

APPENDIX OF CHAPTER 12

12.1 PT PANN Multi Finance

(1) Introduction

In the early stages of PT. PANN Multi Finance's establishment in 1974, its business activities consisted of ships financing, including new building and second hand to be sold on cash basis, on installment; or through leasing arrangements with the shipping companies concerned.

The Minister of Finance Decree No.1105/KMK, 013/1991 dated November 12, 1991, expanded the company activities to cover General Leasing (Vessels and other capital goods), Factoring and Consumers Financing.

So far the company is engaged in general leasing, where the objects financed were ships, aircraft, hotels and truck trailers.

Through ships financing, PT. PANN Multi Finance has supported:

- inter-island transportation for staple and other goods as well as passengers;
- transmigration transport;
- transportation of export goods;
- growth of the maritime industry;
- creation of job opportunities;
- development of the fishing industry;
- development of national shipping companies and domestic shipyards; and,
- regional development and equal distribution of income.

PT. PANN Multi Finance is also implementing government projects, namely the building and leasing of 31 tuna long liner ships.

By financing aircraft, the company has assisted in:

- improving domestic as well international services of air transport for both goods and passengers;
- developing the national air transport services industry;
- stimulating the growth of the tourism sector; and,
- creating job opportunities.

By financing truck trailers, PT. PANN Multi Finance supported:

- the flow of goods to and from the ports for inter-island goods as well as for

export;

- load/unloading of ships; and,
- employment opportunities.

Through hotel financing, the company has contributed to the:

- hotel industry; and,
- growth of the tourism sector.

Due to the changes in the business environment, the company's focus has shifted back to its core business, namely ships.

In line with the government's program to intensify the utilization of marine resources, PT. PANN Multi Finance through its activities of ships financing is taking an active share in the development of the sea communication and fishery sector.

(2) Business Results

The Financial Report shows: (in billions of rupiah)

	2001	2002
* Revenue	: 134.66	280.08
* Expenses	: 228.24	338.72
* Profit (loss)	: (93.58)	(58.63)
* Correction of Previous Year's Profit	: 32.46	-
* Profit before income tax	: (61.12)	(58.63)
* Total Assets	: 2,902.95	2,809.93
* Current Ratio	: 62.0%	58.0%

Procurement of Capital Goods: (capital goods so far proceeded by the company)

- Vessels (Sea Transportation)	: 133 units
- Fishing Vessels	: 31 units
- Hotels	: 3 units
- Aircraft	: 10 units
- Truck Trailers	: 15 units

Production Tools: The main production of the company up till 2002 consisted of the procurement of vessels, air craft, hotels, and truck trailers. PT. PANN Multi Finance presently owns:

- * 51 vessels (163,192 Dwt + 800 Brt + 220 PNP + 4,423 Grt + 1,200 GT) operated by 28 shipping companies,
- * 10 aircrafts operated by 3 airlines
- * 2 hotels operated by 2 companies

Company Performance: Based on the criteria stated in the Minister of Finance Decree No. 826/KMK.013/1992 dated 24th July 1992, PT PANN Multi Finance's performance was rated as "unhealthy".

Tax & Dividend: For 2002 there was no obligation to pay taxes and dividend, because of the losses during the previous years, the company is still at a loss in aggregate.

Assistance to Small Business and Cooperation: PT. PANN Multi Finance's assistance funds that has been successfully accumulated in 2001 was Rp. 9,686,34 million, derived from: (in million of rupiah)

- Share of the company's profit	:	
(allocation 1989 up to 97)	:	3,802.01
- Repayment of PUKK loans (principal)	:	4,845.35
- Income (interest, giro and others)	:	1,038.98

As a result, Rp. 8, 935.17 million has been channeled to small business and cooperation.

(3) Company Objectives

The company aims to create financial services that are managed professionally and efficiently, using finances from internal as well as external sources in a correct, fast and diligent manner, thus achieving sustainable profit levels, earning the customers trust as a solid company with high competitiveness supported by quality human resources, enabling the company to respond to the dynamics of fast developing and changing business.

Quantitative goals for 2003:

- Operational earnings	:	Rp. 97.89 billion
- Total earnings	:	Rp. 137.42 billion
- Profits	:	Rp. 37.02 billion
- Profit Margin	:	Rp. 37.82 %

(4) Company Strategy

Refocusing of business: To refocus its business, the company is for the time being concentrating on its core business, namely ships financing. Financing of other capital goods are temporarily stopped, awaiting improvement of the national economy.

Optimizing the operation of production means: All the production means are to be operated optionally. Whenever possible unproductive or non-operating production means that create burdens of cost are to be sold.

Debt Collection: Debt collection to be intensified through the Debt Collection Team. Outsourcing of debt collection whenever necessary is considered more effective and advantageous. To reward prime operators who fulfill their obligations properly, they will be given priority on further financing.

Restructuring of Debt: Government loans for the Financing of aircraft and fishing vessels are to be restructured. Concessions are being requested with regard viz, the forgiving of penalties, rescheduling of capital repayments, conversion of loans into equity to improve the capital structure of the company.

Internal Revitalizing: Internal improvements to be achieved through better organizational structure, adjustment of Human Resources, optimization of employment of production means / capital goods intensification of debt collection and promotion of hard work ethics.

12.2 BMI (Bank Mandiri Indonesia)'s Finance for Businesses (corporate banking)

(1) Introduction

BMI is government-owned and is the largest bank in Indonesia after the merger of four former state banks; namely, BAPINDO (Development Bank), EXIM Bank (Export Import Bank), Bank DAGAN NEGAEA (Industrial & Commercial Bank), Bank BUMI DAYA (National Bank).

BMI's corporate banking directorate provides private and government-related customers with a range of loan and deposit products as well a variety of value-added services, such as trade finance services, cash management services and treasury services. BMI's lending products include loan facilities such as working capital and term loans and syndicated loans and non-funded loan facilities such as bank guarantees and letters of credit. Its deposit products include demand deposits, time deposits and certificates of deposit.

As of December 31, 2002, by value, on a consolidated basis, corporate customers represented 77.5% of BMI's total loan portfolio, of which Government-related entities accounted for 11.0%. In 2002, BMI extended Rp. 12.5 trillion in new loans to corporate customers, bringing the total corporate loan portfolio to Rp. 50.7 trillion. Also as of December 31, 2002, BMI held total deposits of Rp. 12,382 billion (US\$1,434 million) from 477 corporate customers and Rp. 65,392 billion (US\$7,360 million) from 691 Government-related customers. Deposits from corporate and Government-related customers represented, in aggregate, 42.5% of BMI's total deposits at the end of 2002.

(2) Details of loans

(a) By Economic Sector:

	2002	2001
Foreign currency:		
Manufacturing	15,940,259	11,118,555
Trading restaurant and hotel	2,112,997	2,110,727
Mining	1,722,031	1,316,843
Agriculture	1,588,469	1,080,991
Other services	1,583,105	1,439,446
Construction	1,423,625	1,255,969
Transportation, warehousing and communications	556,099	679,822
Electricity, gas and water	319,136	363,576
Social services	7,334	15,881
Others	653,449	1,238,630
	<u>25,906,504</u>	<u>20,620,440</u>
Total	65,417,248	48,339,302
Less: Allowance for possible losses	(8,906,545)	(6,100,252)
Deferred income	(164,284)	-
	<u>56,346,419</u>	<u>42,239,050</u>

(b) By Collectability:

	2002	2001
Current		
Special mention	44,451,924	30,972,027
Sub-standard	16,201,501	12,655,129
Doubtful	1,521,643	2,561,479
Loss	1,039,787	966,132
	2,202,393	1,184,535
	<u>65,417,248</u>	<u>48,339,302</u>
Less: Allowance for possible losses	(8,906,545)	(6,100,252)
Deferred income	(164,284)	-
	<u>56,346,419</u>	<u>42,239,050</u>

The non-performing loans ratio (consolidated gross basis) as of December 31, 2002 and 2001 is 7.28% and 9.75%, respectively (Bank only – 7.39% and 9.89% for 2002 and 2001, respectively). Included in loans classified as current as of December 31, 2002 are loans purchased from IBRA through “Program Penjualan Aktiva Kredit” (“PPAK”) amounting to Rp. 3,990, with an allowance for possible losses of Rp. 288,797, and deferred income of Rp. 164,284.

12.3 BRI (Bank Rakyat Indonesia)'s Finance for Micro Business

The micro business has shown encouraging growth year on year, despite the unstable conditions of the national economy. The positive results were reflected in the growth in *Kupedes*, *Simpedes* and other savings accounts both in terms of nominal value and the number of account holders.

For example, total *Kupedes* loan outstandings at the end of December 2002 stood at Rp. 12,011 billion, up by 22% over the Rp. 9,841 billion figure of 2001.

Kupedes loan is projected to continue its upward trend, as the term for the debtors with fixed income has been Rp. 50 million. By the end of 2002, the accumulated *Kupedes* loan facilities exceeded Rp. 72trillion. These loan facilities have been used by more than 30 million customers.

In the meantime, by the end of 2002 *Simpedes* deposits had shown very significant growth compared to the performance of the previous year. As one of BRI's leading savings products, *Simpedes* had succeeded in mobilizing public funds with a total amount of Rp 16,894 billion by the end of 2002, and this accounted for 71.95% of the total amount of savings at BRI's Units, which stood at Rp 23,480 billion. The figure is projected to continue to rise in the upcoming years.

BRI's extensive experience in providing a broad range of loans to the public and in mobilizing funds can be leveraged to grow lending and funding at the rural level through local BRI's Units. This will address the need of the rural customers for a banking facility. Its realization is reflected in the increasing number of BRI's Units in the far corners of Indonesia. The plan of online system further extends its services that facilitate customers' inter-region transaction activities, even to remote places that have been too difficult for the other commercial banks to reach.

During 2002, BRI developed and improved its micro-finance services with a very vast network. By the end of December 2002, the number of BRI's Units had risen to 3,916, while the number of Village Service Point had grown to 211. With the addition of more BRI's Units, especially in the rural areas, the local communities from the lower strata are now able to enjoy banking services, especially micro business financing.

In line with advancement in technology, BRI's Unit has also adopted information technology through the implementation of BRI's Unit BRINETs (online) at some BRI's Unit offices in stages. By the end of 2002, 115 BRI's Units were already connected to the BRINETs. These included 70 BRI's Units in the Jakarta area, 15 in Bandung, 10 in Semarang, 5 in Surabaya and 6 in Denpasar.

In 2002, based on the study of the Hong Kong-based UBS Warburg, BRI was deemed fit to be used as a benchmark for Indonesian banks.

BRI's existence and reputation, particularly the success stories of its BRI Unit, has been recognized by the international community, as reflected in the Sugianto Pioneer Award

given by the Microfinance Network in 1998, as well as the recognitions from international institutions.

In addition, the success stories of BRI Unit have also been published in various books and international journals. The institution has been receiving visitors from a number of foreign countries intent on developing micro finance in their respective nations.

12.4 BTN (Bank Tabungan Negara)'s Finance for Housing and Others

(1) Introduction

In accordance with the vision of BTN, namely to become a reputable and profitable bank engaging in non-subsidized housing financing sector, BTN has made efforts to increase the extensions of new non-subsidized credits. This was reflected in the composition in 2002 in the amount of 14%:86% compared to 24%:76% in 2001.

Being in the middle of a less advantageous condition compared to the other participants of recapitalization banks, BTN and several other banks suggested that some of the government's bonds be exchanged from fixed rate to variable rate. This is with the consideration that starting from August 2001, the SBI rate was above the average rate of the government's fixed-rate bonds. The Government, by virtue of the Letter of the Minister of Finance No. S-84/MK.01/2002 dated March 26, 2002 regarding the implementation of Conversion of FR Series Bonds into VR Series Bonds on March 26, 2002, had approved the conversion of Fixed Rate into Variable Rate of the government's bonds in BTN.

During the year 2002 in credit sector, BTN remained applying the prudential banking practice. This was reflected by the improvement of Credit Policies either for public or individual credits, improvement of Credit Information System and monitoring of the performance of Management Information System (MIS) on the Silver Lake Integrated Banking System (SIBS) and Models (CSM) aimed at improving the entire credit collectability and company's performance.

Activities in the field of human resources during the year 2002 were reflected in various policies included in the Human Resources restructuring. The intended Human Resources restructuring policies include the following: the preparation of process for the application of career hierarchy based on competency, performance and job grading, improvement of software of integrated Human Resources Information System (HRIS), adjustment of several policies related to the application of the new Human Resources system, and the staffing policy in Head Office and Branch Offices and evaluation of such staffing based on the new organizational structure.

In 2002, BTN had entered a new stage in the implementation of the new banking system. The on-line real-time system technology with IBM-AS 400 basis had been implemented in all outlets of BTN. This technology system will continuously be improved in the future. In line with the implementation of such banking system and in an effort to increase retail funds, especially savings and giro, BTN kept on making improvements on facilities and product features.

(2) Business Activities

Summary of business activities of PT. Bank Tabungan Negara (Persero) years 2002 and 2001 are presented in Table 12.1. During the year 2002, business activities of BTN increased in comparison with the same of the previous year. This condition is evidenced by the increase of assets by 2.12% from Rp. 26,509,197 million in 2001 to Rp. 27,071,977 million in 2002.

(3) Credits Extended

The position of loans extended up to and including the year 2002 before being deducted by provision for loan losses reached the amount of Rp.10,210,984 million, representing an increase of Rp.1,799,068 million or 21.39% in comparison with the same of the previous year amounting to Rp.8,411,916 million. The position of loans extended in the context of Home Ownership Credit (KPR) and Non Home Ownership Credit (Non KPR) (before being reduced by Provision for loan losses) reached the amount of Rp.9,557,575 million, representing an increase of Rp.1,474,050 million or 18.24% in comparison with the same of the 2001 period amounting to Rp.8,083,525 million, as described in Table 12.2.

