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Philippine Institute for Development Studies

Micro Studies: Philippine Car Assembly Sector

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GLOBALLY COMPETITIVE PHILIPPINE ECONOMY

MICRO STUDIES : PHILIPPINE CAR ASSEMBLY SECTOR

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The Philippine Car Assembly Sector

I. Introduction

The automotive industry has often been regarded as a crucial leading sector capable of throwing off linkages to many diverse industries and sectors and of taking a major role in a country's industrialization process. In an effort to develop domestic vehicle assembly and manufacturing capabilities, governments of many developing countries have imposed substantial local content requirements and protected local car assemblers through restrictive trade policy measures. Experience has shown, however, that few countries can support an economically viable car industry, and fewer still, automobile production (Karmokolias, 1990). While these policies have stimulated local manufacture of vehicles and components, they have at times resulted in inefficient and uncompetitive local car production. Often, the restrictive measures adopted have produced immediate losses to consumers and to the economy as a whole.

Under the rationale of infant industry protection, the Philippine car industry has been one of the most favoured sectors which have received trade protection and special incentives. The industry developed under a restrictive trade regime made up of a complicated set of regulations. It was subject to an import prohibition of all assembled vehicles and tariffs on sets of components to be assembled as well as assembled cars.

The highly restrictive trade regime imposed costs on consumers and misallocated resources and encouraged high cost domestic production of cars. Takacs (1994) estimated the cost to consumers to be about P3.2 billion a year while the deadweight efficiency losses were around P749 million. The gainers of the protective regime were the assembly and components sectors whose benefits amounted to P955 million and P831 million, respectively. Takacs concluded that while the program has stimulated growth in related sectors such as metal working, plastics and rubber, the net gains in these sectors were more than offset by the net losses due to inefficient production. Along the same vein, De dios (1995) calculated efficiency losses ranging from P163 million to P327 million.

Automotive firms operated under the government's local content program which required assemblers to increase the local content of cars by domestically sourcing previously imported car parts. The program also required them to earn foreign exchange by exporting products to partially compensate for the foreign exchange used to import completely knocked down (CKD) units. Prior to the 1996 amendment of the Car Development Program, the Board of Investments (BOI) pegged a minimum local content of 40 percent and 50 percent for the compensatory foreign exchange earning requirement.

In assessing the various automotive development programs that evolved during the period, Abrenica (1996) concluded that these programs failed to cultivate the desired linkages between foreign assemblers and local parts producers. The programs did not set

the ground for the development of a national car and failed to reduce car prices down. The industry remains highly import-dependent and lacking domestic industrial linkages.

With the recent global trade and investment liberalization moves created under the GATT-WTO, AFTA, and APEC; the government was prompted to institute trade policy reforms and liberalize its remaining highly protected sectors like the automotive industry. The country's exemption from the WTO provisions relating to trade-related investment measures (TRIMs) will expire in 2000, after which the country will be required to abandon its local content and foreign exchange requirements. AFTA-CEPT calls for the phased reduction of intraregional tariffs to 0-5 per cent by 2004.

Since 1995, the government has been making major strides toward the liberalization of the automotive sector. Policy makers believe that these changes are necessary to significantly enhance the competitiveness of the sector. In October 1995, the ban on CBU imports was abolished. As part of the July 1995 tariff reform policy embodied in EO 264, tariffs on CKD parts were reduced to 3 per cent while tariffs on CBUs were maintained at 40 per cent. The government plans to adopt a uniform tariff of 5 per cent by the year 2004. In February 1996, a series of deregulation measures were adopted to liberalize the Car Development Program. This includes the opening up of all CDP categories to new participants, the removal of restriction on the number of models that can be assembled, as well as the removal of the local content and foreign exchange requirements by the year 2000. Local car assemblers have expressed their apprehension over the trade liberalization plans and view these as detrimental to their viability. They were able to persuade the government to replace the removal of import restrictions on cars with higher tariff protection.

It is within this setting that an in-depth study of the car assembly industry is deemed necessary. The paper aims to analyze the possible impact of the on-going tariff reforms, the removal of import restrictions on CBUs, the adoption of a 5 per cent uniform tariff and the removal of the local content requirement on the car assembly sector. A survey of car assemblers was conducted to elicit firm-level responses to the trade policy reforms and the emerging trend towards the regional and global trade and investment liberalization. Inquiries were made on the activities that car assemblers plan to undertake to improve their competitiveness in the midst of the changing domestic and international environment. In particular, firms were surveyed on the changes in their strategies in production, pricing, marketing, and technology acquisition.

Section 2 will provide an overview of government policies affecting the industry. Section 3 will examine the current situation of the car assembly sector. Section 4 will present the survey results and the adjustment responses of car assemblers. Section 5 will present the conclusions and policy recommendations.

II. An Overview of Government Policies Affecting the Passenger Car Industry

A. Scope

The Philippine automotive industry consists of passenger cars, light commercial vehicles (LCVs), Asian utility vehicles (AUVs), trucks, and buses. This study focuses on the assembly of passenger cars, which refer to motor vehicles covered by the government's Car Development Program and used primarily for the transport of persons with engine displacement of up to 2,800 cubic centimeters (cc) including passenger car derivative vans.

Imported cars and car parts are classified as completely-knocked-down (CKD), semi-knocked-down (SKD), and completely-built-up (CBU) vehicles. SKDs are semi-assembled cars without tires and batteries. CKDs are completely knocked-down parts and components which may include not only parts and components but also sub-assemblies and assemblies like engine, transmission, axle assemblies, chassis, and body assemblies.

Automotive parts with counterpart local components of acceptable quality are deleted from the CKD pack before its importation. Locally-produced parts are incorporated as original equipment parts (OE) in vehicles assembled in the country.

B. Local Content Policies

During the Postwar period, there was virtually no car industry in the Philippines as all motor vehicles were imported. Local vehicle assembly was encouraged in line with the government's overall implementation of import substitution which governed the country's development strategy during this period. Starting in 1950, the importation of CBU vehicles in commercial scale was prohibited. In 1951, foreign exchange allocation was granted only for the importation of CKD components for assembly. This opened up the assembly phase of the Philippine car industry. Local content was minimal with almost all components imported as part of the KD kit.

In 1960, there were twelve (12) local vehicle firms assembling thirty (30) different brands from Western Europe, the US, Japan, and Australia. In 1968, the number of vehicle firms rose to twenty-nine (29) while the number of models increased to sixty (60). However, the relatively small and highly fragmented market did not generate sufficient demand. With an annual demand of about 10,000 units, the automotive assembly industry became increasingly overcrowded. With the dwindling foreign exchange reserves in the late 1960s, the Central Bank refused to grant foreign exchange reserves to the car industry until a rationalization program was developed. This prompted the Board of investments (BOI) in 1971 to announce the launching of the country's first Progressive Car Manufacturing Program.

1. Progressive Car Manufacturing Program (PCMP)

The BOI implemented the country's local content program in 1973. Its objectives were threefold:

- to achieve foreign currency savings through the domestic manufacture of automotive components;
- to establish manufacturing activity in various small to medium sized enterprises for the domestic manufacture of automotive components, and in the process upgrade engineering and production skills and provide new technological knowhow to the country's industrial sector; and
- to build up exports of manufactured products in a regional (ASEAN) automotive complementation program.

The program prohibited the imports of CBU vehicles and as an industry rationalization scheme, it limited the number of registered firms allowed to import CKD parts to only five (5) assemblers. It also required assemblers to increase their domestic content from 10% in 1973 to 60% at the end of 1976 which compelled assemblers to put up their own parts manufacturing plants. The program aimed to promote horizontal integration with a view to creating new manufacturing activities in small and medium scale industries by way of subcontracting and transfer of technology.

After five years of operation, the program's failure became evident as its major objectives were only partially fulfilled. This was attributed to the following factors: small size of the domestic market, financial stringencies, company indebtedness and low scale economies in production (EIU, 1985). Between 1978 and 1983, local content was reported to have gone up from 34% to 43%. Industry sources, however, claimed that these figures were not an accurate guide to their real position as the Philippines did not have a steel mill or plastic industry and must therefore import most materials for the manufacture of components. In effect, the local value added element of total vehicle content was small. Furthermore, the tightening of foreign exchange regulations in the early 1980s led to severe production and integration bottlenecks. The planned horizontal integration never materialized as firms integrated vertically. Car assemblers provided very little support to local parts manufacturers as they engaged either in the in-house production of parts or sourced their materials from their affiliated parts and components firms.

Due to its inability to become a major exporter, the industry was gradually relegated to a low priority in terms of government support. With another economic crisis in 1983, the government imposed a foreign exchange ban on imports whose value was greater than an individual company's exports. The Central Bank allocated the country's scarce dollars to other sectors which were deemed more dynamic. Since the car assembly industry was highly import dependent, the unavailability of foreign exchange resulted in the near collapse of the industry. By 1984, only two (2) participants, PAMCOR-Mitsubishi and Nissan remained in the program. Ford and General Motors left the country while Toyota's assembler-distributor Delta Motors shut down its operations. The number of components

manufacturers was reduced from 220 in 1978 to only 40 companies in 1984.

2. Car Development Program (CDP)

After the slump in the automotive industry arising from the 1983-86 economic recession, the government rationalized the industry in 1987 and replaced the PCMP with the Car Development Program (Annex 1 details the major features of the CDP). The CDP is essentially similar to the PCMP except for some changes. The CDP aimed to:

- develop a viable automotive parts manufacturing industry;
- facilitate technology transfer and development;
- generate employment;
- make available reasonably priced passenger cars; and
- earn and save foreign exchange for the country.

The program covered the manufacture and assembly of passenger cars with engine displacement of up to 2,800 cubic centimeters and limited the number of program participants to three: PAMCOR, Pilipinas Nissan, and Toyota Motors -- all three are Filipino-Japanese joint venture companies. The CDP continued to ban imports of CBU vehicles competing with domestic production and required CDP participants to comply with minimum local content requirement which increased annually. CDP participants were expected to earn 50% of their foreign exchange requirements for their CKD imports through revenues derived from exports.

3. People's Car Program (PCP)

In response to the clamor for more affordable cars, the government launched the People's Car Program in 1990. The PCP covered the assembly of cars with a displacement of 1,200 cc or less and an initial BOLI-imposed price ceiling of P175,000 (later raised to P220,000 in the last quarter of 1990, again to P235,400 in the first quarter of 1991 and to the current P300,000). Like the main CDP participants, PCP assemblers should meet the minimum local content usage and must earn at least 50% of their foreign exchange requirements by exporting automotive and non-automotive products. They should also invest at least P200 million and commit to manufacture major components. Seven (7) participants were registered under the PCP: Italcar Pilipinas (Fiat), Honda Motors, Asian Carmakers (Daihatsu), Pilipinas Nissan, PAMCOR (Colt), Columbian Autocar (Kia), and Transfarm (Norkis Gurkel).

