

CHAPTER V

Dunlop Malayan Industries Ltd.

Origin and History

The development of the Dunlop Malayan Industries Ltd., in Petaling Jaya can only be understood in connection with the part that is played by the Parent Company in London. And in connection with the growth of the industry in Malaya, the Parent Company will continue to influence this growth by making available its manifold resources to the company here. It is therefore essential that something should be known about the development and growth of the Parent Company or the Dunlop Rubber Co., Ltd., England.

The history of Dunlop begins about 75 years ago when John Body Dunlop in 1838 invented the first practicable bicycle pneumatic tyre. A year later, the original company was formed in Ireland to develop the invention, by assembling bicycle tyres from components brought from existing rubber manufacturers. Within a few years, however, one of these manufacturers, Byrne Brothers of Birmingham was acquired.

Growth was so rapid that, by the turn of the century, selling or manufacturing companies had been established in France, Germany, Canada, South Africa and Australia. In 1900, the Company acquired another factory in the Birmingham area and started to manufacture car tyres. In 1910 the present name of Dunlop Rubber Company Limited was adopted.

In 1906, the Company acquired a wheel manufacturing firm in Coventry, renamed the Dunlop Rim and Wheel Company, Ltd. in 1908. Vertical expansion started and from 1909 onwards the Company acquired rubber estates mainly in Malaya where since the 1920's, it has been the largest single owner of plantations.

In 1916 the first of the Dunlop Cotton Mills was opened in Rochdale to manufacture tyre casing textiles. Today Dunlop Cotton Mills also process rayon and nylon (which have almost wholly replaced cotton in tyre) and produce many of the materials used by the Belting, Hose and General Rubber Goods Divisions and by Dunlop Footwear Limited.

Growth continued in other fields and countries. New factories were opened in Japan (1909) and in the U.S.A. (1920). New products were brought on to the market: in 1908, Dunlop was selling golf balls, and in 1910, equipping aeroplanes with tyres. In 1916, a 300-acre

site on the outskirts of Birmingham was acquired on which Fort Dunlop was built. Fort Dunlop is the biggest factory and the research, technical and development headquarters. By the end of the First World War, then, the international character of the Dunlop organisation was clearly already in evidence.

In 1925, the Company took the important step of acquiring the old-established Charles Macintosh Group of Companies which was among the pioneers of the British rubber industry in the 19th century manufacturing in addition to tyres-footwear, cables, clothing and other general rubber products. (Shortly afterwards, the cable interests and more recently the clothing companies were sold.) In 1932, General Rubber Goods Division was set up to manufacture and market a wide group of these rubber products.

Also in 1925, Dunlop purchased W. & A. Bates Ltd., of Leicester, makers of cycle tyres and rubber thread, and W. Goodyear & Sons Ltd., of Dudley who manufactured wheels. In 1928, the Dunlop Sports Company Ltd., was formed.

In 1929, Dunlopillo latex foam was patented. It now ranks second in use of rubber after tyres. A new range of flooring materials was also introduced with the formation of Semtex Limited in 1933.

The mid-thirties also saw a further growth in the Company's activities overseas with new factories in Ireland, South Africa and India. In the U.K. the India Tyre and Rubber Company in Scotland was acquired to extend tyre production there. From 1939 to 1945 all the Company's resources and its technical inventiveness were devoted to the production of articles for the War.

Since 1945 the Company has set up new factories in the United Kingdom while the Dunlop overseas companies in Canada, India, South Africa, France, Japan and the U.S.A. have also opened up new plants. At the same time, the Dunlop Group has taken its manufacturing activities into new areas with the establishment of factories in New Zealand, Brazil, Rhodesia and recently Malaya. (1961)

Other interests of the Group have been expanded by the purchase of Tyresoles Ltd., (Remoulders) in 1953, the John Bull Group (tyres, rubber-bonded-to metal components etc.) in 1958 and the Slazenger Group (sports goods) in 1959. The Research Centre at Fort Dunlop has opened up the Dunlop Chemical Products and Brake Divisions. In 1958, the International Synthetic Rubber Company was opened at Fawley for the manufacture of synthetic rubber. In 1956 the Company's Nigerian plantation was started.

