RESEARCH PAPER
SERIES No. 94-02

Motorcycle and Parts Industry:
Impact of Trade Policies on Performance, Competitiveness and Structure

Virginia S. Pineda

PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES

This is part of the Development Incentives Assessment (DIA) Project of the PIDS, funded by the United States Agency for International Development (USAID), through the NEDA-Technical Resources Project (TRP).

The author is a Research Associate at PIDS. She gratefully acknowledges the valuable comments and/or information from the following: Dr. Thomas Aquino, Dr. Romeo Bautista, Jules Cruz, Edgardo Gatpandan, Dr. Ponciano Intal, Dr. Mario Lamberte, Dr. Erlinda Medalla, Cesar Mendigo, Mateo Ocenar, Dr. John Power, and Dr. Gwendolyn Tecson. She also thanks Benjamin Mojica and Susan Pizarro for their computer assistance.

Motorcycle and Parts Industry:

Impact of Trade Policies on Performance, Competitiveness and Structure

Virginia S. Pineda

RESEARCH PAPER SERIES NO. 94-02

Philippine Institute for Development Studies

The publication of this study is made possible by a financial grant from the United States Agency for International Development through the Technical Resources Project of the National Economic Development Authority.

Please address all inquiries to the:

Philippine Institute for Development Studies
4th Floor, NEDA sa Makati Building
106 Amorsolo Street, Legaspi Village
1229 Makati, Metro Manila, Philippines
Fax No. (632) 816-1091
Tel. Nos. 893-5705 and 892-4059

ISBN 971-564-001-X
RP - 9 - 94 - 500

Table of Contents

List of Tables

List of Abbreviations

BOI	-	Board of Investments
CBU	-	Completely build-up units
CIF	-	Cost, Insurance, Freight
CKD	-	Completely-knocked down parts
DAF	-	Department of Agriculture and Food
DRC	-	Domestic Resource Cost
DTI	-	Department of Trade and Industry
EPR	-	Effective Protection Rate
EPZA	-	Export Processing Zone Authority
FOB	-	Free on Board
GATT	-	General Agreement on Tariffs and Trade
MDP	-	Motorcycle Development Program
MDPPA	-	MDP Participants Association
NSO	-	National Statistics Office
NEPR	-	Net Effective Protection Rate
OEM	-	Original Equipment Manufacturers
PCMP	-	Progressive Car Manufacturing Program
PMMP	-	Progressive Motorcycle Manufacturing Program
SER	-	Shadow Exchange Rate
SKD	-	Semi-knocked-down
TRP	-	Tariff Reform Program

1

Introduction

As part of its industrialization strategy, the government implemented localization programs in the 1970s for motor vehicles, consumer electronics, and diesel engine. The local content requirement ensured the use of local parts in the manufacture of these commodities, which in turn were granted tax incentives and provided protection through tariffs and quantitative restrictions. Although the said policies benefited domestic suppliers, these also implied additional costs to society. Such unfavorable experiences of the country caused by inward-looking policies have been documented in several studies, e.g., Bautista, Power, and Associates (1979). With the current thrust towards deregulation, import restrictions have been lifted for some commodities covered by local content programs, such as consumer electronics, buses and trucks; other vehicles, which include motorcycles and parts, are scheduled for liberalization in 1998.

This study aims to review the structure, performance, and competitiveness of the motorcycle and parts industry under a protectionist trade regime and evaluate how it would be affected by future liberalization policies. Specific objectives are as follows:

1) Assess the overall effectiveness of the local content program vis-à-vis its objectives;
2) Evaluate the effects of liberalization scheduled in 1998; and
3) Identify the constraints to competitiveness and the possible measures to overcome them.

Chapter 2 gives a description of the industry, its structure and characteristics. Government policies with regard to the local content programs and the structure of protection are discussed in Chapter 3. A review of the performance of the motorcyle and parts industry in

relation to policy objectives and an identification of other factors affecting the industry's performance then follows in Chapter 4. Chapter 5 discusses the rationale for trade liberalization and its possible effects on the industry. Finally, Chapter 6 summarizes the general findings and policy implications.

2

Industry Profile

Products and Linkages

A motorcycle is defined as a two- and three-wheeled motor vehicle powered by an internal combustion engine and is rated by the cubic inch displacement of its engine (1988 Guidelines on the Motorcycle Development Program). In the Philippines, motorcycles are mainly appended with sidecars and used for public transport (tricycles), particularly in the rural areas. This constitutes about 80-85 percent of the demand for motorcycles. In recent years, an additional market was provided by food establishments, which use such types of vehicles for their food delivery services.

Products of local parts manufacturers include metal parts, electrical parts, rubber parts, batteries, paints, chemicals, plastic materials, reflectors, and upholstery. Compared with imported completely-knocked-down (CKD) parts, local parts accounted for an average of 22 percent of the assembler's cost of materials (i.e., CKD+local parts) for 1988-1991. This figure, however, differs from the estimation of local parts content in the motorcycle programs which are presented later in the paper. Based on the 1988 Input-Output table, about 65 percent of the intermediate inputs used in the manufacture of motorcycles and bicyles was sourced from the nonferrous (metal other than iron) foundries sector (Table 1).

Structure

Currently, there are six registered assemblers of motorcycles in the Motorcycle Development Program (MDP) — four in the two-

Table 1

Manufacture of Motorcycles and Bicycles: Intermediate Inputs

I-O Sector (Input Source)	% of total Intermediate Inputs
Non-ferrous foundries	65.35
Metal stamping, coating, engraving mills	4.07
Rubber tire and tube manufacturing	3.26
Cutlery, handtools, general hardware	2.61
Iron and steel foundries	1.78
Manufacture of current-carrying wiring devices, conduits and fittings	1.33
Insulated wires and cables	0.49
Petroleum refineries	0.38
Manufacture of paints, varnishes and lacquers	0.18
Manufacture of miscellaneous chemical products	0.11
Blast and steel making furnace, steel works and rolling mills	0.07
Manufacture of other fabricated wire and cable products	0.04
Manufacture of fabricated plastic products	0.02
Manufacture of artificial leather and impregnated and coated fabrics	0.02
Manufacture of basic industrial chemicals	0.02
Manufacture of other non-metallic mineral products	0.01
Others, including electricity and services	20.26
Total Intermediate Inputs	**100.00**

Source: 1988 Input-Output Table, (230 x 230 Commodity x Commodity Classification).

Table 2

Market Shares (In percent)

Company	1973	1978	1983	1988	1991
Norkis	41.07	42.89	38.70	48.31	37.96
Honda	24.21	23.36	25.65	17.81	21.72
Kawasaki	23.51	20.23	18.41	19.23	26.13
Suzuki	11.21	13.52	17.24	14.65	13.79

Source: MDP Participants Association (MDPPA) and Board of Investments (BOI).

wheeled category (Category A) and two in the three-wheeled category (Category B).

For the two-wheeled category, the firms include Norkis (Yamaha Brand), Kawasaki, Honda, and Suzuki, which also participated in the previous Progressive Motorcycle Manufacturing Program. They all belong to the List of Top 1,000 Corporations in the Philippines and have Japanese tie-up. Norkis, however, is 100 percent Filipino-owned, while the other three have Japanese equity, as follows: Suzuki — 100 percent; Honda — 98.32 percent; and Kawasaki — 40 percent (BOI data as of December 1991). Japanese equity participation was encouraged by the government during the economic crisis in the 1980s when the firms could not afford to import CKDs due to the very low foreign exchange reserve.

From 1973 up to the present, Norkis has maintained its leadership in motorcycle sales, while Suzuki consistently has the lowest market share. Since 1988, Kawasaki has occupied the second top sales position.

For the three-wheeled category, the participants are Porta Coeli (owned by Norkis) and Victoria Motors. Both companies are Filipino-owned. Their sales volume comprised a very small percentage of the total sales volume of motorcyles — only 0.11 percent to 2.56 percent during the period 1988-1992. Victoria Motors had no production for 1990-1992.

To upgrade standards, the MDP participants have accredited 130 component and parts manufacturers, whose products they agreed to patronize. The parts manufacturers, which are mostly small entrepreneurs, produce items not only for motorcycles but also for other motor vehicles and even for non-automotive industries (e.g., paints/chemicals and upholstery).

In accordance with the guidelines, the program participants provide technical assistance to the parts manufacturers, such as free technical services and use of facilities for testing. Furthermore, to illustrate an effort of quality control, one of the parts manufacturers indicated that some of its raw materials are supplied by the assemblers, which could be the latter's way of ensuring good quality of inputs.

Product Differentiation

The output of the assemblers are differentiated: 21 models for two-wheeled motorcycles and 6 models for the three-wheeled category (Table 3). Inasmuch as specifications differ between firms and models, parts and components are not standardized. Although consumers are provided with many product choices, a fragmented market would still have many disadvantages, such as higher toolings and inventory costs, shorter production runs, and limited economies of scale (Hill 1981).