Except perhaps for Columbian Autocars, the PCP is not a profitable undertaking for most participants, particularly for yen-dependent Japanese car assemblers. Columbian Autocar's Kia Pride was selling at less than P300,000 while the other participants were losing. Despite its unprofitability, many of the firms entered the program in order to get into the mainstream market where demand was less elastic (PDI, 1996). People's car prices are subject to price ceilings while the main category cars are not.

PCP participants become eligible to the main category after one year of operation. Abrenica (1996) noted that: "Out of the seven PCP assemblers, five were able to move to the main category. The market was, thus, flooded with more car brands and models than it was twenty years ago. As a result, the market became more fragmented and the opportunities for standardization and learning became more limited. As in the previous programs, the PCP failed in achieving its main objective of developing the car parts industry".

4. Assembly of Luxury Cars

In 1992, a new car category was introduced to allow new participants into the assembly of cars with engine displacement of 2,190 cc and above. Under the revised CDP guidelines, luxury car assemblers must invest at least P200 million in automotive parts and components for the export and domestic markets. Participants must also generate 100% of the foreign exchange needed for the importation of CKD packs from their net foreign exchange earnings generated through exports of autoparts and components. This expansion of the CDP allowed the entry of Volvo International of Sweden and Daimler Benz of Germany.

5. AIJV Scheme

In 1994, the CDP was again amended to allow the entry of new assemblers under the ASEAN Industrial Joint Venture scheme. Proton of Malaysia came in under this amendment through a joint venture with Filipino firm Autocorp Group. Proton assembles not only Proton Wira cars, but also European automobiles Volkswagen, Alfa Romeo, and Audi cars.

6. Deregulation Program

The signing of Executive Memorandum Order Number 346 in February 1996 paved the way for the liberalization of the automotive industry. EO 346 opened up the closed car categories to new participants. Restrictions on the number of models and variants were removed, hence, new players can introduce and manufacture models in any of the existing categories. Prior to this amendment, CDP participants were required to go into the assembly of cars with engine displacement of 1200 cc or below before they could enter the medium range and luxury car categories. CDP participants except those in category III would no longer be required to comply with a vehicle local content higher than 40% to remain in the program. However, BOI may grant a foreign exchange award amounting to 50% of foreign exchange earned during the previous year to a participant in categories I and II who has attained a weighted local content average of at least 50% of all its participating models and variants. By the year 2000, the foreign exchange and local content requirements under the program would be terminated.

B. Tariffs and Import Restrictions

Tariffs and import restrictions have been imposed to protect the local car assembly industry. With the implementation of the country's first progressive car manufacturing program in 1972, the importation of CBU passenger cars was officially banned. Between 1973 to 1980, a tariff of 100 percent was levied on CBU vehicles. This was reduced to 70 percent in 1981, to 50 percent in 1982, and to 40 percent in 1993 (refer to Table 1).

Since very few CBU vehicles were actually imported, the only tariff revenues collected by the government were the much lower duties on CKD component kits, parts, and accessories imported by local assemblers. Between 1981 to 1992, tariffs on CKD parts remained at 30 percent. In 1993, this was reduced to 20 percent. With the legislation of EO 264 in July 1995, tariffs on CKD parts were lowered to 3 per cent while those on CBUs for passenger cars were maintained at 40 per cent. These rates will remain up to 1999. By 2000, the tariff rate on CBUs will be reduced to 30 per cent while that on CKDs will be retained at 3 per cent. By the year 2004, a uniform tariff of 5 per cent on CKDs and CBUs is expected to be in place.

In October 1995, CB Circular 92 further liberalized the sector by removing the import restriction on cars and allowing the importation of brand new vehicles. At present, only the importation of second-hand cars is prohibited. The government plans to liberalize used cars by the year 2000.

Table 2 presents the average tariff rates of locally manufactured parts and components. As a result of the tariff reduction under EO 264, the average tariff duties of parts and components declined from 26.5% to 24.6% in 1994 and 1995, respectively. Note that with the tariff reduction in 1995 (embodied by EO 264), tariffs on raw materials are levied higher than CKD imports. As Table 2 shows, tariffs on locally produced parts and components range from 10 to 35 percent (except for carpet whose tariff rate was 50%) while CKD imports are levied a much lower tariff of only 3 percent. Given this tariff structure, it becomes cheaper to import parts than to procure them locally. With the relaxation of local content rules, assemblers are free to choose the parts to be locally purchased. Hence, there is a real possibility that they will choose to import some items. This may result in the elimination of some small and medium manufacturers especially those who are low-tech, unable to improve their efficiency, and produce only for the domestic market.

A 10 per cent value added tax is imposed on cars. In addition, imported and domestically assembled cars are subject to a 15 -100 per cent excise tax, depending on the car's engine displacement (in cc):

Table 1 : Tariff Structure of the Automotive and Automotive Parts Industry

	1981	1982-1987	1988-1992	1993	1994	1995	1996	1997	2000
Motor cars and other motor vehicles for the transport of persons	70	50	50	40	40	40	40	40	30
Components, parts &/or accessories imported for assembly of motor vehicles by participants in the vehicle development program upon prior authorization and certification by the Board of Investments									
Asian Utility & Light Commercial Vehicles			20	20	20	3	3	3	3
Passenger Cars	30	30	30	20	20	3	3	3	3
Buses with g.v.w. of 6 tonnes to 18 tonnes			30	30	30	30	25	20	10
Buses with g.v.w. of above 18 tonnes			30	40	40	35	30	30	20
CKD buses with g.v.w. of 6 tonnes to 18 tonnes upon prior authorization by the BOI			10	10	10	3	3	3	3
Components, parts &/or accessories imported for assembly of motor vehicles by participants in the commercial vehicle development program upon prior authorization and certification by the Board of Investments			20	20	20	3	3	3	3
Motor vehicles for the transport of goods g.v.w. not exceeding 5 tonnes									
--refrigerated vans			30	30	30	3	3	3	3
--other			30	30	30	40	40	40	40
g.v.w. exceeding 5 tonnes but not exceeding 20 tonnes									
up to 6 tonnes									
--refrigerated vans			30	30	30	3	3	3	3
--other			30	30	30	40	40	40	40
other			30	30	30	35	30	30	20
Components, parts &/or accessories imported for assembly of trucks by participants in the commercial vehicle development program upon prior authorization and certification by the Board of Investments			20	20	20	3	3	3	3

Source: Tariff and Customs Code of the Philippines, various years

Table 2 : Tariff Structure of the Automotive and Automotive Parts Industry

	1981	1982-1987	1988-1992	1993	1994	1995	1996	1997	2000
Motor cars and other motor vehicles for the transport of persons	70	50	50	40	40	40	40	40	30
Components, parts &/or accessories imported for assembly of motor vehicles by participants in the vehicle development program upon prior authorization and certification by the Board of Investments									
Asian Utility & Light Commercial Vehicles			20	20	20	3	3	3	3
Passenger Cars	30	30	30	20	20	3	3	3	3
Buses with g.v.w. of 6 tonnes to 18 tonnes			30	30	30	30	25	20	10
Buses with g.v.w. of above 18 tonnes			50	40	40	35	30	30	20
CKD buses with g.v.w. of 6 tonnes to 18 tonnes upon prior authorization by the BOI			10	10	10	3	3	3	3
Components, parts &/or accessories imported for assembly of motor vehicles by participants in the commercial vehicle development program upon prior authorization and certification by the Board of Investments			20	20	20	3	3	3	3
Motor vehicles for the transport of goods									
g.v.w. not exceeding 5 tonnes									
--refrigerated vans			30	30	30	3	3	3	3
--other			30	30	30	40	40	40	40
g.v.w. exceeding 5 tonnes but not exceeding 20 tonnes									
up to 6 tonnes									
--refrigerated vans			30	30	30	3	3	3	3
--other			30	30	30	40	40	40	40
other			30	30	30	35	30	30	20
Components, parts &/or accessories imported for assembly of trucks by participants in the commercial vehicle development program upon prior authorization and certification by the Board of Investments			20	20	20	3	3	3	3

Source: Tariff and Customs Code of the Philippines, various years

gasoline	diesel	tax rate (in percent)
up to 1600	up to 1800	15
1601 to 2000	1801 to 2300	35
2001 to 2700	2301 to 3000	50
2701 to over	3001 or over	100

Source: National Internal Revenue Code, Chapter VI, Title VI

III. Industry Performance

Car Assembly/Manufacturing in the Philippines Compared With Other Countries

Table 3 shows average monthly production/assembly¹ of passenger cars and commercial vehicles in selected countries. The table emphasizes the big differences in the production of passenger cars and commercial vehicles between developed and developing countries and the concentration of production in the wealthier countries of the world. World output is still dominated by Japan, the US, Germany, and France. Among developing countries, South Korea, Spain, Mexico, and Brazil are the largest passenger car and commercial vehicle manufacturers.

With the exception of South Korea, no developing country has managed to duplicate the success of Japan. Most developing countries have not been able to achieve the economies of scale necessary to be internationally competitive in car manufacturing. Traditionally, a volume of 250,000 cars per year integrated with engine manufacturing has been considered as the minimum economic size of a car manufacturing plant. For car assembly operations, the minimum size is not well defined. It is indicative, however, that an assembler with a 25,000 per year production in Southeast Asia and another with a 16,000 cars per year production in Southern Europe both believe that they cannot remain competitive in the long run unless they can increase their production volumes to at least 40,000 cars per year to achieve lower unit costs (Karmokolias, Y., 1990). According to a UNIDO study (1978), the figures of 300,000 and 50,000 units per year are often quoted as break-even outputs for passenger and commercial vehicles having 100 per cent local content.

In Southeast Asia, Thailand, Malaysia, Indonesia, and the Philippines are identified as the region's main automobile producing countries. Major assemblers in Thailand are moving to mass production in anticipation of future exports and they are currently exporting commercial vehicles. Malaysia, which has established a mass production system for its national car, is also starting to export finished cars and manufacture abroad. Despite its

¹The production data exclude vehicles built on imported chassis or assembled from imported parts. The data series on assembly refer to the assembly of passenger cars and commercial vehicles either wholly or mainly from imported parts.

