No. of Very Important and Important Problems
	Importance	Usefulness	Effectiveness	
Financial Support	Very important	Useful	Moderately effective	7
Marketing	Very important	Not applicable	Not applicable	5
Taxation Incentives	Very important	Very Useful	Effective	3
Seafarer	Important	Moderately useful	Moderately effective	9
Legislation	Important	Not applicable	Not applicable	5
Ship Registration	Important	Useful	Moderately effective	2
Government Administration	Less important	Not applicable	Not applicable	5
Related International Organization	Less important	Not applicable	Not applicable	Not applicable
Cargo Reservation	Less important	Useful	Less effective	4
Maritime Infrastructure	Not important	Not applicable	Not applicable	Not applicable
Shipbuilding	Not important	Not applicable	Not applicable	Not applicable
National Shipping Line	Not important	Moderately useful	Less effective	5

Legend: Not applicable: no existing measures implemented in this area.

Note: Ranking and classification of importance from section 4.1

Classification of usefulness and effectiveness from section 4.2

Very important problems and obstacles from section 4.3

The existing government measure of the maritime loan fund endowed by the Thai government through the IFCT and EXIM Banks is rated useful and moderately effective. However, insufficient maritime funds with inappropriate conditions such as high interest rates, short repayment periods, and short grace periods are problems associated with this measure. According to the conditions set by Ministry of Finance, the loan repayment period of five years is relatively shorter than the break-even period of ship acquisition. There is some doubt that five years is sufficient in giving an operator time to invest in vessels that require 20 years or more for depreciation. The loan is obtained via Japan Government's Maritime credit corporation, with payback usually allowed up to a minimum of 15 years (Baird 2001). These problems in the financial support area indicate that the government does not truly understand the characteristics of the maritime business.

In spite of the continuous efforts by the maritime support organizations, the establishment of the maritime fund is still being considered by the government. Thai ship operators who are unable to obtain government loans might try to borrow from domestic commercial banks. However, the problem still remains since Thai commercial banks are reluctant to provide loans to shipping companies. Most of them do not accept the collateral asset of ships, hence the loans are often rejected. This situation usually occurs in other countries too (Ogunella 1989, as cited in Iheduru 1992). It was also stated that (African Maritime Economist 1990, as cited in Iheduru 1992) the lack of ship financing was a major obstacle to the fleet development. Thus the source of ship financing in Thailand is always regarded as the most important and is the deciding factor to the success or failure of the Thai merchant fleet development.

Thai ship operators suggest an improvement to the existing measure by providing a sufficient amount of funds and reviewing the loan conditions by the Thai government. They also suggest that the Thai government should persuade domestic commercial banks to support the maritime industry. This type of financial support was

also provided in China and Korea (Sun and Zhang 1999; Cho 2002). The establishment of a permanent bank for the maritime industry is also recommended by Thai ship operators, like those in Nigeria (Iheduru 1992), Malaysia (ESCAP 1999), and the Philippines (Maritime Industry Authority of the Philippines 1999).

(b) Marketing support area.

Marketing support are is a very important area for Thai ship operators. At present, there is no marketing measure implemented by the Thai government except the cargo reservation scheme, which will be discussed later. In the marketing area, two important problems are: Thai traders have low bargaining power in choosing to use Thai ships; and 95% of the government goods are bought at CIF prices and so they may not be carried by Thai ships. Thai exporters and importers do not specifically support the use of Thai ships. Thai ship operators suggest that the Thai government should expand the international cargo base by encouraging exporters to sell at CIF prices and importers to buy at FOB prices, and to promote Thai shipping companies to all importers and exporters. This measure has been implemented in the Philippines (Maritime Industry Authority of the Philippines 1999). Other important problems are the lack of the marketing network and low frequency of service of the Thai fleet. In the expansion of the marketing network and an increased frequency of service, Thai ship operators should enhance routes and concentrate on offshore expansion to gain economies of scale, as well as frequency of services through their own marketing strategies on network of slot charter³, joint service⁴, consortium⁵,

³ A Voyage charter whereby the ship-owner agrees to place a certain number of container slots at the charter's disposal.

⁴ A joint activity of two or more companies usually performed under a common name.

⁵ A form of co-operation between two or more carriers to operate in a particular trade.

conference⁶, or strategic alliances (Harrigan 1985; Alix *et al.* 1999; ESCAP 1999; Gilman 1999; Lu and Marlow 1999; Ryoo and Thanopoulou 1999; Brook 2000; Cullinane 2000; Heaver *et al.* 2000; Midori and Pitto 2000; Slack *et al.* 2002; Jenssen 2003; Panayides 2003). Onshore enhancement should also be considered to cover the activities of multi-modal transport and propose a one-stop service to their customers (Martin 1996; Maritime Industry Authority of the Philippines 1999; Saldanha *et al.* 2002).

(c) Taxation incentives area.

The Taxation incentives area is ranked third in terms of its importance to the development of the national merchant fleet. Favorable taxation and depreciation schemes would assist the national fleet to become internationally competitive (ESCAP 1999). At present, Thai ship operators enjoy the benefits of various tax incentives provided by the Thai government. Exemption on corporate income taxes and ship import duties are really important in reducing their operating cost. They found that both measures are very useful and effective measures, so they should be maintained. Other exemption on ship selling tax, personal income tax and vessel rent tax are also important for Thai ship operators, these measures are rated useful and moderately effective. Although, exemption on dividend income tax, and reduction of withholding tax on income earned by Thai ships used in international transport are rarely used by Thai ship operators. Double deduction of freight expenses is not directly beneficial to the Thai ship operators, but these three measures are rated useful and moderately effective. All of these measures are performing well without any improvement of implementation.