Based on the composition of credit realization in the current year, there was a decrease in the realization of subsidized KPR from the total credit realization in the year 2001 in comparison with that of the year 2002. In 2001, the realization of subsidized KPR was 24.06% out of the total credit realization, while in 2002 the realization of subsidized KPR was 14.24%. This was in accordance with the management policy to focus on non-subsidized KPR as described in the diagrams illustrated in Figure 12.1.

Table 12.1 **BTN's Business Activities, 2001 and 2002**

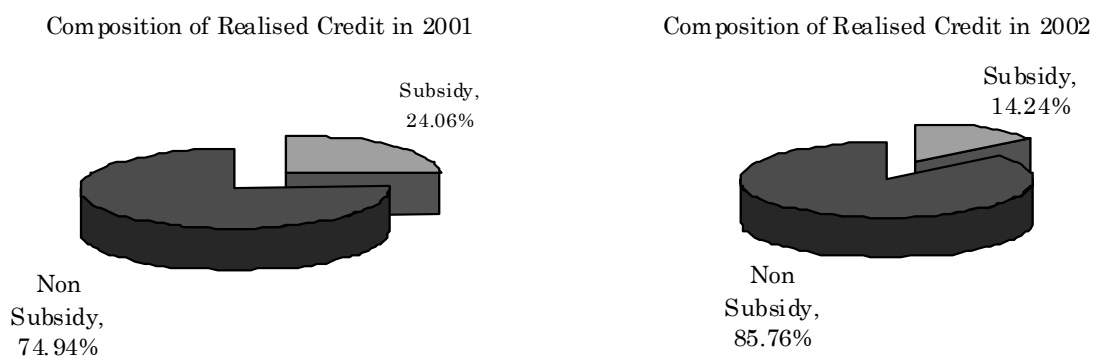
(Rp. Millions)

POSITION/STATUS	2002	2001	CHANGE (%)
Total assets	27,071,977	26,509,197	2.12%
Credits extended	10,210,984	8,411,916	21.39%
Placement and commercial papers	15,201,582	15,519,259	-2.05%
Equities	893,682	830,458	7.61%
Current Accounts	1,175,921	1,065,144	10.40%
Time Deposits	15,636,115	14,187,987	10.21%
Deposit Certificates	13,484	279,207	-95.17%
Savings	3,496,659	3,571,391	-2.09%
Commercial Papers Issued	216,590	679,673	-68.13%
Loans received	4,392,337	4,610,778	-4.74%
Total Income	3,983,090	3,089,012	28.94%
Total Expense	3,680,047	2,967,752	24.00%
Profit(Loss) Before Tax Credit	303,043	121,260	149.91%
Deferred Tax	152,186	(3,421)	-4548.58%
Current Year Profit(Loss)	150,857	124,681	20.99%
FINANCIAL RATIO			
Capitalization			
CAR-	11.39%	10.85%	4.98%
Fixed assets to capital-	55.61%	75.32%	-26.17%
Earning Assets			
Non-performing productive asset-	3.37%	3.90%	-13.59%
NPL-	4.76%	4.75%	0.21%
Provision for Losses of Earning Assets	4.17%	3.54%	17.80%
Fulfillment of Provision for Losses of Earning Assets	112.51%	123.21%	-8.68%
Remunerativeness			
ROA-	1.13%	0.49%	130.61%
ROE-	31.31%	25.06%	24.94%
NIM-	2.44%	1.24%	96.77%
BOPO-	93.04%	95.52%	-3.00%
Liquidity			
LDR- Inter-Bank Obligation	51.31%	46.28%	10.87%
Against Core Capital	-71.79%	10.75%	767.81%
Compliance			
Violation of LLL-	0.00%	0.00%	0.00%
Excess of LLL-	0.00%	0.00%	0.00%
GWM Rupiah-	5.21%	5.04%	3.37%
NOP-	7.42%	5.75%	29.04%

Table 12.2 Provision of Loan Services

	(Rp Millions)		
POSITION/STATUS	2002	2001	CHANGE(%)
Home Ownership Credit (KPR)	5.646.706	7.239.212	-22.00%
Non Home ownership Credit (Non KPR)	3.910.869	844.313	363.20%
Sub Total	9.557.575	8.083.525	18.24%
Credits To the Board of Directors			
And Employees	73.420	32.782	123.96%
Investment Credits	76.637	4.570	1576.96%
Working Capital Credits	503.352	291.039	72.95%
Sub Total	653.409	328.391	98.97%
Total	10.210.984	8.411.916	21.39%
Provision for Loan Losses	(682.293)	(311.035)	119.36%
Grand Total	9.528.691	8.100.881	17.63%

Figure 12.1 Composition of Realized Credit, 2001 and 2002



12.5 Japan's Experience in Public Ship Finance

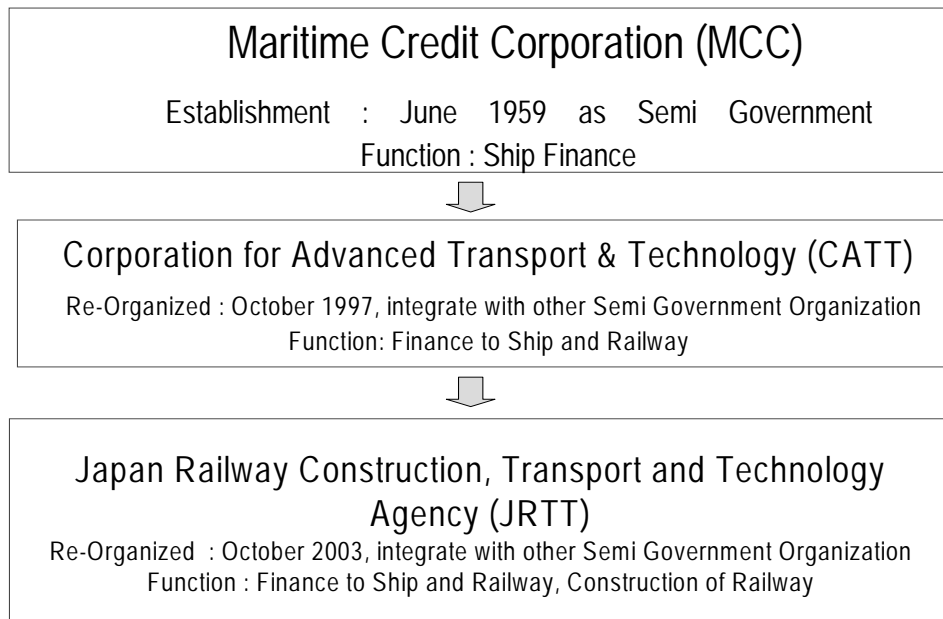
(1) History

Among various government assistance to the shipping sector in Japan, the one provided through the Maritime Credit Corporation (MCC) was the most significant with regard to ship finance. It was established in 1959 as a quasi-governmental organization to mainly replace wartime standard ships which provided unreliable passenger shipping services at that time. In 1966 the corporation expanded its coverage to cargo vessels.

Prime objective of MCC is centered on the contribution to the provision of adequate and smooth domestic shipping. Although the statement is simple, it aims to promote social stability and economic growth. From the beginning, MCC has kept its unique business method: joint building and vessel ownership.

In line with reforming governmental organizations and streamlining quasi-governmental entities, Maritime Credit Corporation was merged in Corporation for Advanced Transport and Technology (CATT) in 1997. Again, CATT was reorganized to Japan Railway Construction, Transport and Technology Agency (JRTT). Though experiencing those two organizational changes, however, MCC's services have continued with an unchanged method and procedure. Therefore this article still calls MCC as a body to provide public ship finance service.

Figure 12.2 Organizational Change

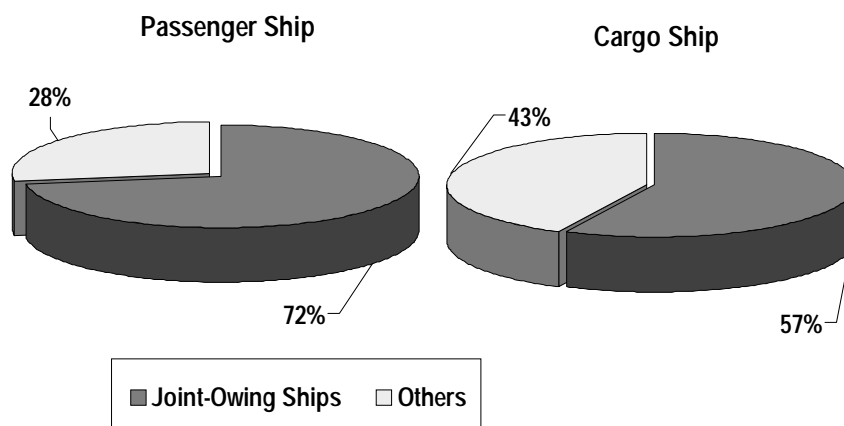


(2) Achievements

More than half of the domestic shipping vessels have been built through the joint building and vessel ownership method between shipowners and MCC. Until the year 2002, the method was adopted to 938 passenger vessels (863,000 gt in total) and 2,700 cargo vessels (2,954,000 gt in total). This is the most popular ship acquisition method since 1959. Even recently, during the period 1995-2000, the method had shares of 72% for passenger vessels and 57% for cargo vessels, respectively.

The Japanese domestic shipping industry is characterized as a mass of small-scale shipping companies. Generally speaking, such small companies lack assets, collateral to get finance and creditability of their business. Most of them therefore find it difficult to tap commercial finance to renew their vessels. However, the joint building and vessel ownership method can work well even among those companies because of its unique mechanism.

Figure 12.3 Share of Joint Building and Ownership Method in Five Years, 1995-2000



Source: MLIT, Japan

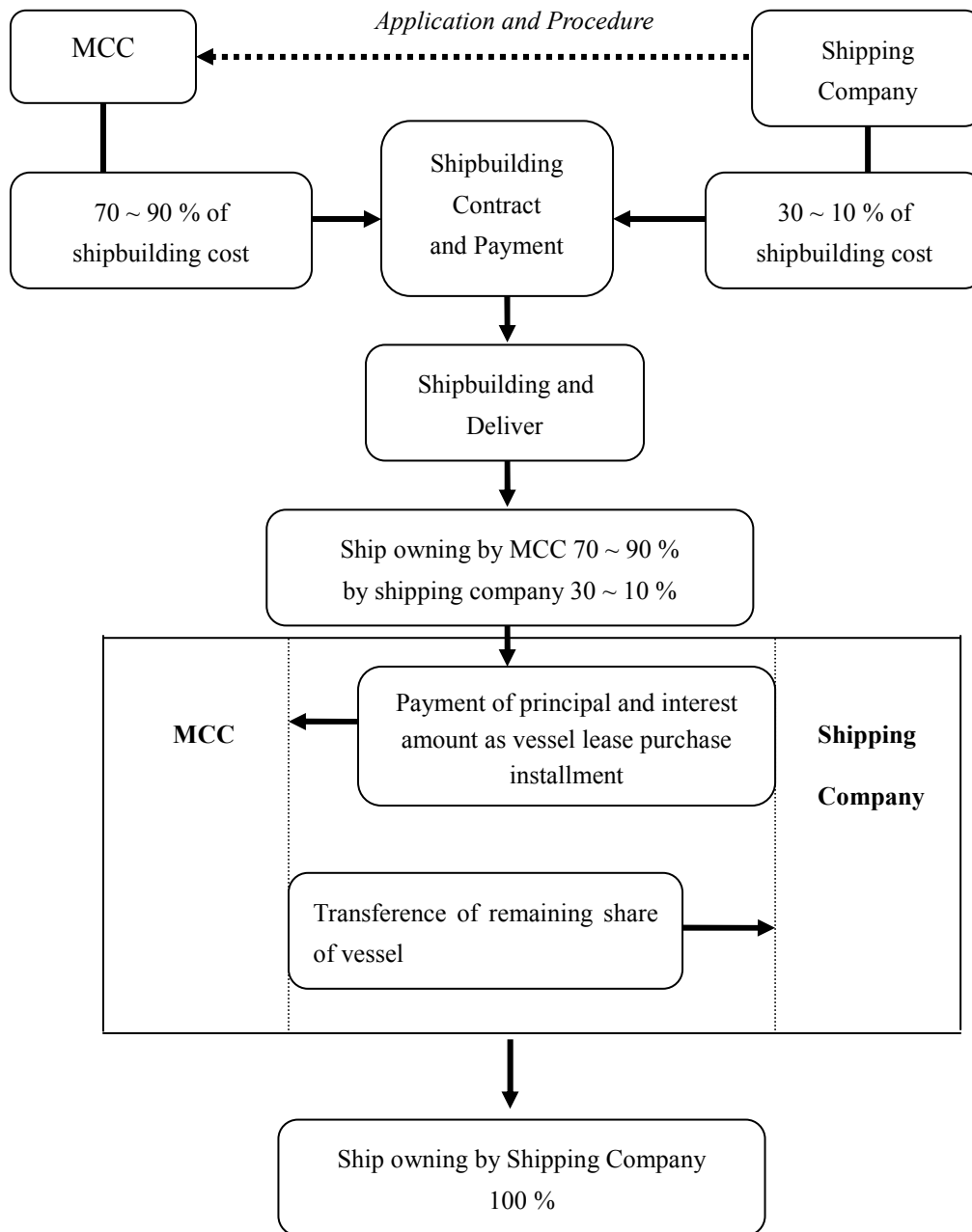
(3) Joint Building and Vessel Ownership Method

In order to support the building of domestic passenger ship or domestic cargo ship (cargo ship less than 16,000 gross ton), MCC supplies long term fixed and low rate funds and provides technical support through shared ownership vessel building program. When building steel ships financed by the loan, old cargo ships should be scrapped or exported.