Table 3 : Monthly Average Production

Passenger Cars

Country	1988	1989	1990	1991	1992	1993	1994	1995	1996
Argentina	10400	10100	6800	9500	18400	23900	28200	16550	22144
Brazil	32900	26100	22300	24400	27600	32700	30600	22900	18600
Canada	84000	82000	78400	74200	75100	97100	87600	95800	92714
France	261500	284500	291800	282900	277100	243400	263200	253500	282500
Germany	359100	378600	384800	355800	405500	327200	351900	378000	398400
Italy	157000	164200	156100	135600	122900	93100	111700	118400	125050
Japan	683300	697500	829000	813000	781200	723500	667800	648800	656091
Korea	72300	70500	79700	94300	107800	127300	146300	166600	188000
Mexico	29000	37900	51200	61100	65700	70700	69300	58600	68860
Spain	124800	136500	139900	147800	149600	125500	152200	166500	177667
UK	102200	108300	108000	106500	107600	114600	122200	127700	140500
US	592100	567300	504300	450600	473700	496800	545800	525800	ND

Commercial Vehicles

Country	1988	1989	1990	1991	1992	1993	1994	1995	1996
Argentina	1100	500	1500	2100	3500	4600	5900	3800	3367
Brazil	59500	60400	56000	57000	62400	ND	102300	114800	115813
Canada	76700	79100	67300	65800	75100	ND	ND	ND	ND
France	46000	42400	45900	39700	36200	28500	33400	36800	ND
Germany	16300	17400	29100	32500	30400	22600	24200	ND	ND
Italy	19200	20500	21700	21500	17500	12500	16100	21600	20675
Japan	376200	334200	295800	291500	258800	227500	230300	216900	209409
Korea	16800	20300	26800	26500	32400	37700	40900	42500	46300
Mexico	12400	15800	10300	12000	13200	13900	13600	13200	33010
Spain	26100	28700	25200	18300	19300	12700	14400	16700	18275
UK	26500	26200	22800	18500	20000	16300	19300	19700	20100
US	343400	338500	310000	281300	338500	407900	470000	476100	ND

Total Vehicles

Country	1988	1989	1990	1991	1992	1993	1994	1995	1996
Argentina	11500	10600	8300	11600	21900	28500	34100	20350	25511
Brazil	92400	86500	78300	81400	90000	32700	132900	137700	134413
Canada	160700	161100	145700	140000	150200	97100	87600	95800	92714
France	307500	326900	337700	322600	313300	271900	296600	290300	282500
Germany	375400	396000	413900	388300	435900	349800	376100	378000	398400
Italy	176200	184700	177800	157100	140400	105600	127800	140000	145725
Japan	1059500	1031700	1124800	1104500	1040000	951000	898100	865700	865500
Korea	89100	90800	106500	120800	140200	165000	187200	209100	234300
Mexico	41400	53700	61500	73100	78900	84600	82900	71800	101870
Spain	150900	165200	165100	166100	168900	138200	166600	183200	195942
UK	128700	136500	130800	125000	127600	130900	141500	147400	160600
US	935500	905800	814300	731900	812200	904700	1015800	1001900	0

relatively large domestic market, Indonesia is focusing on commercial vehicles, which it is now exporting. In the Philippines, production scale of assemblers is small and lack export competitiveness, though the country is producing and exporting certain types of functional parts (RIM, Pacific Business and Industries, 1996).

Table 4 reveals that within ASEAN, Thailand is the largest passenger car and commercial vehicle assembler. Thailand posted substantial increases in its monthly average assembly of total vehicles over the past eight years. Although still low by world standards, Thailand's monthly assembly of vehicles rose from 13,083 vehicles in 1988 to 45,114 vehicles in 1995. As a result of the economic and political crisis in 1983, the Philippine car assembly industry has lagged very far behind other ASEAN countries.

Table 5 presents comparative data on registration of new vehicles in Malaysia, Thailand, and the Philippines. It is evident from the table that Thailand's domestic market for passenger cars and commercial vehicles is the largest in Southeast Asia with 1.9 million new units registered in 1995 compared to only 219,600 new units in the Philippines and 228,600 units in Malaysia (for the year 1994). Thailand's annual auto sales are forecast to exceed 800,000 vehicles by the year 2000, accounting for about 40 percent of total Southeast Asian sales (PDI, 1997). The growth potential of Thailand's market and its developed production foundation including the growth of its parts industry have led automobile manufacturers from Japan and other countries to position it as the linchpin of their Southeast Asia strategies (RIM, Pacific Business and Industries, 1996). These reasons prompted General Motors to select Thailand instead of the Philippines as its production base in Southeast Asia. Honda Motor Co. of Japan has also chosen Bangkok for its Asian regional headquarters. Honda and Toyota both plan to commence production of low-priced strategic Asia cars and have positioned Thailand as the core of their Asia car production.

Thailand's liberalization of its car industry started in 1991 with the removal of import restrictions on new and used cars and subsequently, with the substantial reduction of import duties on motor vehicles and components. Import duties on vehicles (CBUs) over 2300 cc were reduced from 300 percent to 100 percent. For CBUs with engine capacity under 2300 cc, tariffs were lowered from 180 percent to 68.5 percent. CKD duties were reduced from 112 percent to 20 percent. The idea of a national car plan emerged in 1992, but it was abandoned as this would run counter to their liberalization trend. The Thai government announced that it would eliminate the local requirement on passenger cars in August 1998, which is 18 months earlier than the deadline set by the WTO.

Table 4: Monthly Average Assembly

Passenger Cars

Country	1988	1989	1990	1991	1992	1993	1994	1995	1996
Indonesia	2665	2735	4785	1621	2368	1717 ND	ND	ND	
Malaysia	5055	7891	10909	12705	11412	12089	14442	20074	25942
Thailand	4940	5789	6147	6412	8356	12037	10536	11327 ND	
Turkey	9053	9675	13851	16299	22090	28598	17260	18282	15616
Philippines				2272	2795	4280	4756	6110	6409

Commercial Vehicles

Country	1988	1989	1990	1991	1992	1993	1994	1995	1996
Indonesia	9961	11767	16850	6734	320	5921 ND	ND	ND	
Malaysia	1583	3216	6144	6577	2892	2892	3145	3844 ND	
Thailand	8143	12950	19281	17181	18640	26959	27065	33788 ND	
Turkey	3636	2555	3466	5626	6626	7092	3769	6280	7648
Philippines									5038

Total Vehicles

Country	1988	1989	1990	1991	1992	1993	1994	1995	1996
Indonesia	12626	14502	21635	8355	2688	7638			
Malaysia	6638	11107	17053	19282	14304	14981	17587	23918	25942
Thailand	13083	18739	25428	23593	26996	38996	37601	45114	
Turkey	12689	12230	17317	21925	28716	35690	21029	24562	23264
Philippines									11447

Note:

Passenger Cars: motor vehicles usable as cars seating not more than nine persons, excluding motorcycles.

Commercial Vehicles: light and heavy lorries (trucks), buses, delivery vans, special vehicles, wheeled tractor units for road haulage and trailer combinations. Vehicles operating off the road (industrial and farm tractors), and other construction machinery are excluded.

Source: Monthly Bulletin of Statistics, Department of Economics and Social Information and Policy Analysis, United Nations, various issues

**Table 5 : Registration of New Vehicles in Selected ASEAN Countries
(in thousands)**

		1990	1991	1992	1993	1994	1995
Malaysia	A	137.8	152.1	114.2	132.4	185.7	ND
	B	35.6	43.8	34.5	24.5	42.9	ND
Thailand	A	ND	1396.6	134.9	192.9	199.5	193.2
	B	ND	1188.3	946.2	1153.7	1422.7	1735
Philippines	A	42.4	32.1	39.6	48.6	58.3	70.5
	B	90.3	86.5	106.5	117.3	131.2	149.1

A: Passenger Cars B: Commercial Vehicles

Sources: Data for Malaysia and Thailand were taken from the Monthly Bulletin of Statistics, United Nations and for the Philippines, Philippine Statistical Yearbook

Performance Indicators

Output, Employment, and Value Added

The number of passenger car assemblers increased from three in 1987 to the current eleven. The 1987 CDP limited the participants to PAMCOR, Nissan, and Toyota. The nineties saw the entry of new car assemblers in the local scene: Asian Carmakers, Columbian, Honda Cars, Italcara Pilipinas, Transfarm and Company, Proton, Commercial Motors, and Scandinavian Motors. The first five assemblers were able to penetrate what used to be the exclusive market of PAMCOR, Nissan, and Toyota through the People's Car Program (PCP) which allowed people's car assemblers to graduate to the main category after a one-year stint. The Luxury Car Program attracted Commercial Motors which assembles Mercedes Benz and Scandinavian Motors with Volvo cars as its entry. Malaysia's Proton entered through the CDP's Asean Industrial Joint Venture (AIJV)-accredited automotive assembly projects.

With the increase in the number of car assemblers; employment, output and value added generated by the sector grew substantially. Between 1992 and 1994, employment increased by 32 percent, output grew by 65 percent while census value added posted an increase of 31 percent (see Table 6a). Table 6b shows that the net income of majority of the firms went up between 1995 and 1996.

In terms of its contribution to the economy, the sector accounted for an average of 2.48 percent of the total value of output in manufacturing and 1.18 percent of total manufacturing value added. In 1994, the value added of the passenger car sector represented about 0.25 percent of the country's gross domestic product.

Table 6a: Selected Economic Indicators

	1990	1991	1992	1993	1994	Average 1990-1994
Total Employment	2142	2240	3147	3983	4154	
Share in total manufacturing	0.23	0.24	0.32	0.44		
Total Compensation	P230.7M	P268.5M	P424.9 M	P533.3 M	P812.5M	
Share in total manufacturing	0.45	0.47	0.66	0.84		
Value of Output	P15.8B	P10.3B	P15.8 B	P22.9 B	P26.0B	
Share in total manufacturing	2.78	1.52	2.15	2.89	3.05	2.48
Census Value Added	P2.4B	P2.2B	P3.2 B	P4.0 B	P4.2B	
Share in total manufacturing	1.16	0.92	1.19	1.33	1.29	1.18

Source: Annual Survey of Establishments and 1994 Census of Establishments, National Statistics Office

Table 6b: Net Income of Car Assemblers, 1995-1996

Firm Name	1995	1996
Mitsubishi Motors	646,803,786	1,306,405,576
Toyota Motors	465,061,803	674,741,943
Honda Cars	149,651,792	427,144,544
Nissan Motors	40,064,778	47,331,137
Commercial	26,966,440	84,947,884
Italcarr	616,833	3,322,502
Scandinavian	2,252,296	
Proton	(32,243,917)	13,578,758

Source: Securities and Exchange Commission

Production and Sales

Eight years after the start of the new Car Development Program, the car assembly industry has recovered and has surpassed the level of the early 1980s. 1979 was the last growth year of the Philippine car assembly industry. During this year, 30,400 cars were assembled. The early 1980s witnessed the near collapse of the industry as sales continued to dwindle from 30,190 units in 1980 to 3,600 units in 1986 (see Table 7). As the government revived the Motor Vehicle Program in 1987, the industry started to recover with car sales growing by an annual average of around 58 percent between 1986 and 1990. After an upward trend for four consecutive years, sales volume took a plunge in 1991. Total car sales plummeted by 21 percent from 35,193 in 1990 to 27,796 in 1991. BOI attributed this decline to weak demand arising from the increase in prices and the gulf war. With improved economic conditions in 1992, both production and sales volume increased to 33,543 units and 35,152 units, respectively. In 1996, 76,909 cars were assembled, an improvement from 72,418 in 1995 and 57,066 in 1994 and represented a high level of output by past standards. On the average, passenger car production and sales grew by about 24 percent during the period 1991 to 1996. 1996 could be considered a record holder in terms of sales and number of models and make introduced. Many cars were sold during this year as a result of zero-interest and low downpayment schemes offered by banks.