Value-added tax refund is also rated as a useful and mo-

⁶ A group of two or more vessel-operating carriers, which provides international-liner services for the carriage of cargo on a particular trade route and which has an agreement or arrangement to operate under uniform or common freight rates and any other agreed conditions.

derately effective measure. Many Thai ship operators have a very important problem related to this measure: the refund process takes a long time. The tax refund for the maritime business is not specifically mentioned in the Tax and Custom Laws. There are many definition in calculating tax depending on the judgement of tax collectors, and the Revenue Department often inspects the company account. Nevertheless the current taxation relief should be maintained but its implementation should be improved.

(d) Seafarers area.

Thai ship operators consider the seafarers area as an important issue. In the evaluation of existing government measures, the reduction in the number of Thai seafarers: from 75% to 50% is considered a moderately useful and moderately effective measure, which should be improved. However, Thai ship operators considered that this measure should be continued. This will allow Thai ship owner to hire more foreign seafarers since there is a shortage in every level of seafarers in Thailand.

Besides this measure, there are nine additional important problems that need to be resolved: firstly, there is a lack of co-operation among government units in controlling and supporting the maritime education and training institutions. Support from the private sector is also found lacking. Secondary, there are a number of Thai seafarers who do not receive certificates issued in accordance with STCW 78/95 and therefore are not accepted to work on Thai ships. The other seven important problems are high training expenses for seafarer program; weakness of the articulated education system; shortage of maritime personnel in every level; shorter sea service life of Thai seafarers; insufficient maritime personnel knowledge and understanding; lack of cooperation and discussion between ship owners and training center; and lack of ships for training need be resolved.

In order to resolve the problems, Thai ship operators expressed their opinions that the government should set up clear objectives and

goals for maritime human resources development. The government should increase personnel quality to meet international standards, so as to serve not only the Thai market, but also the international market. The efficiency of the maritime education and training institutions with appropriate training courses and high quality course instructors or trainers to raise the quality of Thai seafarers to meet the standard of STCW 78/95 are recommended (Sletner 2000). This recommendation also includes a proper selection of cadets admitted for training. Beside these, financial assistance should be provided for training of seafarers and repatriation costs (Ledger and Roe 1992). Kikauer and Morris (2002) provided an example of the German shipping industry sponsored training and recruitment programs on the Kiribati atolls, and continues to invest significant sums into their training school.

(e) Legislation area.

Legislation is considered by Thai ship operators as being important to the development of a national merchant fleet. At present, the Thai government has not implemented any measures in the legislation area. However, there are five important problems. Most laws, rules and regulations do not follow international standards, such as the Thai Vessel Act, 1938 and the Navigation in Thai Waters Act, 1913. This causes inconvenience to Thai ship operators. Some amendment of rules, regulations and law are not announced to the relevant groups. Mercantile Marine Promotion Act Ship Mortgages and Maritime Liens Act, and Carriage of Goods by Sea Act are also important problems for Thai shipping operators.

However, in order to resolve these problems, the government might amend laws, rules and regulations (Maritime Industry Authority of the Philippines 1999). Thai ship operators recommend reform of the Merchant Marine Promotion Act and review of regular practices applying to the provision of shipping services and bring them in accordance with international practices. The addition of maritime laws and the revision of Carriage of Goods by Sea Act;

Arrest of Ship Act; and Ship Mortgages and Maritime Liens Act are also recommended by Thai ship operators.

(f) Ship registration area.

Ship registration is an important area for Thai ship operators. Ships under construction and purchased in other countries are allowed to register without any need to bring evidence of the ships into the country. This measure is found to be useful, but moderately effective and so its implementation should be improved. There are two important problems: in the renewal of ship using license, the owner has to bring the ship certificate back to Thailand; both the classification society and Thai Marine department need to inspect the ship. Thai ship operators request the Marine department, who is responsible for the issuance of ship registration and ship license, to review the ship registration process and ship license renewal process to be as simple as the process of second registry. The second register of a country generally has most of the characteristics of an open register, i.e. increased crew flexibility and access to more beneficial taxation regime. This measure was implemented in UK, Korea and the countries in the ESCAP region (Ledger and Roe 1992; Lee 1996; Cho 2002; ESCAP 1999).

(g) Government administration.

Government administration is considered less important for Thai ship operators. However there are three very important and two important problems impeding the development of a national merchant fleet. At the time of the survey, the Office of Maritime Promotion Commission (OMPC) was regarded as having little authority to perform its duty and it lacked expertise in planning an organization management system to the international standard. Since the end of 2002 after the government organization reform, the OMPC has been amalgamated with the Harbor Department to form a new Marine Department. The new department is expected to have enough unified capabilities to implement the recommended policies

and measures. However, Thai ship operators recommend Thai government to have clear regulatory framework, to minimize bureaucracy, and to strengthen the maritime administration. The last recommended measure is also implemented in the Philippines (Maritime Industry Authority of the Philippines 1999).

(h) Cargo reservation area.

