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Automobile industry began in Thailand in an earnest way in 1961 after the government had specified policy emphasizing promotion of industry which produce in order to replace import, by proclaiming the promotion of investment to establish car assembly plant within the country because there is a great demand in the country which caused a waste of foreign currencies to import ready-made cars every year wherein the said policy encouraged an investment to construct car assembly plant in the country, both being invested by Thai people and joint venture with parent companies overseas. At the first stage, certain accessories produced in Thailand were used, i.e. car-tyre, battery and until the year 1969, the cabinet has approved appointment of Board for Developing Automobile Industry in order to take care and specify policy for developing automobile industry of the country, up to the present time. Government has specified policy about producing accessories produced in Thailand and co-ordination with other Working Units, i.e. Ministry of Finance, Ministry of Commerce in specifying taxation policy and prohibited import of certain categories of ready-made cars, in order to protest domestic are motor car, pick-up, truck and passenger car. In assembling the automobile, one has to import certain part of Completely Knocked Down (CKD) accessories to assembly together with accessories produced in the country.

In addition, a car in the characteristics of chassis with windshield is altered and make an addition in order to obtain a car with truck for loading goods, what we call 'double' or 'cab' or 'station wagon' for multi-purpose use. Majority of accessories used for
alteration or make an addition are accessories produced in Thailand. Use of domestic accessories have increased. There is also more complicated technology of local production of accessories. The Board, therefore, specified that assembly plants which produce small trucks to use locally produced accessories since July 1989 onwards.

1.1 Automobile Industry in Thailand

1.1.1 Automotive production.

In 1991, Auto Assembly Plants which produce motor cars, small truck (Pick-up), big truck and passenger cars (1992) are more than ten assembly plants have registered capital totalling Baht 1,004.0 millions, with production capacity of approximately 144,300 units/year/1 (Period of work). But production as indicator, which is, car spray and room for warming the colour of the car.

As regards situation of production which was during economic recession between 1984-1986 and in 1987 economy began to recover. As economy of the country in general began to recover, at the same time price of important crops become higher, people have more buying power, while interest on loans has reduced, the improvement the down payment and instalment period has been extended, this resulted in increase of production according to demand. In 1987, 98,148 automobile were produced, an increase from 1986 by 32.34% and in 1988 assembly of automobile have gone as high as 154,1983 units, out of this, 54,459 were cars about 35%, pick-up and passenger automobile : 99,724 units or 65%.

1.1.2 Domestic market.

In 1987 demand for cars was 26,938 units, pick-ups and passenger automobile were 74,394 units, an increase form 1986 by 23 %
and 32% accordingly. As for 1988 which was the time when economy was supportive, there was much higher demand for cars, that is, demand for cars was 38,759 units, pick-up: 85,710 units, big truck and passenger automobile was 22,023 units, an increase from 1987 by 43.9%, 34.7% and 78.6%, accordingly. Summarily, in 1988 total categories of automobile demanded was 146,492 units, an increase from 1987 by 44.6% which in higher than the past period when there used to be a high demand in the country, which was an average increase from that time by 5% - 7% per year.

1.1.3 Overseas market.

In 1987, there was an export of 488 cars, 40 units of pick-ups and passenger automobile. But in 1988, the result that government has specified measures in supporting export in various aspects, has enabled M.M.C. Sitthipol Co.Ltd. who signed contract with Chrysler Co.Ltd. of Canada, was able to export 100,000 cars to Canada within 6 years (1988-1993), which enabled export of cars in 1988 to increase to 13,500 units valued Baht. 1,965.0 millions and in 1989, Board for Developing Export has specified target for exporting 20,500 cars valued approximately Baht. 3,100.0 millions became alert in trying to send cars by negotiating to export to European market. As for exporting pick-ups and passenger automobile in 1988, there were 4,415 units valued Baht. 49.4 millions.

1.2 Industry Parts of Automobile

1.2.1 General condition

At the beginning stage, industry parts for automobile were produced in repair structure, or small lathe machine factories by copying overseas parts and it was produced piece by piece.
Later, the factory produced false spare parts for sale. Up until 1961, when car assembly factories were constructed wherein the government specified policy for use of locally produced parts in the country, therefore, parts of automobile were produced and have increase more items of parts more increasingly, including the production of main parts, i.e. engine, which enable production in industry because parts have to have standard quality. Also these parts have to be handed over according to specified period. But majority of raw materials for use in producing still have to be important, especially steel sheets and other metals which are the most required item and which have not been produced in the country. However, industry parts of automobile is able to develop itself both in technology of production, quality and price that it is capable of exporting to overseas countries in parts market valued exceeding Baht. 5,000.0 millions in 1988.

1.2.2 Production of Automobile Content/Parts.

In the present time, there are about 150 cases of producers of automobile contents for distributing to automobile factories and there are about 200 cases of producers of immitated and false spare parts. It is expected that more than 20,000 persons are employed. List of car spare parts produced locally may be classified by producers of parts and spare parts of automobile according to level of technology and use of labour into 3 groups:

Group 1. It is the group of producers which use labour force as a main point and use low technology. Producers in this group are normally small factories with low capital investment. Spare parts produced are pumped metal, small size with rubber and spring wire, etc.