Table 7 : Production and Sales of Passenger Cars (units)

Year	Production	Sales
1972	....	11299
1975	....	27497
1979	30421	34869
1980	26631	30190
1984	....	6416
1986	3706	3600
1987	....	5543
1988	10775	11038
1989	28601	28208
1990	....	35193
1991	27267	27796
1992	33543	35152
1993	51359	51199
1994	57066	58501
1995	72418	71195
1996	76909	77780

Source: Department of Trade and Industry
Board of Investment;

While the number of car assemblers increased from three in 1987 to the current eleven, the industry remains oligopolistic with only four firms accounting for 89 percent of production and 87 percent of sales in 1996. PAMCOR, Nissan, Toyota Motors, and relatively new Honda Cars four dominate the local passenger car market with Toyota Motors in the lead (see Table 8). Toyota's share, however, has been declining from 39% in 1992 to 25% in 1995. Honda Cars followed with a share of 19% in 1995. Its share steadily increased from 3% in 1991 to 17% in 1994. PAMCOR and Nissan accounted for a share of 17.5% and 17%, respectively. PAMCOR's share was down from about 25% in 1992 and 1994. Nissan's share declined from 20% in 1992 to 12.5% in 1994, but an improvement was evident in 1995.

TABLE 8: Car Development Program Participants: Some Characteristics and Production, 1991-1996

NAME OF ASSEMBLER	CATEGORY	MAKE	EQUITY	CAPACITY units/year	DATE OF REG'N	PRODUCTION					
						1991	1992	1993	1994	1995	1996
1. ASIAN CARMAKERS CORPORATION	I	Daihatsu Charade	100 % Filipino	3,000	1990	1657	1036	1102	500 80	316 639	40 389
	II	BMW							89	149	-
	III	BMW5 - Series									
2. COLUMBIAN AUTOCAR	I	Kia Pride	100 % Filipino		1990	4286	1712	2542	5015	6369	781
	II	Mazda			1993			2007	2291	4459	2110
3. HONDA CARS PHILS.	I	Honda Civic	70 % Jap	24.5 / shift	1990	902	2345	1663	1680	3290	2
	II	Honda	30 % Fil	'95 - 21,918							
4. ITALCAR PILIPINAS	I	Fiat Uno	100 % Filipino	1140	1990		427	305	152	278	57
	II	Hyundai Excel		(1st sem. 1994)							
5. TRANSFARM & CO.	I	Daewoo Racer	100 % Filipino		1993			499	2764	2441	1354
6. NISSAN MOTOR PHILS.	II	Nissan	70 % Jap		1990	4235	6561	7155	7157	10818	10245
	III	Nissan Cedric	30 % Fil						10	1736	-
7. PHIL. AUTOMOTIVE MANUFACTURING CORP.	II	Mitsubishi	99.99 % Jap 0.01 % Fil	29 / shift '95 - 32,000		6065	8308	11988	14077	12835	16772
8. PROTON PILIPINAS CORP	II	Proton WIR Audi, Volkswagen Polo	70 % Malaysian	16134	1994						-
	III	Audi A4	30 % Fil		1996						
9. TOYOTA MOTOR PHILS.	II	Toyota	60 % Fil 40 % Jap	18720 '95 - 36,000	1988	10032	13154	18200	15301	18393	18273
10. COMMERCIAL MOTORS	III	Mercedes Benz	100 % Fil	94	1993			96	94	45	189
11. SCANDINAVIAN MOTORS	III	Volvo	100 % Fil	1040	1994					298	274
Total						27267	33543	51359	57066	73323	76909

Columbian, Italtcar, and Transfarm are assemblers of South Korean cars and are 100% Filipino-owned. Columbian Autocars posted a share of 15% in 1995 with its share fluctuating between 1991 and 1994. Transfarm accounted for a share of 3% in 1995 while Asian Carmakers and Italtcar had shares of 1.5% and 1.2%, respectively. Commercial Motors and Scandinavian both registered shares of less than 1%.

The entry of new participants in the domestic market has stirred competition in the industry. As new carmakers joined the market to challenge the industry veterans, a shake-up of the local car assembly industry has become inevitable. With a limited domestic market, competition has been stiff and has resulted in the employment of various marketing and financing strategies to gain an edge. Assemblers have embarked not only in the introduction of new models but have engaged as well in aggressive marketing and advertising campaign strategies. Manufacturers offer huge discounts and affordable financing schemes while upgraded models are sold at their old prices with the additional costs absorbed by the manufacturers. The future demand for passenger cars will largely depend on the economic performance of the country. Car sales are expected to remain buoyant as the economy grows, but intense competition and price wars could drive inefficient manufacturers out of the market.

Imports and Exports

CBU exports from the Philippines are rare while CBU imports used to be prohibited, apart from certain special arrangements such as no-dollar or tax free importation of cars by diplomats, high-ranking government and military officials, and overseas Filipino workers and residents abroad. Table 9 presents the imports and exports of passenger cars for the period 1990-1996 as well as for the first quarter of 1997. It is evident from the data that for the period 1990-1995, average imports of passenger cars accounted for merely 0.2 percent of total imports. With the liberalization policy of the government, import restrictions on new passenger cars were lifted in October 1995. Import share of passenger cars to total imports increased to 0.4 percent in 1996. For the first quarter of 1997, an import share of 0.01 percent was registered. In terms of quantity and value, the table shows that the quantity of car imports grew by 97 percent in 1996 while the import value increased by 140 percent relative to the previous year.

The figures tend to show that the removal of the import restriction on new passenger cars did not trigger a massive importation of cars as some sectors feared. In 1996, sales grew by 9 percent while the increase in net income ranged from 18 to 437 percent (see Tables 5 and 6b). As the effective protection estimates will later show, the current tariff structure of the industry is still highly protective. The replacement of quantitative restriction with high tariffs has made the cost of imported CBU units remain prohibitive.

For the period 1990-1996, the average export of passenger cars was less than 0.01 percent of total exports. In the first quarter of 1997, a small improvement can be noted with the percentage share of passenger car exports amounting to 0.02 percent of total

Table 9: Imports and Exports of Passenger Cars, 1990-1996 .

YEAR	QUANTITY	IMPORTS CIF Value(\$)	PERCENT TO TOTAL	QUANTITY	EXPORTS FOB Value(\$)	PERCENT TO TOTAL
1990	6,338	24,387,891	0.19	9	68,201	0.00
1991	6,020	17,924,023	0.14	22	284,469	0.00
1992	4,229	21,763,348	0.14	222	1,549,925	0.02
1993	4,925	25,858,004	0.14	378	2,495,028	0.02
1994	5,567	57,807,380	0.26	1,606	279,813	0.00
1995	5,944	53,486,704	0.19	255	2,464,353	0.01
1996	11,642	128,487,835	0.37	18	243,139	0.00
1997p/	3,947	46,334,183		49	1,053,849	0.02

Note:

1990-1995 data from Foreign Trade Statistics, NSO.

1996-1997 data from BISR, DTI

p/ - preliminary data, as of May, 1997

a/ - from 1996 Philippine Statistical Yearbook, NSCB.

b/ - as of April, 1997

exports. Honda Cars and Proton Pilipinas recently announced their plans to export passenger CBU units. Starting in the first quarter of 1998, Proton is set to export Proton Wira cars to Mexico and Panama with the hope of cornering five percent of the combined markets of the two countries (Business World, 1997). After the launching of Honda City in 1996, Honda Cars is seriously studying the feasibility of exporting the left-hand drive City to other countries (PDI, 1996).

IV. Survey Results

Survey questionnaires were sent to the eleven (11) car assemblers out of which seven (7) responded. Table 10 summarizes the characteristics of these firms. The major products of the respondents include passenger cars, light commercial vehicles, buses, trucks, and spare parts. They are all large scale manufacturers with a capitalization exceeding P15 million. Majority of the respondents employ more than one thousand workers. Two firms are 100 percent Filipino-owned, one is 100 percent foreign-owned, while the remaining firms have mixed equity.

Part I: Quantitative Analysis

EPR and DRC Analysis

This section employed the concept of effective protection and a closely related measure, domestic resource cost² in evaluating the impact of the on-going trade policy reform on the car assembly industry. Effective protection rates (EPRs) and domestic resource costs (DRCs) were estimated based on the information provided by the firms. Out of the seven firms that responded, four completed both quantitative and qualitative questionnaires. These firms had a combined market share of 82 percent in 1995 and employed a total of 5,720 workers during the same year.

The effective protection rate is the ratio of domestic value added measured at domestic prices to the same value added, but measured at world prices (free trade value added). Value added is the margin between the prices of inputs and outputs. It is within this margin that a domestic manufacturer must pay wages, rents, and interest on borrowed capital and from which he must extract his profit. The greater the margin, the more room there is to accommodate higher factor cost and/or the higher the potential margin. It can be increased either by raising tariffs on competing imports of finished products, lowering tariffs on imported inputs, or both. This dual effect of the tariff structure is called effective protection.

² For a more detailed discussion of effective protection rate and domestic resource cost, see Technical Appendix, Volume II of *Catching Up With Asia's Tigers*, Medalla et al, 1995.

Table 10: Firm Characteristics

Name of Firm	Domestic Sales as Percentage of Total Sales	Capitalization	Employee Size	Major Stockholders
Firm T	83	> P15 M	351-500	100% Filipino
Firm U	100	> P15 M	101-200	mixed equity
Firm V	100	> P15 M	101-200	100% Filipino
Firm W	100	> P15 M	> 1000	100% Japanese
Firm X	100	> P15 M	> 1000	mixed equity
Firm Z	100	> P15 M	> 1000	mixed equity

EPRs can be either positive or negative. A positive EPR tend to show that the industrial activity is protected while a negative EPR implies that the industrial activity is not conferred with incentives but rather penalized. The latter arises when the ratio of domestic value added to free trade value added is less than one. In both cases, both domestic and free trade value added are positive.

It is possible for both domestic and free trade value added to have negative signs. A negative domestic value added implies that protection on inputs is greater than protection on outputs and hence, conferring less protection than a zero EPR level. A negative free trade value added implies inefficiency in the use of materials so that input costs actually exceed the world price of the output. A negative EPR arising from a negative free trade value added confers higher protection than a high positive EPR (Krueger, 1983).

The analysis would cover the years 1994 and 1995. The year 1994 would represent the pre-trade policy reform condition while the latter would mark the changes in the industry's protective structure. With the legislation of EO 264 in July 1995, the tariff rate on CKD parts was reduced from 20% to 3%. The average tariffs of locally manufactured automotive parts also dropped from around 27% to 25%. Another significant change was the issuance of CB Circular No.92 in October 1995 which removed passenger cars from the list of regulated commodities, thus allowing the importation of brand new vehicles without the prior approval of the DTI/BOI. It must be noted that the policy reform in 1995 would normally take more than a year to have the full effects felt. As such, the results should be viewed as representing only the partial and initial effects of the on-going trade reform.