Cargo reservation is considered less important to the development of national merchant fleet. However Thai ship operators evaluate the existing measures of cargo reservation to be useful but less effective, and bilateral agreement to be moderately useful and less effective. They found that their businesses do not receive any benefit from these two measures especially in the oil tanker business. The study also found four important problems associated with the cargo reservation scheme. In principle, all Thai ships should receive the privilege from this measure, but in practice only TMN receives the entire contract from the government. Government Units have not supported the use of other Thai ships. Most of the cargo imported by the Thai government use the CIF basis regardless of whether Thai ships actually carry the cargo. There are some weak points in the cargo reservation scheme that allows the operators to avoid the use of Thai ships.

In spite of all the above problems, Thai ship operators still insist to have this cargo reservation scheme. They require the Thai government to revise the routes and bidding process and cancel all exclusive privileges to TMN. This measure is presently under review by the Marine Department, who has authority to justify either abolishing or improving the implementation of the cargo reservation scheme.

(i) Establishment of a national shipping line.

Establishment of a national shipping line is expected to be an important area for the expansion of the national merchant fleet. Thai ship operators consider this area less important. However,

it should be eventually established by the government, it would be regarded as a direct competitor to other Thai ships and would receive various privileges from the Thai government. This area is therefore considered not important to their own fleet development.

Thai ship operators evaluate that the establishment of the national shipping line is moderately useful and less effective. Since the national shipping line will be established by giving authority to TMN to act as a core business in raising the funds from outside. Private sector dares not invest a large amount of money in TMN. Thai ship operators have more confidence of success in their own business management than to rely on TMN. Therefore, they rate the establishment of a national shipping line measure moderately useful and less effective.

Moreover there are one very important and four important problems resulting from the implementation of this measure. The establishment of national shipping line has not been finalized due to the political changes in the Ministry of Transport, cabinet reshuffles, and changes of government fiscal policies. TMN has privileges through the cargo reservation scheme over other private operators in the freight bidding process of the government cargo. It does not operate the business in accordance with the market mechanism. Its operation does not affect the Thai ship companies in carriage of government cargoes. Since TMN does not have its own ships, it operates by chartering foreign ships to carry Thai government cargo. Therefore, Thai ship operators agree that Thai government should not establish a national shipping line, and should balance privileges for all of the Thai ships.

Iheduru (1992) provided an example of West African shipping lines as "*anaemic charity cases, cases in need of massive blood transfusion*" (Newswatch, 29 July, 8 (1991) cited in Iheduru 1992). Very few investors would risk their money on them and finally "*the government must give it more subsidies which end up being invested in money-glazing, ageing fleets and a bloated bureaucracy*" (Iheduru 1992). Jenssen (1993) stated that the general

policy to solve these problems was to privatize rather than to restructure the companies or part of them. China had an experience in setting up and reforming state-owned enterprises in 1958 and 1978 (Sun and Zhang 1999).

5. Conclusions and Recommendations

Based on the experience from other countries (Wannakrairoj 2004a), twelve areas have been identified as being important to the development of national merchant fleet. The survey results indicate that only six areas are considered very important and important to the development of Thai merchant fleet. The very important areas are financial support, marketing, and taxation incentives. Six important areas are seafarers, legislation, and ship registration. The rest of the areas are considered less important and not important.

The Thai government has implemented several measures covering six of the twelve areas. In the evaluation of the usefulness and effectiveness of these existing government measures, there are two very useful and one useful measure, which are effective. These measures, which should be continued, are exemption on corporate income tax; imported ship duties; ship duties; and ship selling tax. Eight measures are considered useful but moderately effective and less effective. These are maritime loan fund; vessel rent tax; value added tax refunds; personal income tax; withholding tax; dividends income tax; ship registration process; and cargo reservation scheme. These measures should be continued but require some improvements. Seafarer measure, which is moderately useful and moderately effective, should be continued. The other two moderately useful and less effective measures: bilateral agreements and national shipping line establishment should be abolished.

The last part of this study investigates fifty-four problems to the development of the national merchant fleet. Thai ship operators rate five problems as very important. These are value added tax refund take a long time; policies and plans in establishing a national

shipping line are not stable; the Thai bureaucratic system stills lack cooperation among various departments; government does not understand the needs of maritime business; supportive maritime bureau may not have authority to perform its duty. Forty problems are rated as important, but some of them may result from ineffective implementation of the government measures. The rest of the important problems are not relevant to these implemented measures. However, all of them need to be resolved.

In order to resolve the very important and important problems impeding the development of the Thai merchant fleet, the following sixteen necessary improvements in nine important areas are recommended.

(1) Ministry of Finance and Bank of Thailand should continue and improve the existing measure of financial support by providing sufficient funds and reviewing the terms and conditions of the maritime loan funds.

(2) Bank of Thailand should initiate a policy to encourage domestic commercial banks to provide loans to Thai shipping companies with competitive terms compared to other countries.

(3) A permanent ship financing revolving fund should be established.

(4) The use of Thai ships should be promoted by the Thai government in order to increase Thai ship operators' marketing competitiveness and cargo base expansion.

(5) The current taxation incentives, which are very useful and useful, should be maintained.

(6) The Thai government should improve efficiency of the maritime education and training institutions with appropriate training courses and high quality courses instructors or trainers for Thai cadet students to meet the standard of STCWS 78/95 and the demand for the Thai ships as well as for foreign ships.

(7) Financial assistance should be provided for seafarer training.