Group 2. It is the group of producers which use labour force as a main point with medium technology. Producers of this group
are the ones who have been doing this industry for a long time that they are able to increase experience and there is a use of modern technology at medium level in developing the production that the quality has become standardized and is accepted.

Group 3. It is the group of producers which use high technology. Modern machinery is used coupled with labour force, which are, producers of spare parts of engine and spare parts which concerns safetiness of engine, etc. Majority of producers are joint ventures with overseas or are affiliate companies of automobile producing factories.

1.3 Marketing of Replacement Equipment of Automobile.

1.3.1 Marketing of replacement equipment within the country

Replacement equipment of automobile distributed within the country may be classified into 2 markets, i.e.

Market for replacement equipment parts used for assembling automobile are replacement equipment which the factory which assembly automobile produce themselves or employ other producers to produce. This category of replacement equipment will have high standard quality and the goods have to be delivered in a specified date. Demand of this part of market do relate with requirment of automobile within the country, relate with requirement of automobile within the country, relate with policy for selection the use of replacement equipment of assembly factory as well as relating with policy forcing the use of domestic replacement equipment of Ministry of Industry.

Market for replacement equipment have both production of real replacement equipment (parts which producers of automobile
guarantee in quality and allow the use of trade mark of such automobile), and imitated spare parts (parts which do not use trade mark of producer of automobile, but quality is very much alike), and false spare parts (spare parts which have been by falsifying trade mark of real or imitated spare parts). Market demand of this part of market do relate with the number of automobile used within the country, characteristics of the roads, climate, including age of use of such parts in each category which is different. Parts which have short life of use is rubber tube, etc.

In the present time, there is a demand for new automobile and locally produced automobile which is increasing in volume because there are more roads and people need automobile in travelling and in transporting goods more increasingly which enables a higher demand in spare parts domestically. Although, one is enable to estimate the demand of spare parts within the country piece by piece, but is able to follow up from volume of assembly and volume of registered automobile used within the country.

1.3.2 Marketing of Parts Foreign Market.

In the present time, Thai auto-parts have developed both in quality and price that it is capable of exporting in spare parts market to compete with spare parts of Taiwan and Japan that it is very interested by Middle East countries and Australia by having an increase in export value of automobile spare parts, accordingly. Category of spare parts exported in high value are rubber, battery, elliptic leaf spring and moreover, the Ministry of Commerce has specified that accessories and automobile equipment are target goods for export in 1989 capable of exporting as high as Baht. 1,000.0 millions by increasing from the year 1988 by 20%. The important markets
are Singapore, Malaysia, U.S.A., Japan, Federation Republic of Germany. In addition, there is one part of export which has no statistics because it is an export which does not pass through custom, as buyers from foreign country, such as Burma brought in cash to select buying spare parts from retail shops for selling spare parts from Vorachak Road, Bangkok and brought them out of the country without passing through protocol process. In addition, there are certain producers, especially those who have no 'brand name' of their own which have potentiality to export, but they depend more on domestic market and are interested to extend overseas market earnestly.

As regards spare parts markets for assembling automobile, there are many constraints in export, such as, unreadiness in planning production, quality control and delivering of goods to be on time required by the buyer which is very important for international trade. Domestic producers, therefore, have to take time in developing themselves. In addition, certain cases of producers still have problem on obligation and contract with owner of the 'brand name' overseas which prohibits exports, thus there is no more chance to export, in spite of the fact that quality and price can compete with foreign countries.

1.4 Policy on automobile industry of the government.
1.4.1 Policy on production.

1.4.1.1 Cars

1) Not less than 54% of locally produced spare parts is specified to be used by using spare parts 27.07%

2) It is prohibited to increase 'Series' in each factory except that it has obtained prior permission to assembly
more than one lot and in each lot to assemble not exceeding 2 patterns by considering from the body of the automobile, size of engine, gear is allowed -2 kinds for each pattern.

3) It is prohibited to establish a new factory but it is allowed to extend production capacity.

4) Any type of car which has not been assembled within the past year, cancellation of rights in assembling will be made.

1.4.1.2 Pick-ups

Pick-up mean small truck with Wheel Base not exceeding 3.0 metres and Cross automobile weight not exceeding 3,000 kgs.

1) It is specified to use locally produced spare parts as a forced item between 1986-1988 which can be charged in percentage.

2) Series and Model of this category of automobile is not specified.

3) Permission is granted to either establish a factory or extend production capacity.

1.4.1.3 Truck and other passenger buses.

1) 7 items of spare parts are forced to be used, i.e. water pump, sound box and exhaust pipe, battery, elliptic leaf spring, outer/inner tire, safety glass and brake drum. Selection and after including the forced items of spare parts, it has to be as specified below :-

* Not less than 40 % is to be important in the characteristics of Chassis with Engine.