Market Orientation

The motorcycle and parts industry is basically oriented to the local market. The highest export volume of assembled motorcycles/sidecars, as recorded in 1991, was only 2 percent of local sales. According to the MDP participants, domestic sales should be the backbone of the industry, without which no real growth is possible (*The Business Star,* 27 August 1992).

Although exports of parts increased substantially in 1990 and 1991, the country remains a substantial importer of CKDs and parts. In 1991, CKD imports were about four times the value of local parts purchased by assemblers and three times the export value of parts.

Geographical Location

Norkis and Porta Coeli are based in Cebu, while the other four assemblers are located in Metro Manila. Advantages of location in urban centers are better infrastructure/facilities and nearness to ports, which is important for assemblers' CKD imports. Of the 130 accredited parts manufacturers, 15 are based in Cebu; three are in Laguna, Bulacan, and Cavite; and the rest are located in Metro Manila.

Table 3
List of Motorcycle Models under the MDP

Brand	Category A Model
Honda	C70 DD
	TMS 125
	TMS 125 SR
	TMX 155
	PF-50
	XL-125 SD
Kawasaki	AR 080F
	HD 11
	HD 111
	HDX
	KE 100
Norkis	DT 125 (01W)
	L2 DX 100
	RS 100T
	RXZ 100
	V models
Suzuki	B 120 N
	GP 100 UN
	GP 125 UX
	TS 100 ERD
	TS 125 ERD

Brand	Category B Model
Porta Coeli	PASEO
	Wondercab
	K rider
Victoria Motors	BAJAJ Close van
	BAJAJ Passenger
	BAJAJ Pick up
	BAJAJ Autoriksha

Source: Bureau of Investments (BOI).

Significance to the Economy

The MDP participants' direct contributions to the economy are presented in Table 4. For 1992, the contributions included employment of 1,341 persons; purchases of local parts, which totaled P362 million; and payment of taxes and duties amounting to P419 million. Indirectly, the industry has given livelihood to thousands of tricycle operators/drivers. There are about 400,000 tricycle units in the country providing transportation for some 30 million people (*The Business Star,* 27 August 1992). Employment is likewise generated through the operation of parts manufacturers. In addition, some 300 spare parts distributors and 400 service shops are currently operational nationwide.

Table 4
MDPPA Economic Contributions
(Value in million pesos)

	1988	1989	1990	1991	1992
Employment (no.)	**942**	**1,743**	**1,941**	**1,283**	**1,341**
Total Payroll	31	34	75	92	99
Local Parts Purchases	112	194	253	225	362
Taxes and Duties Paid	82	225	346	359	419

Source: Motorcycle Development Program Participants Association.

3

Government Policies

PRIOR to the 1950s, the country's demand for motor vehicles was met by importing completely built-up units (CBUs). During the period of import and foreign exchange controls in the 1950s, the government issued licenses for setting up assembly plants for CKD units purchased from dollar allocations (Aquino et al. 1986; Hill 1981). Assembly has lower capital costs than component manufacturing, and it was made the starting point for the development of the motor vehicle sector. Before the introduction of the local content programs, assembled vehicles contained only a negligible amount of local inputs.

LOCAL CONTENT PROGRAMS

Progressive Motorcycle Manufacturing Program (PMMP)

The PMMP, which was introduced on 1 January 1973, had the same rationale as the Progressive Car Manufacturing Program (PCMP). Its objectives then were as follows:

1) To save foreign exchange through increased local production;
2) To generate new export products, such as motorcycle components, especially in the context of the ASEAN Complementation Program; and
3) To create manufacturing activities in various existing small- to medium-size enterprises, and in the process, upgrade engineering and production skills and provide new technological knowhow.

Included in the PMMP were motorcycles with engines between 80 and 125 cc cubic displacement, which had the highest sales percentage in the local market (94 percent in 1969). Under the program, only the participants were allowed to import CKD packs, the contents of which were defined from time to time to exclude those approved as local content. The firms were protected from foreign competition since CBU imports were banned. They also benefited from tax incentives as they were registered with the BOI under the Investment Incentives Act.

To be approved as local content, individual domestically manufactured motorcycle components must meet the folowing criteria:

1) The foreign exchange cost for the domestic manufacture of such part or component shall not be greater than the approved cost to import that component as part of the CKD pack (deletion allowance).[1]
2) The resulting peso cost to manufacture that component shall not be higher than the cost to import that same component as a spare part after paying the tariff, which shall not be more than 50 percent ad valorem.

The schedule of parts/components prescribed by the BOI (1978-1979) included wheel sprockets, sidecar chassis/bodies, seat saddles,

1. The foreign exchange cost to manufacture the component includes imported materials and supplies, foreign exchange content of locally purchased materials and supplies, applicable overseas royalty, services payments and other significant foreign exchange components of the export, such as depreciation of imported materials.

The deletion allowance refers to the discount given by the exporter of a CKD pack on its price when a certain component is deleted from the pack; it is usually considerably lower than the price of the same component when imported individually and sold in the replacement market. For example, if item A is to be imported as a spare part, it will have a landed cost of P30.00, but if it is deleted from the CKD pack, the deletion alllowance for that item may only be P17.00 (Guidelines to the PMMP). The deletion allowance is determined by the foreign corporation in terms of the marginal savings of the company if it were to do away with the particular component (Odaka 1983).

cycle handlebars, signal and brake lights, brake and clutch cables, brake and clutch pedals, mufflers and exhaust pipes, bump and rail guard, chain covers, front and rear wheel covers, and fuel tanks.

The local content ratio was computed as the summation of the respective values of domestic manufacture and export earning credits divided by the imputed value of motorcycles assembled during the year. It may be expressed as follows:

Sum of import prices (free on board, FOB) of spare parts, equivalents of domestically manufactured components actually used in local assembly during the period. (If the price of the component could not be obtained, the value of the domestically manufactured component shall be taken as 150 percent of the deletion allowance for that component).

Plus net foreign exchange earned (i.e., FOB export value less cost of imported materials used for manufacture) from the export of domestically manufactured motorcycle components attributed to the registered assembler during the period. (The assembler need not be the exporter of the motorcycle component for which domestic content credit is claimed. The exporter has to attribute it only to the registered assembler.)

Divided by the total cost of motorcycles completed by the registered assembler during the period. In estimating the total cost, motorcycles are valued at FOB export prices of the overseas supplier of the same models.

Foreign exchange allocation was provided for CKD imports. The allocation per firm was influenced by market shares with adjustments for either exceeding or not achieving local content targets. Due to limited foreign exchange, output/sales volume in the initial years of the program were lower than the registered capacity (33,280 units) submitted to the BOI and the measured capacity established for

motorcycles (49,000 units), as reflected in the Fifth Investment Priorities Plan. Table 5 shows that local content targets were surpassed except for 1977 while the measured capacity was exceeded in 1978.

The guidelines specified that horizontal integration is preferred over vertical integration for the following reasons:

- Foreign exchange outlays for new equipment and capital requirements for new facilities are minimized.
- A healthy competition will ensue among manufacturers of individual parts, which should lead to better quality and lower prices for these parts.
- The benefits of pursuing the program are spread over more segments of the economy rather than concentrated on a few assemblers-manufacturers.

Table 5
PMMP Local Content and Sales

	Local content (%)		Sales
	Prescribed	Attained	(no. of units)
1973*	10	12	19,796
1974*	20	25	29,075
1975	30	33	29,456
1976	40	45	31,028
1977	50	46	42,188
1978	50	52	51,769
1979	50	54	49,059
1980	50	55	44,774

*Pre-operation/gestation period; program year started in 1975.

Sources: Hill (1981) and Motorcycle Development Program Participants Association (MDPPA).

- Capability in manufacturing other products such as agricultural implements, gasoline engines and components thereof could be strengthened among parts manufacturers.

- It is anticipated that a motorcycle assembler making certain components will be likely to encounter problems in supplying those components to their competitors than would an independent parts maker. Hence, an assembler which is vertically integrated is likely to limit his production of components to the volume of his end-product sales, which is not advantageous for the economy.

Assemblers are encouraged to manufacture a major component only if there are no existing facilities for such manufacture and if there are reasonably good prospects of exporting such component aside from supplying domestic requirements. However, it was pointed out that in reality, in-house parts manufacturing was promoted because the incentives are made available only to the participants and not to parts manufacturers (Hill 1981).

Motorcycle Development Program (MDP)

The MDP replaced the PMMP in 1988. Its objectives are as follows: (1) development of a viable parts manufacturing industry; (2) technology transfer and development; (3) employment generation; (4) reasonable prices for consumers; and (5) foreign exchange savings and earnings.