(8) The Maritime Promotion Bureau of Marine Department

should have clear regulatory framework, to minimize bureaucracy and to strengthen the maritime administration in order to gain efficient implementation of the recommended government policies and measures.

(9) The Marine Department, which is responsible for the issuance of ship registration and ship license, should review ship registration and ship renewal process to be as simple as the process of second registry.

(10) The government measure that allows registration of ships under construction or purchased in other countries should be continued.

(11) The cargo reservation scheme should be improved by reviewing routes and bidding process.

(12) Bilateral agreement of cargo reservation should be abolished.

(13) The establishment of national shipping line should be cancelled.

(14) TMN should be fully privatized. Any privileges to TMN should be cancelled

(15) Maritime laws, rules, and regulations should be amended in order to facilitate the provision of shipping services and international practices.

(16) Additional laws, rules, and regulations should be drafted and enacted in order to comply with international conventions and practices.

These remedial recommendations for the improvement of existing measures may lead to more useful policies and measures, and to more effective operation of the Thai merchant fleet in the global market in the future.

6. Limitations and Recommendations for Further Research

After the data had been obtained through questionnaires, the data were edited. It was found that some of the questions were not answered. A survey by telephone interview was then employed in order to fill these blank responses.

In the survey method using a comprehensive questionnaire, all participants were asked exactly the same questions. This questionnaire covered many areas. Some participants had limited knowledge in some areas such as legislation, hence did not provide complete responses. Despite efforts to eliminate blank responses it was not possible to do so completely. Therefore, remaining blanks were not completed in the final results. This was not deemed to be a major factor in the overall results.

During the interviews of the Thai ship operators, it was suggested that maritime laws, rules and regulations should be amended and additional ones should be enacted in order to facilitate the improvement of Thai shipping services. This area is however beyond the scope of this research and its detail study should be conducted separately as further research work.

This study covered a wide range of issues related to the development of the Thai merchant fleet. It is however restricted to the views of Thai ship operators only. Thai maritime government officials are directly involved in the formulation and implementation of government policies and measures, their opinions on these issues should also be surveyed in order to gain a full insight of existing problems and obstacles. This result will be presented in the next paper.

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Appendices

Appendix A

Table A-1 List of Thai Ship Operators Selected for Study Survey

No	Name of Company	Participation in Survey
Dry Cargo Vessel Company		
1	Jutha Maritime (Public) Co., Ltd.	No
2	Nam Yuen Yong Shipping Co., Ltd.	Yes
3	Navee Supply Co., Ltd.	No
4	Ngow Hock Agency Co., Ltd.	Yes
5	Pacific Sea Trans Line Co., Ltd.	No
6	Phulsawat Navy Co., Ltd.	Yes
7	Precious Shipping (Public) Co., Ltd.	Yes
8	Regional Container Lines (Public) Co., Ltd.	Yes
9	Sang Thai Navigation 1977 Co., Ltd.	No
10	Siam Petra International Co., Ltd.	No
11	Thai Maritime Navigation Co., Ltd.	No
12	Thai Commercial Line Co., Ltd.	No
13	Thoresen (Bangkok) Co., Ltd.	Yes
14	Unithai Line (Public) Co., Ltd.	Yes
15	Wong Samuth Navy Co., Ltd.	Yes
Liquid Bulk Carrier Company		
1	B.P.P. Supply Co., Ltd.	Yes
2	Big Sea Co., Ltd.	Yes
3	C&P Co., Ltd.	No
4	C.S.K. Marine Co., Ltd	Yes
5	Delta Shipping Co., Ltd.	Yes
6	Khun Nathee Co., Ltd.	Yes
7	Maritime Dolphin Co., Ltd.	Yes
8	Nathalin Co., Ltd.	Yes
9	Navakun Transport Co., Ltd.	No
10	P.I.N.K. Transport and Trading Co., Ltd.	Yes
11	P.S.V. Supply Co., Ltd	Yes
12	Seaman Ship Co., Ltd.	Yes

No	Name of Company	Participation in Survey
13	Siam Mongkol Marine Co., Ltd.	Yes
14	Thai International Tanker Co., Ltd.	Yes
15	Thai Oil Marine Co., Ltd.	Yes
16	V.L. Enterprises Co., Ltd.	Yes
17	V.S.P. Marine Shipping Co., Ltd.	No
18	Vision Marine Co., Ltd.	No
19	World Wide Transport Co., Ltd.	Yes

Source: Annual Report of Thai Ship Owners Association.

Note: Excluding Coastal Shipping Companies (Dry Cargo Vessel Company).

Appendix B

Table B-1 Important areas to the development of the national merchant fleet

Important Area	No. of Respondents for each Rank (Ordinal Scale)							Total No.
	12	11	10	9	8	7	6	
1. Financial Support	10	5	2	1	1	3	0	1
2. Taxation incentives	4	5	0	4	2	0	4	2
3. Marketing	2	6	3	0	3	1	2	4
4. Ship registration	0	0	6	2	2	3	0	0
5. Seafarers	3	1	3	3	3	4	1	0
6. National shipping line	0	0	1	0	1	0	0	0
7. Cargo reservation scheme	0	0	1	2	2	2	2	3
8. Legislation	0	2	3	4	2	4	4	0
9. Related international organizations	0	1	2	2	0	2	4	6
10. Government administration and operation	3	1	2	1	2	3	6	3
11. Shipbuilding	0	0	0	0	2	1	0	1
12. Maritime infrastructure and facilities	1	1	2	3	2	1	2	1
Overall								