* Not less than 45 % is to be important in the
characteristics of Chassis with Engine and windshield.

* Not less than 50% is to be important in the characteristics of Chassis with Engine and Cab.

2) Series and Model of this type is not limited.

3) It is permitted to establish a factory and extend production capacity.

1.4.2 Trend in forcing the use of locally produced spare parts.

1) It is specified that cars use locally produced Engine from 1 July 1989 onwards.

2) It is supported to use important locally produced spare parts of pick-up, i.e. Side Frame, Head Lamp, etc. by using spare parts in place of the forced items of spare parts.

1.4.3 Standard Policy of the Product.

Ministry of Industry has specified standard of automobile spare parts to protect consumers and raise level of quality of the product to a higher one. Automobile standard which has been proclaimed for use comprise of 31 subjects (34 items) and 38 more subjects are being implemented. The above standard are classified into 2 categories, i.e. forced standard and general standard.

1.4.4 Policy on promotion of investment.

Industry for producing automobile spare parts in one of the industries which the Board of Investment has given importance as it corresponds with National Socio-Economic Development Plan No.7. The important spare parts which have already been given promotional support are :-
1) Car engine which has been given promotional support is in 4 cars wherein benzine and diesel engines sized 1,600-2,500 cc. are produced.

3) Transmission which has been given promotional support is one case wherein gear system for Pick-up is produced.

1.4.5 Policy for protecting domestic automobile industry.

Prohibiting import and control of import.

1) In the present time, Ministry of Commerce prohibits import of ready-made ears with engine not exceeding 2,300 cc, ready-made passenger buses with 30 seatings upward.

2) Ministry of Commerce controls import of car body and parts of car body, but has given exemption to car assembling factories to import only permitted pattern/model, or pattern has been approved by the Ministry of Industry.

1.4.6 Policy for co-ordinating cooperation between ASEAN countries.

Thailand has made agreement with ASEAN countries in industrial cooperation by having 2 important projects of automobile industry.

1) AIC (ASEAN Industrial Complementation) by giving special privilege in Tax, and it is regarded as domestic spare part, according to the specified list as agreed upon.

2) AIJV (Aswan Industrial Joint-Ventures). It is a joint-venture between ASEAN countries in order to produce automobile parts. These products will be given special privilege in tax and is given protection on production from joint-venture countries.
1.5. Truck Industry in Thailand.

Truck is considered an important category of vehicle both in production, marketing and in investment. Truck has important role toward the change in economic cycle and in creating jobs of the country because it is capable of linking between economic development of the country in various aspects, specifically development and extension of communicative system and transportation of goods within the country.

From the beginning of the First National Socio-Economic Development Board Plan (1961-1966) onwards, communication and transportation system of Thailand has extended rapidly because the government has developed and invested in constructing various highways, both the State Highways and Provincial Highways which has sent an impact in extending vehicle industry greatly.

Truck industry has expanded rapidly due to superior quality in transporting by truck when compared with other means of transport whether it be fastness, capability of serving wide areas and accessibility without having to transfer goods, thus transportation by truck has become more popular than transporting by other means of transport.

From figure of Land Transport, it shows that transportation by truck is as high as 85.5 %, by train 10.9 % and there is very little by air transport which is less than 1 %. When the people becomes more interested in using truck service, the trucks produced in Thailand is in sufficient to cope with the demand.

At the same time, operators of truck service require a high quantity of trucks in order to have sufficient quantity to give
transportation of goods service to their customers. Through the reasons mentioned above, businessmen and investors are encouraged to invest in truck industry increasingly and there is a trend that truck industry will expand continuously according to economic growth.

1.5.1 Background of truck industry in Thailand.

Truck industry, one of the vehicle industries is an industry which most of the developing countries regard as a principle industry in developing the country into an industrialized country because it is a continuous industry which links with other multiple industries in order to be efficient in safe and rapid transportation. Thailand is also the same, there was a promotional support to develop vehicle industry in the country and it is considered that it is the first industry which the Ministry of Industry has a direct role in developing according to the following background history.

1.5.1.1 In November 1973, the Ministry of Industry has proclaimed percentage of use of spare parts produced in the country, which has chassis with engine, for trucks/passenger vehicle, to be 15%. In February 1974, the Ministry of Industry has proclaimed percentage of use of locally produced spare parts for trucks/passenger vehicle, which has chassis with windshield, to be 20% from 1 January 1975 onwards, because the Ministry has considered that spare parts of trucks/passenger vehicle produced locally were less than that of cars. In 1975, the Ministry of Industry has proclaimed formula in calculating the use of locally made spare parts by using the price and tax of such spare parts as data for calculation.

1.5.1.2 In December 1979, the Ministry of Industry
has cancelled the formula in calculating percentage of trucks/passenger vehicle and has specified the same standard as cars.