Similar to the PMMP, only registered participants are allowed to import CKDs under the MDP. Importation of CKDs or components and parts require BOI approval. Likewise, BOI clearance is needed for CBU or SKD (semi-knocked-down components/parts or semi-assembled vehicles) importation. A maximum of 10 prototype units (CBU/SKD) for each final model/ variant is allowed for the participants' engineering, market evaluation and testing. Under the MDP, horizontal integration is again preferred over vertical integration. A BOI source noted that the focus was shifted from foreign exchange savings to export orientation.

Various changes were made under the MDP. The new program added a new category (Category B) for three-wheeled vehicles with unitized chassis and without any limit to engine displacement. New participants are allowed for Category B but not for Category A, which is limited to the previous PMMP participants. Category A covered two-wheeled motorcycles with no limit to engine displacement. Local parts are defined as those locally manufactured parts and components that are of OEM (original equipment manufacturers) approved quality, of a reasonable price, and with a maximum cost penalty of 15 percent. Cost penalty means the percentage by which the selling price on a locally-produced part is greater than the landed cost of its imported CKD counterpart. The formula used in the PMMP to estimate the local content ratio has been criticized for overstating the effective level since locally manufactured parts were valued at replacement parts prices which were always substantially higher than original parts prices in a CKD kit (Hill 1981). This was revised under MDP as follows:

Net Local content = Points x Local content rate of parts

where

- Points = the percentage of the FOB CKD price of the part to the CKD Full Pack Price of the vehicle model;

- Local content rate of parts = the percentage of net local content over selling price or manufacturing cost if the parts are produced in-house; and

- Net local content = the OEM selling price or manufacturing cost less the depreciation of imported capital equipment directly utilized in the production thereof and Cost, Insurance, Freight (CIF) value of imported raw materials, components and supplies used in

the manufacture of the product. In the estimation of local content, assembly allowances are added.

The local content requirements and attainment for the first three program years under the MDP are shown in Table 6. For succeeding years, the BOI shall determine the minimum local content in consultation with the participants and the parts manufacturers. For 1991, the minimum prescribed local content requirement for Category A remained at 54.95 percent. The levels attained by the participants were 56.67 percent for Honda, 63.59 percent for Kawasaki, 55.6 percent for Norkis, and 49.45 to 57.08 percent (specified per model) for Suzuki.

In addition to local content, the participants are required to earn 25 percent of their foreign exchange requirements for CKD importations through exports. Initially, they are allowed to source this through both automotive exports and non-traditional/non-automotive exports but the latter are given lower foreign exchange credits. During the first five program years, non-automotive exports

Table 6
MDP Local Content (in percent)*

	Category A		Category B	
	Minimum Prescribed	Attained	Minimum Prescribed	Attained
1988	44.02	58	38.20	-
1989	51.28	57	44.02	43
1990	54.95	69	46.64	-

* Includes assembly allowances of 20 percent for Category A and 15 percent for Category B.

Sources: Motorcycle Development Program Participants Association (MDPPA) and Board of Investments (BOI).

shall be phased-out while the percentage of automotive exports in the required export earnings shall be increased, as follows:

	% Automotive	*% Non-automotive*
1988	encouraged	100
1989	20	80
1990	40	60
1991	60	40
1992	80	20
1993	100	0

The assemblers need not be the exporters but they should be instrumental in generating the incremental export sales. This refers to current year export sales over and above the average export sales for the immediate past three years. The scheme thus provides mutual benefits to the participants and the firms they asssist in exporting. Only the incremental export sales are credited to the participant's account, and only the net foreign exchange earnings (gross value of exports less all imported inputs) are considered in the actual credits given to the participants. In 1989 and 1990, gross exports generated by the participants were higher than the exports of motorcycles/ sidecars and components/parts recorded in the Philippine Foreign Trade Statistics (Table 7).

Other major provisions in the MDP are as follows:

- Each participant, over a period of three years, shall support the manufacture or shall manufacture components and parts whose cumulative value is at least 9 percent of the total net local content requirement under the program. This may be done through equity investment in a new or existing parts manufacturing company, in-house manufacturing projects, or cost-sharing schemes with existing automotive parts manufacturing companies in terms of tooling and other costs in the production of automotive components and parts. Participants are also required to provide technical assistance to local parts manufacturers.

Table 7

Exports of Automotive and Motorcycle Parts (In million US$)

	Automotive[1]		Non-automotive[1]		Motorcycles sidecars
	Gross	Net	Gross	Net	& parts[2]
1989	4.59	1.26	10.34	8.93	0.67
1990	8.51	3.26	6.39	4.91	6.26
1991	7.36	2.56	0.97	0.87	10.78

Gross = value of exports

Net = gross - value of imported inputs

[1] Attributed to MDP participants.

[2] Derived from Foreign Trade Statistics (do not include rubber tires, engines, electric parts, completely knocked down parts, and storage batteries).

Source: National Statistics Office and Board of Investments.

- Participants exceeding local content targets shall receive additional foreign exchange credits. High technology items shall be given a premium on local content percentages.

- Participants are free to select components that they shall manufacture or source from local parts manufacturers, except those parts/components which qualify for mandatory deletion.

Penalties for non-compliance/violation of the guidelines include suspension of incentives, non-issuance of release certificate for importation, and suspension/cancellation of the certificate of registration.

Protection Structure

Tariffs

Before the Tariff Reform Program (TRP) in 1981-1985, tariff rates were 70 percent for assembled motorcycles and 30 percent for components, parts, and accessories. Under the TRP, they were decreased to 50 and 20 percent, respectively. Under E.O. 470, they are scheduled for reduction to 30 and 10 percent, respectively, in 1995. Mark-up rates applicable to imports (25 percent for motorcycles) were abolished in 1986.

Non-tariff Protection

In view of the restriction on the importation of CBUs, CKDs, components and parts, protection for the BOI registered assemblers is likely to be significantly different from the level indicated by the tariff rates. Attempts were made to do price comparisons. Prices vary for the different motorcycle models. In both Hongkong and Singapore statistics, data on motorcycle imports are lumped with other items (e.g., motor scooters). The most disaggregated information available was from the 1991 Philippine Foreign Trade Statistics. Cost, Insurance, Freight (CIF) unit value of imported motorcycles from Japan (under the category of greater than 50 cc but not exceeding 250 cc) was compared with the average unit sales value of locally assembled motorcycles for the same category in 1991. The price ratio (local/imported) was 1.53, which was very close to the tariff rate (50 percent) on motorcycles for the same year.

Effective Protection Rates (EPRs)

Effective protection rates, which take into account protection of both output and inputs, were estimated for 1983 and 1988, based on NSO (National Statistics Office) establishment data, and for 1991, using firm level data. Border prices were imputed from the tariff rates.

Tariffs were the same for 1983, 1988, and 1991: 50 percent for motorcycles and 20 percent for components and parts. The high

EPRs, specifically those exceeding 100 percent, may be explained by the low value added of the concerned establishments/firms (their value added/ output value ratio ranged from 0.07 to 0.39). A decrease in the average implicit tariffs on inputs from non-ferrous/metal sectors (i.e., from 1.10 in 1988 to 1.07 in 1991) was reflected in the 1991 increase in the EPR rates for parts manufacturers. Firm I has a low EPR since it produces other products which have low tariffs. Motorcycle parts constituted only 20 percent of its production. On the other hand, Firm K, which has a high EPR of 186 percent, had a low value added ratio of 0.17.

Net effective protection rates (NEPRs) were also computed to take into account the foreign exchange undervaluation (estimated at 25 percent by Medalla et al. 1990), as buffered by the protection system. EPR and NEPR estimates for the manufacture of motorcycle and parts are shown in Table 9. The peso overvaluation reduces protection, as indicated by the lower NEPR rates. It has a "cheapening" effect on imports since the amount of domestic currency required for import payments is reduced.

Table 8

Tariff Rates on Motorcycles and Parts

	1973	1981-1982	1983-1988	1991	1992	1993-1994	1995
Motorcycles	70	60	50	50	50	40	30
Components, parts and accessories for assembly*	30	20	20	20	20	20	10
Parts and accesories of motorcycles	30	20	20	20	20	20	10
Engines	10	10	20	20	10	10	10
Tires	50	30	30	30	30	30	30

*Imported directly by participants in the motorcycle program under prior authorization of the Board of Investments.

Source: *Tariff and Customs Code*, various years.

Table 9

EPR and NEPR Estimates

	EPR (%)	NEPR (%)
	1983	
Manufacture of motorcycles		
Estab. 1	154.27	103.42
Estab. 2	179.18	123.34
Estab. 3	*	*
Estab. 4	132.89	86.31
Estab. 5	219.54	155.63
Manufacture of motorcycle parts		
Estab. 6	22.22	-2.2
	1988	
Manufacture of motorcycles		
Estab. 1	72.04	37.63
Estab. 2	80.35	44.28
Estab. 3	222.94	158.35
Estab. 4	*	*
Manufacture of motorcycle parts		
Estab. 5	28.65	2.92
Estab. 6	28.58	2.86
	1991	
Manufacture of motorcycles		
Firm A	162.17	109.74
B	169.01	115.21
Manufacture of motorcycle parts		
C	31.44	5.15
D	31.32	5.06
E	40.38	12.30
F	65.22	32.18
G	47.04	17.63
H	36.35	9.08
I	12.80	-9.76
J	57.64	26.11
K	185.94	128.75
L	28.32	2.66
M	47.90	18.32

* Negative free trade value added

4

Industry Performance

Policy Objectives and Performance

Development of a Viable Parts Manufacturing Industry

The existence of efficient supporting basic industries and a big market to allow for scale economies are considered essential to the viability of the motorcycle and parts manufacturing industry. Our concern here is the effectiveness of policies in bringing about these conditions.