Note: Ranking is in ascending order of importance

2 = most important, 1 = least important

Table B-2 Usefulness of existing measures to the development of the national merchant fleet

Measures	No. of Respondents for each Likert Scale					Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1					
1. Financial Support										
1.1 Maritime loan fund endowed by government through IFCT and EXIM Bank	12	7	3	0	1	23	4.26	1.01	5	Useful
<i>Area Total</i>							4.26			
2. Tax Incentives										
2.1 Exemption on corporate income tax.	15	8	0	0	0	23	4.65	0.49	1	Very useful
2.2 Exemption on ship import duties.	15	7	1	0	0	23	4.61	0.58	2	Very useful
2.3 Exemption on income tax from selling ships or rebates from insurance companies.	11	7	5	0	0	23	4.26	0.81	5	Useful
2.4 Exemption on income tax collected from vessel rental revenue.	8	10	4	0	1	23	4.04	0.98	7	Useful
2.5 Refund of value - added tax for buying ship, ship machineries, accessories and all materials imported.	14	5	4	0	0	23	4.43	0.79	4	Useful
2.6 Exemption on personal income tax for crews of Thai ships.	15	5	2	1	0	23	4.48	0.85	3	Useful
2.7 Reduction of withholding tax on the income earned by Thai ships used in international transport.	8	8	5	1	1	23	3.91	1.08	10	Useful
2.8 Exemption on income tax from dividends from the international shipping lines	9	8	2	3	1	23	3.91	1.20	10	Useful
<i>Area Total</i>							4.29			

Table B-2 Usefulness of existing measures to the development of the national merchant fleet

Measures	No. of Respondents for each Likert Scale					Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1					
3. Ship Registration										
3.1 Ships under construction or purchased in other countries are allowed to register without any need to bring the ship into the country for inspection.	9	7	4	2	1	23	3.91	1.16	9	Useful
	<i>Area Total</i>					3.91				
4. Seafarers										
4.1 Reduction in number of Thai national seafarers from 75% to 50%	4	4	7	4	4	23	3.00	1.35	14	Moderately useful
	<i>Area Total</i>					3.00				
5. National Shipping Line										
5.1 Stimulate the establishment of a National Shipping Line.	5	2	5	1	10	23	2.61	1.64	15	Moderately useful
	<i>Area Total</i>					2.61				
6. Cargo Reservation										
6.1 Cargo reservation covering 7 routes between Japan, Korea, Taiwan, Hong Kong, Europe, US and Singapore to Thailand.	7	7	4	3	2	23	3.61	1.31	12	Useful
6.2 Bilateral Agreement between Thailand and China, Vietnam, Bangladesh, Germany	3	4	10	3	3	23	3.04	1.27	13	Moderately useful
	<i>Area Total</i>					3.33				
	Overall Total					3.57				1.0

Classification of Usefulness

Very useful: Means is from 4.51 to 5.00

Useful: Means is from 3.51 to 4.50

Moderately useful: Means is from 2.51 to 3.50

Table B-3 Ranking of usefulness of government measures by area

Area	Total No. of Measures	Classification				Area Average	Area Ranking	Classification
		Very Useful	Useful	Moderately Useful	Less Useful			
Financial Support	1	0	1	0	0	4.26	1	Useful
Taxation Incentives	8	2	6	0	0	4.29	2	Useful
Ship Registration	1	0	1	0	0	3.91	3	Useful
Seafarers	1	0	0	1	0	3.00	5	Moderately useful
National Shipping Line	1	0	0	1	0	2.61	6	Moderately useful
Cargo Reservation	2	0	1	1	0	3.33	4	Moderately useful
Total	14	2	9	3	0	3.57		

Classification of Usefulness

Very useful: Means is from 4.51 to 5.00

Useful: Means is from 3.51 to 4.50

Moderately useful: Means is from 2.51 to 3.50

Table B-4 Effectiveness of existing measures to the development of a national merchant fleet

Measures	No. of Respondents for each Likert Scale					Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1					
1. Financial Support										
1.1 Maritime loan fund endowed by government through IFCT and EXIM Bank	2	6	9	4	2	23	3.09	1.08	8	Moderately effective
<i>Area Total</i>							3.09			
2. Tax Incentives										
2.1 Exemption on corporate income tax.	8	5	6	3	1	23	3.70	1.22	1	Effective
2.2 Exemption on ship import duties.	8	6	5	2	2	23	3.70	1.29	2	Effective
2.3 Exemption on income tax from selling ships or rebates from insurance companies.	6	5	8	3	1	23	3.52	1.16	3	Effective
2.4 Exemption on income tax collected from vessel rental revenue.	5	3	11	2	1	22	3.41	1.10	5	Moderately effective
2.5 Refunds of value - added tax for buying ship, ship machineries, accessories and all materials imported.	4	2	8	7	2	23	2.96	1.22	10	Moderately effective
2.6 Exemption on personal income tax for crews of Thai ships.	8	0	10	4	1	23	3.43	1.27	4	Moderately effective
2.7 Reduction of withholding tax on the income earned by Thai ships used in international transport.	4	2	9	6	2	23	3.00	1.21	9	Moderately effective
2.8 Exemption on income tax from dividends from the international shipping lines	4	4	9	6	0	23	3.26	1.05	6	Moderately effective
<i>Area Total</i>							3.37			