At the same time, the Ministry of Industry has increased the use of spare parts produced in the country by increasing 5% each year for altogether 5 years until reaching the specified period for each category as follows:-

1. Chassis with cab from 25% to 50%
2. Chassis with windshield from 20% to 45%
3. Chassis with engine from 15% to 40%

In December 1979, the Ministry of Industry has also proclaimed policy on vehicle industry for export which has important sense as follows: The vehicle factories which assemble vehicle for export overseas to be exempted from using locally produced spare parts and accessories according to the proclamation of the Ministry of Industry, but to use locally made spare parts only when deemed suitable by the Board for Developing Vehicle Industry.

1.5.1.3 In January 1980, the Board for Developing Vehicle Industry has proclaimed by specifying criteria for practice on station wagon and jeep assembly.

For vans (whether it has no window or with transparent window), to practise according to car policy. As regards station wagon (whether it be without window or with transparent window) and jeep, if imported the whole completed station wagon or jeep, to practise according to car policy, but if imported in the characteristics of chassis with windshield or chassis with engine, to practise according to the policy of truck or passenger vehicle.

Later, in April 1980 and in December 1981, Board for
Developing Vehicle Industry has proclaimed the forced use of spare parts for trucks altogether in 7 items, i.e. water pot, sound box and exhaust pipe, battery, front and back elliptic leaf spring, outer and inner tire, safety glass, front and back brake linings.

1.5.1.4 In May 1985, Ministry of Industry has proclaimed by specifying the forced use of spare parts for pick-ups year between 1986-1988.

In order to be in the same direction as cars wherein small pick-ups, means pick-ups when connected with tray for loading will have gross vehicle weight not exceeding 3,000 kgs. and the wheel base not exceeding 3.0 metres. For small pick-ups which use diesel engine, the first year it is specified to use 70 items, second year to increase another 18 items and the third year to increase another 23 items.

As regards small pick-ups which uses benzine engine, it is specified to use 60 items for the first year, increase 24 items in the second year and increase another 19 items for the third year. In June 1985, Ministry of Commerce has proclaimed and permitted to import cars with engine exceeding $2,300 \text{ c}^3$ and at the same time the Ministry of Finance has changed the rate of import tax for cars with engine exceeding $2,300 \text{ c}^3$ from 150 \% to 200 \% and in September 1985, the Board for Developing Vehicle Industry has proclaimed about permission to transfer assembly of cars and assembly of the same series of cars to another factory in order to make the full use of existing machinery and equipment without making additional investment.

1.5.1.5 In May 1989, Board for Developing Vehicle Industry has proclaimed that pick-Ups (including station wagons, vans)
which are assembled locally, which does not exceed 2,500 c\(^3\) to use locally made engines.

The above means engines which are both diesel and benzine engines to use locally produced engines from 1 July 1989 onwards except pick-ups (including station wagons, vans which is below 1,350 c\(^3\)). As for other sizes apart from what has been specified, the Board for Developing Vehicle Industry will specify the use of locally produced engines according to suitable time in the future.

In June 1989, the Ministry of Industry considered that vehicle development industry of the country had been very progressive. In order to improve the policy to be more precise in practice, and to be convenient to control, the Ministry of Industry has cancelled proclamations in March 1983, in August 1984 and in December 1984 (3 issues) and has issued a new proclamation wherein the Board for Developing Vehicle Industry has issued condition and method for approving the assembly of new cars in order to correspond with the above new Proclamation of the Ministry of Industry.

Important sense of both Proclamations are no permission is made to construct a new car factory, but will allow the existing factory to expand its factory. It will be permitted to assemble cars for sale locally altogether not exceeding 42 series, each series will be allowed to assemble not exceeding 2 models. Each model will have one pattern of body, with one size of engine, but is allowed to have 2 kinds of gear.

1.5.1.6 In August 1990 Board for Developing Vehicle Industry has proclaimed not to use locally produced front and back drum brake for assembling truck which have loading capacity of 3.5 MT upward temporarily up until the end of December 1991.
To remedy the problem of assembling truck which is in high demand within the country which producers of spare parts are unable to expand production capacity of spare parts to cover the demand in assembling the trucks and in August 1990, the Ministry of Industry has issued additional policy for assembling cars, by cancelling series (it is free to produce series of cars without limiting series/model in order to allow market mechanism to lead in specifying series or model in assembling cars, to suit economic and trading condition by considering about the benefit which the consumers ought to receive.

Table # 1.1
Volume of production on various sizes of trucks.