The Dunlop Group is the eighteenth largest international concern outside America. In terms of statistics, it has 150 companies, 110 factories (51 of them in Britain) and employing over 100,000 people. It manufactures about 30,000-odd products. It owns 90,000

acres of rubber throughout the world. It also employs more than 300 scientists at the Dunlop Research Centre in Fort Dunlop.

The Dunlop Group has been formed both through vertical and horizontal expansion. It has indeed tremendous resources in men, materials and machines.³⁹

In Malaya, the Dunlop Rubber Co., (Malaya) Ltd. (known as the Distributing Company) was incorporated in Singapore as a private company on 6th September, 1922. It has been importing and distributing tyres and certain other products of the Parent Company in England since the above date. In 1956 this Distributing Company established a "Dunlopillo" latex foam plant at Bahau in the Federation, producing a wide range of high quality mattresses, pillows and cushioning both for the Malayan market and for export.

The Distributing Company was the wholly-owned subsidiary of the Parent Company. On the 12th July, 1961, the Dunlop Malayan Industries Ltd., was incorporated as a public company in the Federation to establish a tyre factory at Petaling Jaya manufacturing tyres and tubes for cars, trucks, motorcycles, scooters and bicycles and also retread rubber. This Manufacturing Company acquired for cash all the shares of the Distributing Company from the Parent Company.

Although the official Production Day was at the 1st April, 1963, when the factory was officially opened yet by this date, production levels envisaged in the original project was reached in "record time". From the day when there was nothing to the day of production, about 12 months elapsed. Another 4 months brought production to project level. That is by the end of 1962, project level was reached in a period of 16 months.

From January to July in 1963, production increased by almost a 100 per cent and by this time it was already on a 3-shift basis thus maximising unit costs of production. From the peak level reached at July 1963 to the present period a number of expansion schemes have been embarked upon and the growth is gradual and steady.

Some basic facts will give a picture of the size and importance of the Dunlop Malayan Industries Ltd. in Petaling Jaya (hereinafter called the "Company"). The Company employs a total of nearly 1,100 people in all its establishments with about 700 people in the factory in Petaling Jaya. It is the 109th Dunlop factory with an authorised share capital of \$25 million and an issued fully-paid up capital of \$12 million. It is at present one of the largest manufacturing company in Malaya occupying a 36-acre site in Petaling Jaya.

³⁹See Paul Jennings, Dunlopera, Privately Published Book of the Dunlop Rubber Company Ltd., London, 1961. p.136.

At the end of 1963, the value of salaries, wages together with local purchases of raw materials and services amounted to about \$9 million. Pioneer status is granted to the company in the manufacture of motor vehicle tyres and tubes of all types excluding bicycle tyres, tubes and solid tyres.

It is to be expected that the decision to build up such a factory at such a time was the responsibility of the Parent Company. After such a long connection in the distribution of Dunlop tyres and "Dunlopillo" from the Distributing Company in Malaya and the ownership of the Dunlop Plantations Ltd. (Malaya) it would seem only logical to set up a tyre industry in Malaya. However, it was not until Malaya had attained its Independence in 1957 that serious thought was given to the many factors involving the setting up of the factory. The decision to open up a factory can only be made after exhaustive and expert study of local conditions in the country concerned.

A glimpse of one part of the decision making process in establishing a factory here may be seen in a speech of the Chairman of the Dunlop Group, Sir Edward Beharrel, at an Annual General Meeting:

"Our over-all policy is wherever possible to export from our existing factories, but this becomes difficult in the case of developing countries because of import and exchange restrictions and the understandable desire to establish local manufacture even if sometimes prematurely. Thus we are frequently faced with a decision either to withdraw from a territory completely or to show our confidence in that territory by establishing a factory there. These decisions are often difficult and must be taken with the greatest care if we are to derive the full benefits from the expanding demand which is arising in every country of the world where the use of motor vehicles is increasing with improving living standards. We believe that a controlled policy of expansion of this kind in overseas markets, notwithstanding its attendant risks is one which should be pursued by the Company in its own interest and in the interests also of the national economy and the economies of the countries concerned."⁴⁰

The role of the Government obviously plays a very influential part in the setting up of a factory however there are equally other vital aspects such as the costs of production and market size. A further look at how some of these problems were tackled by the Company will be discussed.