Table B-4 Effectiveness of existing measures to the development of a national merchant fleet

Measures	No. of Respondents for each Likert Scale					Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1					
3. Ship Registration										
3.1 Ships under construction or purchased in other countries are allowed to register without any need to bring the ship into the country for inspection.	2	4	8	8	1	23	2.91	1.04	11	Moderately effective
<i>Area Total</i>						2.91				
4. Seafarers										
4.1 Reduction in number of Thai national seafarers from 75% to 50%.	3	3	8	3	6	23	2.74	1.36	12	Moderately effective
<i>Area Total</i>						2.74				
5. National Shipping Line										
5.1 Stimulate the establishment of a National Shipping Line	1	0	4	9	9	23	1.91	1.00	15	Less effective
<i>Area Total</i>						1.91				
6. Cargo Reservation										
6.1 Cargo reservation covering 7 routes between Japan, Korea, Taiwan, Hong Kong, Europe, US, and Singapore to Thailand.	2	2	4	9	6	23	2.35	1.23	13	Useful
6.2 Bilateral Agreement between Thailand and China, Vietnam, Bangladesh, and Germany	0	1	8	9	5	23	2.22	0.85	14	Moderately useful
<i>Area Total</i>						2.28				
Overall Total						3.01				

Classification of Effectiveness

Effective: Mean is from 3.51 to 4.50

Moderately effective: Mean is from 2.51 to 3.50

Less effective: Mean is from 1.51 to 2.50

Table B-5 Ranking of effectiveness of government measures by area

Area	Total No. of Measures	Classification			Area Average	Area Ranking	Classification
		Effective	Moderately Effective	Less Effective			
Financial Support	1	0	1	0	0	3.09	2
Taxation Incentives	8	3	5	1	0	3.37	1
Ship Registration	1	0	1	0	0	2.91	3
Seafarers	1	0	1	0	0	2.74	4
National Shipping Line	1	0	0	1	0	1.91	6
Cargo Reservation	2	0	0	2	0	2.28	5
Total	14	3	8	4	0	2.72	

Classification of Effectiveness

Effective: Mean is from 3.51 to 4.50

Moderately effective: Mean is from 2.51 to 3.50

Less effective: Mean is from 1.51 to 2.50

Less effective: Mean is from 1.51 to 2.50

Table B-6 Evaluation of the usefulness and effectiveness of existing government measures

Measures	Means Score			Classification	
	Usefulness	Effectiveness	Usefulness	Effectiveness	
1. Financial Support					
1.1 Maritime loan fund endowed by government through IFCT and EXIM Bank	4.26	3.09	Useful	Moderately effective	
<i>Area Total</i>					
2. Tax incentives					
2.1 Exemption on corporate income tax.	4.65	3.70	Very useful	Effective	
2.2 Exemption on ship import duties.	4.61	3.70	Very useful	Effective	
2.3 Exemption on income tax from selling ships or rebates from insurance companies.	4.26	3.52	Useful	Effective	
2.4 Exemption on income tax collected from vessel rental revenue.	4.04	3.41	Useful	Moderately effective	
2.5 Refund of value - added tax for buying ship, ship machineries, accessories and all materials imported.	4.43	2.96	Useful	Moderately effective	
2.6 Exemption on personal income tax for crews of Thai ships.	4.48	3.43	Useful	Moderately effective	
2.7 Reduction of withholding tax on the income earned by Thai ships used in international transport.	3.91	3.00	Useful	Moderately effective	
2.8 Exemption on income tax from dividends from the international shipping lines	3.91	3.26	Useful	Moderately effective	
<i>Area Total</i>					
	4.29	3.37			

Table B-6 Evaluation of the usefulness and effectiveness of existing government measures

Measures	Means Score		Classifications	
	Usefulness	Effectiveness	Usefulness	Effectiveness
3. Ship Registration				
3.1 Ships under construction or purchased in other countries are allowed to register without any need to bring the ship into the country for inspection.	3.91	2.91	Useful	Moderately effective
<i>Area Total</i>	3.91	2.91		
4. Seafarers				
4.1 Reduction in number of Thai national seafarers from 75% to 50%.	3.00	2.74	Moderately useful	Moderately effective
<i>Area Total</i>	3.00	2.74		
5. National Shipping Line				
5.1 Stimulate the establishment of a National Shipping Line.	2.61	1.91	Moderately useful	Less effective
<i>Area Total</i>	2.61	1.91		
6. Cargo Reservation				
6.1 Cargo reservation covering 7 routes between Japan, Korea, Taiwan, Hong Kong, Europe, US and Singapore to Thailand.	3.61	2.35	Useful	Less effective
6.2 Bilateral Agreement: between Thailand and China, Vietnam, Bangladesh, Germany.	3.04	2.22	Moderately useful	Less effective
<i>Area Total</i>	3.33	2.28		
Overall Total	3.57	3.01		