<table>
<thead>
<tr>
<th>Trucks</th>
<th>1987 (units)</th>
<th>1988 (units)</th>
<th>1989 (units)</th>
<th>1990 (units)</th>
<th>Rate of change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 5MT</td>
<td>60,465</td>
<td>86,146</td>
<td>130,663</td>
<td>188,379</td>
<td>27.5</td>
</tr>
<tr>
<td>5-10 MT</td>
<td>4,124</td>
<td>5,021</td>
<td>5,582</td>
<td>10,370</td>
<td>57.1</td>
</tr>
<tr>
<td>10 MT upword</td>
<td>3,858</td>
<td>7,576</td>
<td>17,713</td>
<td>32,035</td>
<td>78.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>68,447</td>
<td>98,743</td>
<td>153,958</td>
<td>230,784</td>
<td>163.3</td>
</tr>
</tbody>
</table>

Source: Annual Reports, Office of the Board of Investment, Office of the Prime Minister, Royal Thai Government, 1998.
FIGURE 1.1

*Show the Volume of Product on Various Size of Truck*

![Graph showing the volume of product on various sizes of trucks for different years (1987, 1988, 1989, 1990). The x-axis represents the size of the truck in MT (Metric Tons) and the y-axis represents the volume. The graph demonstrates how the volume changes as the size of the truck increases.](image-url)
Table # 1.2
Structure, cost price and locally assembled trucks.

<table>
<thead>
<tr>
<th>Category of vehicle</th>
<th>Small trucks (Pick-Ups)</th>
<th>Medium and big trucks and Passenger Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of imported spare parts</td>
<td>41.5</td>
<td>46.2</td>
</tr>
<tr>
<td>Expenses in assembling</td>
<td>3.2</td>
<td>31.6</td>
</tr>
<tr>
<td>Local spare parts</td>
<td>20.8</td>
<td>13.2</td>
</tr>
<tr>
<td>Tax</td>
<td>24.0</td>
<td>18.4</td>
</tr>
<tr>
<td>Expenses in distributing</td>
<td>10.5</td>
<td>8.4</td>
</tr>
<tr>
<td><strong>(TOTAL PROFIT)</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Annual Reports, Office of the Board of Investment, Office of the Prime Minister, Royal Thai Government, 1998.
1.5.2 Situation in producing trucks.

Thailand has established vehicle factory for the first time in 1961, which was Thai Motor Industry Co. Ltd. which operated in procucing 'FORD' cars and trucks with production capacity of about 2,700 units/year (1,200 trucks/year) by being given a promotional support from the Board of Investment.

After that there are many car assembly companies until there are totally 12 companies, out of this, 8 companies produce trucks wherein structure of investment in vehicle assembly industry are joint ventures between Thai and foreigners and also investment by total Thai people or totally foreigners.

In 1985, there was a fall in vehicle industry once again after it had fallen in 1982 this was due to the impact in the change of economic situation of the country which was due to proclamation to reduce the cost of Thai currency, the use of measures to reduce loans, proclamation to adjust tax structure as well as the collapse of financial system outside the system.

The fall has caused a great impact to vehicle industry, both to producers, to distributors as well as the buyers. Volume of production for commercial use has reduced 20 % from 1984 and continued to reduce because economic situation of the country in general had not recovered as it ought to be.

Up until the year 1987 the industry situation and economic situation has improved which enabled buyers to have more buying power. The cost of certain important goods has gone higher which enabled production of every type of vehicle for commercial use have increased, specifically 5-10 MT and 10 MT trucks have increased by 57.1 % and 78.7 %, accordingly, while small trucks (Pick-Ups) (lower than 5 MT)
have increased about 27.5%. However, pick-ups still have the highest proportion of production, which was about 87.7% of the total lot for commercial use. The rest 12.6% are medium and big size trucks as well as passenger vehicle.

1.5.2.1 Factories for assembling trucks.

In 1990, there were altogether 8 factories for assembling vehicles for commercial use, out of this, 5 are producers of trucks, i.e.

1. Thai Roong Union Car Co. Ltd.
2. M.M.C. Sithiphol Motor Co. Ltd.
3. Thai Hino Industry Co.Ltd.
4. Siam Motors and Nissan Co. Ltd.
5. ISUZU Motor (Thailand) Co.Ltd.

1.5.2.2 Production capacity of trucks.

Production of vehicle for commercial use in 1990 was altogether 231,377 units, an increase of 49.5%. It can be noticed that proportion of vehicle production for commercial use has increased from 72.5% in 1989 to 75.8% of the total production, because they have direct role with economic situation of the country and they can be used on multi-purpose, especially transformed pick-ups which are cheap and consume little fuel oil when compared with cars. Also, pick-ups are allowed to register as private cars which has equal right with cars on every aspect.

As for category of trucks which has the highest production capacity, they are still Pick-Ups/ trucks lower than 5 MT, by having production capacity about 81.4% of the total production of vehicle
for commercial use. Second to it were trucks, 10 MT upward and 5-10 MT trucks with proportion of production 13.8% and 4.5%, accordingly.

However, production of 5 MT trucks upward has increased to 82.0% because they are required to transport goods while production of passenger vehicle has reduced by 27.4%

Expansion of trucks in 1990 is due to the total economic growth which is still high which enabled the people to have high income, and buying power of the market has increased, although in the second half of the year, there was an adjustment of interest rate and the cost of fuel oil has become higher.