⁴⁰Quoted by Jennings, op.cit., pp.137-8

With its vast resources the Dunlop Company would not find any difficulty at all in complying with the conditions of a pioneer company. Its adaptability and progress will only reveal the "brains", the backing of traditional experience and technical know-how.

Capital Structure and Finance

The amount of the authorised capital is \$25 million of Ordinary Shares of \$1 each at par value. The issued amount is \$12 million of Ordinary Shares of \$1 each at par value. Of the issued amount of \$12 million; \$7,320,000 or 61 per cent is held by the Dunlop Rubber Co., Ltd., England and \$4,680,000 or 39 per cent is held by the Malayan public. Furthermore to make provision for Malay participation in the share capital, the Company will transfer 1,200,000 shares to a Malay investment company to be nominated by the Government at a future date at the market price at the date of transfer, or at par plus 10 per cent whichever is the lower. When this transfer has been completed, Dunlop Rubber Co., Ltd. will hold 51 per cent of the issued share capital of the Company. So far this transfer which is to be mutually decided upon by the Government of the Federation of Malaya and Dunlop Malayan Industries Ltd., has not been taken up.

A capital loan of \$7 million for a period of 15 years has been granted to the Company by way of a 7 per cent debenture issue. The debenture is secured by way of floating charge on the assets of the Company. This \$7 million loan is from the Malayan Industrial Development Finance Ltd.

There is so far only one class of share or stock (the called-up shares have been converted into stock and reconversion of stock into share is also provided); there is no founders, or management or deferred shares, however provision is made available in the Memorandum and Articles of Association for the issue of Preference Shares carrying a right to redemption.

Other sources of working capital finance are to be found with the banks, trade creditors and suppliers of provisions, and the Dunlop Rubber Co., Ltd. and associated Companies.

There seems to be no difficulty in raising the required amount of capital for both fixed capital and working capital from the various sources. Reputation, connection and dependability have augmented its financial standing. An interesting note is that the public subscription of \$4,680,000 of ordinary shares was over subscribed by 400 per cent. A premium placed at the transfer of shares to the Malay investors may be hindering them from participating effectively.

Management and Labour

The Board of Directors consist of eight persons, six expatriates and two Malaysians. The posts of directorship held by the Malaysians may be considered as passive ones. Both of the Malaysians held directorship in a number of other companies too. For example the Chinese director is currently Chairman of five and Director of 15 companies.

The expatriate directors are directly involved in the administration of the business. They hold the posts of the Managing Director, Works Director, Finance Director, and Sales Director. The other two Directors are mainly directors of the Group's overseas activities; they maintain liaison with the Dunlop Group at London.

All the expatriate directors are of U.K. origin and all of them have at least over 15 years of service in the Dunlop Group; four of them with over 30 years of service.

The Managing Director has under him the Works Director, the Sales Director and the Finance Director (who is also the secretary of the Board). Under the Directors are the various managers responsible to them. The management level is entirely composed of expatriates who are from U.K. with the exception of the Production Manager who is from Brazil. All of them have been selected from the different branches and divisions of the Parent Company by the Board in London. The managers are all of a high calibre having practical knowledge, experience and training from the Company itself. All of them are on a contract for a few years. Of course, these contracts are re-newable.

The lower executive, technical and superintendent levels are mainly staffed by Malaysians. It is a feature of the Company's policy to train Malaysian employees for technical and administrative posts. Training will be given both in Malaya and at other Dunlop factories in the United Kingdom and elsewhere.

At the operative level or workers' level all of them are Malaysians chiefly obtained through the Labour Exchange. We shall look at the part they play in production later. Of all the operatives employed; about 50 per cent are Malays, 48 per cent are Chinese and the rest are Others. Out of a total working force of 686; 195 are "staff" workers being monthly paid and 491 are operatives who are daily-paid workers.

At the external level, workers who help to construct and build the factory were readily available and the speed with which they work hand-in-hand with the Company's own architects and engineers prove their skill and efficiency.