Table B-7 Problems and obstacles in financial support area

Problems and Obstacles	No. of Respondents for each Likert Scale				Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1				
1. Insufficient financial support provided by the government.	10	4	7	1	1	23	3.91	1.16	3
2. Delay in establishing the permanent maritime fund.	6	8	8	1	0	23	3.83	0.89	4
3. Domestic financial institutions are reluctant to provide loans to shipping companies.	8	7	4	3	1	23	3.78	1.20	5
4. Domestic interest rate is higher than foreign rate.	7	10	4	2	0	23	3.96	0.93	2
5. The loan to asset ratio in Thailand is less than those in other countries.	3	7	7	4	2	23	3.22	1.17	9
6. Loan repayment period is relatively short.	8	6	5	3	1	23	3.74	1.21	6
7. Grace period in Thailand is shorter than those in other countries.	5	7	7	3	1	23	3.52	1.12	7
8. Banks do not authorize mortgages for the ships that hold provisional certificate (temporary registration).	3	8	8	2	2	23	3.35	1.11	8
9. Government sector does not understand the characteristics of the maritime business.	15	6	1	0	1	23	4.48	0.95	1
Area Average						3.75	1.08		Important

Classification of Importance

Very important: Mean is from 4.51 to 5.00
 Moderately important: Mean is from 2.51 to 3.50

Important: Mean is from 3.51 to 4.50
 Less important: Mean is from 1.51 to 2.50

Table B-8 Problems and obstacles in marketing area

Problems and Obstacles	No. of Respondents for each Likert Scale					Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1					
1. Thai importers and exporters do not show their patriotism by specifically supporting the use of Thai ships.	7	7	6	2	0	22	3.86	0.99	4	Important
2. Thai importers and exporters have low bargaining power with the shipping operators in choosing the use of Thai ships.	11	8	1	2	0	22	4.27	0.94	1	Important
3. 95% of government's imported goods are bought at CIF prices so they may not be carried by Thai ships.	12	4	5	1	0	22	4.23	0.97	2	Important
4. Thai shipping operators have a higher operating cost than foreign operators.	6	9	0	4	3	22	3.50	1.44	7	Moderately important
5. The Thai fleet, in a foreigner's view, does not reach international standards both in quality of services and safety.	4	6	5	6	1	22	3.27	1.20	9	Moderately important
6. Thailand is not located on the main shipping route of the world.	6	5	5	2	4	22	3.32	1.46	8	Moderately important
7. Low frequency of service of Thai fleet.	7	8	3	2	2	22	3.73	1.28	5	Important
8. Lack of a marketing network.	9	9	2	1	1	22	4.09	1.06	3	Important
Area Average						3.78	1.17			Important

Classification of Importance

Very important: Mean is from 4.51 to 5.00

Moderately important: Mean is from 2.51 to 3.50

Important: Mean is from 3.51 to 4.50

Less important: Mean is from 1.51 to 2.50

Table B-9 Problems and obstacles in taxation incentives area

Problems and Obstacles	No. of Respondents for each Likert Scale				Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1				
1. There are different definitions in calculating tax collection.	11	11	0	1	0	23	4.39	0.72	2
2. Value-added tax refund takes a long time.	14	9	0	0	0	23	4.61	0.50	1
3. For a value-added tax refund, Revenue Department often inspect the company account, which leads to complexity in operation.	8	10	3	1	1	23	4.00	1.04	3
Area Average						4.33	0.76		Important

Classification of Importance

Very important: Mean is from 4.51 to 5.00

Moderately important: Mean is from 2.51 to 3.50

Important: Mean is from 3.51 to 4.50
Less important: Mean is from 1.51 to 2.50

Table B-10 Problems and obstacles in seafarers area

Problems and Obstacles	No. of Respondents for each Likert Scale				Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2					
1. Some Thai seafarers do not receive a certificate issued in accordance with STCW 78/95.	8	11	2	2	0	23	4.09	0.90	2
2. Shortage of seafarers in every level.	5	10	4	3	0	22	3.77	0.97	5
3. Lack of co-operation between government units in controlling and supporting the maritime training center.	9	10	3	1	0	23	4.17	0.83	1
4. Sea service life of Thai seafarers is shorter than those in other countries.	4	12	5	1	1	23	3.74	0.96	6
5. Lack of co-operation and discussion between ship owners and training center.	7	6	5	3	1	22	3.68	1.21	8
6. Lack of ships for training - both training ships for cadets and cargo ship for apprentices.	4	7	9	3	0	23	3.52	0.95	9
7. Insufficient maritime personnel knowledge and understanding.	6	7	7	3	0	23	3.70	1.04	7
8. Weakness of the articulated education system.	6	9	6	1	1	23	3.78	1.04	4
9. Training expenses for seafarer program are quite high.	9	6	4	3	1	23	3.83	1.23	3
Area Average							3.81	1.02	Important

Classification of Importance

Very important: Mean is from 4.51 to 5.00

Moderately important: Mean is from 2.51 to 3.50

Important: Mean is from 3.51 to 4.50

Less important: Mean is from 1.51 to 2.50

Table B-11 Problems and obstacles on legislation

Problems and Obstacles	No. of Respondents for each Likert Scale				Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2					
1. Mercantile Marine Promotion Act, B.E.2521	4	9	8	1	0	22	3.73	0.83	3
2. Carriage of Goods by Sea Act, B.E. 2534	3	9	9	1	0	22	3.64	0.79	5
3. Arrest of Ships Act, B.E. 2534	2	8	9	3	0	22	3.41	0.85	6
4. Ship Mortgages and Maritime Liens Act, B.E. 2537	5	8	7	2	0	22	3.73	0.94	3
5. Complicated law and regulations that do not follow international standards.	11	9	2	0	0	22	4.41	0.67	1
6. There is no announcement of the cancellation of law to the relevant groups.	8	11	3	0	0	22	4.23	0.69	2
Area Average							3.86	0.79	Important