The joint building and vessel ownership method is outlined as follow:

- According to the proposal of a maritime transport company, both the company and MCC share the cost and give an order of shipbuilding jointly to a dockyard. Construction supervision and inspection throughout working period until completion are also jointly performed.
- Both a maritime transport company and MCC own jointly at a certain period of time (normally over the whole period of depreciation) and the share is determined by the cost it pays.
- This shared ownership vessel is used and maintained by the maritime transport company and both the income and the expenditure from the vessel operation belong to the company. The company should repay the MCC's share of the building cost both principal and interest throughout shared period. Repayment amount per year is designed to be the same throughout amortization period.
- After the joint project period is expired, the vessel ownership will be 100% owned by the maritime transport company by it's paying the MCC's share of the remaining book value to MCC.

Table 12.1 Project Flow of Joint Building and Vessel Ownership Method



(4) Remarkable Attractiveness

Collateral free: Bank loan to build vessels requires collateral, but MCC’s loan does not require collateral as a general rule since MCC directly owns some share of the vessel under the shared method. Therefore, vessel building is possible if the company prepares only collateral to funds financed for their own portion.

Low and fixed interest rate: MCC’s interest rate is determined by the long-term prime rate as a general rule and in addition, it is fixed. Thus, the company can prospect the project with ease. In addition, since MCC does not impose compulsory deposit from the company, the increase in the net interest cost will not cause any losses to the company.

Long-term repayment: Term of repayment is more or less tied with the vessel's life period. Long-term repayment from 7 to 15 years according to the category of vessels is possible so as to match to the company's reasonable repayment schedule.

Technical assistance: Shared ownership vessel is partially a property of MCC. The shipping company can receive various technical assistances from MCC which has professional capability to provide consultancy services regarding ship design and building, ship-management and shipping business. This is a large benefit since these assistances cannot be provided if the company gets loans from other financial institutions.

Preferential taxation: The company is exempted from a title registration tax when registering an ownership title corresponding to a MCC's share of the joint ownership vessel.

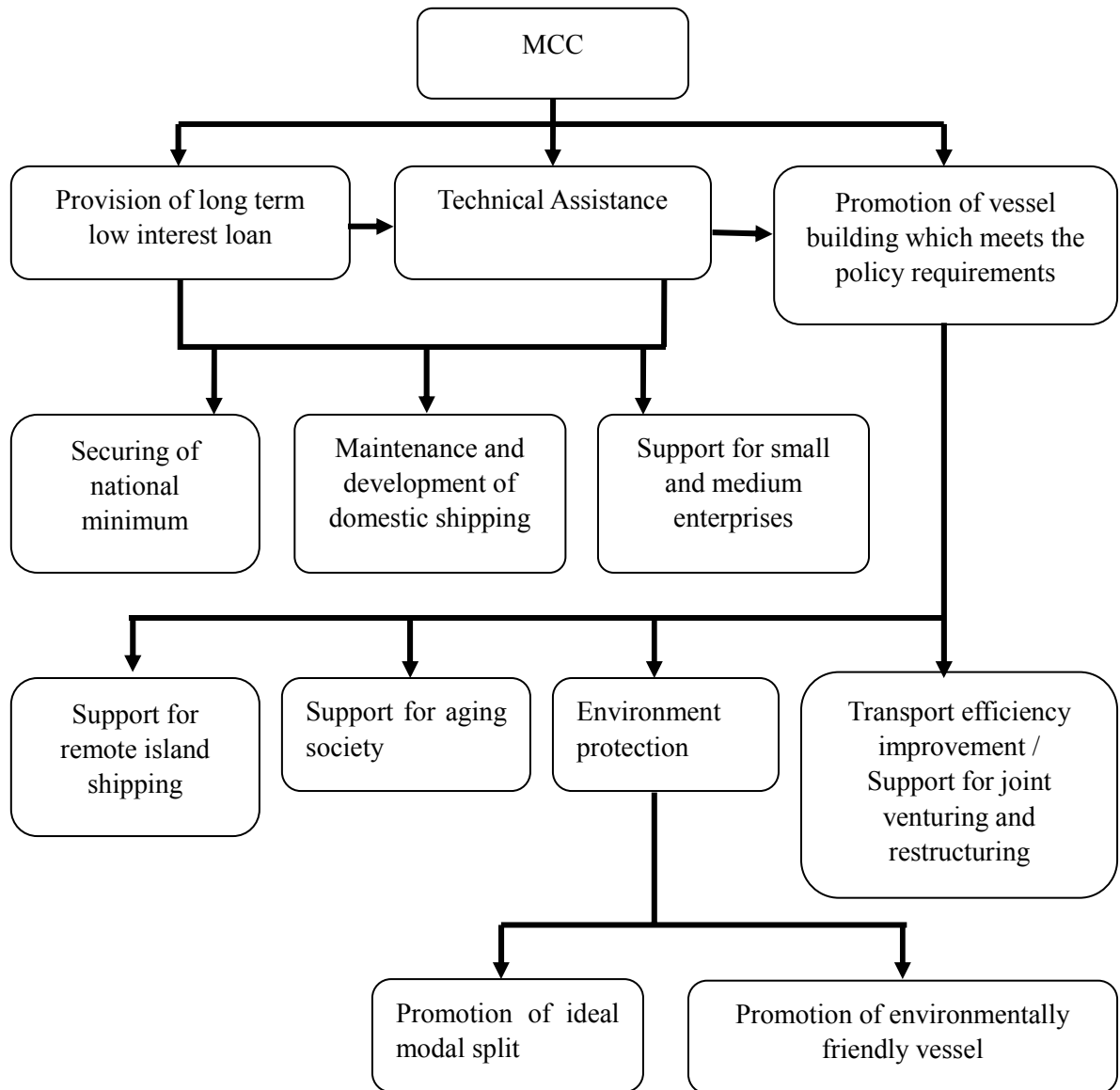
(5) Stable Resource

MCC fund comes from Fiscal Investment and Loan Program (FILP) which is the generic term for the government's fiscal techniques to carry out policy objectives by using funds on the basis of the state's credit. The FILP's original sources are among others postal savings, government insurance funds and social security funds. FILP is interest bearing fund and domestic fleet is one of the policy-oriented development targets.

(6) MCC's Current Roles

In principle, MCC has not changed its basic roles such as securing of national minimum, maintaining and development of domestic shipping and supporting for small and medium enterprises over 40 years. To meet contemporary shipping needs, however, development priority and finance incentives are placed on new vessel types, i.e., environmentally friendly vessels for more environment concern, barrier free vessels to prepare for aging society, and Ro-Ro vessels to promote multimodalism over the country.

Figure 12.4 Roles and Functions of MCC



Source: <http://www.jrtt.go.jp/business/vessel.htm>

12.6 Questions and Answers concerning ODA Fund in the Shipping Sector

Since Indonesia has not experienced much about ODA projects in the shipping sector, particularly the case where private entities become direct beneficiaries in procuring and improving vessels through TSL. Therefore this section highlights the questions and answers made at the STRAMINDO Workshop on Shipping Investment and Ship Finance on 22nd October, 2003. The questions were likely frequent questions to this aspect among Indonesian shipping business entities. However, the answers were limited to the experts' previous experiences and personal opinion. They do not imply the expression of any opinion whatsoever on the part of GOJ and JBIC.

Q.1: Possibility of cooperation by GOJ?

- A: (1) *Up to the priority rated by GOI since GOJ's assistance is on request basis.*
- (2) *The project content should be clearly shown and justified by FS report.*
- (3) *GOJ needs to show its concern and probably to conduct preparatory work such as TA study before engaging a bilateral agreement.*

Q.2: How much amount of fund can be provided by Japan?

- A: (1) *It can be predicted from previous similar project, i.e., the Domestic Shipping Modernization Program (TSL) I, II for the Philippines.*
- (2) *Size of the country and the sector could be taken into account.*

Q.3: How about interest rate of sub loan?

- A: (1) *Probably app. 12%, considering the similar scheme in Indonesia 2-3% lower than prevailing commercial rate.*
- (2) *Existing 6% special term loan will not be succeeded.*

Q.4: What kind of currency can be used as sub loan?

- A: (1) *Usually Rps.*
- (2) *If there will be justifiable reason or need ¥ can be used?*
- (3) *US\$ is possible but unusual*

Q.5: Who will be the supplier of ships under the plan?

- A: (1) *Suppliers will be decided through ICB including LCB.*
- (2) *JV of foreign and local manufacturers should be given chance.*

Q.6: How about lending period of ODA loan and sub loan?

- A: (1) *Probably 25 years including with 5 years grace period.*
- (2) *Reasonable sub loan period is 5 years with 1-year grace period.*

Q.7: Can loan conduit through less commercial institution?

- A: (1) *Sub loan should be conduit through reliable bank. Loan administration and book keeping is important.*
- (2) *BMI or BRI are considered to be capable enough to handle this type of loan.*

Q.8: Other costs, i.e. guarantee fee, TA fee, etc will be added to 12%?

- A: (1) *It is possible to include these charges within 12%.*

Q.9: More attention should be paid for the strengthening of traditional shipping

- A: (1) *It should be supported by ODA. (TSL)*
(2) *Traditional ships should be included in tertiary shipping program.*

Q.10: What kind of fund is best for the shipping sector?

- A: (1) *ODA is the best. But ODA is insufficient.*
(2) *Funds other than ODA should be sought.*

Q.11: Ship building sector should also be supported.

- A: (1) *FDI should be encouraged.*
(2) *In order to encourage FDI to Indonesia, sufficient domestic demand is prerequisite.*
(3) *Past effort to support shipbuilding was not enough.*

Q.12: Does ODA fund cover foreign vessels?

- A: (1) *As long as they are operating in domestic route, they are not denied. They are eligible to ODA loan from Japan. (There have been such cases.)*
(2) *Fund however should exclusively be used for domestic shipping. International shipping will not be eligible.*
Domestic shipping should encompass routes between Indonesia to and from Malaysia or Singapore, because these routes cannot be separated from other domestic routes.

Q.13: Fund should cover the investment for related facilities like loading and unloading (L & UL) equipment.

- A: (1) *It is necessary. L & UL equipment, distribution center etc. Without improving them, effect of ship improvement will often be insufficient.*
(2) *Other than physical improvement made by investment, institutional improvement i.e. shipping operation and management, port operation and management, custom services, etc. should be made together.*

APPENDIX OF CHAPTER 13

13.1 Table of Major, Medium and Minor Shipyard

Major Shipyards for Ship repair are:

1. East Java Shipyard (A)
2. East Java Shipyard (B)
3. Central Java Shipyard (I)
4. Jakarta Shipyard (K)
5. Jakarta Shipyard (L)
6. South Sulawesi Shipyard (D1)

Medium Shipyards for Ship repair are:

7. North Sulawesi Shipyard (D2)
8. South Sumatra Shipyard (F)
9. South Sumatra Shipyard (G)
10. Jakarta Shipyard (J)
11. Jakarta Shipyard (M)

Minor Shipyards for Ship repair are:

12. East Java Shipyard (C)
13. East Kalimantan Shipyard (E)
14. South Sumatra Shipyard (H)

MAJOR SHIPYARD

EASTJAVA SHIPYARD (A)

Manpower = 600

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost / Work Days [Million]	Total GT / Total Manpower	Total Repair Cost / Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost / Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Man Day / GT
Cargo	55	115,000.25	24,900	1,404	0.22	17.74	191.67	41.50	2.34	29,558.40	25.53	7.33
Tanker	8	65,027.30	12,700	326	0.20	38.96	108.38	21.17	0.54	64,928.43	40.75	3.01
Container	33	111,426.84	17,529	971	0.16	18.05	185.71	29.21	1.62	30,086.84	29.42	5.23
Passenger	29	74,993.00	13,400	389	0.18	34.45	124.99	22.33	0.65	57,412.17	13.41	3.11
Ferry / Ro-Ro	19	74,370.00	14,500	451	0.19	32.15	123.95	24.17	0.75	53,584.63	23.74	3.64
Tug Boat	9	2,195.00	3,985	302	1.82	13.20	3.66	6.64	0.50	21,992.27	33.56	82.55
LCT	3	806.00	283	51	0.35	5.55	1.34	0.47	0.09	9,248.37	17.00	37.97
Fishing Boat	10	3,304.00	1,900	169	0.58	11.24	5.51	3.17	0.28	18,737.67	16.90	30.69
Barge	16	23,064.35	17,700	1,936	0.77	9.14	38.44	29.50	3.23	15,237.60	121.00	50.36
First Patrol Boat	13	3,753.10	13,400	228	3.57	58.77	6.26	22.33	0.38	97,953.22	17.54	36.45
Navy Ship	61	58,024.85	28,500	1,891	0.49	15.07	96.71	47.50	3.15	25,118.98	31.00	19.55
Dredger	2	4,463.55	6,000	119	1.34	50.42	7.44	10.00	0.20	84,033.61	59.50	16.00
Total	258	536,428.24	154,797	8,237	0.29	18.79	894.05	257.99	13.73	31,321.39	31.93	9.21

EAST JAVA SHIPYARD (B)

