CHAPTER VI
MARKETING MANAGEMENT IN
HPF AND HTL
In an enterprise two basic functions are performed for viability and expectant growth - production and marketing. These two functions are so intimately connected that a study of one of the functions does find partial efficiency of an enterprise. The former relates to the favourable process for achieving targets through effective and balanced utilisation of three important factors, viz., manpower, finance and raw materials. The effective utilisation of the three factors along with the machinery utilisation forms the core of the production process. The latter includes functions which crystallize and direct the demand for maximum production, purposefully towards maximum value and consumers' satisfaction and also help in, to develop standards of efficiency and quality.

The field of marketing is being rapidly transformed into a much broader and more significant field in recent years. In the past it was referred to as 'selling' of the products, or flow of goods from seller to the buyer. In subsequent years, marketing is no longer considered to be as selling or advertising but encompassing several other elements. It is considered to be a process of determination of consumer demand for a product or service, motivating its sales and distributing it into ultimate consumptions at a profit. This enlarged view of marketing has


led to the development of marketing concept, which is more complex in nature. The marketing concept represents a new business philosophy and clearly distinguishes between selling and marketing.

Marketing, thus refers to a function which helps in creating and using effectively the resources available in the context of technological and industrial developments; growing public sector and changing socio-economic conditions. In simple terms, it creates a balance between the movements of products to the consumers and relate it to the production capacity by undertaking functions - planning, organization, staffing, motivation and control of marketing forces to achieve company's objectives.  

Each of the public sector undertakings undertakes a project to manufacture product(s) of different nature and regulates their flow to different market segmentations. The functions of marketing are undertaken usually by a department to cater to the following functions: (a) To establish and maintain company's image and quality of products, (b) To establish a distribution set-up for maximum sales at minimum cost, (c) To provide efficient after sale services to consumers (d) To advise on pricing of the products by taking profitability into consideration, (e) To apprise respective head offices about quality of products in comparison with other and future market

trends.

The above functions form the basis of total system in public sector undertakings though each one of them has different type of operational environment. There are three basic types of environments in which public sector undertakings operate - monopolistic, semi-monopolistic and competitive.

The difference in the operational environment directly influences the public sector undertakings to adopt varied marketing strategies and distribution systems which are most suited to them in fulfilling the corporate objectives.

This chapter explores the strategic planning and environmental considerations which offered changes in organizational structure; types of markets, distribution network adopted by HPF and HTL. It also does a study of the market potential of their products, forecasting system, effect of marketing variables, pricing policies on the growth rate of profits and the analysis of future trend of the market which causes more threats to both HPF and HTL. It also analyses the trend of transport and handling expenses from 1968 to 1982 in HPF and from 1962 to 1982 in HTL, which helps in computing the weighted percentage rate of change of this input in both PUs.

Both PUs undertook the marketing operations in different operational environments, which led them to adopt measures in their own style for achieving the goals. The organizational structure of marketing division explains the effect of various
factors which forced changes in the organizational structure for more effectiveness. Both PUUs started with rudimentary installation of concerned division for undertaking the function, which grew amidst various limitations and inhibiting factors.

HPF, in 1961, decided to have a cold storage at Madras for imported films and a set of distributors to supply cine films. With its experience of selling small quantities of imported materials like roll films, document copying paper, sales organization was established in 1967, with main sales office at Madras and branch sales office at Bombay. Later, branch sales offices were set up at Delhi and Calcutta. The poor performance of marketing process initially, led HPF to take steps in strengthening of distribution net work, and established 16 sales depots all over the country, practically one in each state and evenly distributed into four regions. The reporting system starts from sales depots to their respective sales offices and in turn these regional sales offices with their remarks, report to the marketing head office at Madras. The communication system is two way and direct. The organizational set up adopted by HPF marketing division in 1969 is shown in figure 6.1. It is evident that marketing division was headed by the marketing manager assisted by the product and sales

managers for product quality; maintenance of stocks and regular supply of photo-sensitized goods to regional sales offices. As HPF was growing rapidly, it evolved an effective distribution for higher returns on capital employed. The marketing division was strengthened by regulating changes in the organizational structure to overcome the deficiencies, which surfaced during the period when distribution was carried out through distributors. The newly adopted changes are as follows: (a) The position of marketing manager was upgraded as chief marketing manager. (b) The manager, market co-ordination was made responsible for keeping a balance of outflow of products and feed-back HPF of the current development in the market trend. (c) The distribution manager was needed to establish a regular flow of different types of products manufactured by HPF.

The innovative organization structure of marketing division in HPF offered more delegation of authority in order to have effective control over the distribution of the products, to regulate market co-ordination for analysing the percentage of each of the products outflow, and the expected growth rate in the forthcoming year. It sought to uplift the image of the products for increasing their market potential and increasing consumers' satisfaction. The innovations were on the basis of functional principle.