Production

The products at present manufactured are: truck, car, motor-cycle, scooter, bicycle tyres and tubes. Tubeless tyres and white-side-wall tyres for cars are also produced. Large-size tyres for earthmovers, tractors, bulldozers and cranes are imported as they are not manufactured here. In addition, retread rubber is also manufactured as there is a significant amount of business in this field. A tyre may be retreaded if the tyre has been carefully used. Although the tread pattern has worn away, the casing may still be in excellent condition and it is a practical and economic proposition to fit this casing with a new tread which will give the tyre a "second life".

The raw materials that go into tyre-making are many and all of them are imported except for natural rubber. Chemicals are used to quite a large extent in the process. For example, the typical mix for a modern tyre may be:

Parts by weight

Smoked sheet	100.0
Carbon black	47.5
Pine Tar	2.0
Antioxidant	1.5
Zinc oxide	3.0
Stearic acid	3.0
Accelerator	1.0
Sulphur	<u>3.0</u>
	<u>161.0</u>

More than half as much stuff is added to the original rubber. Other basic raw materials are: synthetic rubber used for car treads, fabric of nylon or rayon and steel. Different amounts of natural rubber are used for different purposes, for example, in truck tyres 100 per cent of natural rubber is used but this is only about 50 per cent of the entire weight of the tyre.

The sources of supply for these raw materials come from India, United Kingdom, Europe, U.S.A. and elsewhere. Only natural rubber is from Malaya. This is bought in the open market carried out by the Klang Dunlop Purchasing Co., and not from the Dunlop Plantations Co. Special grades and qualities are needed for the manufacture of tyres. As for capital machinery and quipment, 90 per cent comes from the United Kingdom and 10 per cent from the United States. The import of raw materials, machinery and component parts are free from duty. Production costs are lowered as they are duty-free.

The factory, machinery, and equipment planning and installation are vital to the progress of production. The factory complex consists of nine separate buildings such as: the Main Building which houses the manufacturing process; the Boiler House and Pump Room, the Store, the Administration building which also contains the Physical and Chemical Laboratory, the Labour and Welfare Office containing the Doctor's Room and Surgery and the Canteen which is capable of sitting 400 at one time.

On the production side, the plant lay-out has an uninterrupted floor space of nearly 1,000 feet in length and 145 feet in width. Within this building, the freedom from columns has ensured efficiency and ease of movement. The layout of the factory is to minimise movement and cut down waste effort. The flow of materials and processes are facilitated by the plant arrangement. Maintenance and good house-keeping is also made easier.

The installation of machinery and equipment of about \$9 million involved the setting up of giant machines weighing as much as 50 tons and using as much as a total of 7,300 horse power. The larger production machinery units comprise the Banbury Mixer, Mixing and Warming Mills, Rubber Sheet Cooling Festooners, Tyre Cord Impregnating Machine, Rubberised Tyre Cord Calender, Tread and Tube Extruders, Tyre Building Machines, and a number of Tyre and Tube Vulcanising Presses. Machinery and equipment maintenance are periodic and preventive in nature.

The essential services for production comprise steam, hot water, refrigerated water for cooling, vacuum, high and low pressure compressed air and also hydraulic equipment. Water is capable of being cooled at an extraction rate of four and a half million British Thermal Unit per hour. Hot water can be supplied at a temperature of 400 degree F. and at a pressure of 400 p.s.i., with a capacity of 450 gallons per minute.

The construction of a factory of such magnitude and the installation of an infinite variety within a space of a year could never be achieved without the backing of traditional experience and technical know-how. Detail planning and dove-tailing of the construction were carried out by the Company's own architects and engineers who worked hand-in-glove with the Port Swettenham's authorities, Malayan Railway, P.W.D., C.E.B. and the local contractors. By 16 months, production had already reached project levels.

While the factory was being made ready for production, the recruitment and training of workers were timed to fit into the production programme. Under the production Manager is the Assistant Manager (trained by Dunlop) 6 senior foremen, 2 foremen and 491 leading hands and operatives.