Manpower = 480

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost / Work Days [Million]	Total GT / Total Manpower	Total Repair Cost / Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost / Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Man Day / GT
Cargo	115	313,625.00	53,700	2,130	0	25.21	653.39	111.88	4.44	52,523.47	18.52	3.26
Tanker	22	64,350.00	17,300	415	0	41.69	134.06	36.04	0.86	86,847.39	18.86	3.10
Container	67	220,350.00	31,130	1,325	0	23.49	459.06	64.85	2.76	48,946.54	19.78	2.89
Passenger	40	151,000.00	22,600	383	0	59.01	314.58	47.08	0.80	122,932.99	9.58	1.22
Ferry / Ro-Ro	75	206,000.00	28,000	1,340	0	20.90	429.17	58.33	2.79	43,532.34	17.87	3.12
Tug Boat	20	2,368.00	7,960	392	3	20.31	4.93	16.58	0.82	42,304.42	19.60	79.46
LCT	6	2,145.00	2,250	106	1	21.23	4.47	4.69	0.22	44,221.70	17.67	23.72
Barge	13	63,050.00	7,100	188	0	37.77	131.55	14.79	0.39	78,679.08	14.46	1.43
Bulk Carrier	2	7,800.00	800	40	0	20.00	16.25	1.67	0.08	41,666.67	20.00	2.46
Total	360	1,030,688.00	170,840	6,319	0.17	27.04	2,147.27	355.92	13.16	56,324.84	17.55	2.94

CENTRAL JAVA SHIPYARD (I) Manpower = 303

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost / Work Days [Million]	Total GT / Total Manpower	Total Repair Cost / Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost / Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Man.Day / GT
Tanker	11	16,365.00	4,980	550	0.30	9.05	54.01	16.44	1.82	29,884.32	50.00	10.18
Cargo Ship	38	118,205.00	21,030	2,100	0.18	10.01	390.12	69.41	6.93	33,050.01	55.26	5.38
Passenger	4	9,144.00	4,721	126	0.52	37.47	30.18	15.58	0.42	123,649.64	31.50	4.18
Ferry / Ro-Ro	44	85,513.00	44,948	2,032	0.53	22.12	282.22	148.34	6.71	73,002.83	46.18	7.20
Barges	4	5,489.00	571	245	0.10	2.33	18.12	1.88	0.81	7,687.45	61.25	13.52
Tug Boat	15	4,797.00	2,536	487	0.53	5.21	15.83	8.37	1.61	17,184.33	32.47	30.76
LCT	1	1,250.00	693	22	0.55	31.52	4.13	2.29	0.07	104,030.30	22.00	5.33
Fishing Boat	6	2,240.00	1,431	590	0.64	2.43	7.39	4.72	1.95	8,005.79	98.33	79.81
Total	123	243,003.00	80,909	6,152	0.33	13.15	801.99	267.03	20.30	43,404.95	50.02	7.67

JAKARTA SHIPYARD (K) Manpower = 487

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost / Work Days [Million]	Total GT / Total Manpower	Total Repair Cost / Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost / Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Man.Day / GT
Tanker	79	264,529.15	30,412	952	0.11	31.95	543.18	62.45	1.95	65,595.57	12.05	1.75
Cargo Ship	109	346,778.25	75,164	1,180	0.22	63.70	712.07	154.34	2.42	130,798.13	10.83	1.66
Container	31	124,312.50	18,300	397	0.15	46.10	255.26	37.58	0.82	94,653.79	12.81	1.56
Passenger	50	511,350.00	28,950	457	0.06	63.35	1,050.00	59.44	0.94	130,076.01	9.14	0.44
Ferry / Ro-Ro	5	23,650.00	2,428	52	0.10	46.68	48.56	4.98	0.11	95,862.28	10.40	1.07
Barges	20	9,697.35	4,095	215	0.42	19.05	19.91	8.41	0.44	39,113.24	10.75	10.80
Tug Boat	23	5,740.00	2,470	164	0.43	15.06	11.79	5.07	0.34	30,920.02	7.13	13.91
LCT	14	4,927.68	2,644	173	0.54	15.28	10.12	5.43	0.36	31,376.95	12.36	17.10
Fishing Boat	11	4,553.00	1,276	167	0.28	7.64	9.35	2.62	0.34	15,694.22	15.18	17.86
Dredgers	1	5,180.00	1,940	29	0.37	66.89	10.64	3.98	0.06	137,344.71	29.00	2.73
Research Vessel	2	2,568.00	1,451	19	0.57	76.39	5.27	2.98	0.04	156,856.99	9.50	3.60
Navy Vessel	25	152,707.00	17,610	245	0.12	71.88	313.57	36.16	0.50	147,596.13	9.80	0.78
Floating Crane	2	6,250.00	920	26	0.15	35.38	12.83	1.89	0.05	72,658.35	13.00	2.03
Total	372	1,462,242.93	187,660	4,076	0.13	46.04	3,002.55	385.34	8.37	94,538.45	10.96	1.36

JAKARTA SHIPYARD (L)

Manpower = 334

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost / Work Days [Million]	Total GT / Total Manpower	Total Repair Cost / Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost / Total Working Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Man.Day / GT
Tanker	38	44,181.71	19,008	2,269	0.43	8.38	132.28	56.91	6.79	25,081.67	59.71	17.15
Cargo Ship	75	139,437.35	20,757	2,609	0.15	7.96	417.48	62.15	7.81	23,820.15	34.79	6.25
Passenger	39	134,667.60	13,886	1,228	0.10	11.31	403.20	41.58	3.68	33,856.70	31.49	3.05
Barges	7	6,956.95	1,709	178	0.25	9.60	20.83	5.12	0.53	28,746.29	25.43	8.55
Tug Boat	66	6,423.55	18,968	2,406	2.95	7.88	19.23	56.79	7.20	23,603.31	36.45	125.10
LCT	7	917.15	196	118	0.21	1.66	2.75	0.59	0.35	4,962.29	16.86	42.97
Fishing Vessel	1	350.00	290	23	0.83	12.61	1.05	0.87	0.07	37,750.59	23.00	21.95
Scrapup Ring	1	1,300.00	525	23	0.40	22.83	3.89	1.57	0.07	68,364.96	23.00	5.91
KRI > 2,000 GT	2	5,212.00	1,160	106	0.22	10.94	15.60	3.47	0.32	32,758.99	53.00	6.79
Dredger	3	8,735.00	3,226	196	0.37	16.46	26.15	9.66	0.59	49,280.16	65.33	7.49
Research Vessel	2	1,740.00	1,348	75	0.77	17.97	5.21	4.03	0.22	53,794.40	37.50	14.40
Navigation Vessel	3	3,449.00	627	407	0.18	1.54	10.33	1.88	1.22	4,613.82	135.67	39.41
Others	13	5,525.00	1,628	276	0.29	5.90	16.54	4.88	0.83	17,664.13	21.23	16.68
Total	257	358,895.31	83,328	9,914	0.23	8.41	1,074.54	249.48	29.68	25,164.90	38.58	9.23

SOUTH SULAWESI SHIYARD (D1)

(as no data for 2000 and 2001, data calculated from 2002 x 3)

Manpower = 300

Kind of Vessel	Quantity [unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million Rp]	Total Repair Cost / Work Days [Million Rp]	Total GT / Total Manpower [GT]	Total Repair Cost / Total Manpower [Million Rp]	Total Working Day / Total Manpower	Total Repair Cost / Total working Days / Total Manpower	Average Repair Day Kind of Vess.	Manday/ GT
Tanker	3	2,925.00	1,500	30	0.51	50.00	9.75	5.00	0.1	166,666.67	10.00	3.08
Cargo ship	27	26,325.00	7,166	453	0.27	15.82	87.75	23.89	1.51	52,729.95	16.78	5.16
Ferry Ro-ro	21	6,300.00	4,315	600	0.68	7.19	21.00	14.38	2	23,972.22	28.57	28.57
Barge	6	6,648.00	3,488	354	0.52	9.85	22.16	11.63	1.18	32,843.69	59.00	15.97
Tug Boat	15	357.60	1,944	378	5.44	5.14	1.19	6.48	1.26	17,142.86	25.20	317.11
Fishing Vessel	33	11,538.00	4,440	636	0.38	6.98	38.46	14.80	2.12	23,270.44	19.27	16.54
Others	9	1,782.00	1,234	117	0.69	10.55	5.94	4.11	0.39	35,156.70	13.00	19.70
Total	114	55,875.60	24,087	2,568	1.22	15.08	186.25	80.29	8.56	50,254.65	24.55	58.02

MEDIUM SHIPYARD

NORTH SULAWESI SHIPYARD (D2)

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost/ Work Days [Million]	Total GT / Total Manpower	Total Repair Cost/ Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost / Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Manpower =	Man.Day / GT
												96	
Cargo	13	2,249.00	2,709	411	1.20	6.59	23.43	28.22	4.28	68,669.52	31.62	17.54	
Passenger	6	1,704.00	2,859	245	1.68	11.67	17.75	29.79	2.55	121,573.18	40.83	13.80	
Ferry /Ro-Ro	17	6,527.00	4,242	407	0.65	10.42	67.99	44.18	4.24	108,557.74	23.94	5.99	
Tug Boat	20	760.96	2,287	541	3.01	4.23	7.93	23.82	5.64	44,032.18	27.05	68.25	
LCT	24	3,367.00	5,991	775	1.78	7.73	35.07	62.40	8.07	80,520.49	32.29	22.10	
Fishing Boat	17	2,387.70	1,239	157	0.52	7.89	24.87	12.91	1.64	82,215.71	9.24	6.31	
Barge	12	6,178.90	5,336	380	0.86	14.04	64.36	55.59	3.96	146,280.79	31.67	5.90	
Tanker	2	204.75	80	37	0.39	2.16	2.13	0.83	0.39	22,522.52	18.50	17.35	
Total	111	23,379.31	24,743	2,953	1.06	8.38	243.53	257.74	30.76	87,282.19	26.60	12.13	

SOUTH SUMATERA SHIPYARD (F)

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost/ Work Days [Million]	Total GT / Total Manpower	Total Repair Cost/ Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost / Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Manpower =	Man.Day / GT
												94	
Cargo	16	14,651.00	1,592	890	0.11	1.79	155.86	16.94	9.47	19,032.39	55.63	5.71	
Tanker	14	8,888.75	1,596	551	0.18	2.90	94.56	16.97	5.86	30,805.91	39.36	5.83	
Passenger	1	1,500.00	85	21	0.06	4.05	15.96	0.90	0.22	43,059.78	21.00	1.32	
Ferry /Ro-Ro	1	200.00	132	68	0.66	1.94	2.13	1.40	0.72	20,627.35	68.00	31.96	
Barges	74	62,539.75	5,469	1,810	0.09	3.02	665.32	58.18	19.26	32,141.64	24.46	2.72	
Tug Boat	51	25,070.00	1,929	918	0.08	2.10	266.70	20.53	9.77	22,359.65	18.00	3.44	
Total	157	112,849.50	10,803	4,258	0.10	2.54	1,200.53	114.92	45.30	26,989.74	27.12	3.55	

SOUTH SUMATERA SHIPYARD (G)

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost/ Work Days [Million]	Total GT / Total Manpower	Total Repair Cost/ Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost / Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Manpower =	Man.Day / GT
												130	
Cargo	12	7,312.50	2,440	265	0.33	9.21	56.25	18.77	2.04	70,827.29	22.08	4.71	
Passenger	20	3,000.00	417	245	0.14	1.70	23.08	3.21	1.88	13,092.62	12.25	10.62	
Barges	47	45,500.00	11,800	1,275	0.26	9.25	350.00	90.77	9.81	71,191.55	27.13	3.64	
Tug Boat	32	4,120.00	21,875	648	5.31	33.76	31.69	168.27	4.98	259,674.74	20.25	20.45	
Total	111	59,932.50	36,532	2,433	0.61	15.02	461.02	281.02	18.72	115,501.60	21.92	5.28	

Manpower = 175

JAKARTA SHIPYARD (J)

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost/ Work Days [Million]	Total GT / Total Manpower	Total Repair Cost/ Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost/ Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Man.Day / GT
Tanker	15	17,533.10	2,647	457	0.15	5.79	100.19	15.12	2.61	33,093.53	30.47	4.56
Cargo Ship	75	86,916.05	15,250	2,892	0.18	5.27	496.66	87.14	16.53	30,131.80	38.56	5.82
Passenger	3	4,788.00	987	67	0.21	14.73	27.36	5.64	0.38	84,153.12	22.33	2.45
Ferry / Ro-Ro	10	8,649.00	1,047	134	0.12	7.81	49.42	5.98	0.77	44,643.06	13.40	2.71
LCT	8	3,512.60	211	62	0.06	3.41	20.07	1.21	0.35	19,474.54	7.75	3.09
Tug Boats	70	26,880.00	4,338	1,410	0.16	3.08	153.60	24.79	8.06	17,579.61	20.14	9.18
Others	127	12,200.00	30,758	1,749	2.52	17.59	69.71	175.76	9.99	100,493.01	13.77	25.09
Total	308	160,478.75	55,237	6,771	0.34	8.16	917.02	315.64	38.69	46,616.79	21.98	7.38

Manpower = 130

JAKARTA SHIPYARD (M)

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost/ Work Days [Million]	Total GT / Total Manpower	Total Repair Cost/ Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost/ Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Man.Day / GT
Tanker	4	9,911.00	2,059	108	0.21	19.07	76.24	15.84	0.83	146,684.80	27.00	1.42
Passenger	1	650.00	40	35	0.06	1.15	5.00	0.31	0.27	8,844.75	35.00	7.00
Barge	1	117.00	78	7	0.67	11.13	0.90	0.60	0.05	85,604.40	7.00	7.78
Tug Boat	7	2,116.40	409	71	0.19	5.77	16.28	3.15	0.55	44,364.47	10.14	4.36
L.C.T	2	355.00	184	16	0.52	11.51	2.73	1.42	0.12	88,562.33	8.00	5.86
Total	15	13,149.40	2,771	237	0.21	11.69	101.15	21.32	1.82	89,947.80	15.80	2.34