It was also due to the fact that the operators of business have developed the pattern of goods and have brought strategy in promoting the market for use in order to create the demand of the vehicle market which has sent continuous good result to the related industry.
Table # 1.3
Volume of distribution of various sizes of trucks.

<table>
<thead>
<tr>
<th>Trucks</th>
<th>1987 (units)</th>
<th>Rate of change (%)</th>
<th>1988 (units)</th>
<th>Rate of change (%)</th>
<th>1989 (units)</th>
<th>Rate of change (%)</th>
<th>1990 (units)</th>
<th>Rate of change (%)</th>
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<tbody>
<tr>
<td>Below 5MT</td>
<td>67,692</td>
<td>31.0</td>
<td>94,256</td>
<td>39.2</td>
<td>135,602</td>
<td>43.9</td>
<td>197,848</td>
<td>45.9</td>
</tr>
<tr>
<td>5-10 MT</td>
<td>3,781</td>
<td>106.0</td>
<td>3,638</td>
<td>-3.8</td>
<td>5,067</td>
<td>39.3</td>
<td>8,224</td>
<td>62.3</td>
</tr>
<tr>
<td>10 MT upword</td>
<td>3,568</td>
<td>56.9</td>
<td>8,195</td>
<td>129.7</td>
<td>18,104</td>
<td>120.9</td>
<td>20,232</td>
<td>67.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>75,041</td>
<td>193.9</td>
<td>106,089</td>
<td>165.1</td>
<td>158,773</td>
<td>204.1</td>
<td>226,304</td>
<td>175.2</td>
</tr>
</tbody>
</table>

Source: Annual Reports, Office of the Board of Investment, Office of the Prime Minister, Royal Thai Government, 1998.
FIGURE 1.2

Show Volume of Distribution of Various Sizes of Truck
1.5.3 Volume of distribution of trucks.

Volume of distribution of trucks for commercial use has received an impact from change of economic situation similarly to that of production as in the year 1985. The total distribution of trucks for commercial use keeps decreasing until the year 1987 that distribution of trucks has increased by being able to sell as high as 75,451 units or an increase of 33.5%. Small trucks (or pick-ups) get the highest market share and has proportion of distribution as high as 89.7% of the total sale of trucks for commercial use and has growth rate as high as 31.0% because it can be used widely, such as can be used for loading cargo and for seating.

As for medium and big size trucks, although proportion of sale will not be very high, which is approximately 5.0% and 4.7%, accordingly, but it has a noticeably high rate of increase because the requirement in transporting goods in agricultural sector and industrial sector have expanded greatly by having volume of sale of medium and large size trucks increased from 1986 by 106.0% and 56.9%, accordingly.

Situation in distributing trucks still expands continuously from 1987 according to beneficial economic situation, specifically in the year 1989, there was a development in producing trucks which have higher capability in work, development in service after sale including policy to maintain the price of fuel by the government.

These factors have supported the sale of trucks to be as high as 158,773 units or an increase of 49.7%, out of this, 85.4% was for small trucks (or pick-ups), second to it were big trucks and medium
sized trucks which have proportion of sale about 11.4 \% and 3.2 \% of the total sale of approximately 11.4 \% and 3.2 \% of the total sale of vehicle used for commercial purpose.

However, when considering about increase of sale, in 1989 it was found that big size trucks have the highest sale rate as high as 120.9 \% while small trucks (Pick-Ups) and medium sized trucks has an increased sale of about 43.9 \% and 39.3 \%, accordingly. This was due to an increase in construction work which has sent an impact on the requirement of big trucks for loading construction materials, i.e. cement, stones, soil, sand.

In 1990, there was a sale of vehicle for commercial use totalling 238,297 units. It appeared that 83.0 \% of market share for vehicles for commercial use were pick-ups. Second to it were big trucks and medium trucks which had proportion of sale in 12.7 \% and 3.5 \%, accordingly. As for passenger vehicles and special vehicles, there were little sale. It is noticeable that the total sale of big trucks, medium trucks and special vehicles have increased more than 60\% which was in accordance with the demand in the market.

From structure of sale of trucks in 1990, it appeared that Japanese trucks monopolize nearly all the market about 98 \% while European trucks had market proportion of about 2 \%. ISUZU trucks still had the highest sale. Second to it were TOYOTA trucks, NISSAN trucks, MITSUBISHI trucks, MAZDA trucks, HINO trucks, SUZUKI trucks, accordingly.
### Table # 1.4

**Volume and value of import of trucks between 1988-1991**

<table>
<thead>
<tr>
<th>Year</th>
<th>Vans and Pick-Ups</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volume (Units)</td>
<td>Value (Million Baht)</td>
<td>Volume (Units)</td>
</tr>
<tr>
<td>1988</td>
<td>3,959</td>
<td>738.8</td>
<td>3,037</td>
</tr>
<tr>
<td>1989</td>
<td>3,337</td>
<td>651.0</td>
<td>3,864</td>
</tr>
<tr>
<td>1990</td>
<td>5,757</td>
<td>1,114.0</td>
<td>5,431</td>
</tr>
<tr>
<td>1991 (Jan-Mar)</td>
<td>2,037</td>
<td>395.6</td>
<td>1,736</td>
</tr>
</tbody>
</table>

Source: Annual Reports, Office of the Board of Investment, Office of the Prime Minister, Royal Thai Government, 1998.