As presented earlier, the 1988 Input-Output Table showed that about 65 percent of the total intermediate inputs in the manufacture of motorcycles (including bicycles) are from the nonferrous metal sector. There seemed to be no significant improvement in the metal working sector. In the early 1980s, a report indicated that the quality of small firms' output was deficient; in fact, in the foundry sector, "large tolerances" were common (Hill 1981). Similarly, in 1993, another study noted that the metal and engineering processes such as metal casting, forging, tool and die making, and machining remain underdeveloped (*Manila Chronicle*, 24 February 1993). A Department of Trade and Industry (DTI) official noted that there has been a failure in the past to integrate the local content utilization with the development of the basic metals and engineering sector (*Business World*, 12 September 1991).

Attaining economies of scale has been the main rationale behind the protection/local content programs in the motorcycle and parts industry. Economies of scale is associated with large production volume which require the existence of a big market. The local content program has ensured a market for the industry's products but local demand and the corresponding production have not been large enough to allow for cost-efficiencies. The market is further

fragmented because there are many motorcycle models and their parts are not standardized/ interchangeable. Thus, after two decades of local content programs, the parts industry still does not have the scale advantage.

Due to limited market demand and the deficiencies of the supporting basic and strategic industries, big companies are discouraged from making huge investments in parts manufacturing, specifically in major parts (*The Business Star*, 27 August 1992 and *Business World*, 12 October 1991). The parts manufacturers are mostly small entrepreneurs selling mainly to the local market. Hence, the growth of the industry has been dependent on the domestic market for motorcycles.

Sales volume of local motorcycles from 1973-1980, as presented earlier in Table 5, was generally increasing, with an annual average growth rate of 14 percent. Adverse economic conditions, particularly the shortage of foreign exchange for CKD imports and low market demand during the economic crisis starting in late 1983, resulted in very low sales of motorcycles — levels in 1984-1987 were even lower than the 1973 sales volume of 19,796 units. (Sales data from 1980 onwards are shown in Table 10.)

Compared with Thailand, which has about the same population as the country, the growth of the local market for motorcycles is relatively slower. The highest production of motorcycles in the Philippines was 76,058 units (including three wheelers), as registered in 1992. Thailand's production reached 75,000 units in 1975 (UNIDO 1978); in 1990, its domestic sales was 719,000 units (*Manila Chronicle*, August 1991).

In Thailand and other Asian countries, motorcycles are primarily used as solo or private vehicles, which implies a bigger market compared with the Philippines wherein 80-85 percent of motorcycle sales goes to the tricycle market (*Business World*, 23 August 1990). Based on a survey, motorcycles are unpopular as solo vehicles because of the availability of jeepney rides, the Filipinos' preference for cars, the perception that motorcycle riding is dangerous, and the popular association of the motorcycles with messengers, tricycle drivers or collectors (*Business World*, 6 February 1991 and 27 August 1991).

Reasons cited for the Philippines' limited market growth include unfavorable economic conditions, low per capita income, and high financing rates, which make motorcycles unaffordable to poor people (*Manila Chronicle Supplement*, 24 February 1993). Domestic sales is adversely affected by peso depreciation and yen appreciation, which raise costs of imported inputs and prices of output. Based on the information from the MDPPA, a 20 percent price increase (to make a 5 percent profit) will decrease the market by 40 percent. This will also result in lower demand for parts.

The limitations of the domestic market may be overcome through exports. However, it is quite difficult for local manufacturers to be price competitive in the international market because even for domestic consumption, quality products can be done only at higher cost due to the lack of scale economies. (*Philippine Daily Inquirer Supplement*, 30 May 1991).

Since the constraints pertaining to economies of scale and the metalworking sector were not eliminated under the program, the industry's products, in general, remained uncompetitive with imports in terms of price and quality. In turn, competitiveness of industries which use these inputs is likewise reduced.

Export Earnings

The industry's products are mainly geared to the local market. Exports usually pale in comparison to domestic sales (Table 10). In 1990 and 1991, export performance improved greatly. During the same period, both volume and value of exports of the assembled products surpassed the imports of the same commodities. The average growth rate of the said exports from 1989 to 1991 was 876 percent in terms of volume and 586 percent in terms of value. Export markets included the United States, Guam, Bangladesh, Guatemala, and Japan.

For parts of motorcycles and sidecars, volume and value of exports increased by 456 percent and 831 percent, respectively, from 1989 to 1990, for the first time hitting and going beyond the one million mark (Table 11). For 1991, exports of these items were even greater than the corresponding imports. The principal markets for these

Table 10

Motorcycle Sales, Imports and Exports

	Sales	Imports*		Exports*	
	(No.)	Quantity (No.)	Value ($'000 CIF)	Quantity (No.)	Value ($'000 FOB)
1980	44,774	1,522	481	1	0.370
1981	45,412	671	152	23	8
1982	49,021	653	275	8	8
1983	53,500	720	355	-	-
1984	13,988	87	62	-	-
1985	11,812	421	269	66	27
1986	13,468	694	395	6	0.990
1987	17,088	104	69	10	5
1988	25,656	442	452	14	14
1989	46,212	1,094	839	25	25
1990	67,988	287	249	41	249
1991	56,350	377	305	1,210	936

* Motorcycles and sidecars

Sources: Motorcycle Parts Program Participants Association; *Foreign Trade Statistics*, National Statistics Office, various years.

products were Japan and the U.S. In the case of CKDs, exports have been negligible, while imports remained substantial.

The surge in exports may be attributed to the MDP's foreign exchange earnings requirement. Exports of other products, both automotive and non-automotive, were also generated to comply with the requirement. These were presented earlier in Table 7. For 1991, exports of automotive and non-automotive products attributed to the participants amounted to US$ 8.33 million. Despite the improved performance, exports of motorcycles and parts are still minimal. As cited earlier, the highest export volume of motorcycles and sidecars attained in 1991 was only 2 percent of motorcycle sales for the same year. Value of CKD imports was almost thrice the value of exports of parts.

One MDP participant indicated that it has incurred losses from exports of both CBUs and parts, which reduce its profitability/

Table 11

Imports and Exports of Motorcycle Parts and CKDs

	Parts of motorcycles and sidecars[1]			
	Imports		Exports	
	Quantity (Gross kg)	Volume (US$'000 CIF)	Quantity (Gross kg)	Volume (US$'000 FOB)
1980	1,314,070	2,781	143,840	522
1981	1,165,290	2,274	105,993	334
1982	1,687,093	2,807	98,117	296
1983	1,281,019	1,911	116,351	352
1984	434,253	252	12,353	9
1985	988,224	834	1,500	6
1986	505,187	1,069	3,206	7
1987	724,130	1,709	48,965	103
1988	1,367,060	2,967	34,265	87
1989	1,103,872	6,134	190,487	646
1990	2,444,687	9,609	1,058,233	6,011
1991	1,207,630	3,857	1,308,377	9,840

	Motorcycles in CKD[2]			
	Imports		Exports	
	Quantity (Gross kg)	Volume (US$'000 CIF)	Quantity (Gross kg)	Volume (US$'000 FOB)
1981	40,712	5,961	-	-
1982	211,255	7,115	-	-
1983	715,794	8,727	-	-
1984	10,315	2,727	-	-
1985	8,898	1,687	2	1.8
1986	15,121	3,025	-	-
1987	22,555	6,394	-	-
1988	30,887	11,983	-	-
1989	48,323	24,776	-	-
1990	63,898	33,054	10	3.6
1991	59,444	28,583	-	-

[1]Do not include rubber tires, engines, electric parts, completely-knocked-down parts, and storage batteries.

[2]Specially fabricated for motorcycle assembly plants, excluding batteries and maybe imported only by licensed assemblers of motorcycles.

Source: *Foreign Trade Statistics*, National Statistics Office, various years.

viability in the local market. In the international market, Philippine-made products are not reputed to have good quality and their prices are not competitive. In the firm's experience, a motorcycle model which sells at P40,000 in the domestic market has to be priced at P22,000, which is 82 percent lower than its domestic price, for it to be sold in the foreign market. Data from the Foreign Trade Statistics and the MDPPA for 1991 indicate that the average export unit value (FOB US market) is 50 percent lower than the average unit sales value for motorcycle models which are greater than 50 cc but not exceeding 250cc.