MINOR SHIPYARD

EAST JAVA SHIPYARD (C)

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost/ Work Days [Million]	Total GT / Total Manpower	Total Repair Cost/ Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost/ Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Manpower =	135
												Man.Day / GT	
Cargo	11	5,473.00	1,483	289	0.27	5.13	40.54	10.98	2.14	38,002.46	26.27	7.13	
Ferry / Ro-Ro	35	13,790.00	5,386	910	0.39	5.92	102.15	39.90	6.74	43,845.71	26.00	8.91	
Barge	19	40,560.00	4,157	962	0.10	4.32	300.44	30.79	7.13	32,009.21	50.63	3.20	
Tug Boat	18	3,468.00	2,209	614	0.64	3.60	25.69	16.37	4.55	26,655.51	34.11	23.90	
LCT	1	143.00	560	282	3.92	1.99	1.06	4.15	2.09	14,722.01	282.00	266.22	
Total	84	63,434.00	13,796	3,057	0.22	4.51	469.88	102.19	22.64	33,429.26	36.39	6.51	

EAST KALIMANTAN SHIPYARD (E)

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost/ Work Days [Million]	Total GT / Total Manpower	Total Repair Cost/ Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost/ Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Manpower =	81
												Man.Day / GT	
Ferry / Ro-Ro	25	40,396.00	2,339	400	0.06	5.85	498.72	28.88	4.94	72,194.35	16.00	0.80	
Barges	96	43,251.00	15,413	2,263	0.36	6.81	533.96	190.28	27.94	84,084.56	23.57	4.24	
Tug Boat	87	13,315.00	5,623	1,174	0.42	4.79	164.38	69.42	14.49	59,135.18	13.49	7.14	
LCT	26	5,011.50	1,992	458	0.40	4.35	61.87	24.59	5.65	53,689.01	17.62	7.40	
Total	234	101,973.50	25,367	4,295	0.25	5.91	1,258.93	313.18	53.02	72,916.27	18.35	3.41	

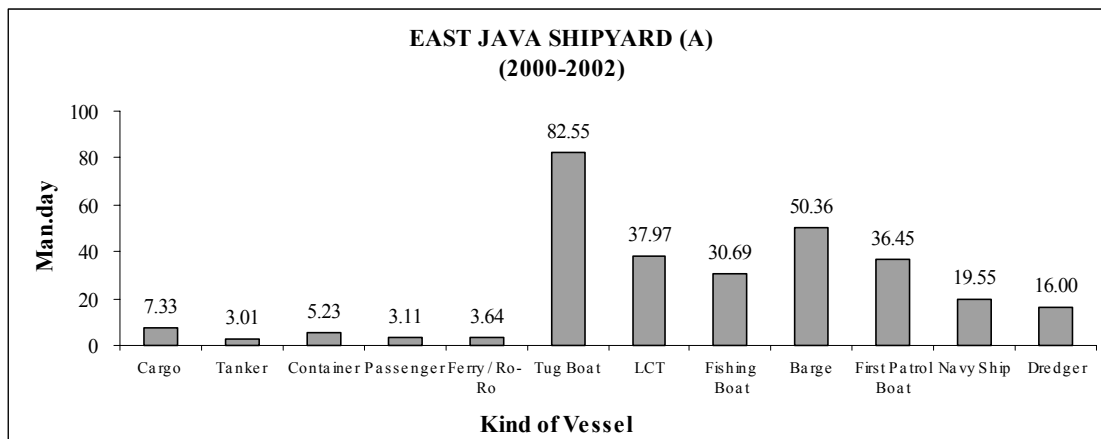
SOUTH SUMATERA SHIPYARD (H)

Kind of Vessel	Quantity [Unit]	Total GT [GT]	Total Repair Cost [Million Rp]	Total Work Days [Days]	Total Repair Cost / GT [Million]	Total Repair Cost/ Work Days [Million]	Total GT / Total Manpower	Total Repair Cost/ Total Manpower [Million]	Total Working Days / Total Manpower	Total Repair Cost/ Total Work Days / Total Manpower	Ave. Repair Day for Kind of Vessel	Manpower =	94
												Man.Day / GT	
Cargo	50	307,817.25	1,838	273	0.01	6.73	3,274.65	19.56	2.90	71,635.10	5.46	0.08	
Tanker	3	9,360.00	2,525	95	0.27	26.58	99.57	26.86	1.01	282,754.76	31.67	0.95	
Ferry / Ro-Ro	12	2,087.00	183	328	0.09	0.56	22.20	1.95	3.49	5,938.83	27.33	14.77	
Barges	9	2,242.50	84	16	0.04	5.23	23.86	0.89	0.17	55,684.84	1.78	0.67	
Tug Boat	4	195.84	213	105	1.09	2.03	2.08	2.27	1.12	21,580.55	26.25	50.40	
Total	78	321,702.59	4,843	817	0.02	5.93	3,422.37	51.52	8.69	63,063.57	10.47	0.24	

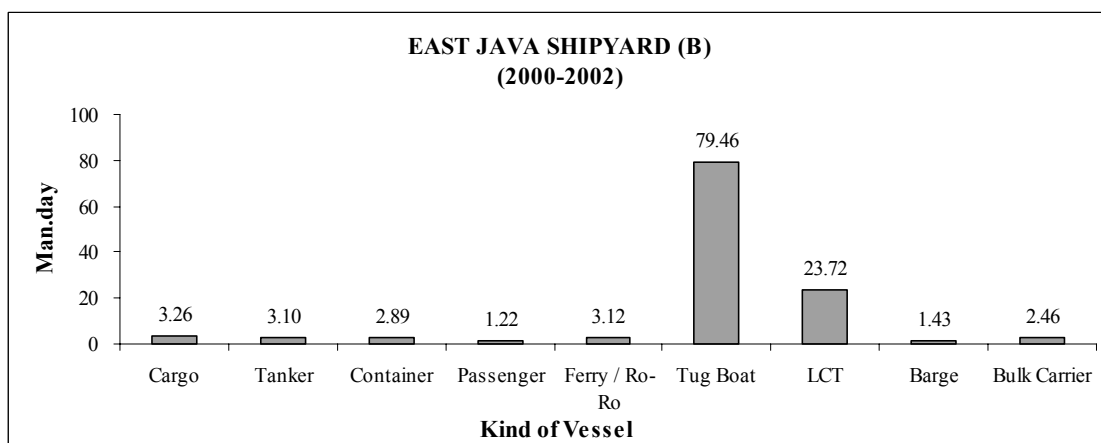
13.2 Graph Man.day / GT for Kind of Vessel

(1) Major Shipyard

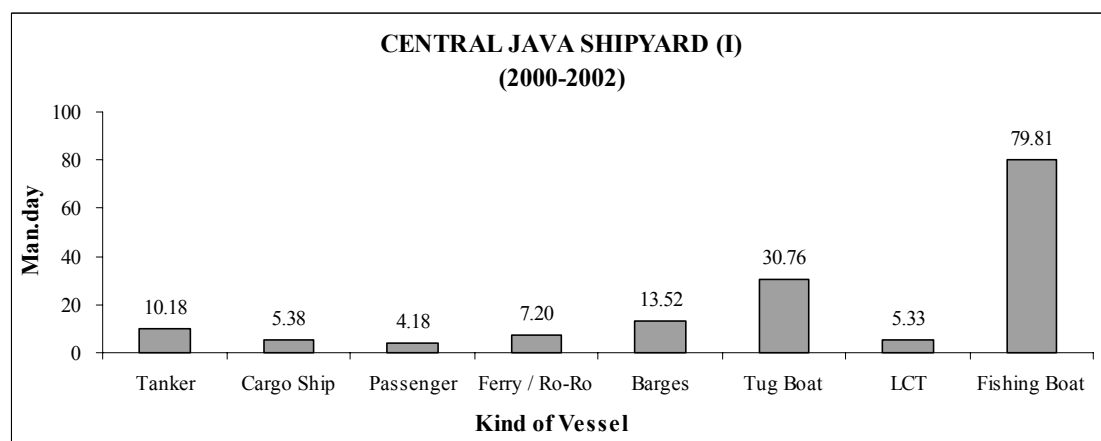
1. EAST JAVA SHIPYARD (A)



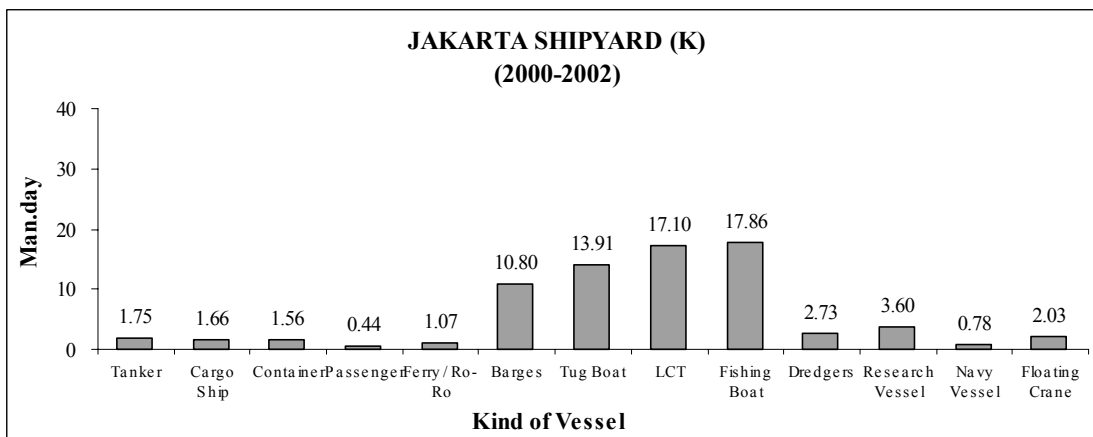
2. EAST JAVA SHIPYARD (B)



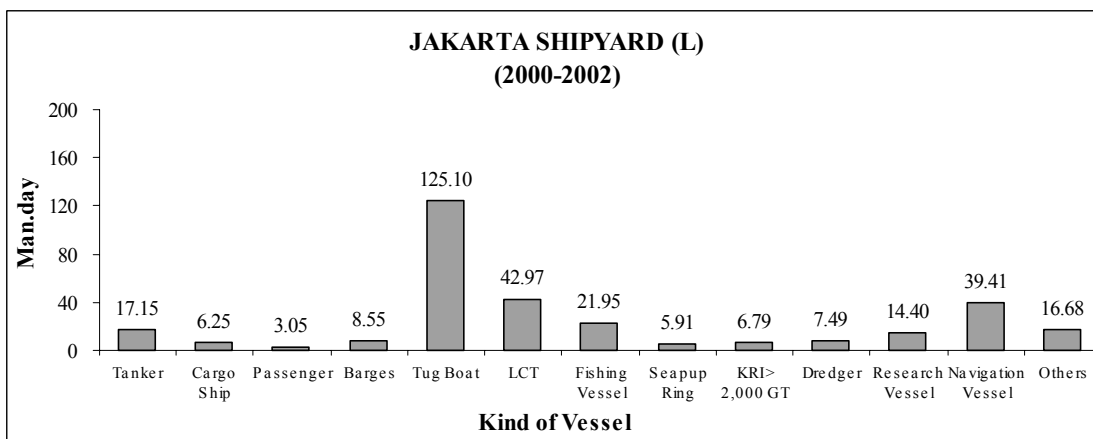
3. CENTRAL JAVA SHIPYARD (I)