The EPR and DRC estimates presented in Table 11 were calculated on the basis of world prices. EPR and DRC estimates based on legal tariffs and taxes were also computed, but the results obtained were underestimated because of the presence of import restriction on CBUs. Until October 1995, the importation of brand new vehicles was prohibited, thus making the import restriction on passenger cars more binding and the more important source of effective protection than legal tariffs and taxes. As Bautista and Power (1979, IPPP) noted, where import controls are present, they may dominate the tariff and tax structure, so that the latter underestimates real protection.

Table 11: EPR and DRC Estimates, 1994 and 1995

Firm Name	Effective Protection Rates (in percent)		Domestic Resource Costs (DRC/SER)	
	1994	1995	1994	1995
Firm W	3669	-208*	1.4	-3.17
Firm X	-206*	-125	4.22	-4.19

Firm Y	-1664*	-505*	5.9	15.48
Firm Z	-171*	-382*	2.89	1.48

* : Negative Free Trade Value Added

As illustrated by the figures in Table 11, the estimates yielded very high levels of effective protection for the four firms in both years 1994 and 1995. All firms are heavily protected as indicated by the EPRs of 3,699% for one firm and negative EPRs derived from negative free trade value added for the remaining ones. The 1995 EPR estimates yielded negative free trade value added for all firms. Very high negative EPRs indicate that the firms are inefficient as their inputs cost more in foreign exchange than their outputs are worth at world prices. The high levels of protection imply that domestic assemblers enjoy a very large margin over value added at world prices. Therefore, by taking advantage of the high level of effective protection afforded by the tariff and import restriction structure, domestic assemblers can earn extremely high profits, pay high wages, and/or simply accommodate inefficiencies and high costs substantially above those of foreign competitors.

The domestic resource cost is the ratio of total domestic cost, evaluated at social opportunity cost, to the net foreign exchange earned, i.e., world price less foreign cost. The DRC measure indicates the amount of domestic resources used per unit of foreign exchange earned or saved from the production of a tradable good. As Bautista and Tecson wrote (1979, IPPP):

DRC analysis offers useful insights into the relative efficiency of sectoral investments and the international competitiveness of domestic industries. Moreover, the DRC measure can be interpreted ex post sense to represent the social cost of promoting exports or of protecting import substituting industries under an existing policy regime.

Following Medalla, Tecson, Bautista, and Power (1995), a country has comparative advantage (disadvantage) in the production of the industry's output if the DRC/SER ratio is less (greater) than 1.2.

Table 11 shows that in 1994, the DRC estimates for car assembly ranged from 1.4 to 5.9. In 1995, the DRC estimates yielded 1.48 and 15.48 for two firms (Z and Y, respectively) and negative foreign exchange saving for the two remaining firms. The DRC results reveal that all the four firms are inefficient in terms of saving foreign exchange for both years 1994 and 1995. In 1995, two firms (W and X) were found to be foreign exchange dissavers.

The high DRCs obtained imply the economic inefficiency of the four car assembly firms in saving foreign exchange. This indicates that the use of domestic resources by the car assemblers is costly compared to their net foreign exchange saving. On the whole, the DRC results are indicative of the country's lack of comparative advantage in the

assembly of motor vehicles. The same result seems to be borne out by the price comparison that follows.

To sum up, the trade policy reform in 1995 resulted in the removal of the import restriction on passenger cars. To compensate for this, tariff duties on CKD parts were reduced from 20% to 3% while the average tariffs on locally manufactured parts were reduced from around 27% to 25%. The tariff rates on passenger cars was maintained at 40%. The results show that the policy changes in 1995 did not alter the structure of protection in the passenger car assembly sector. The effective protection on the assembly of vehicles remained at very high levels as indicated by the negative firm EPRs arising from negative free trade value added. In terms of efficiency, the DRCs implied that the firms remained highly inefficient in saving foreign exchange with the DRCs of three of the four major car assemblers even worsening between 1994 and 1995. Two firms (W and X) registered negative foreign exchange saving while one (Y) showed a very high DRC of 15.48. One firm (Z), however, showed some substantial improvement as its DRC dropped from 2.89 in 1994 to 1.4 in 1995. This implies that this car assembler has become less inefficient between 1994 and 1995.

Cost Comparison

Table 12: Cost Comparison

Car Type	Pd: Ex-Factory Price		Pb: Price of Imported Counterpart (Japan)		Pd/Pb Ratio	
	1994	1995	1994	1995	1994	1995
Passenger Car 1.2L	348,687	389,468	110,500	105,818	3.16	3.68
Passenger Car 2.0 L	686,995	802,022	231,496	240,558	2.97	3.33
LCV: Aluminum Van (diesel)2500cc	476,846	616,333	201,623	157,084	2.37	3.92
LCV: Pick-up 2500cc	435,744	499,914	168,564	209,622	2.59	2.38

The information on prices was provided by one of the firms in the survey. The firm had 41% local content in 1994 and 44% in 1995.

Table 12 compares the production costs of vehicles assembled in the country to comparable vehicles manufactured and assembled in Japan. The data indicate the considerable differences in the costs of production between the two countries. It is evident from the table that vehicles assembled in the Philippines are more costly than completely built up units from Japan. With 41 percent local content, production costs for passenger cars ran about 3 times those in Japan. For light commercial vehicles, production costs were in the range of 2.37-2.59 times than those in Japan. At 44 percent local content in 1995, the cost differences even widened, except for pick-up vans. The cost of a passenger

car (1.2L) was 3.68 times its Japanese counterpart while the delivery van was 3.92 times its Japanese equivalent.

The cost differences and inefficiency of the car assembly industry may be explained partly by the low-volume production, i.e., assemblers are operating below the optimum size of production, and partly by the protection from foreign competition that assemblers have received. For more than two decades, the car industry developed under a system of protection and increasing local content requirement on parts which are also protected by tariffs. This, however, resulted in a high cost structure which has tended to price vehicles assembled in the country out of world markets.

Limited Domestic Market

A number of studies on the Philippine car assembly industry have shown that the fundamental obstacle to production efficiency is the diseconomy of scale associated with production oriented to internal markets of limited size. The local car market is small compared to the minimum scales of production required in the industry. Despite the small size of the Philippine market, however, there are currently eleven companies that are assembling automobiles or producing them under contract for Japanese, Korean, and European manufacturers. As a result, the average output per assembler is extremely low, with only six companies having production capacity of above 10,000 as of March 1996 (Pacific Business and Industries, 1996).

Local Content Requirement

The government's local content program requires assembly firms to use 40% domestic parts. While this regulation provides protection to domestic producers of parts, the effect is somewhat different on the assembly firms that must buy locally. The use of local components has entailed a "cost penalty" among car assemblers who often must bear the high cost of local inputs, the inability of some local suppliers to meet product quality specifications, and the untimely delivery of some local suppliers. Moreover, the program requires assemblers to put up their own parts manufacturing plants. Thus, Mitsubishi and Toyota invested in transmission plants, Honda and Kia constructed engine assembly plants, and Toyota and Nissan built stamping plants. To the extent that their exports of parts are not significant, the assemblers themselves also contribute to the "cost penalty".

In an earlier study on automotive parts manufacturing in the Philippines, Gimenez (1994) identified 300 different components for OEM car assemblers (original equipment market) and the replacement market. The BOI reported that during the same year, 91 automotive parts manufactured locally were integrated into the category II passenger car (refer to Table 2).

Gimenez concluded that the government's local content program failed to develop

the parts manufacturing sector as a world-class export sector. He pointed out that the parts manufacturing industry did not grow as fast as expected. The growth in exports was accounted for by a few components such as wiring harnesses, transmissions, radiators, aluminum wheels, plastic grills, and rubber hoses. Exports to OEM were limited to wiring harnesses (accounted for more than 70 percent of all auto parts exports), transmissions, plastic grills, and radiator hoses. On the whole, many of the parts manufactured and supplied to assemblers are not competitive in terms of both price and quality due to the following problems:

- lack of locally manufactured raw materials, hence many of the raw materials used by components manufacturers are imported
- low productivity and lack of quality measures among small and medium parts makers
- old equipment and technology, many are using technologies that are more than 20 years behind
- lack of mold design technology, tool and die making

Table 13 presents the actual production costs of the sample firms. The costs are broken down by cost inputs, i.e., imported raw material, local raw material, labor, and manufacturing overhead. The data show that the general cost structure of assembly firms does not seem to vary much. Some variation, however, occurs in the local and imported raw materials mix. Raw materials are the major elements in vehicle assembly whose cost range from 91 to 94 percent of total production cost. The cost of local raw materials rose from an average share of 32 percent in 1993 to 40 percent of total cost in 1995. On the other hand, the cost of imported raw materials declined from an average share of 61 percent in 1993 to 53 percent of total production cost in 1995. Direct labor is within the range of 1 to 2 percent of total cost, while manufacturing overhead ranges from 6 to 7 percent of total cost.

Table 13 : Comparison of Production Costs (in percent)

Item	Firm W			Firm X			Firm Y			Firm Z		
	'93	'94	'95	'93	'94	'95	'93	'94	'95	'93	'94	'95
Raw Material	92	92	91	93	93	94	93	94	93	94	92	94
Local	28	38	43				26	30	35	43	44	41
Imported	64	54	48				67	64	58	51	49	53
Direct Labor	2	2	2	1	1	1	1	1	1	1	1	1
Manufacturing Overhead	6	7	7	7	6	6	6	6	6	6	7	6

The local content program is one major element contributing to the high cost of car

assembly in the country. As a result of the program, local parts constituted between 35 to 43% of total cost in 1995. Except for those parts with significant exports, domestic parts are not competitive in terms of both price and quality. The cost of domestic production does not approximate the cost of mass-produced parts in Japan or Thailand (Philippine Daily Inquirer, 1997). In a study of automotive industries in India and Latin America, Baranson (1969) noted that manufacturing cost increases as a function of domestic content. This can be attributed to the high cost of components and parts which are produced at relatively low volumes in small-scale plants. The backward linkage effects generated by assembly plants, which is usually cited as beneficial, actually gives rise to high-cost vehicle assembly.

Part II: Qualitative Analysis

Policy Environment

All respondent firms are aware of the government's plan to adopt a five percent uniform tariff. All firms believe that the plan will affect their sector. They, however, maintain that the five percent uniform tariff plan is not the best path that the industry must take in order to become globally competitive.