In addition to the low economies of scale and high cost, yet poor quality of materials, tariffs and taxes on inputs are regarded by motorcycle and parts suppliers as major "culprits" for their uncompetitiveness in the international market. Apparently, they do not benefit from exemption/drawback schemes.

Marginal exporters, including those in the motorcycle and parts manufacturing industry, are excluded from exemption schemes under bonded warehouses and the Export Processing Zone Authority (EPZA). This is so because these require a substantial exports to output ratio (at least 70 percent for bonded warehouses; EPZA firms produce solely for the export market).

In Malaysia and Thailand, exporters have the advantage of many bonded warehouses. In the Philippines, tedious and time consuming arrangements/requirements associated with bonded warehouses and other exemption and drawback schemes raise the price of inputs above world prices. For the drawback scheme, the tariff equivalent of transaction costs as a percentage of import value was estimated at 9.51-21.38 percent (Manasan 1990). The processing of claims is reported to have been facilitated by the creation in 1992 of a one-stop inter-agency tax credit and duty drawback center (TCDDC); nevertheless, the system needs to be simplified further (*Business World*, 20 July 1994).

In a survey conducted by this study, wherein three assemblers and 13 parts manufacturers responded, the barriers to exports identified by manufacturers of parts included the following: technical problems, lack of market, documentation requirements, financing, and low profitability in the export market. Based on the experience of the

assemblers, foreign linkage could help, such as finding markets, providing financial support, and technological assistance. Government efforts could thus be directed towards the improvement of systems and institutions to minimize bureaucratic red tape.

Assemblers claim that they benefit from the global network of their foreign partners. The Japanese counterpart is primarily responsible for sourcing markets in his country of origin and is capable of negotiating for more competitive prices. However, the Japanese firms have the practice of reserving CBU exports for themselves. The Philippines is allowed to export CBUs only when the model is no longer made in Japan. Another export constraint is that locally-assembled motorcycles are designed for tricycles, which make the former unsuitable for foreign markets (*The Business Star*, 27 August 1992). Lastly, the overvalued peso penalizes all exports, including those of motorcycles and parts.

Foreign Exchange Savings/Efficiency

Local production of motorcycles and parts substitutes for imports, which translates to foreign exchange savings. To determine the efficiency in saving foreign exchange, this study used the Domestic Resource Cost (DRC) framework. The DRC measure indicates the cost of domestic resources used per unit of net foreign exchange saved (earned) by the activity through import substitution (export). Net foreign exchange saved is the difference between the amount saved by not importing and the amount of foreign inputs used in local production. The DRC of the activity is then compared with the shadow exchange rate (SER): a DRC/SER ratio of less than one indicates comparative advantage, while a ratio greater than one denotes inefficiency in saving foreign exchange. In this paper, a positive DRC/SER ratio of up to 1.20 is taken to imply comparative advantage. This allows for computational errors. Estimation of DRC/SER ratios was done using data from the NSO Census of Establishments for 1983 and 1988 and financial statements of sample firms for 1991.

The DRC/SER estimates show that government intervention has encouraged the growth of both efficient and inefficient firms. In 1983, only one sample establishment was saving foreign exchange efficiently (Table 12). In 1988, three out of the six establishments showed unfavorable DRC/SER ratios (Table 13). Six sample firms were high-cost savers of foreign exchange, while seven were low-cost savers in 1991 (Table 14).

The objectives of developing a viable parts manufacturing industry and saving and earning foreign exchange are not adequately satisfied where there are firms whose cost of domestic resources used is greater than the net foreign exchange saved from substituting for imports. Society will gain if resources are reallocated from the less efficient to the more efficient producers.

Other Factors Affecting Performance

Tariffs and import restrictions on motorcycles, components and parts were the same from 1983 to 1991. Hence, differences in performance among firms and changes in performance indicators may not be attributed to changes in protection policies but to other factors.

Labor productivity and capital intensity for motorcycle manufacturers were higher in 1988 than in 1983. This can be associated with the lower rate of employment in 1988, which may be ascribed, in turn, to unfavorable economic conditions. Although output values were relatively higher in 1988, they reflect high costs/inflation. Sales volume was actually lower in 1988 (25,656 units) than in 1983 (53,500 units), as presented earlier in Table 10. Despite this, three establishments showed favorable efficiency ratios in 1988. To determine the sources of variations, each performance indicator was compared with the DRC/SER ratio. The findings were as follows:

- High capital productivity (value added/capital) had positive impact on efficiency in both 1983 and 1988. Establishments which had the most favorable DRC/SER ratios (Establishment 4 in 1983 and Establishments 1 and 2 in 1988) also had the highest capital productivity.

Table 12
Performance Indicators: 1983

	DRC/ SER	Value added per capital	Value added per worker	Capital intensity	Value of output	Share of firm in total subsector sales	Price margin	Vertical integra- tion	OPSCALE	Census added	Employ- ment
Manufacture of motorcycles											
Estab. 1	3.70	0.075	22359	296770	10359800	0.026	0.094	0.285	0.063	2951376	132
Estab. 2	1.42	0.258	118361	458231	71148970	0.177	0.258	0.308	0.465	21896806	185
Estab. 3	4.66	0.057	22298	389886	131099670	0.326	-0.012	0.073	0.204	9588279	430
Estab. 4	1.17	0.921	49809	54102	18747490	0.047	0.152	0.186	0.074	3486647	70
Estab. 5	1.72	0.165	102164	618372	171256231	0.425	0.231	0.275	1.000	47097782	461
Manufacture of motorcycle engines and parts											
Estab. 6	9.15	0.014	8586	603400	152901	1.00	0.294	0.730		111612	13

Table 12 *continued*

	Herfindahl Indices Using			
	Sales of major products	Total revenue	Census value added	Minimum efficient scale
Manufacture of motorcycles	0.32	0.32	0.41	0.554
Manufacture of motorcycle engines and parts	1.00	1.00	1.00	

Table 13

Performance Indicators: 1988

	DRC/ SER	Value added per capital	Value added per worker	Capital intensity	Value of output	Share of firm in total subsector sales	Price margin	Vertical integra-tion	OPSCALE	Census added	Employ-ment
Manufacture of motorcycles											
Estab. 1	0.43	0.77	2101220	2727970	209573409	0.39	0.54	0.55	1.00	115567123	55
Estab. 2	0.70	0.48	378684	786419	195013343	0.36	0.41	0.47	0.78	90126678	238
Estab. 3	1.32	0.35	317369	896590	92182108	0.16	0.18	0.21	0.16	18724752	59
Estab. 4	*	-	-	820524	44745618	0.09	-	-	-	-	225
Manufacture of motorcycle engines and parts											
Estab. 5	0.83	1.24	5093	4094	280426	0.15	0.06	0.40		112036	22
Estab. 6	3.94	-	-	4824	1647310	0.85	-	-		-	57

Table 13 *continued*

	Herfindahl Indices Using			
	Sales of major products	Total revenue	Census value added	Minimum efficient scale
Manufacture of motorcycles	0.316	0.287	0.433	0.51
Manufacture of motorcycle engines and parts	0.751	0.953	1.00	

- = Cannot be computed due to missing variables.
* = Negative foreign exchange saving.

Table 14
DRC/SER Ratios: 1991

Manufacture of motorcycles	
Firm	
A	0.66
B	1.28*
	0.79**
Manufacture of motorcycle parts	
C	2.09
D	1.07
E	1.17
F	1.33
G	0.94
H	1.51
I	1.19
J	1.11
K	1.15
L	1.27
M	1.57

* At actual utilization which was lower than that of Firm A.
** At capacity utilization equal to Firm A.

- The relationship between labor productivity (value added/labor) and efficiency was not conclusive. Labor productivity was positively associated with efficiency in 1988 wherein both establishments with the lowest DRC/SER ratios also had the highest labor productivity. However, such connection was not found in 1983 wherein the most efficient establishment had the lowest labor productivity.

- No clear pattern was found between efficiency and capital intensity (replacement cost of capital/employment). In 1983, Establishment 4, which had the most favorable DRC/SER ratio, was the least capital intensive. However, Establishment 2, which had the second lowest DRC/SER ratio, was the second most capital intensive among the assemblers. In 1988, Establishment 1, which was the

most efficient, was the most capital intensive. On the other hand, Establishment 2, which ranked second in efficiency, was the least capital intensive among the manufacturers of motorcycles.

- In 1988, Establishments 1 and 2, which were the most efficient savers of foreign exchange, also had highest levels of output value, market share, price cost margin, vertical integration (census value added/sales), and optimum scale (OPSCALE). (The OPSCALE measure indicates how close the establishment is to the minimum efficient scale or MES; the higher (lower) the OPSCALE figure, the closer (farther) the establishment is to the MES.) However, this was not manifested in the case of the other low-cost savers of foreign exchange — Establishment 4 in 1983 and Establishment 5 in 1988 — which had lower levels of the said indicators compared with the less efficient firms. (Vertical integration, however, was high for Establishment 5.) Nevertheless, this does not necessarily negate the direct relationship between high levels of production and efficiency/ economies of scale considering the heterogeneity of products. The level of output could be enormous, but if products have various specifications and require differences in toolings, economies of scale would also be limited.