Senior foremen and foremen were recruited from advertisement in the papers. Their basic qualification was the Senior Cambridge. Not one of them knew about tyre-making at all. They were sent to the 2 factories in India for training. Each of them was trained in some particular aspects of tyre-production for three months. The trainee foremen worked side by side with about 20 United Kingdom foremen who were on a temporary period between 6-9 months. After the foreign foremen were sent back, the Malayan foremen became supervisors and superintendents of the operatives.

The operatives were obtained from the Labour Exchange. Selection was based on the decision of the personnel officer in conjunction with the foremen. All of them were given training by the foreign and local foremen. Training was given for a period of 3 months out of a probationary period of 6 months. For the first 3 months, the operatives were paid at 60 cents per hour. Six weeks after training if the operative was chosen he would get a slight increment. And six weeks later he would be paid the true rate for the job. The lowest paid job is 60 cents per hour; tube-making is at 75 cents and casing-work is at 90 cents per hour.

Other factors which concern the efficiency, stability, productivity and the dependability of labour are to be found in the working conditions provided. The operatives are the only ones who are paid daily. They operate on a three-shift basis:-

First shift	7 a.m.	to	3 p.m.
Second shift	3 p.m.	to	11 p.m.
Third shift	11 p.m.	to	7 p.m.

The work force is divided into three groups corresponding to the three-shifts. Of the eight working hours, a half-hour break is provided for meal-time. After a certain quota of units have been produced, the worker is given the "unofficial" time off to "relax". The operatives are given a 1-day holiday without pay during the working week; however extra pay for over-time work or inconvenience are also available.

The operatives do not get the Staff Provident Fund benefits though they contribute to the Employees Provident Fund. Two pairs of working-clothes are given to each operative per year. Other benefits are in the form of medical attention, a full-meal at 50 cents at the subsidized canteen, washing-up facilities and sports facilities. According to the Personnel Manager at some period other incentives will be started.

The workers are not union members yet. Promotion is based on ability and skill from the 'shop-floor'. Complaints and problems are dealt with by line authority. Dismissal of an operative depends on the seriousness of the offence. However, verbal and written warnings are usually given a few times in minor offences before dismissal though the instant sack will be carried out for fights, or drunkenness.

The operative force age-group ranges from 18 to 35. So far, labour turnover has never exceeded 3 per cent per month as it is very much often lower than that. The daily rate of absenteeism is below 1 per cent.

Materials, machines, and men all go into the processes of manufacture. A description of the processes in manufacturing a modern tubeless tyre will be given here. Raw rubber is a tough and leathery substance which needs to be broken down and softened before it can be manipulated into the various shapes necessary for the construction of a tyre. Raw rubber alone is useless for most industrial purposes. It needs to be mixed with certain chemical ingredients and compounds to make "rubber" the very useful article today.

First, the Branbury Mixer, a large machine mixes the raw rubber and other chemicals in its mastication and compounding process under heat and pressure. This takes only 4 minutes, yet a complete breakdown of the constituents into a perfectly uniform compound is ensured. The resultant compound is passed between rollers to give it sheet form, which is immediately fed as a continuous strip into another machine. The rubber strip is draped over bars, allowed to cool, and finally cut off into sheets ready for the next process.

Sulphur is now added in a final mixing which is carried out on dual mills which pass the compound backwards and forwards from one to the other in a continuous belt. Finally, the compound is passed through a cooling conveyer in strip form which is cut into sheets ready for further processing.

The nerve-centre of this section of the Factory, known as the Mill, is its control laboratory. Here, every batch of mixed rubber is tested and has to be given a "certificate of fitness" before it is allowed to leave the department. Samples of mixed rubber are sent from each mill and the tests then applied include ones for specific gravity, plasticity, scorching liability and properties when vulcanised. Also in the laboratory are the electronic controls which record on graphs the functioning of the Branbury Mixer. Rubber compounds of the proper standards are so ensured.

Different tyres are made of a number of different pieces. A tubeless car tyre has these main pieces:

- (1) The tread and walls. The tread being the part of the tyre which contacts the road, and the wall are the sides of the tyre
- (2) The casing, which is the "body" of the tyre.
- (3) The bead wires which serve to keep the tyre on the rim.

Now that the correct compounds have been produced they can be shaped to the correct size for the tread and side-walls in a machine called an "Extruder". This machine forces or squeezes the rubber through a die, whence it emerges in the basic shape of the tread and sidewalls.