4. JAKARTA SHIPYARD (K)

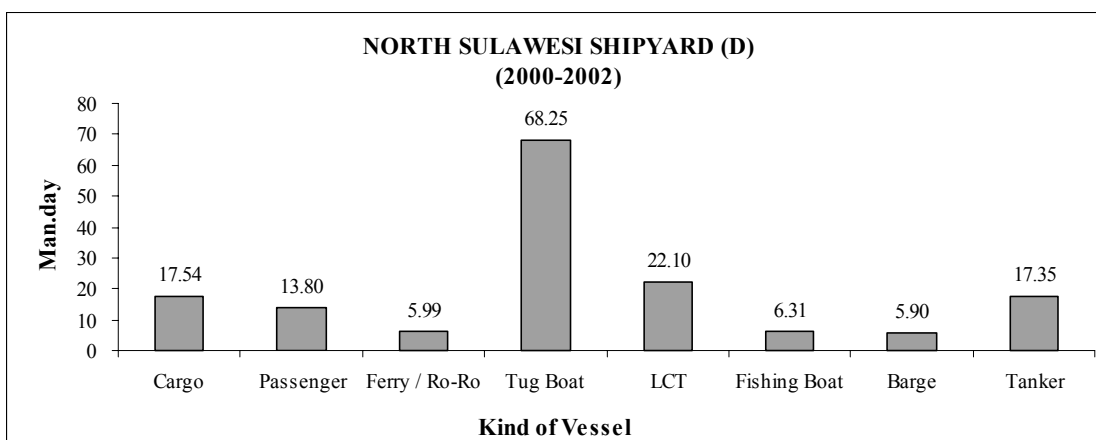


5. JAKARTA SHIPYARD (L)

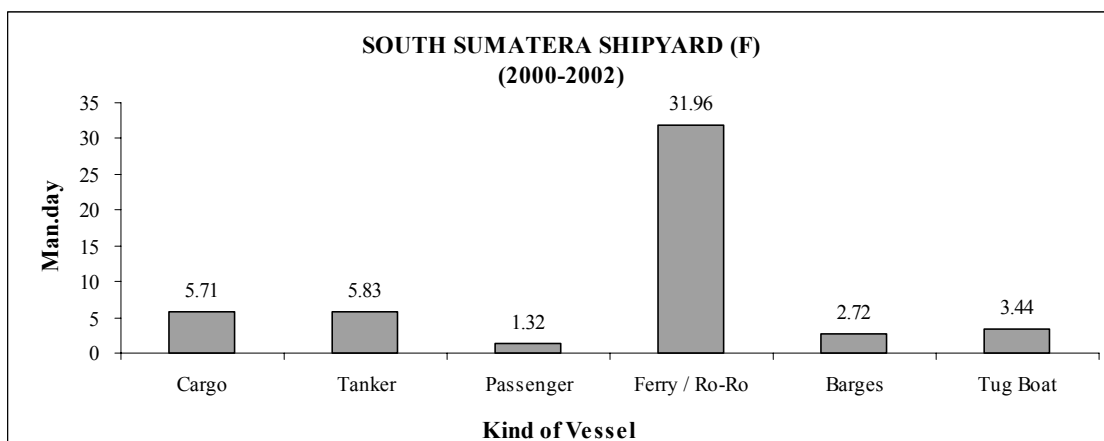


(2) Medium Shipyard

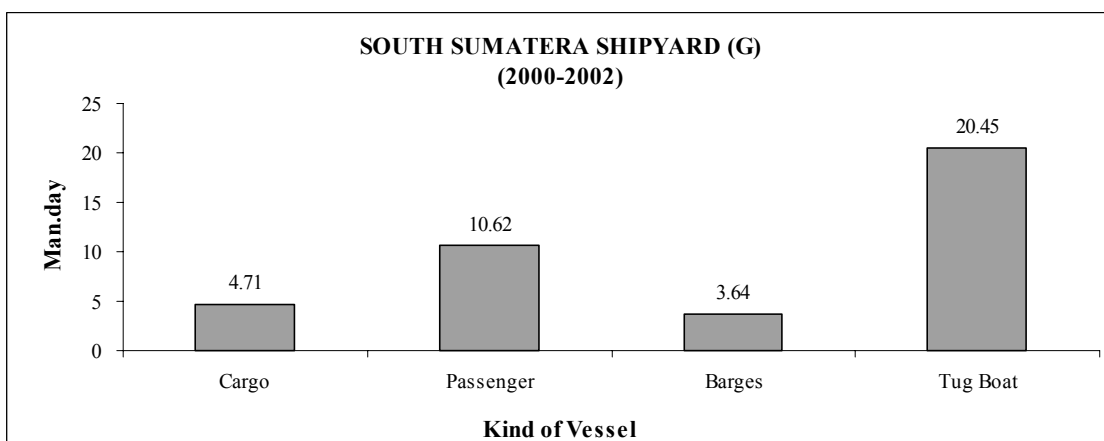
1. NORTH SULAWESI SHIPYARD (D2)



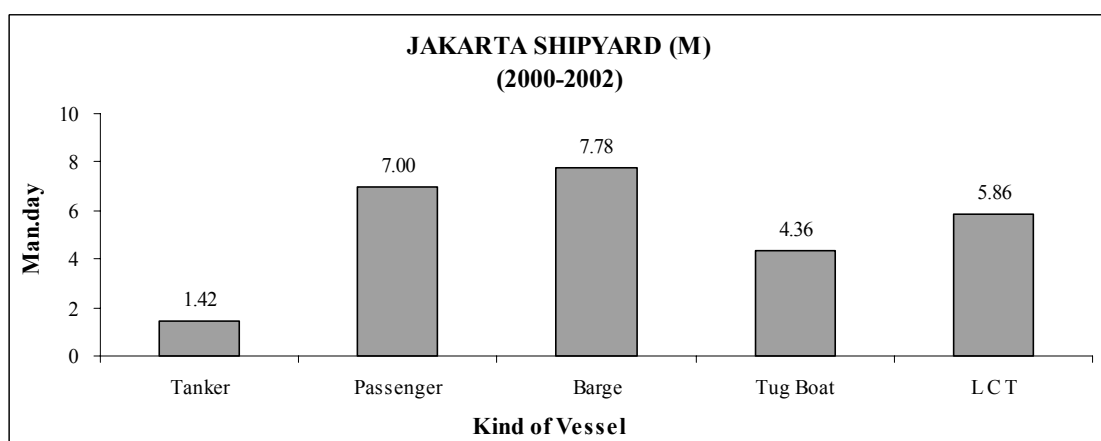
2. SOUTH SUMATERA SHIPYARD (F)



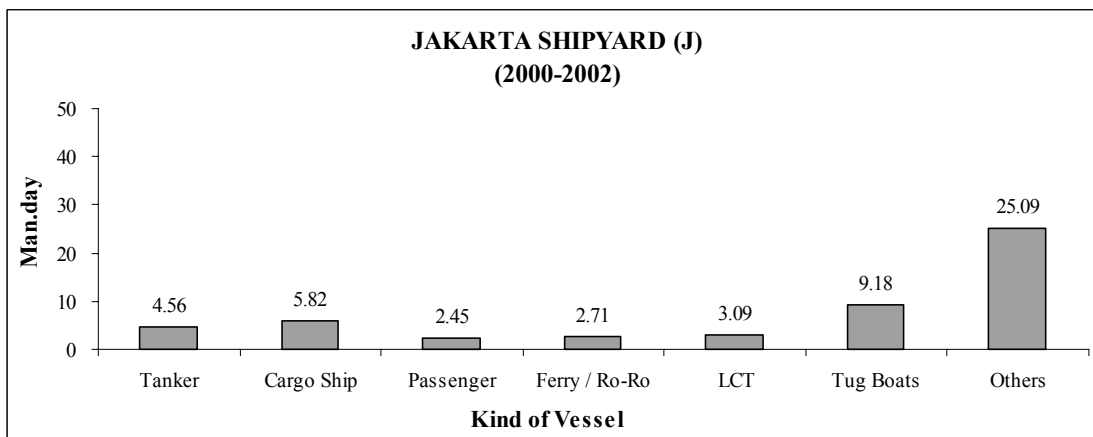
3. SOUTH SUMATERA SHIPYARD (G)



4. JAKARTA SHIPYARD (M)

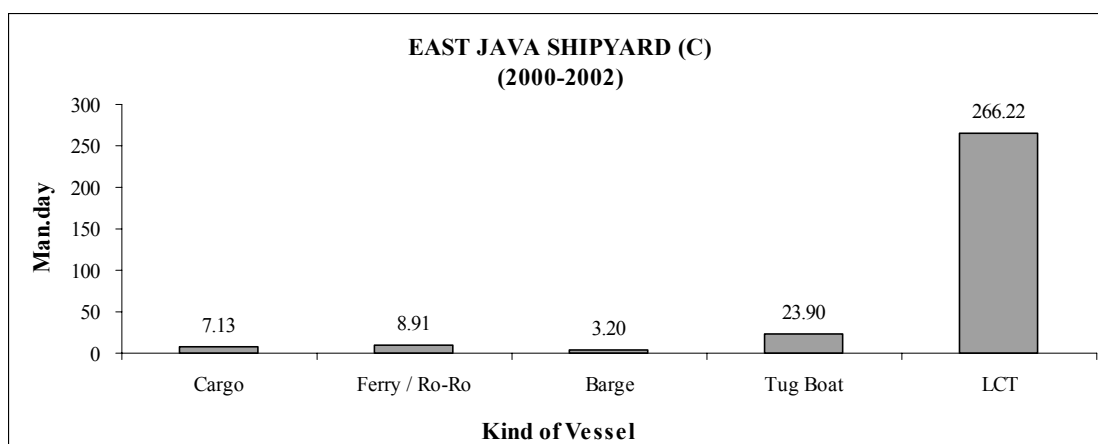


5. JAKARTA SHIPYARD (J)

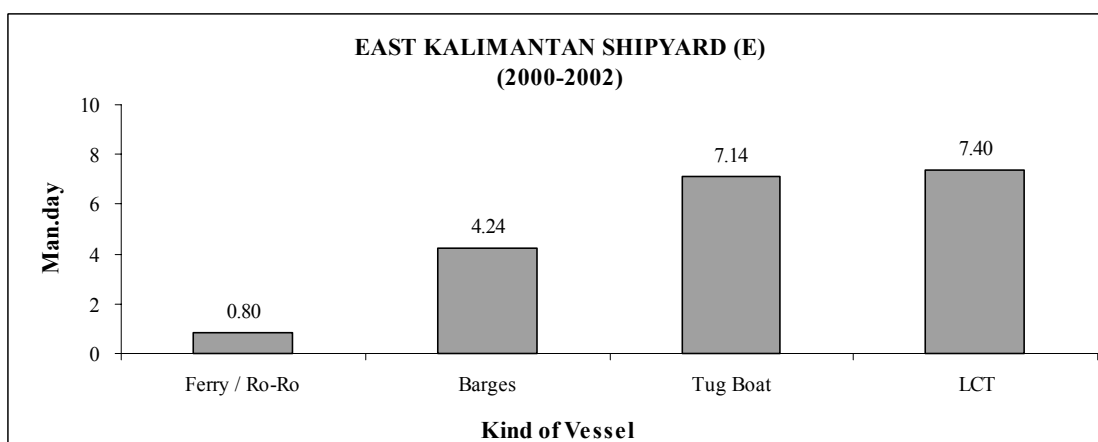


(3) Minor Shipyards

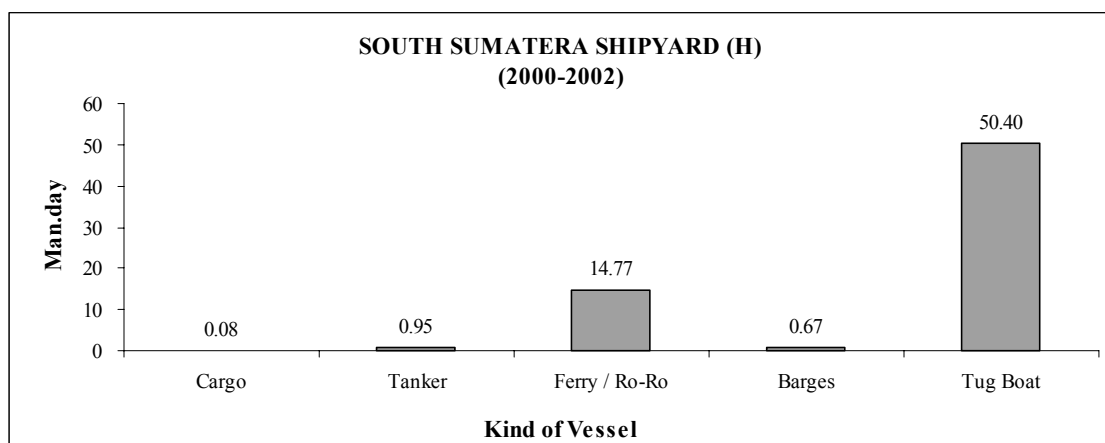
1. EAST JAVA SHIPYARD (C)



2. EAST KALIMANTAN SHIPYARD (E)



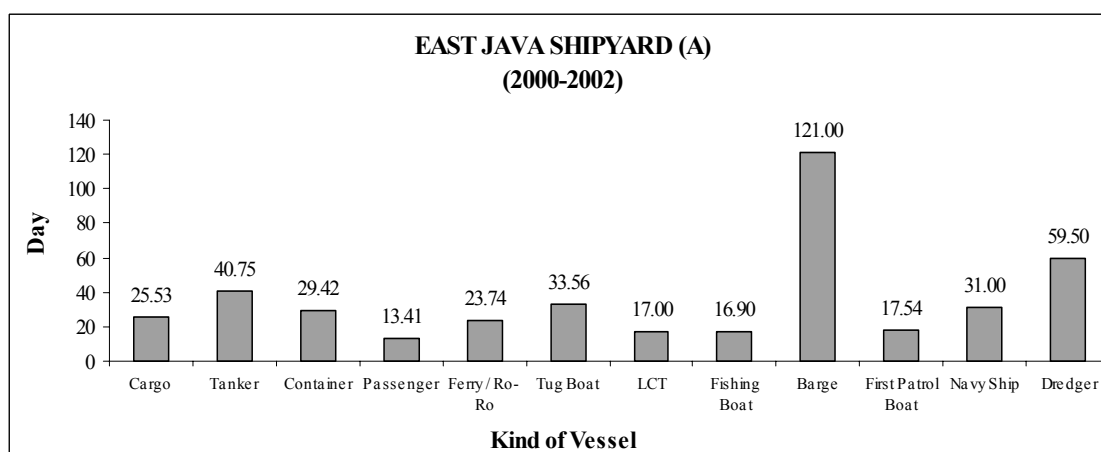
3. SOUTH SUMATERA SHIPYARD (H)