The firms are aware that the uniform five percent tariff plan of the government will increase the current duty on their CKD inputs from three percent to five percent while the tariff rate on their outputs will decline from the current 40 percent duty to five percent. This tariff reduction will, consequently, change the protective structure of the industry. It will heighten competition as the plan will encourage the entry of imports. Assemblers are worried because they feel that this tariff policy change will be detrimental to them and as one firm noted, it may eventually cause the industry to collapse. Box 2 shows the input and output effects of the five percent uniform tariff plan. On the input side, their costs will increase as a result of a higher tariff. With respect to the effects on output, demand for locally assembled cars will decline as the uniform five percent plan will allow the entry of cheaper imported cars. This demand cut will amount to a reduction in their scale of operation. In response, firms will adopt cost-cutting measures (lay-off employees, hold-off expansion), institute ways to improve their productivity, and increase their prices.

Box 1: How Car Assemblers Responded

- | | |
|---|------|
| 1. Awareness of the government's plan to implement a five percent uniform tariff. | 100% |
| 2. The five percent uniform tariff plan will affect the car industry. | 90% |
| 3. This is the best approach to achieve global competitiveness. | 10% |

Some firms view the plan as one that encourages the adoption of a trading rather

than a manufacturing perspective. Without any tariff differential between CKD parts and CBUs, firms will no longer engage in manufacturing activities as it will be more profitable for them to import the finished product. Thus, in the future, the firms believe that their present manufacturing activities will be replaced by trading activities. They cautioned that the latter will not generate new employment or new investments for the sector. They argued that the present tariff differential should be maintained because compared with other countries, the Philippines was late in developing its parts and components industry. Furthermore, infrastructure development in the country is very inadequate. Finally, the country's economy has just started to grow and a simultaneous trade liberalization will likely put us at a disadvantage.

The assemblers want the government to slow down on its car liberalization plan and adopt a more realistic phase of liberalization. They maintain that the current plan poses a threat to the viability of the car industry. The Philippine Automotive Federation, Inc. is urging the government to maintain the current tariff differential between CBU units and CKD packs at the 37 per cent level, continue the ban on the importation of second hand cars, and retain the current local content and foreign exchange requirements even after the year 2000.

**Table 14 : The Philippine Car Assembly Industry vis-a-vis
Other Asian Countries
(response rate in percent)**

Scale	Indonesia		Malaysia		Thailand		Vietnam		China	
	Price	Qty	Price	Qty	Price	Qty	Price	Qty	Price	Qty
1	33		50	33	67	17	17		33	
2	50	83	50	67	33	83	33	50	33	67
3	17	17					33	50		33

On a scale of 1 to 3, the firms were asked to assess the industry's competitiveness in terms of price and quality relative to each of the Asian countries listed in the table. The firms used the following rating: 1-- not competitive, 2 -- competitive, and 3 -- has competitive edge. The results (see Table 14) reveal that the country's car assembly industry is competitive against Indonesia in terms of both price (50%) and quality (83%). Most of the firms believe that in terms of quality, the industry can compete against Malaysia (67%), Thailand (83%), and China (67%). In the case of Vietnam, half of the sample believes that the local industry has a competitive edge while the other half rated it only as competitive. In terms of prices, 67% of the sample maintains that the local industry cannot compete against Thailand while 50% believes the local industry can compete against Indonesia and Malaysia.

The firms were also asked how the on-going trade and investment liberalization policies of the government are likely to affect their performance. Box 2 summarizes their responses.

Currently, domestically-produced car parts are more expensive than imported ones. This can be attributed to the failure of the car development program to develop the spare parts sector. Few parts manufacturers have made inroads in the export market and the greater majority is still not competitive, even here at home. The industry, which is composed mostly of small and medium-sized firms, has remained import dependent and vulnerable to increased competition. The removal of the local content program will lead to a more optimal sourcing of raw materials and parts without the limitations imposed by local content regulations. This will result in a decline in the cost of inputs of car assemblers as

Box 2 : Overall Effects of Government On-going Policy Changes and Future Plans

Perceptions of Firms

A. Five Percent Uniform Tariff

Probable Effects:

Input

- increase cost

Output

- decrease demand for locally assembled cars
- reduce scale of operation

Reactions/Responses

- institute cost-cutting measures
- improve productivity
- lay-off employees
- hold-off expansion
- import CBUs
- diversify into other products
- raise prices

B. Removal of Local Content Program

Probable Effects

- improve quality of products
- decrease cost of inputs

Reactions/Responses

- increase proportion of imported inputs

C. Removal of Import Restrictions on CBUs

Probable Effects

- reduce scale of operation
- decrease demand on output locally assembled cars

Reactions/Responses

- institute cost-cutting measures
- lay-off employees
- hold-off expansion
- improve productivity

well as an improvement in the quality of their finished products. Without the local content program, firms will increase their proportion of imported inputs.

A removal of the import ban on CBUs will reduce demand on the firms' output and the firms' scale of operation. Without the protection provided by the import ban, firms will institute cost-cutting measures, reduce their workers, hold-off expansion, diversify into other products, and import CBUs.

Given the changing domestic and global trade and investment policies embodied by AFTA, APEC, and GATT-WTO, the firms were asked how these will affect the future prospects of their companies. The reactions of the surveyed firms were varied -- one firm said it would be better as these changes would level the playing field; another answered it would be worse because these changes would affect its growth potential in the short term; another firm answered it would be the same as it had the option of importing CBUs in case CKDs and CBUs would have similar import duties of 5 percent, although the firm mentioned that by adopting this alternative, employment and investment opportunities would diminish; two firms said it would be good because for the first firm, all these international policy changes are taken into consideration in its plans for future survival and for the second firm, it would redirect its goals towards global competitiveness; the last firm answered it would be both good and worse, good if there would be enough government support and worse, if government policies would be inconsistent. The government should lay down the rules for the next ten years in order to allow market players to formulate their plans too. Constant revision in government regulations have been hampering their plans. To enable them to cope with the changing domestic and global trade environment, the firms further suggested the following policy reforms and government assistance:

- cut down bureaucracy and red tape particularly in the Bureau of Customs and other agencies like Bureau of Internal Revenue and Land Transportation Office
- more government support to local parts manufacturers: reduced tariff rates on their inputs, training subsidies, easier financing terms, reduced cost of utilities
- tariff protection for CKD assemblers
- easier processing of tax credit/duty drawback claims

The firms' reactions on how they view the future are also mixed. Those that have a positive outlook for the industry over the next ten years maintain that for as long as the growth of the economy is sustained at five percent and above, the car industry can continue to grow adequately. However, others are cautious because of the possible entry of used vehicles in the country. One firm warned that the industry may not develop if we follow or exceed the pace of the liberalization pattern of Thailand. Another firm cautioned that the low tariff rates on CBUs may cause some firms to discontinue their operations.

Development Strategy: Strengthening Competitiveness

Based on the preceding section, the survey showed that car assemblers are worried about the negative effects of the five percent uniform tariff. They maintain that this

plan is not the best way for the industry to attain global competitiveness. They are, however, aware that the government is committed to remove the mandatory local content requirement and foreign exchange earnings by the year 2000 and is scheduled to implement a uniform five percent tariff by the year 2004. With the opening up of the car development program to new participants and the removal of the quantitative restriction on new CBU imports, the fight for market share has grown stiffer. To face competition, local assemblers are introducing new models and employing marketing and financing strategies. While urging the government to delay the liberalization of the industry, a review of their current strategies reveals that there are some firms that are responding to the call to be globally competitive by strengthening themselves. Given the remaining limited period, these firms are preparing for the day when no protection will be in place and are thinking of exporting, plotting their investment plans in a bid to expand their market.

Management

All respondent firms send their employees for local and foreign training. Two firms allow 100 percent of their manpower to attend trainings while the remaining ones have percentage shares ranging from 5 percent to 60 percent. The firms allocate 1-5 percent of their budget for manpower training. Except for one, all respondent firms conduct product and marketing research and development activities. These firms allot 3-5 percent of their budget for R&D and in the past four years, there has been an increase of 10 percent in their budget for these activities. To improve their productivity, the firms adopt the following measures:

- continuous manpower training and development
- training and performance incentives
- introduction of modern technology
- automation of equipment and facilities
- productivity programs like quality circles, kaizen (suggestion) programs, and programs for dealers and parts suppliers

In the area of management, the firms suggested the following to strengthen their competitiveness:

- fully computerized management operations
- cost reduction and control
- management support of mother company
- increased involvement of Filipino executives in policy and decision making.

Technology

All respondent firms have plans to increase the degree of automation of their production process by acquiring new machines with higher capacities. One firm noted that 10 percent of its labor is being replaced by the acquisition of new machines. In their production divisions, engineers comprise between 5 to 30 percent of total employees directly engaged in the production process. According to respondent firms, they employ mostly mechanical engineers. The firms will introduce new technology which will further

mechanize their operations. They mentioned robotics/automated assembly line control and metrology equipment like a three coordinate measuring/lay-out machine. In their choice of technology, the firms consider the following factors:

- quality improvement
- reduction of cost of production
- advance or latest automotive technology
- supplier total support and parts availability
- easy operation and cost.

For joint venture companies, technology is transferred by the parent company through direct infusion of production system, production know-how, and technical specifications. Other firms operate under existing technical assistance agreement programs. All firms responded that their choice of technology is the appropriate one, considering the country's level of development. They are all planning to improve their quality control through the following measures :

- acquire the latest quality control equipment such as electronic hand-held tester
- assist local parts suppliers in improving quality
- introduce automation in the production process
- create quality control center
- ISO 9002 accreditation

Firms cited cost and production volume as a constraint in their choice of technology which negatively affects their competitiveness. They identified the following measures to strengthen competitiveness in the area of technology:

- constant research and development
- integrated business automation to reduce production overhead cost and improve product pricing
- introduction of new technology to enhance operating control mechanism
- development of automated system to support after sales program for customers

Marketing

Except for one, all respondent firms are planning to shift to new products and increase their budget for advertisement between 10 to 30 percent. All firms will look for new markets abroad including Europe, ASEAN region, and the Middle East. One firm will focus on the production and export of left hand drive cars to ASEAN and Middle East countries. The firms cited the following marketing constraints which negatively affect their competitiveness:

- shipment costs
- changing government policies and regulations
- price ceiling on people's car
- heavy discounting brought about by competition

The firms identified the following measures to improve their competitiveness in the area of marketing:

- customer satisfaction and improvement of after sales service
- clear excise tax policy particularly on light commercial vehicles

V. Summary and Conclusions

The series of trade policy reform in 1995 resulted in the removal of the import restriction on passenger cars and a reduction in tariff duties on CKD parts from 20% to 3% as well as in a decline in average tariffs on locally manufactured parts from about 27% to 25%. The tariff rates on passenger cars was maintained at 40%. As a result of these tariff policy changes, automobile-related tariff rates in the country are the lowest in ASEAN. Following these policy changes, effective protection on the assembly of vehicles still remained at very high levels as indicated by the 1994 and 1995 firm EPRs. Although the import restriction on new CBU units was lifted, the existing tariff structure provided substantial protection to car assemblers. In 1995, the four major vehicle assemblers in the industry had negative EPRs arising from negative free trade value added. In terms of efficiency, the DRCs estimated for the same period implied that the firms remained highly inefficient in saving foreign exchange with the DRCs of three of the four major car assemblers worsening between 1994 and 1995. Two firms (W and X) registered negative foreign exchange saving while the third firm (Y) showed a very high DRC of 15.48. The fourth firm (Z), however, showed a substantial improvement as its DRC dropped from 2.89 in 1994 to 1.4 in 1995 implying that it has become less inefficient between 1994 and 1995.