After being cooled in a water tank, the extruded tread and sidewall rubber is cut into lengths equal to the circumference of the tyre by means of a rapidly revolving circular blades; the tread is cut at an angle so that a perfect join can be made. The tread and sidewall rubber is now ready to be built up, with the other materials, into a tyre.

Chief of these materials is the fabric which forms the casing of the tyre. This is made of rubberised nylon or rayon which is woven in a special way. The fabric is dipped in a both of latex adhesive and then led between the rollers of a huge calendar. Here a hot viscous rubber compound is pressed over the fabric so that it completely coats each cord.

After cooling, the fabric is stored and then, when required, is cut into exactly measured strips, known as casing "plies". Each ply is cut to the right width and angle for the particular tyre to be made.

Tyres are held in place on their wheel rims by means of bead wires. These are made of strands of high-tensile steel wire which are drawn together and coated with a rubber compound. The wire is made circular in shape, bound with adhesive fabric and "filler strips".

So far the component parts of a tyre have been fabricated, now the different items are brought together and the tyre is ready to be built. This is done by skilled craftsmen on a specially designed machine. When he has finished, the tyre he produces is still a flat surfaced hoop that will receive its characteristic shape only in a later moulding operation. In the process of building up the tyre the craftsman wraps around the collapsible metal drum or 'former' an inner lining, and several plies. The former is power-operated and will rotate at speed or idle under the craftsman's control. The two sets of bead wires with the filler strips are wrapped around by the edges of the casing plies on the machine. Further plies as required are added on the collapsible drum. The next step is laying the extruder tread and sidewall rubber on the wired fabric hoop and thus building up the complete tyre. This built-up tyre is then removed from the collapsible drum.

The final stage is in the moulding and vulcanising process for which a Diaphragm Moulding Press is used. The tyre still in its

"flat hoop" shape is placed over a rubber diaphragm or air-bag which has collapsible walls made of very tough rubber. The diaphragm is then inflated to force the tyre outward against the mould which at the same time closes round the tyre.

When the mould is shut, circulating hot water is passed into the diaphragm and into the mould itself under a pressure of about 365 lbs. to the square inch. The following two processes are now accomplished simultaneously during the time the mould is closed. One, the tyre is shaped by the mould into its distinctive tread pattern. And two, the rubber compound, softened by heat, is consolidated and vulcanised so that a tough, resilient, hard-wearing tyre is born when the mould is opened. Such are the processes of making a tubeless tyre.

Continuity in the production of better products is made available by research and testing not only the material components but also the finished product. Road tests are carried out by the Company's vans which do nothing but test out Dunlop tyres for quality and durability. In addition, the Company will have the benefit of technical advice and assistance from the Parent Company. Arrangements are made so that the Company shall be entitled to use the trade marks, designs, processes and inventions of the Parent Company.

Marketing

Before production on a large-scale was considered as commercially feasible, market surveys were carried out by the Company's experts from United Kingdom. Local marketing survey organizations were also made use. The tyre market for each product to be manufactured was analysed in terms of the amount and value of existing market demand both for imports and locally produced tyres. The existing amount or percentage of the market for the Company's individual product which is demanded and the potential market have to be known or calculated. The cost price of the product to be produced and the selling price in comparison with competing brands are vital to the production of the product. These were some of the marketing problems faced by the company.

It was suggested by the company that since the market had just the basic potential of being economically served by a single large company it should be given a sole licence to produce for these needs. Furthermore, the company could easily produce for the whole of the Federation's potential requirements and still leave available an exportable surplus. Additional plants for future expansion could be easily set up to keep pace with the anticipated growth of the Malaysian economy. This licence was to be subjected to certain conditions among which was the company's sole licence would be for a period of years subject to re-newal and that it should also co-operate in the production of other different company's brands. However the sole licence application was turned down.

In analysing competition it was found that in the bicycle tyre and tube production only two local companies are manufacturing them. They are the Shum Yip Leong Rubber Works Ltd., and Fung Keong Rubber Manufactory Ltd. Since the establishment of the Dunlop Company, a potential and rising competitor, Bridgestone Malaysia Co., Ltd., in Singapore is scheduled to go into the production of tyres and tubes and other rubber products in July 1964. This would provide competition in motor vehicle tyres and tubes.