Based on MDPPA sources, the relative efficiency of the assemblers over the parts manufacturers could be attributed to foreign tie-up. (Establishments 1 and 2 in 1988 and Firm A in 1991, which have the most favorable DRC/SER ratios, are manufacturers of motorcycles.) During the economic crisis which started in late 1983, the assemblers could not import CKDs because of low foreign exchange reserves. Thus, the government encouraged foreign equity participation. Sophisticated equipment from the Japanese investors brought technology and developed local skills. These are not available to ordinary component manufacturers.

As revealed by the survey, the barriers to competitiveness of parts specified by the firms are poor quality and high cost of raw materials, inadequate tool and die facilities, lack of testing facilities and capital investment. Barriers to expansion include difficulty of technology

acquisition, lack of access to finance, high interest rates, lack of access to raw materials, lack of skilled labor, too much competition from imports, and bureaucratic procedures.

5

Trade Liberalization

Concept/Rationale

Trade liberalization may be defined as a program of reform which moves a country closer to a neutral trade regime — one that provides equal incentives to exports and domestic sales (Papageorgiou et al. 1991).

A protectionist trade policy puts greater emphasis on production for the domestic market and is biased against exports. By reducing the supply and raising the prices of imported goods in the domestic market, tariffs and import restrictions allow higher prices and encourage greater production of local goods which compete with imports. However, they do not have protective effects on exports since these are sold abroad and face world market prices. Exports are even penalized by such measures in terms of insufficiency of supply, higher prices and low quality of inputs. Considering that protection on exports is zero and inputs are subject to tariffs and import restrictions, the effective protection rate for exports, under these conditions, is less than zero; with tax/duty drawbacks on inputs, the EPR is zero. Consequently, resources are drawn from exports (and other less-protected industries) into sectors which have higher effective protection rates but not necessarily more efficient.

Restrictive trade policies also cause foreign exchange undervaluation which discourage exports. As the demand for imports decreases, so does the demand for foreign exchange and its value in domestic currency. The resulting exchange rate, therefore, is lower than under a free trade policy. The foreign exchange undervaluation (or peso overvaluation) is estimated at 25 percent (Medalla et al. 1990). In 1988, the average official exchange rate (OER) was P21/US$1. Correcting for a 25 percent foreign exchange undervaluation

(or peso overvaluation), the shadow or true exchange rate (SER) was P26.25. The undervaluation makes export receipts lower. Using the OER and SER figures in 1988 for illustration, exporters should get P26.25 in domestic currency for every US$1 earning. However, they only get P21. It also makes the price of the country's exports in the international market higher. A product valued at P26.25 would have an export price of US$1.25 (at P21/US$1) instead of only US$1.00 (at P26.25/US$1).

The bias against exports may be reduced through subsidies or by decreasing protection on domestic sales. The use of subsidies is limited by the General Agreement on Tariffs and Trade (GATT), and they are subject to countervailing duties or retaliation from other countries. They also require financial outlay. In the case of the Philippines, the amount of subsidies required to offset the costs of protection were so huge that they were financially impracticable (Power 1986). The remaining option therefore is the reduction of protection, i.e., trade liberalization, which is the current policy direction in the Philippines. By minimizing policy induced distortions, trade liberalization fosters competition and greater reliance on the market. It provides an even playing field which will encourage industries with real profitability, resulting in better resource allocation and welfare benefits to consumer/users in terms of greater availability of goods and lower prices. It reduces foreign exchange undervaluation and anti-export bias, hence, promoting outward orientation. But to make trade reforms viable, peso depreciation is necessary. This is to maintain the balance of payments equilibrium. A peso depreciation favors Philippine products in both the export and local markets. It results in lower export prices in foreign currency and higher export proceeds in peso. In the domestic market, depreciation raises the cost in peso of imported goods, thus improving competitiveness of local products.

Liberalization in the Motorcycle and Parts Industry

The BOI has made the announcement that the motorcycle and parts industry will be liberalized in 1998. Protection will be through

tariffs and may be done following the scheme in trucks and buses, which have already been liberalized: for CBUs, tariffs were increased upon liberalization and thereafter scaled down over a four-year period; for CKDs, components, parts, and accessories, there were two sets of tariffs — a low rate for participants and a high rate for other importers (Table 15). The local content requirement will be waived, provided the participants can fully comply with the foreign exchange earnings requirement. (At present, this is 25 percent of foreign exchange requirements for imports, but is likely to be increased in the future.) The foreign partner or parent company of the participants would select a particular product to export; if there are enough proceeds for even just one part, participants need not buy local parts.

Locally assembled motorcycles are designed primarily for tricycles, which comprise about 85 percent of the domestic market, while imported motorcycles have different specifications. This dissimilarity also provides protection in addition to tariffs which would be initially increased upon liberalization. According to an assembler, competition with imports will be in the market for solo riding, which is only about 15 percent of the market. However, it was also noted that although the difference in specification protects assemblers in the domestic market, it also makes local motorcycles unsuitable for other markets.

Liberalization is not expected to solve smuggling, which is done mostly for second-hand motorcycles, since the cost disparity is too large. Prices of local brand new motorcycles are about five times more than those of second-hand units. The extent of smuggling was estimated at about 10 percent of motorcycle sales.

The foreign exchange earnings requirement ensures that some parts will be exported. These may be produced by the assemblers themselves or in association with local parts manufacturers which benefit from market and technical assistance to meet export standards.

In an extreme case where the foreign exchange earnings requirement is fully satisfied and the local content requirement is waived, the parts which will not be exported must compete with imports. The local manufacturers will have to improve their quality and cost-efficiency. According to a representative from the MDPPA, most of the local firms will eventually fold up because their products are expensive and have low quality.

Table 15
Tariff Rates on Liberalized Motor Vehicles (in percent)

	1991	1992	1993	1994	1995	1996
Public transport type passenger motor vehicles						
Buses						
6-18 tons gvw	20	40	35	30	25	20
Above 18 tons gvw	30	60	55	45	35	30
Others	50	75	65	55	45	30
CKD, components, parts and accessories						
Imported for assembly by participants in Commercial Vehicle Development Program (CVDP)	30	10	10	10	10	10
Others	50	75	65	55	45	30
Motor vehicles for the transport of goods						
Motor vehicles	50	60	55	45	35	30
Components, parts and accessories						
Imported for assembly of trucks by CVDP participants	20	10	10	10	10	10
Others	30	60	55	45	35	30

Sources: 1991 *Tariff and Customs Code*, Tariff Commission, and Executive Order No. 8 (1992-1996).

Based on the DRC/SER of sample parts manufacturers, some are low-cost savers of foreign exchange. But such may not be the case if the deletion allowance is taken into account. A CKD pack is supplied as a set of components/parts, and when a certain component is deleted, the discount (deletion allowance) given to the importer is not equal to the price of the same component when it is imported individually and sold in the replacement market. Usually, the deletion allowance is considerably much lower, by as much as one-third or one-fifth (Odaka 1983). Hence, the cost is likely to be higher if the parts are sourced locally than if these are imported as part of the CKD pack. To examine the impact of the cost differential between the parts deleted from a CKD pack and those imported individually, sensitivity analysis was done for the six efficient parts manufacturers in 1991. The border values imputed from tariffs were taken to represent the cost of individually imported parts. The price differentials considered (i.e., border values/deletion allowance) and the effect on the firms' efficiency ratios were as follows: at 4 percent, one firm would have an unfavorable DRC/SER ratio; at 10.5 percent, a total of three firms would become inefficient; and at 17 percent only one firm would have a comparative advantage.

If firms cannot compete, they could contract, fold up, shift to other products or change their output mix since most of them also manufacture other items. Efficient firms can expand and enter into joint ventures with assemblers/foreign firms. From the survey conducted by this study, the response to liberalization indicated by the parts manufacturers included cost-cutting measures, reduction of prices, and diversification to other products.

There would be gainers and losers from trade liberalization, but all these are a matter of optimizing resource allocation, which refer back to the basic tenets of trade practice, i.e., the country would gain if it uses products from abroad which are better and more cheaply produced by other countries, and specialize on goods where it has comparative advantage. Therefore, the country loses if resources are allocated from firms and activities which manufacture products at lower costs to those which produce goods at higher costs. This has been one of the negative effects of past protectionist policies in the Philippines (Bautista, Power, and Associates 1979).

However, if the local content requirement were to depend on export performance, it is not likely to be eliminated. Since the firms find it hard to export, it is highly probable that they will choose to use local inputs rather than fully meet the foreign exchange earnings requirement if there is a partial trade-off between the two requirements. (Meeting the local content requirement, however, does not mean that the firms do not have to export. According to a BOI source, the current policy is that the participants are not given authority to import CKDs if they have zero export balance.) But it must be pointed out that such continuation of the local content requirement is contrary to liberalization.