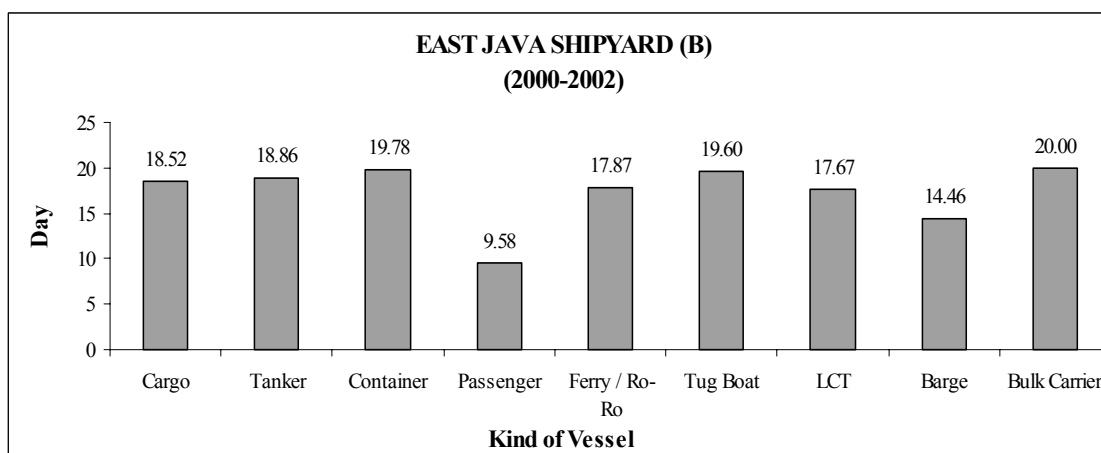
13.3 Graph Average Repairing Days for Kind of Vessel

(1) Major Shipyard

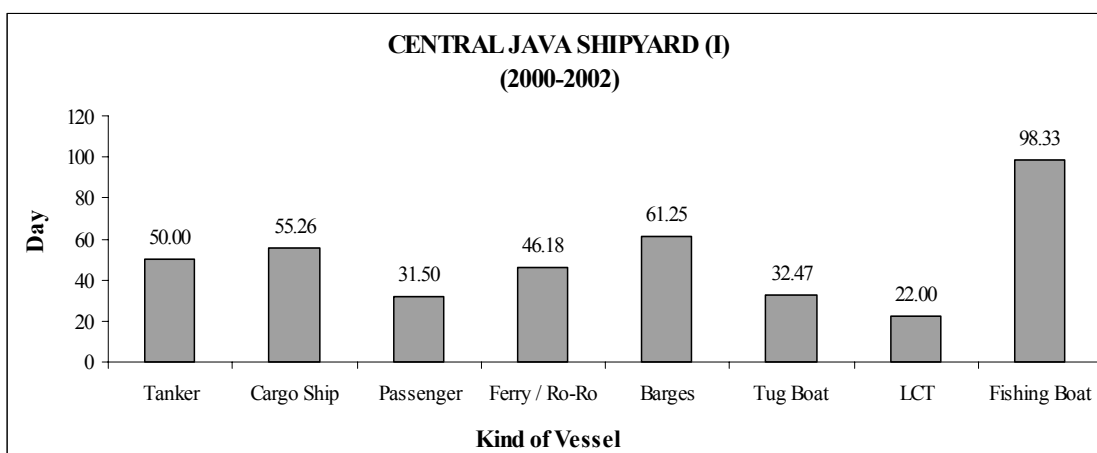
1. EAST JAVA SHIPYARD (A)



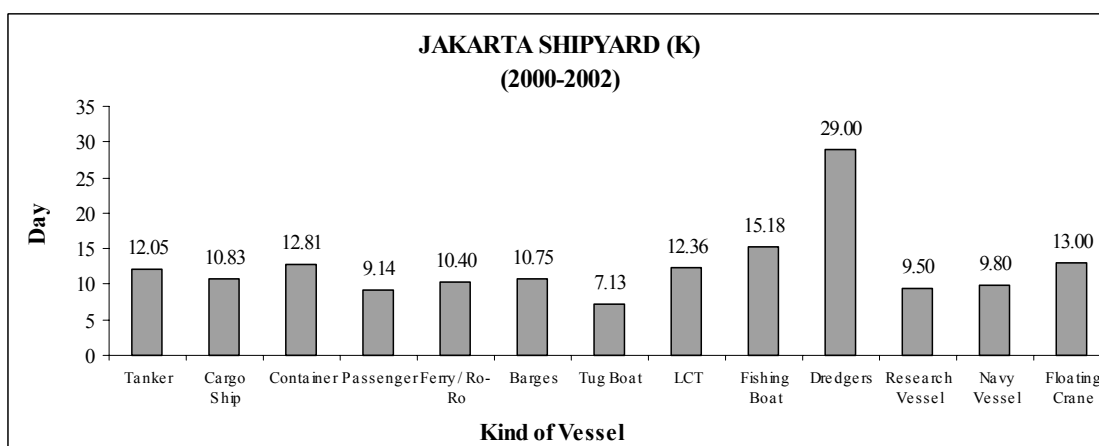
2. EAST JAVA SHIPYARD (B)



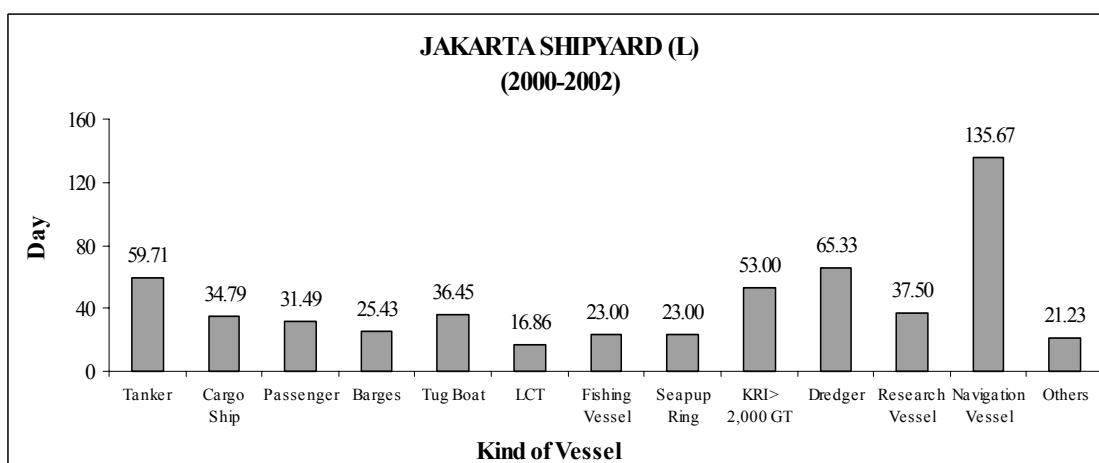
3. CENTRAL JAVA SHIPYARD (I)



4. JAKARTA SHIPYARD (K)

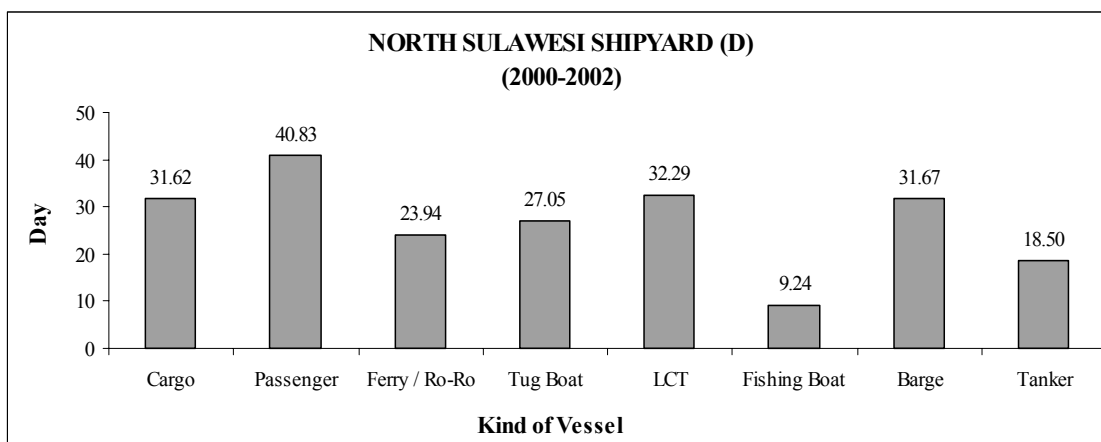


5. JAKARTA SHIPYARD (L)

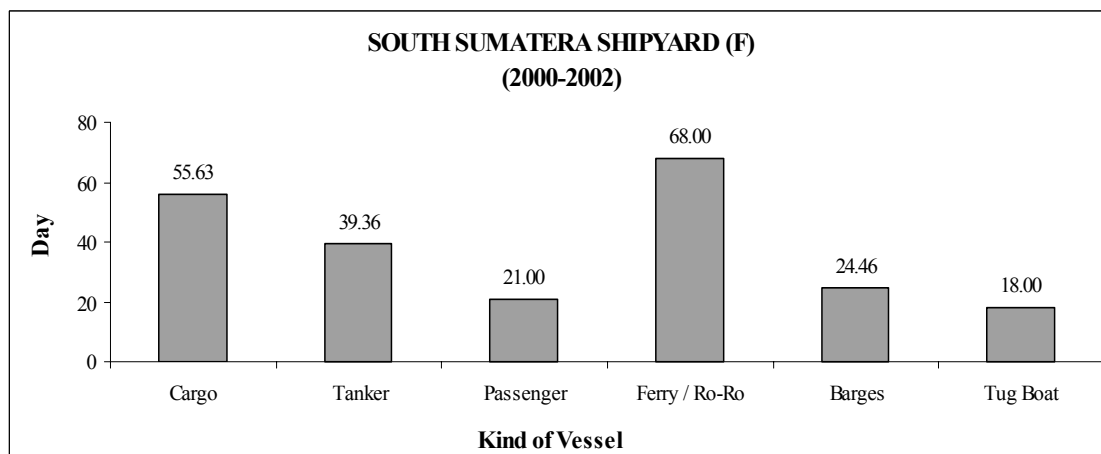


(2) Medium Shipyard

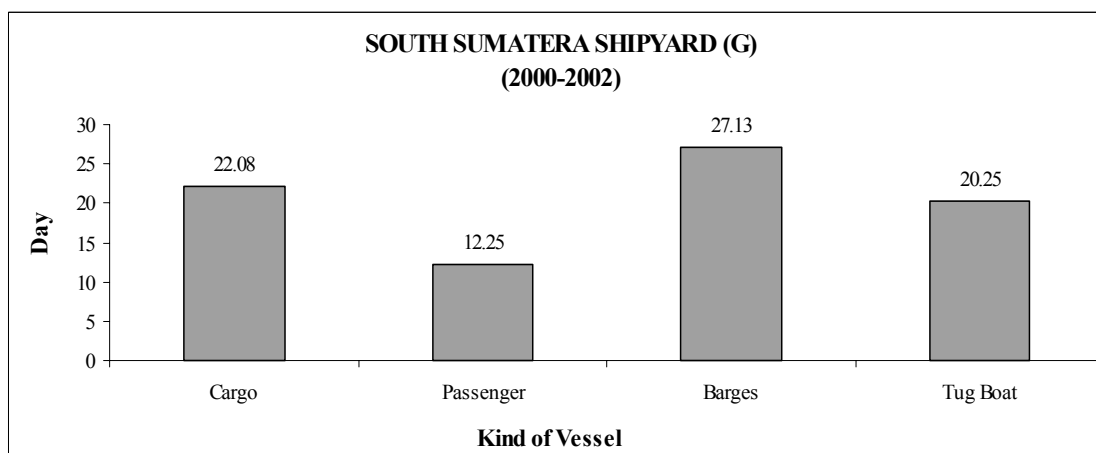
1. NORTH SULAWESI SHIPYARD (D2)



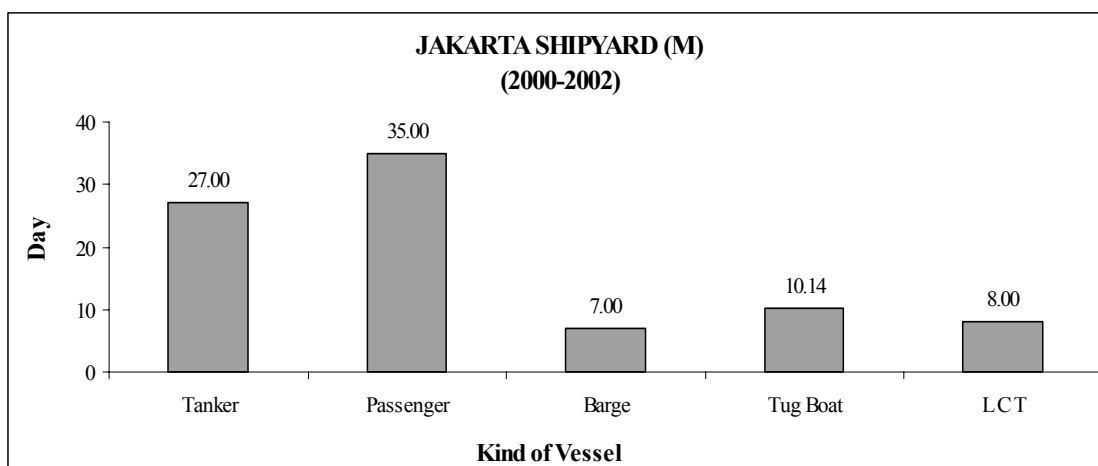
2. SOUTH SUMATERA SHIPYARD (F)