Competition in imported brands were many about 35 of them a year ago. However since the passing of increased import duties on motor vehicle tyres with effect from the 2nd March, 1963, and the lowering of price by the Company, only about 5 active competitors are left. The increased import duties rose by 30 per cent on motor vehicle tyres and tubes. Preferential products rose from the existing 20 per cent to 50 per cent and non-preferential products rose from 40 to 70 per cent.

It is to be noted that the Company also produces 2 other brands (Good Year and India) besides its own. The policy of producing for other companies has been mutually acceptable to the parties concerned. The Good Year Company has been previously producing for Dunlop in Indonesia.

The Company's own tyres have different designations all under one brand 'Dunlop'. They may be labelled: Dunlop Highway, Dunlop RK. 9, RK. 3, T.28, T.29A, C.49, etc. Each one has its own distinctive tread and is made for certain road-purposes. Except for the larger truck tyres, which are bare, the other tyres and tubes are packed in cartons, boxes and paper wrappings. It sells about 1½ million tyres a year.

On the distribution side, the Company as noted earlier, has already a sales organization to handle its products through the Distributing Company for over 20 years. Prior to manufacturing tyres here, the Dunlop Company was merely an export/import firm. Storage facilities or depots are established as stocking points to serve the whole country and for exports. These are located in Penang, Butterworth, Ipoh, Kuala Lumpur, Seremban, Malacca, Johore Bahru, Singapore, Kota Bahru, Kuantan, Kuching and Jesselton. Sale outlets are through the wholesalers and retailers. The sales force keep in contact with them and other large customers such as the various Government departments at a reasonable frequency.

Every opportunity to export to neighbouring countries is explored. Already, the company is exporting to the Malaysian States of Singapore, Sarawak, North Borneo, and (Brunei). Southern Siam is also served by the Company. Before the confrontation, the company was exporting to Indonesia too. The Dunlop Group furthermore has branches in Siam, the Phillipines as well as Indonesia. Because of large economies of scale it is found economical to import tyres from the United Kingdom to these places.

Price discrimination is practised with different customers, for example larger customers will be able to get a lower price. Pricing is also used to cut down competitors. The company has been lowering prices varying between 5 to 15 per cent from one type of tyre to another. In fact, the company has so far announced price reductions three times in a period of a few months. A comparison of the retail price for a motor-cycle tyre is revealing:

<u>Brand</u>	<u>Cost at Retail Level</u>
Firestone	\$28.00
Dunlop	23.50

Tubeless car tyres:

Continental (30% extra)	\$65.00
Dunlop	50.00

For a tubeless tyre a generous discount of about 20 per cent is also given to the Dunlop brand.

Sales promotion takes the form of sales representatives and sales publicity through the media of advertising in the "national" and vernacular newspapers. Other avenues are also explored for example: through the M.A.H.A. and "Made-in-Malaysia" trade fairs, outdoor holdings and neon signs. Advertisement on a selective basis in technical magazines are used too. Stockist Signs for dealers have recently been supplied to replace out-moded ones. Circulars and bulletins are supplied whenever available.

Salesmen are trained in the production, organisation and sales aspects of the Company. In general, the sales force is well organised and remuneration is based on both salary and commission.

Besides the usual discounts, credit sales returns and allowances offered to their customers, the Company has set up a Sales Service Department. The Department is available for consultation to all its customers. It offers technical advice from the point of correct usage of the different types of tyres. It detects criticisms, troubles and problems of the customers as the team travels throughout the whole country.

The development, growth and expansion of marketing are made possible by these steps taken by the Company. Market research by the company is continually being pursued to bring about a still larger sales volume for production.

A problem encountered in marketing is that of the prejudice against Malaysia-made tyres which are of the same quality, price or

service. The company feels that this problem is not insurmountable and that with vigorous promotion and other pricing policies it will be able to convince Malaysians in using locally manufactured tyres and tubes.

On the whole the company did not find any serious problems in its developmental stage.