1.5.4 **Volume of import of trucks.**

In 1989, Thailand has imported a total of 6,916 trucks valued Baht 1,753.8 millions. Out of this, 3,37 units were vans and pick-ups valued Baht 651.0 millions, 3,579 units were other trucks valued Baht 1,102.8 millions, an increase of 11,188 units valued Baht 3,126.1 millions, out of this, there was an import of 5,757 units of vans and pick-ups valued Baht 1,114.0 millions, 5,431 units of other trucks valued Baht 2,012.2 millions.

As for the first 3 months of 1991, a total of 3,773 trucks
have been imported valued Baht. 911.0 millions, out of this 2,037 units were vans and pick-ups valued Baht. 395.6 millions, 1,736 units of other trucks valued Baht. 515.4 millions.

Summarily, Thailand has imported a total of 11,306 units of vehicles for commercial use valued Baht 3,144.4 millions, an increase from the year 1989 by 61.2 % and 74.4 %, accordingly. Majority of them was import of trucks which was as high as as 92.3 % of the total vehicles for commercial use. The important ones are trucks with 5 MT - 20 MT which use diesel fuel and vans and pick-ups by importing from Japan as an important point. This is in accordance with market condition where the country needed to use more trucks rapidly.

Table # 1.5

Volume and value of export of trucks 1989-1991

<table>
<thead>
<tr>
<th>Year</th>
<th>Vans and Pick-Ups</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volume (Units)</td>
<td>Value (Baht 1,000)</td>
<td>Volume (Units)</td>
</tr>
<tr>
<td>1989</td>
<td>47</td>
<td>8,267</td>
<td>231</td>
</tr>
<tr>
<td>1990</td>
<td>14</td>
<td>3,427</td>
<td>414</td>
</tr>
<tr>
<td>1991(Jan-Mar)</td>
<td>1</td>
<td>52</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Annual Reports, Office of the Board of Investment, Office of the Prime Minister, Royal Thai Government, 1998.
1.5.5 Volume of export of trucks

There was not much export of trucks from Thailand and there was not yet importance in economic aspect. Majority was to export Pick-Ups to Laos. However, producers of trucks are trying to expand pick-ups to overseas, ie. Siam Motors and NISSAN Co.Ltd. has a project to export Pick-Ups to Canada.

In 1989, there was an export of small trucks numbering 278 units valued Baht 18.1 millions, out of this, 47 units valued Baht 8.3 millions were vans and pick-ups, 231 units valued Bath 9.8 millions were other trucks, and in 1990 increased to 428 units valued Baht. 333.8 millions, by sending 14 units of vans and pick-ups valued Baht. 3.4 millions, 414 Units of other types of trucks valued baht 330.4 millions.

In the first 3 months of 1991, there was an export of 9 trucks valued Baht. 4.9 millions, out of this 1 unit was a vand and pick-up valued Baht 52,000, 8 units of other trucks valued Baht. 4.9 millions.

Summarily, Thailand exported trucks for commercial use totally 742 units valued Baht 341.9 millions. Volume of export has increased by 17.6 % but value of export has increased more than 6 times, as majority was export of trucks with weight exceeding 20 MT in a higher proportion by having Indonesia as important importer.

1.5.6 Policy and measures of the government relevant to trucks.

In order that vehicle assembling industry becomes progesive and corresponds with policy for developing vehicle
assembling industry, the Ministry of Industry has taken role in specifying policy on car assembling industry in order to remedy the constraints which obstructs development of industry by having principle target, that is, to promote locally assembled vehicle to use locally made spare parts and accessories as an important point wherein on the part of trucks, various measures were specified which is currently in force, briefly as follows:-

1.5.6.1 Policy for assembling trucks:

The Ministry of Industry has specified the following policy:

For small trucks (pick-ups, vans, station wagons) means the Pick-Up when connected with tray for loading, total weight of small trucks should not exceed 3,000 kgs. and the length of the total wheels should not exceed 3 metres.
<table>
<thead>
<tr>
<th>Category</th>
<th>Old rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Import tax</td>
</tr>
<tr>
<td>Pick-Up/van</td>
<td></td>
</tr>
<tr>
<td>- Ready-made vehicle (CBU)</td>
<td>120</td>
</tr>
<tr>
<td>- Chassis with engine for assembling</td>
<td>30</td>
</tr>
<tr>
<td>- Ready-made assembled</td>
<td>72</td>
</tr>
<tr>
<td>Big size Trucks and passenger vehicles</td>
<td>93.6</td>
</tr>
<tr>
<td>- Ready-made cars (CBU)</td>
<td>40</td>
</tr>
<tr>
<td>- Chassis with engine for assembling</td>
<td>10</td>
</tr>
</tbody>
</table>
Table 1.6
Tax Structure of New and Old Cars and Trucks (continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>New rate</th>
<th>Import tax</th>
<th>Standard profit</th>
<th>Trading tax for imported parts</th>
<th>Trading tax when selling</th>
<th>Total tax</th>
<th>Decreased tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pick-Up/van</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Ready-made vehicle (CBU)</td>
<td></td>
<td>60</td>
<td>26</td>
<td>9.90</td>
<td>79.96</td>
<td>49.77</td>
<td></td>
</tr>
<tr>
<td>- Chassis with engine for assembling.</td>
<td></td>
<td>30</td>
<td>11</td>
<td>1.65</td>
<td>9.90</td>
<td>28.14</td>
<td></td>
</tr>
<tr>
<td>- Ready-made assembled spare parts.</td>
<td></td>
<td>20</td>
<td>11</td>
<td>1.65</td>
<td>9.90</td>
<td>25.77</td>
<td>32.47-40.40</td>
</tr>
<tr>
<td>Big size Trucks and passenger Vehicles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Ready-made cars (CBU)</td>
<td></td>
<td>40</td>
<td>26</td>
<td>9.90</td>
<td>57.46</td>
<td>0.96</td>
<td></td>
</tr>
<tr>
<td>- Chassis with engine for assembling.</td>
<td></td>
<td>10</td>
<td>11</td>
<td>1.65</td>
<td>9.90</td>
<td>20.20</td>
<td></td>
</tr>
</tbody>
</table>

Source: Annual Reports, Office of the Board of Investment, Office of the Prime Minister, Royal Thai Government, 1998.
It is specified that factories for producing small trucks (vans, Pick-Ups) to use locally produced spare parts as an additional item from 1986 onwards:-

- Permission is granted to factories which assemble small trucks not to limit series and model.

- It is permitted to establish a factory and extend same (according to proclamation of the Ministry of Industry dated 26 December 1979)

- It is specified to let trucks assembled locally which have engine not exceeding 2,500 c\(^3\), both diesel and benizine from 1 July 1989 except small trucks (pick-ups) which use engine lower than 1,350 c\(^3\)

**Trucks and other passenger vehicles**

Factories for assembling cars are forced to use locally produced spare parts altogether 7 items, i.e. water pot, sound box and exhaust pipe, battery, front and back elliptic leaf spring, outer and inner tire, safety glass, brake linings and to select spare parts produced overseas as an addition. After including the forced use of certain spare parts, it has to be in accordance with the following criteria:-

(a) Truck wherein chassis with engine and windshield has been imported, to use spare parts not less than 40 % in value.

(b) Truck wherein chassis with engine and windshield has been imported, to use spare parts not less than 45 % of the value.

(c) Truck wherein chassis with engine and cab has been imported, to use spare parts not less than 50 %
In addition, it is permitted to assemble every series and model of truck and it is also allowed to expand or establish a new factory.

1.5.6.2 Policy for protecting truck industry.

The Ministry of Finance has specified import tax for ready-made trucks and chassis with engine together with the lower part and body, higher than importing spare parts and accessories in order to protect local industry.

1.5.6.3 Tax structure of new cars-trucks.

On 2 July 1991, there were 2 Proclamations of the Ministry of Finance No. 5/1991 cancelling the reduction and deducting custom tax and No. 6/1991 regarding cancellation the collection of special tax which was enforced for use on 3 July 1991 onwards.

The figure of tax structure which has been reduced, especially pick-ups/vans, big trucks and passenger vehicle, it was obtained from Table on tax structure of cars which has been adjusted. (table 1.8)

1.5.6.4 Certain important problems on truck industry.

The government has given promotional support to vehicle industry and it used to be regarded as an industry which receives special privileges from the Board of Investment which had stopped giving promotional support since 1969, but the government still has a role in planning policy to develop vehicle industry of the country by specifying conditions to let factories for assembling cars and trucks to use more locally made spare parts.
However, in the present time, truck industry still experience many problems.

1) Producers of trucks still have to import spare parts and accessories from abroad by separating the pieces of spare parts because local raw materials, spare parts and accessories cannot produce in time to cover the demand of the factories, i.e. the case when there is a shortage of tire of big trucks, certain tire has to be imported to remedy the immediate problem and they have to be ordered in advance, especially pick-up truck.

When the factory has to import spare parts and certain accessories from abroad, the producers have to face with higher cost price, but they are unable to adjust the sale price because the government controls the price to prevent buying and selling the right in placing an order.

2) Government's policy relevant to vehicle industry is not certain. There is no long-term planning, therefore, vehicle operators do not know which direction they should prepare to go to, whether they should expand the production or they should delay the extension or that they should stop everything.

3) Truck market within the country has limited size and majority is regional market. There is also little chance to export overseas because cost price of production is higher than abroad.