Some factors which favor the use of local parts over imports are as follows:

- Net foreign exchange earned, which is credited to foreign exchange earnings requirement, is computed as the difference between the export value and imported inputs. The use of local materials is encouraged because the lower the imported inputs, the higher the net foreign exchange credit.

- The continuous appreciation of the yen (and possible depreciation of the peso in line with trade liberalization) will make imported inputs expensive.

- MDPPA indicated that it envisions the economy moving towards increased localization. Thus, it declared: "Decrease in imports lead to less foreign exchange requirements and less sensitivity to currency fluctuations. When we localize, we transfer technology to Filipinos. With more employment, the economic base is propped up, prices decrease, and there will be economies of scale. In the long-term, prices of local components will decrease and generate exports." (*Manila Chronicle Supplement*, 24 February 1993). This is premised on the infant industry argument.

A peso depreciation, which is a complementary measure to trade liberalization, would increase the cost of CKD imports. The

assemblers have expressed apprehension that increases in output prices to reflect rising costs would lower demand. If income levels also rise in response to inflation and/or improvement in the economy, market demand does not necessarily have to decrease as output prices increase. Inasmuch as depreciation also makes CBU imports more expensive, it provides protection to assemblers. Furthermore, it will improve export competitiveness and profitability.

With the liberalization of motorcycles, tariffs would be used for protecting participants from new entrants. The implementation of lower tariffs for participants and higher tariffs for other importers of CKDs, components, and parts, would discourage new entrants and preserve the current set-up, i.e., only the present participants could engage in assembly of two-wheeled motorcycles. Under the existing guidelines, new participants may be allowed only for the three-wheeled but not for the two-wheeled category. Any amendment, such as adding more participants for two-wheeled motorcycles would have to be recommended to the President. There could be possible entrants, e.g., a foreign firm, BMW Motorrad GMBH & Co. of Germany, was reported in 1992 to have submitted an inquiry at the BOI on the possibility of manufacturing and selling motorcycles (175 cc) in the Philippines (*Daily Globe,* 27 October 1992). If there are no possible new entrants, there would be no need for a differentiated tariff scheme. Likewise, if production is export oriented or the domestic market is already open to competition from imports, regulation on the number of assemblers would not be necessary. This assumes that imports could be modified for the tricycle market, thus providing competition.

In a limited market, the existence of many firms could result in lower volumes of vehicles per plant which imply diseconomies of scale and higher costs. On the other hand, competition could also result in lower prices for consumers. This could happen if the new entrants have lower production costs, e.g., they can source their CKDs at cheaper prices.

From 1984 to 1989, levels of sales, and correspondingly, capacity utilization, have been lower than the 1983 figure due to the depressed economy (Table 10). Significant improvement was registered only in

1990, with capacity utilization above 90 percent. In 1990, production capacity for one shift was 72,000 units. In 1992, the highest output volume was recorded — 75,822 units for two-wheeled motorcycles. There are complaints, however, concerning the high cost of motorcycles. Very recently, the Department of Agriculture (DA) has proposed the immediate liberalization of motorcycles ahead of the 1998 schedule, but this was not favored by the BOI. According to DA Secretary Roberto S. Sebastian, the local assemblers are unable to provide the market particularly the countryside, adequate supply at reasonable prices (*Philippine Daily Inquirer*, 28 February 1994). (Since higher tariffs will be imposed upon liberalization, it may take time for consumers to benefit from lower prices.) If new entrants would be able to provide products of acceptable quality at much lower costs than the existing participants or if they could be competitive in the export market, liberalization of entry is another way of reallocating resources from higher-cost to lower-cost manufacturers. Restriction on entry precludes the participation of lower-cost producers, in case there are any. The provision of protection from new entrants could be tied to the foreign exchange earnings requirement (*quid pro quo*), i.e., it is given in exchange, as a means of enforcing the requirement.

6

Conclusion and Policy Implications

THE objectives of export generation, development of a viable parts manufacturing industry, and efficiency in saving of foreign exchange were not adequately satisfied under the local content programs. Constraints to the industry's viability — underdeveloped state of the basic metalworking sector and lack of economies of scale — have not been eliminated. Removing the penalty on the input side would involve improving the efficiency/competitiveness of the local metalworking sector and lifting restrictions on imports of parts/materials which are cheaper and have better quality. On the part of the firms, scale economies could be gained by limiting their production to a few models and by standardizing the specifications of parts. Other recommendations, as already cited in previous studies on motor vehicles, include the use of common facilities and promotion of exports (Odaka 1983 and Hill 1981).

To attain genuine liberalization in the industry, the local content requirement, which is a form of non-tariff protection to local parts manufacturers, would have to be lifted. If this would depend on the satisfaction of the foreign exchange earnings requirement, it is possible that the local content requirement would not be eliminated, considering that currently, the firms find it difficult to export. If such is the case, the industry would not be truly liberalized.

In the trade-off between foreign exchange earnings and local content, the government aims to achieve both objectives of promoting the use of local parts in domestic production and pushing for export of parts. On the local content requirement, one issue may be raised: would its continuation make the local parts manufacturing sector competitive and export oriented? This was not achieved within two decades of the local content program. Krugman's (1990) export promotion through protection did not work since the domestic

market has not been large enough, and exports were penalized by input constraints and foreign exchange undervaluation resulting from pervasive protection. If local inputs are competitive with imports, the local content requirement is unnecessary. If they are more expensive and have inferior quality, the local content requirement reduces the competitiveness of the industries using them. To realize cost-efficiencies, manufacturers should be free to choose between the domestic market and foreign market in sourcing cheap and good quality inputs.

As regards the foreign exchange earnings requirement, it can be credited with the surge in exports in 1990 and 1991. Industry sources claim that they are not making profits from exports because local products are uncompetitive in the international market. If such is the case, exports are subsidized by domestic sales. (Otherwise, if they are competitive enough, there is no need for the export requirement.) This would entail providing protection in the domestic market, e.g., regulation on the number of assemblers, in exchange for complying with the requirement. Such measures deviate from the policy direction of greater reliance on the market. Allowing free market forces to operate would mean doing away with local content requirement, differentiated tariff schemes, and foreign exchange earnings requirement. Under this setting wherein the market will determine which products would be exported based on competitiveness, it is possible that parts will not be exported at all if they are not competitive. It is difficult to say whether or not locally produced parts would attain international competitiveness in the long run as a result of government intervention. However, since this is currently being done, it is important that such intervention be time bound. As pointed out by Bautista and Tecson (1978), the mere act of exporting does not necessarily make a developing country better off. It can even have unfavorable economic effects if inappropriate products are caused to be exported that do not exploit the country's comparative advantage (Bautista, Power and Associates 1979).

The basic problem of improving export competitiveness can be addressed by removing the penalties against exports. Based on the experience of the newly industrialized countries (NICs), ensuring free

access to inputs was perceived as an important tool for eliminating the disadvantages faced by exporters in the world market. Free access means that inputs used for exports should be free of tariffs, taxes, and import restrictions (Rhee 1985).

Industry sources indicated that tariffs and taxes are major culprits for their uncompetitiveness. Tedious and time-consuming arrangements/requirements associated with the drawback scheme raise input costs above world prices.

One way of avoiding the transaction/interest costs associated with the drawback scheme is to have predetermined tax credits, just as the rates of local content and foreign exchange earnings requirements are predetermined in the existing set-up. Tax credits may be given in advance based on a target export value for the year or the previous year's amount of tariffs and taxes paid on inputs to exports. To determine the net foreign exchange earnings which are credited and subsequently recorded in each participant's individual ledgers, the BOI has available data on export and inputs used. Additional data on tariffs and taxes payable on inputs (including tariff equivalent for local inputs) could also be provided and recorded in the ledgers. Adjustments may be done at year-end to settle the discrepancy between the predetermined tax credit values and the recorded actual values for the year. If the predetermined values turn out to be greater than the recorded values, the assemblers could pay the difference, perhaps even with interest. Otherwise, if the predetermined values are lower than the actual values, additional tax credit may be given. The predetermined values for the succeeding year would then be increased accordingly. In the foreign exchange earnings credit scheme, the participants do not have to be the actual exporter but only instrumental in generating the export sales. Tax credits should therefore be transferable to the actual exporters.

Direct foreign tie-up/joint ventures could help in surmounting some of the barriers to competitiveness/exports of parts manufacturers, such as problems related to capital investment, technical/quality standards, financing, lack of export market. The government could focus on the improvement of systems or institutions to minimize bureaucratic red tape. An example is the

difficulty of releasing goods at the Bureau of Customs, which is a form of non-tariff barrier that does not automatically disappear with liberalization. Furthermore, the government could also intensify information dissemination, such as on the availability of financial assistance programs at the DTI for small and medium enterprises which are applicable to parts manufacturers.