The high cost structure and inefficiency of the car assembly industry may be explained by the low-volume production and protection which has long sheltered the industry from foreign competition. For more than two decades, the car industry developed under a system of protection and increasing local content requirement on parts which are also protected by tariffs. This, however, resulted in a high cost structure which has tended to price vehicles assembled in the country out of world markets.

A number of studies on the Philippine car assembly industry have shown that the fundamental obstacle to production efficiency is the diseconomy of scale associated with production oriented to internal markets of limited size. Despite the small size of the Philippine market, there are currently eleven companies that are assembling automobiles. As a result, the average output per assembler is extremely low, with only six companies having production capacity of above 10,000 as of March 1996 (Pacific Business and Industries, 1996).

Another factor contributing to the high production cost of the industry is the government's local content program which requires assembly firms to use 40% domestic parts. While this regulation provides protection to domestic producers of parts, the effect is somewhat different on the assembly firms that must buy locally. The use of local components has entailed a "cost penalty" among car assemblers who often must bear not only the high cost of local inputs but also the inability of some local suppliers to meet

product quality specifications and their untimely delivery. Moreover, the program requires assemblers to put up their own parts manufacturing plants. To the extent that their exports of parts are not significant, the assemblers themselves contribute to the "cost penalty".

The industry can overcome the scale disadvantage either through extending the market size or rationalizing production in order to achieve larger production runs. The former may be achieved by exporting while the latter may be realized by reducing the number of models and plants serving the domestic market. The plan to abandon the local content program may also improve industry efficiency as firms will no longer be obliged to source the more expensive parts and components domestically.

Almost all of the firms surveyed are aware of the government plan to implement a uniform five percent tariff in year 2004. They believe that the plan is not the best path that the industry must take in order to become globally competitive. They cautioned the government to go slow in its liberalization policy as rushing into it may cause the industry to collapse.

Except for firm Z, all firms would shift to new products and increase their advertisement budget. With a uniform tariff of five percent, firms W and X would rather engage in trading activities. On the other hand, firm Z would continue its car assembly activities and would look for new markets abroad for its product. While firms W and X view the government's liberalization plans with some apprehension, firm Z seems to be ready, but looks at the future with cautious optimism.

On the basis of the 1995 DRC estimates of the four major assemblers, the liberalization policies of the government may have different effects on the firms in the car assembly industry. The highly inefficient ones may fold up unless substantial improvements in their economic efficiency take place. Others may have to shift to other activities like automobile trading. The less inefficient ones may survive provided they would be able to bring down their production costs in line with the costs and quality of others. In the long term, they need to further reduce their production costs below international price levels through economies of scale and by making greater efforts to reduce raw materials costs.

On the overall, given the on-going and planned liberalization policies of the government, what lies ahead for the country's passenger car assembly industry? Will these policy changes enhance the competitiveness and readiness of the industry for the eventual liberalization of trade and investment? Will these policy changes bring us closer to our objective of achieving export competitiveness and becoming a regional manufacturing hub?

The current trade and investment policy reforms have not reduced the effective protection enjoyed by the car assembly industry. With the high protection conferred by the new tariff structure, there was no improvement in the efficiency of most assembly firms.

The DRC results show the inefficiency of the car assemblers and our lack of comparative advantage in this activity. The reforms, however, are instrumental in stirring market competition and encouraging firms to reorient their strategies. A review of their strategies shows that in response to the stiff competition arising from the liberalization efforts of the government, firms would engage in manpower training and development programs, cost reduction and control, acquisition of new technology and constant research and development to strengthen their competitiveness. Some are thinking of exporting to increase their market.

The key to improving the competitiveness of a global company lies in its ability to reduce total costs. As raw materials account for a major percentage of automobile costs, procurement strategies are vital to the improvement of competitiveness. The case of Thailand may be instructive. Thailand liberalized its car industry as early as six years ago, in 1991. Undoubtedly, its incentives and liberalization policy played an important role in spurring the growth of its car industry, in encouraging foreign investors, and in moving it nearer to its objective of becoming Southeast Asia's regional center for car production and export. Thai assemblers are currently making efforts to reduce production costs in the passenger car category mainly through optimal sourcing of parts and raw materials. The specific measures are: (1) expansion of local procurement, (2) expansion of regional complementation system, (3) reciprocal supplying among assemblers, and (4) sourcing from non-affiliated parts manufacturers. Assemblers are also reducing costs by improving productivity through the following measures: (1) changing factory layouts, (2) updating production facilities, and (3) automating operations through the deployment of welding robots and other equipment (RIM, Pacific Business and Industries, 1996).

In Southeast Asia, Thailand has the largest automobile market and relatively developed parts and materials industry. Thailand has 600 automobile parts manufacturers, the highest number in Southeast Asia. The increase in the number of automobiles assembled have been matched by the investment in new or expanded capacity by parts manufacturers. Some have started to produce functional parts that require heavy investment in plant and equipment, such as cylinder blocks. There are currently ten Japanese-affiliated automobile manufacturers in Thailand and an influx of European, American, and South Korean companies. This has created a very competitive environment. Many of the assemblers and parts manufacturers are implementing export-oriented investment and production plans. For these reasons, Thailand is being eyed as the core of the regional division of labor which is expected to grow in Southeast Asia.

The Philippine passenger car assembly industry pales in comparison with Thailand. Car assemblers in the country thrive because of the high protection that they receive from the existing tariff structure. They produce small volumes of passenger cars for the domestic market. Although the country exports some parts, it is heavily dependent on imported raw materials due to the premature state of supporting industries. For instance, Japanese-affiliated companies are unable to locally source their materials for the production of transmission. Furthermore, the 1995 tariff reforms have created a problem for the parts manufacturers as their tariff rates are higher than those on CKD imports. With

this distortion, it becomes cheaper to import parts than to source them domestically. Thus, concerns have been raised on the negative implications of the present tariff structure on the growth and development of the parts industry.

The continued growth of the passenger car assembly industry in a completely liberalized environment will depend primarily on the development of local supporting industries. The reduction of parts cost and the improvement in the quality of parts are vital in enhancing our competitiveness. The small scale of production, lack of well developed locally based supporting industries (such as forging and machining) and the associated quality and price problems, and the current high protection that shelters car assemblers from foreign competition may make the prospects for the passenger car industry bleak in a fully liberalized environment. It may be difficult for us to catch up with Thailand, which is expected to become the regional export base. The resulting distortion in the parts sector arising from the current trade liberalization policy of the government may hinder the growth of the car parts and components industry. The development of the parts industry should, therefore, be regarded as an urgent priority to improve the competitiveness of the car industry. Unless a viable parts manufacturing industry is developed, it is unlikely that the Philippine car assembly industry will be able to achieve export competitiveness in the passenger car sector.

One bright spot, however, is that the country may emerge as production and export base for some major functional parts. Toyota and Mitsubishi are producing and exporting transmissions within ASEAN under the brand- to- brand complementation (BBC) scheme. Both companies are expanding their production capacity and intend to position the Philippines as production base for transmissions. Honda has also positioned the country as a base for the production and export of parts (Ibid).

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Annex 1

Chronology of Laws Affecting the Philippine Car Assembly Sector

Executive Order Number 906 (4 August 1983): Revised the Progressive Car Manufacturing Program as follows:

Coverage	<ul style="list-style-type: none">passenger cars with engine displacement of 2,000 cc or lessparticipants shall have the exclusive right to import spare parts for their vehicles
Importation of CBU	<ul style="list-style-type: none">importation of built-up vehicles shall not be allowed, even on a no dollar basis except for one prototype of each final model code for engineering evaluation and testing purposes
Local Content	<ul style="list-style-type: none">participants shall maintain yearly a minimum physical domestic content of 40%participants shall have the freedom of choice in selecting the vehicle components that they shall purchase domestically to attain the minimum local content requirement
Foreign Exchange Requirement	<ul style="list-style-type: none">the maximization of net foreign exchange earnings shall be a principal objective of the revised program
Models and Variants	<ul style="list-style-type: none">participants may produce any model so long as the commitments are met and the guidelines are complied with

Executive Order Number 248 (24 July 1987): The Board of Investments shall, in consultation with the appropriate agencies, review and revise the Progressive Car Manufacturing Program as adopted in 1970 and recommend new guidelines for a Car Development Program.

Memorandum Order Number 136 (1 December 1987): Guidelines on the Car Development Program (CDP)

Coverage	<ul style="list-style-type: none">manufacture and assembly of passenger cars up to 2,800 cc engine displacementall passenger cars covered in the Program shall be imported in CKD condition onlyonly qualified participants are allowed to manufacture and assemble passenger cars, the number of participants shall be limited to only three manufacturers
Importation of CBU	<ul style="list-style-type: none">importation of new and second-hand CBU passenger cars covered by the Program shall not be allowed

Local Content	<ul style="list-style-type: none">as a major commitment under the Program, 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% of the total net local content requirement under the Programregistered participants shall comply with a minimum vehicle local content as follows:<table><tr><td>year</td><td>local content (%)</td></tr><tr><td>1988</td><td>32.26</td></tr><tr><td>1989</td><td>36.58</td></tr><tr><td>1990</td><td>40.0</td></tr></table>participants are free to select components that shall be manufactured by them or sourced from local parts manufacturers, except those parts/components which qualify for mandatory deletionthe BOI shall decide which locally-manufactured parts/components, either major or minor, are to be mandatorily deleted	year	local content (%)	1988	32.26	1989	36.58	1990	40.0																
year	local content (%)																								
1988	32.26																								
1989	36.58																								
1990	40.0																								
Foreign Exchange Requirement	<ul style="list-style-type: none">Participants shall earn 50% of their foreign exchange requirements for CKD importations through generation of export earnings<table><tr><td>year</td><td colspan="2">foreign exchange credit (%)</td></tr><tr><td></td><td>automotive</td><td>non-automotive</td></tr><tr><td>1988</td><td>encouraged</td><td>100</td></tr><tr><td>1989</td><td>20</td><td>80</td></tr><tr><td>1990</td><td>40</td><td>60</td></tr><tr><td>1991</td><td>60</td><td>40</td></tr><tr><td>1992</td><td>80</td><td>20</td></tr><tr><td>1993</td><td>100</td><td>0</td></tr></table>	year	foreign exchange credit (%)			automotive	non-automotive	1988	encouraged	100	1989	20	80	1990	40	60	1991	60	40	1992	80	20	1993	100	0
year	foreign exchange credit (%)																								
	automotive	non-automotive																							
1988	encouraged	100																							
1989	20	80																							
1990	40	60																							
1991	60	40																							
1992	80	20																							
1993	100	0																							
Models and Variants	<ul style="list-style-type: none">a participant may have a maximum of three basic models and two variants for each basic model																								