Classification of Importance

Very important: Mean is from 4.51 to 5.00

Moderately important: Mean is from 2.51 to 3.50

Important: Mean is from 3.51 to 4.50
Less important: Mean is from 1.51 to 2.50

Table B-12 Problems and obstacles in ship registration area

Problems and Obstacles	No. of Respondents for each Likert Scale				Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1				
1. In the renewal of license, the owner has to bring the ship certificate back to Thailand.	9	9	3	0	2	23	4.00	1.17	1
2. Both the classification society and Thai Marine Department need to inspect the ship.	7	10	3	0	3	23	3.78	1.28	2
3. Provisional certificate is only valid for six months, while in other countries it is for one year.	5	9	3	2	4	23	3.39	1.41	4
4. Provisional certificate will expire immediately as soon as the ships are brought into Thailand.	7	6	4	2	4	23	3.43	1.47	3
5. Rules are regulations of flagging in area complicated.	6	6	2	4	4	22	3.27	1.56	5
Area Average						3.58	1.38		

Classification of Importance

Very important: Mean is from 4.51 to 5.00

Moderately important: Mean is from 2.51 to 3.50

Important: Mean is from 3.51 to 4.50
Less important: Mean is from 1.51 to 2.50

Table B-13 Problems and obstacles on government administration and operation

Problems and Obstacles	No. of Respondents for each Likert Scale				Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1				
1. Government does not understand the needs of maritime business.	16	6	1	0	0	23	4.65	0.57	2
2. The Thai bureaucratic system stills lack of cooperation among various departments.	17	5	1	0	0	23	4.70	0.56	1
3. Supportive maritime department may not have enough authority to perform its duty.	15	7	0	1	0	23	4.57	0.73	3
4. Lack of expertise in planning the organization management system to be international practices.	13	4	4	0	2	23	4.13	1.25	4
5. Government does not perceive the importance of hiring permanent personnel.	10	3	4	2	4	23	3.57	1.56	5
Area Average							4.32	0.94	Important

Classification of Importance

Very important: Mean is from 4.51 to 5.00

Moderately important: Mean is from 2.51 to 3.50

Important: Mean is from 3.51 to 4.50
Less important: Mean is from 1.51 to 2.50

Table B-14 Problems and obstacles in a cargo reservation scheme

Problems and Obstacles	No. of Respondents for each Likert Scale				Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1				
1. Lack of support from government units in the cargo reservation scheme.	7	9	4	1	2	23	3.78	1.20	3
2. Most of the cargoes, which are imported by the Thai government, use CIF basis regardless of whether the cargo is carried by Thai ships or not.	11	9	2	1	0	23	4.30	0.82	2
3. There are some weak points in the cargo reservation scheme that allows the operators to avoid the use of Thai ships.	5	11	4	0	1	21	3.90	0.94	4
4. In principles, Thai ships should receive the privilege from the measure, but in practice only TMN receives the entire contract from the government.	14	6	0	1	1	22	4.41	1.05	1
Area Average							4.10	1.01	Important

Classification of Importance

Very important: Mean is from 4.51 to 5.00

Moderately important: Mean is from 2.51 to 3.50

Important: Mean is from 3.51 to 4.50
Less important: Mean is from 1.51 to 2.50

Table B-15 Problems and obstacles in establishing a national shipping line

Problems and Obstacles	No. of Respondents for each Likert Scale					Total Number	Means	Std. Deviation	Rank	Classification
	5	4	3	2	1					
1. TMN does not operate the business in accordance with market mechanism.	11	9	2	0	0	22	4.41	0.67	3	Important
2. TMN does not have its own ships.	13	5	4	0	1	23	4.26	1.05	5	Important
3. TMN has privileges above other private operators in the freight bidding process of the government's cargo.	13	7	2	0	0	22	4.50	0.67	2	Important
4. TMN reduces the opportunity for other Thai shipping companies in the carriage of government cargo.	11	7	4	0	0	22	4.32	0.78	4	Important
5. Policies and plans in establishing a National Shipping Line are not stable. They always changed in accordance with the changes of government.	14	9	0	0	0	23	4.61	0.50	1	Very important
Area Average							4.42	0.73		Important

Classification of Importance

Very important: Mean is from 4.51 to 5.00

Moderately important: Mean is from 2.51 to 3.50

Important: Mean is from 3.51 to 4.50
Less important: Mean is from 1.51 to 2.50

Table B-16 Ranking of problems and obstacles by area

Area	Total No. of Problems	Classification			Area Average	Area Classification	Area Ranking
		Very Important	Important	Moderately Important			
Financial support	9	0	7	2	0	3.75	Important
Marketing support	8	0	5	3	0	3.73	Important
Taxation incentives	3	1	2	0	0	4.33	Important
Seafarers	9	0	9	0	0	3.78	Important
Legislation	6	0	5	1	0	3.73	Important
Ship registration	5	0	2	3	0	3.58	Important
Government administration	5	3	2	0	0	4.13	Important
Cargo reservation	4	0	4	0	0	4.41	Important
National shipping line	5	1	4	0	0	4.42	Important
Total	54	5	40	9	0	3.98	

Classification of Importance

Very important: Means is from 4.51 to 5.00

Moderately important: Means is from 2.51 to 3.50

Important: Means is from 3.51 to 4.50

Less important: Means is from 1.51 to 2.50