The current appreciation of the yen provides an opportunity for joint ventures in parts manufacturing. It could also make the manufacture of motorcycle models for export uneconomical in Japan and viable in the Philippines. In view of high production costs in Japan, its manufacturers are considering relocation of industries to other countries. One scheme adopted by the Department of Trade and Industry to attract investors to the Philippines is the sending of investment missions to Japan. According to an assembler, the Japanese would like incentives that would lower the cost of bringing machinery/equipment into the country, such as tax- and duty-free importation of these items. This incentive is provided under the Omnibus Investments Code. Originally, it was only up to August 1992, but it has been extended to December 1994. In accordance with the objective of the regional dispersal of industries, the incentive is now given only to projects which are based outside Metro Manila. Existing export-oriented firms in the National Capital Region which are expanding their operations could not also avail of this incentive. (There are reports, however, that the BOI is considering the lifting of this restriction for expansion projects of existing Metro Manila-based export-oriented firms (*Business Star*, 12 November 1993)). Except for some firms in Cebu, most of the assemblers and parts manufacturers are in Metro Manila. Thus, in order to be entitled to such incentive, joint ventures would have to locate to other regions. Policies are not yet settled on this incentive. It has been proposed for continuation up to 1997, but it is likely that BOI would phase out such incentive, and instead reduce tariffs on imported capital equipment and spare parts (*Business Star*, 10 December 1993). Recently, Executive Order No. 189 was issued, reducing tariffs on capital equipment, components, and spare parts. Tariffs on the above would be gradually reduced from 3-35 percent to 3-10 percent by the year 2000 (*Manila Bulletin*, 14

July 1994). One issue to contend with is that although exemption or reduction of tariffs on equipment would lower production costs, such policies would be biased against employment creation. For exports, tax- and tariff-free access to equipment may be justified since this helps to minimize the bias against exports and ensure that exporters are on equal footing with competitors in foreign markets. Nevertheless, a corresponding tax incentive for the use of labor may be provided to offset any bias against the country's more abundant factor.

The streamlining of administrative arrangements and requirements would attract and encourage export oriented firms. Measures to this effect have already been recommended in various studies (e.g., Ali 1988 and Manasan 1990). These include the following: use of promissory notes in lieu of a performance and reexport bond for bonded warehouses, issuance of a domestic letter of credit for indirect exporters, and making available simplified, up-to-date pre-tabulated formula of manufacture (input-output coefficient).

In general, exports will be benefited by further liberalization towards the goal of a more uniform tariff structure with the appropriate exchange rate adjustment. These measures would also lessen the need for bonded warehouses, costly export processing zones, and other compensating measures for the bias against exports. Considering the initial unpopularity of trade liberalization, such connection may not be obvious. However, it has been proven that a tax on imports is also a tax on exports (Lerner symmetry theorem). Just as the experience of the NICs shows, export promotion involves trade liberalization.

In conclusion, after years of intervention, the government could promote efficiency through the following:

1) Application of basic trade principles

- Importing products which other countries could produce at comparatively lower cost and better quality. This means lifting of the local content requirement which restricts freedom of choice between local and imported inputs, and

- Exporting products based on price competitiveness in the international market. This entails doing away with the foreign exchange earning requirement, which is claimed to result in losses;

2) Fostering low-cost production which implies non-implementation of a differentiated tariff scheme (low tariffs for imports of participants and higher tariffs for non-participants) as this precludes the participation of lower-cost manufacturers, if any;

3) Streamlining of administrative arrangements and requirements for duty drawbacks (and exploring the possibility of providing advance tax credits);

4) Improvement of systems and institutions to minimize bureaucratic red tape;

5) Encouragement of foreign tie-ups/joint ventures through balanced tax incentives on capital and labor; and

6) Intensification of information dissemination.

▲

Bibliography

Ali, I. "Manufactured Exports from the Philippines: A Sector Profile and an Agenda for Reform." ADB Economic Staff Paper No. 42. Manila: Asian Development Bank, September 1988.

Armas, A. Jr. and L. Tan. "Economic Incentives and Comparative Advantage of the Philippine Motor Vehicle Industry." In *The Scope for Southeast Asian Subregional Cooperation in the Automotive Sector.* Bangkok: United Nations Economic and Social Commission for Asia and the Pacific, 1982.

Aquino, T., N. Gabrenada Jr., and J. Rivera. *Development Options for the Philippine Motor Vehicle Industry.* Manila: Center for Research and Communication, November 1986.

Baranson, J. "Automotive Industries in Developing Countries." World Bank Staff Occasional Papers No. 8. Baltimore, Maryland: The Johns Hopkins Press, 1969.

Bautista, Power, and Associates. *Industrial Promotion Policies in the Philippines.* Makati: Philippine Institute for Development Studies, 1979.

Bautista, R. and G. Tecson. "Plant Characteristics and Export Orientation in Philippine Manufacturing." *Philippine Review of Business and Economics* XV (September 1978).

The Business Star. "Special Report: Philippine Automotive Industry, Motorcycle: An Indispensable Transport Mode." 27 August 1992.

_____. "Salazar: BOI to trim 1994 IPP list; criteria for export expansion to be liberalized." 12 November 1993.

_____. "DTI to phase out selective grant of incentives in IPP." 10 December 1993.

Business World. "Motorcycle program assessed as successful." 29 March 1990.

_____. "Special Feature: Motoring." 23 August 1990.

_____. "Riding the crisis and not taking advantage of it." 6 February 1991.

_____. "Motorcycle sales as of July down 65%." 27 August 1991.

_____. "BOI to hike local content." 12 September 1991.

_____. "BOI may decide today on local content rules." 12 October 1991.

_____. "EO cuts import tariffs on capital equipment." 20 July 1994.

Daily Globe. "BMW eyes motorbike making." 27 October 1992.

Dutcher, Bruce. "A Corporate Strategy for Norkis Trading Co. Inc. Yamaha Motorcycle Division." Unpublished masteral thesis. Asian Institute of Management, 1979.

Hill, H. "Subcontracting and Inter-firm Linkages in Philippine Manufacturing." *Philippine Economic Journal* 46, 20:58-79. (First Semester, 1981).

_____."Subcontracting and Technological Diffusion in Philippine Manufacturing." UPSE Discussion Paper 81-12. Diliman: University of the Philippines School of Economics, September 1981.

Krugman, P. *Rethinking International Trade.* London, England and Cambridge, Massachusetts: The MIT Press, 1990.

Manasan, R. "A Review of Fiscal Incentives for Exports in the Philippines." *Journal of Philippine Development* 17, 31 (Second Semester 1990):199-23

Manila Bulletin. "Tariffs on capital goods cut." 14 July 1994.

Manila Chronicle. "Special Report: The State of the Philippine Automotive Industry: Motorcycles." August 1991.

_____. "An update: the MDP." 24 February 1993.

_____ Supplement. "Good times may not be so far behind." 24 February 1993.

Medalla, E. et al. "Reestimation of Shadow Prices for the Philippines." PIDS Working Paper Series No.90-16. Makati: Philippine Institute for Development Studies, June 1990.

National Economic and Development Authority. *Philippine Standard Commodity Classification*, 1989.

National Statistics Office. *Census of Establishments*, 1983 and 1988.

_____. *Foreign Trade Statistics*, Various years.

Odaka, K. (ed.). *The Motor Vehicle Industry in Asia: A Study of Ancillary Firm Development.* Singapore: Council for Asian Manpower Studies, Singapore University Press, 1983.

Papageorgiou et al. *Liberalizing Foreign Trade.* Massachusetts: Basil Blackwell, Inc., 1991.

Philippine Daily Inquirer Special Supplement. "Motorcycle industry: on its way into becoming one of leading industries." 20 March 1990.

_____ *Supplement.* "Motorcycle sales to go down by 40%." 30 May 1991.

_____. "DA wants import lib on motorcycles." 28 February 1994.

_____. "Relocation incentives may be cut." 28 February 1994.

Power, J. "Tariffs and Economic Development: The Rationale for Philippine Tariff Reform." Tariff Commission-PIDS Staff Paper Series No. 86-02. Makati: Philippine Institute for Development Studies, 1986.

Rhee, Yung Whee. "Instruments for Export Policy and Administration: Lessons from the East Asia Experience." World Bank Staff Working Papers No. 725. Washington, D.C.: The World Bank, 1985.

United Nations Industrial Development Organization. *Development and Transfer of Technology Series No. 3: The Manufacture of Low-cost Vehicles in Developing Countries.* New York: UNIDO, 1978.

Ybañez, R. and A. Tolentino. "Philippine Automobile Industry." In Konosuke Odaka (ed.) *The Motor Vehicle Industry in Asia: A Study of Ancillary Firm Development.* Council for Asian Manpower Studies, Singapore: University Press, 1983.

Cover design: P.T. Martin
Book design: Muriel Ordoñez