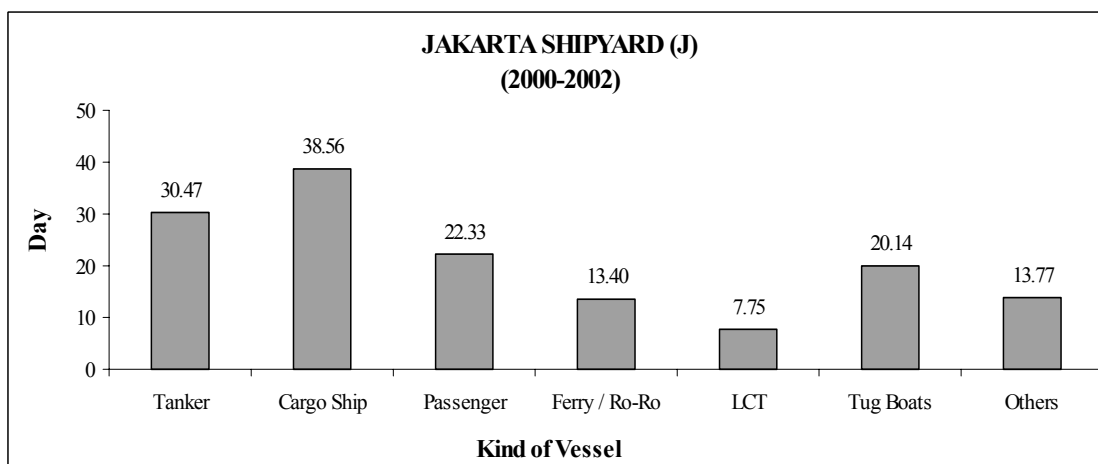
3. SOUTH SUMATERA SHIPYARD (G)



4. JAKARTA SHIPYARD (M)

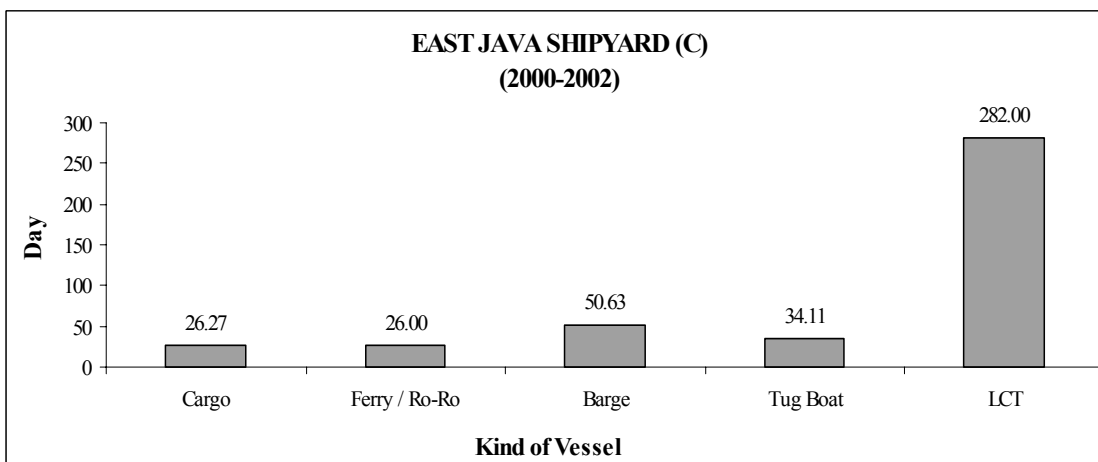


5. JAKARTA SHIPYARD (J)

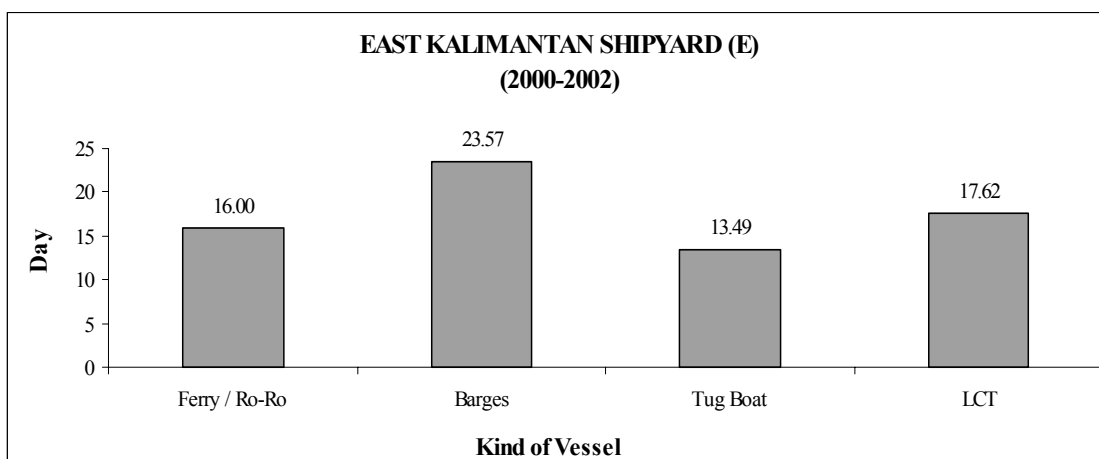


(3) Minor Shipyard

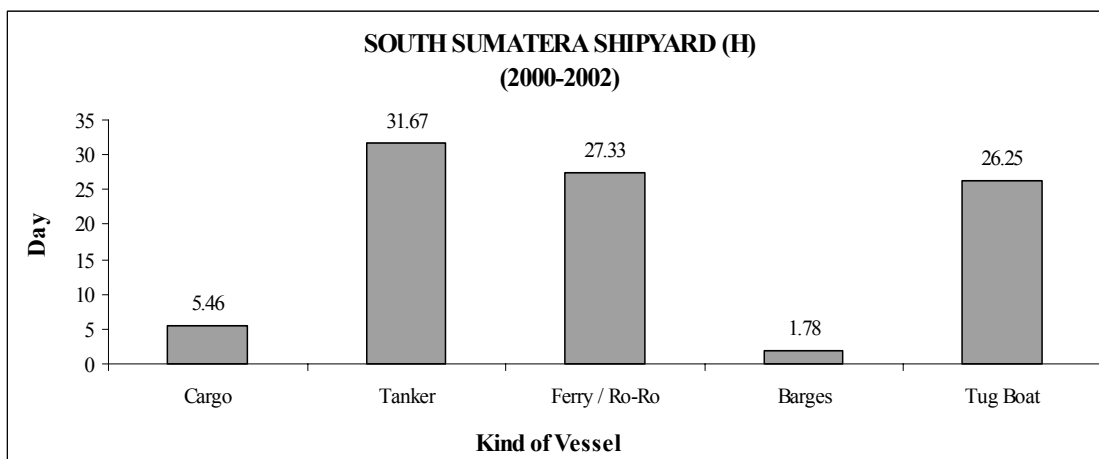
1. EAST JAVA SHIPYARD (C)



2. EAST KALIMANTAN SHIPYARD (E)



3. SOUTH SUMATERA SHIPYARD (H)



APPENDIX OF CHAPTER 14

14.1 Vessel Price and Capital Cost

(1) Vessel Price

Based on the STRAMINDO surveys and interviews, the prices of representative vessels are assumed as shown in Table 14.1.

Table 14.1 Vessel Price

Investment	DWT / GT	Vessel Price (Million Rp)	
		New	Second Hand
Conventional	0~1,000	12,500	5,000
	1,000~2,000	27,000	10,800
	2,000~4,000	43,500	17,400
	4,000~8,000	67,500	27,000
	Over 8,000	125,000	50,000
Container	0~4,000	54,000	21,600
	4,000~8,000	80,000	32,000
	8,000~12,000	150,000	60,000
	12,000~18,000	210,000	84,000
	Over 18,000	260,000	104,000
Bulkier	1,000~4,000	17,500	7,000
	4,000~8,000	32,500	13,000
	8,000~15,000	60,000	24,000
	Over 15,000	110,000	44,000
Barge	5,000~10,000	12,000	4,800
	10,000~15,000	18,750	7,500
	Over 15,000	24,000	9,600
Tanker	0~1,000	17,500	7,000
	1,000~4,000	75,000	30,000
	4,000~8,000	110,000	44,000
	8,000~15,000	187,000	74,800
	15,000~25,000	250,000	100,000
	25,000~35,000	300,000	120,000
	Over 35,000	332,500	133,000
Passenger (GT)	1,000~4,000	17,000	6,800
	4,000~8,000	130,000	52,000
	8,000~12,000	150,000	60,000
	Over 12,000	260,000	104,000
Passenger Ro-ro (GT)	0~4,000	185,000	74,000
	Over 4,000	206,000	82,400

(2) Capital Cost

Capital cost consists of depreciation cost and interest cost, which are calculated by using the prices of new vessels in the above table.

(a) Depreciation Cost

The depreciation period is assumed to be 15 years with 10% residual value. Accordingly the annual depreciation cost is calculated by the following formula:

$$\text{Depreciation cost} = ((\text{new vessel price}) - 10\%) / (15 \text{ years})$$

(b) Interest Cost

The interest rate is assumed as 15% per annum. Also assuming that the loan portion is 40% of vessel price based on the results of interview surveys with shipping companies, the interest cost is calculated by the following formula.

$$\text{Interest Cost} = (\text{new vessel price}) \times 40\% \times 15\%$$

In the case of container vessel of 5000 DWT, for instance, the depreciation cost and interest cost are estimated as:

$$\text{Depreciation} = 80,000 \text{ million Rp} \times 0.9 / 15 = 4,800 \text{ million Rp.}$$

$$\text{Interest Cost} = 80,000 \text{ million Rp} \times 0.4 \times 0.15 = 4,800 \text{ million Rp.}$$

$$\text{Capital Cost} = \text{Depreciation} + \text{Interest Cost} = 9,600 \text{ million Rp.}$$

14.2 Economic Transport Costs by Vessel Type for Case 0 and Case 1

Economic Transport Cost by Vessel Type						
Vessel Type	Transport Cost (million Rp)	2002	Case0		Case1	
			2014	2024	2014	2024
Container	Fixed Cost	998,536	998,536	998,536	2,316,096	3,897,023
	Fuel Cost	103,022	114,762	109,787	260,762	515,416
	Cargo handling cost	90,437	90,437	90,437	257,327	454,776
	Port call cost	4,586	4,630	4,376	12,762	21,310
	Sub-total	1,196,581	1,208,365	1,203,136	2,846,947	4,888,525
Conventional	Fixed Cost	4,056,703	9,658,495	16,066,641	5,452,473	8,036,356
	Fuel Cost	594,946	2,383,941	2,162,337	962,934	1,528,896
	Cargo handling cost	54,090	248,734	227,401	90,461	143,001
	Port call cost	17,453	71,436	61,899	29,149	46,020
	Sub-total	4,723,192	12,362,607	18,518,278	6,535,017	9,754,273
Bulkier	Fixed Cost	1,101,537	1,782,324	2,086,167	1,735,477	1,988,134
	Fuel Cost	209,733	335,030	419,114	330,750	412,387
	Cargo handling cost	46,428	79,150	100,483	78,749	99,871
	Port call cost	14,036	22,505	27,550	22,248	27,157
	Sub-total	1,371,735	2,219,009	2,633,314	2,167,224	2,527,548
Tanker	Fixed Cost	1,891,095	2,479,558	2,614,935	2,479,558	2,614,935
	Fuel Cost	2,279,801	3,066,097	3,233,505	3,066,097	3,233,505
	Cargo handling cost	218,852	295,171	307,536	295,171	307,536
	Port call cost	45,134	59,494	63,397	59,494	63,397
	Sub-total	4,434,883	5,900,319	6,219,373	5,900,319	6,219,373
Total	Fixed Cost	8,047,871	14,918,912	21,766,279	11,983,604	16,536,447
	Fuel Cost	3,187,502	5,899,830	5,924,742	4,620,542	5,690,204
	Cargo handling cost	409,808	713,492	725,858	721,708	1,005,184
	Port call cost	81,210	158,065	157,223	123,653	157,884
	Grand-total	11,726,391	21,690,299	28,574,101	17,449,506	23,389,719

14.3 Benefit and Cost Stream

Benefit Cost Stream in Case1(Master Plan)								Discount Rate: 12.0%		
Year	Investment Cost(billion Rp)		Benefit (billion Rp)				Total Cost	Total Benefit	Discounted	
	Fleet Cost (Case 1- Case0)	Ship yard Cost	Cargo Transp.cost	Accident Reduction	Passenger Transp cost	Passenger Time cost			Cost	Benefit
2004										
2005	1601.17		302	38.5	162	-7	1,601	496	1,430	443
2006	1601.17		627	39.4	219	-10	1,601	875	1,276	698
2007	1601.17		977	40.2	276	-13	1,601	1,281	1,140	911
2008	1601.17		1,353	41.1	335	-16	1,601	1,713	1,018	1,088
2009	1601.17		1,756	42.0	395	-20	1,601	2,173	909	1,233
2010	1624.95		2,188	43.8	456	-23	1,625	2,665	823	1,350
2011	1624.95		2,651	45.7	518	-27	1,625	3,188	735	1,442
2012	1624.95		3,146	47.7	582	-31	1,625	3,744	656	1,512
2013	1624.95		3,675	49.8	647	-36	1,625	4,336	586	1,564
2014	1624.95		4,241	51.9	714	-41	1,625	4,966	523	1,599
2015		869	4,313	53.4	714	-41	1,583	5,039	455	1,449
2016	713.1	869	4,386	55.0	714	-41	1,583	5,113	406	1,312
2017	713.1	869	4,460	56.6	714	-42	1,583	5,189	363	1,189
2018	713.1	869	4,536	58.3	714	-42	1,583	5,266	324	1,078
2019	713.1	869	4,613	60.0	714	-43	1,583	5,344	289	976
2020	4583.91	869	4,691	62.3	714	-43	5,453	5,424	890	885
2021	4583.91	869	4,770	64.6	714	-43	5,453	5,505	794	802
2022	4583.91	869	4,850	67.1	714	-44	5,453	5,587	709	727
2023	4583.91	869	4,932	69.7	714	-44	5,453	5,671	633	658
2024	4583.91	869	5,184	72.3	714	-44	5,453	5,926	565	614
					Residual Value		-45,005		(4,166)	-
					Total				10,358	21,530
								B/C=	2.08	
								B-C=	11,172	
								EIRR=	37.30%	