Memorandum Order Number 286 (8 March 1990) Approving and Promulgating the Supplementary Guidelines to the CDP

Coverage	<ul style="list-style-type: none"> opens the CDP for the assembly of cars with engine displacement of 1,200 cc and below (which shall be known as the People's Car) retail price of more or less P175,000 successful new participants who have complied with their commitments shall only be qualified for eligibility to participate in the manufacture and assembly of passenger cars with engine displacement of up to 2,800 cc after one (1) year of operation 								
Local Content	<ul style="list-style-type: none"> commitment for the manufacture of major components for which evidence of the investment must be in by the end of 1990 registered participants shall attain the following schedule of minimum vehicle local content <table> <tr> <th>year</th><th>in %</th></tr> <tr> <td>1991</td><td>35</td></tr> <tr> <td>1992</td><td>40</td></tr> <tr> <td>1993</td><td>51</td></tr> </table> 	year	in %	1991	35	1992	40	1993	51
year	in %								
1991	35								
1992	40								
1993	51								

Foreign Exchange Requirement	<ul style="list-style-type: none">• capability to earn at least 50% of their foreign exchange requirements by exporting automotive and non-automotive products in accordance with the following schedule:<table><tr><td>year</td><td>automotive (in %)</td><td>non-automotive (in %)</td></tr><tr><td>1990</td><td>20</td><td>80</td></tr><tr><td>1991</td><td>30</td><td>70</td></tr><tr><td>1992</td><td>60</td><td>40</td></tr><tr><td>1993</td><td>100</td><td>0</td></tr></table>• participants may be allowed to import passenger cars in SKD condition for a period of 6 months while the CKD assembly facilities are being set-up	year	automotive (in %)	non-automotive (in %)	1990	20	80	1991	30	70	1992	60	40	1993	100	0
year	automotive (in %)	non-automotive (in %)														
1990	20	80														
1991	30	70														
1992	60	40														
1993	100	0														
Required Investment	<ul style="list-style-type: none">• capability to invest at least P200 million in the manufacture and assembly of cars															

CB Circular Number 1348 (28 July 1992): Revised Manual of Rules and Regulations Governing Foreign Trade Transactions

- This lists motor vehicles, parts and components, and used motor vehicles as regulated commodities, the importation of which requires prior clearance from the DTI/BOI

CB Circular Number 1356 (25 September 1992)

- This allows the importation of motor vehicles for the transport of goods, buses, and other public-transport type motor vehicles without the prior approval of DTI/BOI

Memorandum Order Number 68 (21 December 1992) Approving and Promulgating the Supplemental Guidelines to the CDP

Coverage	<ul style="list-style-type: none"> include passenger cars with engine displacement greater than 2,800 cc Category I : 1,200 cc or below and with a reasonable price ceiling determined by the Board Category II : above 1,200 cc up to 2,800 cc Category III: 2,190 cc or above 								
Foreign Exchange Requirement	<ul style="list-style-type: none"> every participant in category III shall generate 100% foreign exchange needed for the importation of CKD packs from the net foreign exchange realized in exporting auto parts category III participants may be allowed to import SKD units for a period of 6 months while their CKD facilities are being set-up the 50% foreign exchange self-sufficiency rule for categories I and II is amended as follows: <table> <tr> <th>year</th><th>level of foreign exchange self-sufficiency (in %)</th></tr> <tr> <td>up to 1994</td><td>50</td></tr> <tr> <td>1995-1997</td><td>75</td></tr> <tr> <td>1998 and thereafter</td><td>100</td></tr> </table> 	year	level of foreign exchange self-sufficiency (in %)	up to 1994	50	1995-1997	75	1998 and thereafter	100
year	level of foreign exchange self-sufficiency (in %)								
up to 1994	50								
1995-1997	75								
1998 and thereafter	100								
Investment Required	<ul style="list-style-type: none"> capability to invest US \$8 million in the manufacture of motor vehicle parts and components for the export and domestic markets and ability to establish a new assembly facility or utilize an existing one 								

Memorandum Order Number 134 (31 May 1993) Further Modifying the Guidelines to the CDP As approved

Under MO Number 68 (1992) and Number 136 (1987)

Coverage	<ul style="list-style-type: none"> passenger cars under the CDP shall have the following categories: Category I : with engine displacement of 1,200 cc or below for gasoline engine or with a diesel engine with corresponding displacement and with a reasonable price ceiling as determined by the Board Category II : with engine displacement greater than 1,200 cc or up to 2,800 cc for gasoline engine or equivalent displacement for diesel engine Category III : with engine displacement greater than 2,190 cc for gasoline engine or equivalent displacement for diesel engine
Importation of CBU	<ul style="list-style-type: none"> existing restriction on the importation of passenger vehicles (with engine displacement of 2,800 cc or greater for gasoline-fed engines or 3,100 cc or greater for diesel engines) in CBU condition is relaxed for a period of one year only new passenger vehicles, excluding utility vehicles, shall be allowed to be imported only passenger vehicles with a book value of at least \$25,000 may be imported all imported passenger vehicles shall be levied the prevailing rate of duty, 100% excise tax, and 10% VAT
Models and Variants	<ul style="list-style-type: none"> the number of basic models is increased from three (3) basic models to four (4)

Memorandum Order Number 210 (31 May 1994) Further Modifying the Rules On The Importation Of Certain Type of Passenger Vehicles Under MO Number 134 (1993)

- Only passenger vehicles with a book value of at least US \$20,000 may be imported and the dutiable value therefore shall at least be US \$20,000 + cost of freight, insurance and other dutiable charges

Memorandum Order Number 238 (28 July 1994) Further Modifying the Guidelines To The CDP As Approved Under MO Number 134 (1993) and Number 210 (1994)

- The existing restriction on the importation of passenger vehicles in CBU condition is relaxed for another year or up to 19 June 1995 and shall apply only to new passenger vehicles with engine displacement of 2,800 cc or greater for gasoline-fed engines or 3,100 cc or greater for diesel-fed engines

Memorandum Order Number 242 (2 December 1994) Further Modifying The Guidelines To The CDP As Approved Under MO Number 136 (1987)

Coverage	<ul style="list-style-type: none"> the following shall be allowed to manufacture and assemble passenger cars: participants under category I of the CDP which will graduate to category II participants that will qualify under MO Number 68 (category III) AIJV projects endorsed by the government
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Foreign Exchange Requirement	<ul style="list-style-type: none"> participants under the AIJV scheme shall earn 100% of their foreign exchange requirements for CKD importations through the generation of export earnings, however, while waiting for the setting up of their respective automotive parts manufacturing projects, they may be allowed to initially earn 50% of their foreign exchange requirements during the first 6 months participants may be allowed to import passenger cars in SKD condition for a period of 6 months while the CKD assembly facilities are being set-up
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Executive Order Number 264: (22 July 1995) Modifying The Nomenclature And The Rates Of Import Duty On Certain Imported Articles Under Section 104 Of The Tariff And Customs Code Of 1978 (PD Number 1464), As Amended

- This reduces the tariff rate on CKD units from 20% to 3% for the period 1995 to 2000. Duties on CBUs will remain at 40% until 1999 and will be slashed to 30% by year 2000. The rate will be reduced further to 10% in 2003 and to a single rate of 5% in year 2004.

CB Circular Number 92 (19 October 1995)

- This deletes passenger cars from the list of regulated commodities and allows their importation without the prior approval of the DTI/BOI

Memorandum Order Number 346 (26 February 1996) Amending The Guidelines On The CDP, CVDP, and The MDP

Coverage	<ul style="list-style-type: none"> aside from applications for participation in category III of the CDP, applications for participation in categories I and II, which were previously closed, shall be accepted by BOI from Filipino-owned and foreign-owned cars categories: <ul style="list-style-type: none"> Category I: engine displacement of 1,200 cc or below and with a reasonable price ceiling as determined by the Board Category II: above 1,200 cc but below 2,190 cc Category III: 2,190 cc and above
Importation of CBUs	<ul style="list-style-type: none"> Importation of brand-new CBU passenger cars shall now be allowed (in line with EO No.264, 1995 and Monetary Board Circular No.92, 1995)
Local Content Requirement	<ul style="list-style-type: none"> Participants in the Program except those in category III shall no longer be required to comply with a vehicle local content higher than 40% to remain in the CDP. However, the BOI may grant a foreign exchange award amounting to 50% of foreign exchange earned during the previous year to a participant in categories I and II who has attained a weighted local content average of at least 50% of all its participating models and variants. The local content requirement shall be terminated by the year 2000 based on the Agreement on Trade-Related Aspects of Investment Measures under the GATT.

Foreign Exchange Requirement	<ul style="list-style-type: none">Participants in categories I, II, and III will still be required to earn foreign exchange credits through the export of automotive products to be able to import CKDs.<table><tr><th>Year</th><th colspan="2">Foreign Exchange Ratio (% of CKD import value)</th></tr><tr><th></th><th>Category I</th><th>Category II</th></tr><tr><td>1995</td><td>5</td><td>40</td></tr><tr><td>1996</td><td>5</td><td>45</td></tr><tr><td>1997</td><td>7.5</td><td>45</td></tr><tr><td>1998</td><td>7.5</td><td>50</td></tr><tr><td>1999</td><td>15</td><td>50</td></tr><tr><td>2000</td><td>15</td><td>55</td></tr></table>Participants in category III and AIJV will be required to earn 75% of their foreign exchange requirements for the importation of CKDs.The foreign exchange content requirement shall be terminated by the year 2000 based on the Agreement on Trade-Related Aspects of Investment Measures under the GATTNew participants in category I, II, and III intending to sell only to the domestic market may no longer be granted the privilege to import SKD units while their assembly facilities are being set-up. New participants in the Program which will export at least 50% of their CBU production (70% in the case of foreign companies) may be authorized to import SKD units for the local market portion of their operations for a period of 6 months	Year	Foreign Exchange Ratio (% of CKD import value)			Category I	Category II	1995	5	40	1996	5	45	1997	7.5	45	1998	7.5	50	1999	15	50	2000	15	55
Year	Foreign Exchange Ratio (% of CKD import value)																								
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Models and Variants	<ul style="list-style-type: none">No limitation in the number of models and variants provided that the same are registered with the BOI																								
Investment Required	<ul style="list-style-type: none">capability to invest and/or bring investments equivalent to US\$10 million in the manufacture of motor vehicle parts and components for the export and domestic marketability to establish a new assembly facility or utilize an existing facility which is either idle or in operation																								