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HTL took steps to create marketing division for carrying out functions, which were limited to sales only, rather than on estimating the future trend of the products and forecasting the demand for the next year. It however, undertakes after-sales services and training of consumers for using effectively the equipment supplied. Figure 6.3 depicts that marketing functions in HTL are merged with the administrative division and is headed by the deputy manager. The sales section is headed by a senior sales officer flanked with two sales officers entrusted separately. One sales officer is concerned with the actual transportation of equipments cleared by the quality control department, and other carries out dual functions of creating a balance in supply of raw materials and calculating actual production cost in relation to the transportation cost. As the teleprinters require experts to handle the machines for the appropriate output, HTL has incorporated a section under the sales department to give training to the consumers. HTL has three regional offices at Bombay, Delhi and Calcutta. Each of the regional offices is headed by a regional engineer.

The organizational structure of marketing division in HPP and sales department in HTL is the functional structure which includes lines of authority and responsibility that connect and co-ordinate individuals. The nature of organizational structure adopted by both PUs inevitably shows the type of functional environment. The organizational development
of marketing division in HPF connotes a change in functional environment, the effect of market variables and geographical distance involved, whereas sales department in HTL shows a limited growth which signifies no change in its functional environment. The organization structure of HPF marketing agency is more functional in nature than that of sales department in HTL, as it has encompassed other marketing functions rather than sales only.

MARKET SEGMENTATION OF HPF PRODUCTS

HPF, similar to HTL, executes production function in a monopolistic environment, whereas in disbursing the finished products in the market, HPF indulges in competitive traits along with photosensitized goods of other foreign manufacturers. HPF, like the foreign firms, manufactures a variety of photosensitized goods, namely, cine, medical x-ray, graphic arts, micro, roll and portrait films; bromide paper and allied products like magnetic tape, developer, chemicals etc. The principal products manufactured by HPF are photo, cine and x-ray films which account for 30, 40 and 30 percent of turnover respectively. These products are termed as consumer products. The other products are of new origin, and their production started in 1976.

Each of the products manufactured in HPF serves the

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purpose of different market set-up. Cine film is meant for consumers closely associated with the motion pictures; medical x-ray is consumed by the radiologists for fast and clear diagnosis of the internal diseases; roll film by amateur and professional photographers. The present study is on the two main products, namely, medical x-ray and roll films, as these are widely in circulation. The study explores the type of market, channels of distribution system, demand forecasting techniques, growth of the production and sales of the two products along with their market shares in the home-market. The study further assesses the future trend of the two products.

MEDICAL X-RAY FILM

As the products manufactured belong to different market segments, HPF evolved the marketing system in 1967. HPF produces x-ray films, which are classified into two categories - medical x-ray and industrial x-ray films. The production of medical x-ray film commenced in 1967-68. The entire requirements in the country was met by imports before 1967. The other foreign manufacturers of medical x-ray were Kodak and Orwo. Table 6.1 envisages the trend of total demand and the percentage of total to actual production and that of total supplies. The production of medical x-ray in HPF increased considerably from 12.0 percent in 1967-68 to 104.9 percent in 1980-81. Similarly the demand for medical x-ray also increased gradually from 1.00 million sq.ms. in 1967-68 to 1.25 million sq.ms. in 1973-74. From

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1974-75 onwards the average increase was 12.12 percent, which increased the total demand to 2.30 million sq.ms. in 1980-81. The increase in the total demand is due to the effect of the following factors: (a) Increase in outlays on health services by GOI. These sanctions increased the consumption rate of medical x-ray film, as the people were more cautious of health hazards than before. The outlay in the Third Five-Year Plan was Rs.225.85 crores on health services, which increased to Rs.1330.00 crores in the Sixty Five-Year Plan. The sanction in Sixth Five-Year Plan is virtually double the amount sanctioned in Fifth Five-Year Plan. (b) Growing tendency among doctors and patients for opting for x-ray analysis for diagnosing the internal diseases clearly and at the earliest. (c) Less variation in prices of medical x-ray, aided to increase the consumption rate. (d) Better maintenance of x-ray machines which utilises 15 to 25 x-ray films in one day. (e) Increase of population at the rate of 11.9 percent per annum.

Table 6.1 further shows that the imports which were 0.95 million sq.ms. in 1967-68 gradually decreased to 0.42 million sq.ms. in 1968-69. It increased to 1.15 million sq.ms. in 1972-73 from 0.65 million sq.ms. in 1971-72. From 1972-73 the imports showed a decreasing trend and were reduced to 0.10 million sq.ms. in 1976-77, which remained constant for the next two years. In 1979-80 it again increased to 0.30 million sq.ms. The production

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of medical x-ray in HPF shows a steady increase from 0.12 million sq.ms. in 1967-68 to 0.36 million sq.ms. in 1969-70 and a further increase to 0.68 million sq.ms. in 1972-73. It slumped down in 1970-71 when HPF was able to achieve 0.14 million sq.ms. This was due to misappropriations in production scheduling which caused higher percentage of rejections. From 1975-76 HPF's production was steadier and it rose from 1.42 to 2.04 million sq.ms. in 1976-77 and further to 2.19 million sq.ms. in 1980-81. The increase in the imports in 1979-80 and 1980-81 reveals that it was done to fill the gap created by low production in 1978-79. HPF's production was merely 12.0 percent to the total demand, increased gradually to 32.7 percent in 1969-70. It decreased 12.1 percent in 1970-71 due to low production achieved. It steadily increased thereafter and was 123.6 percent to the total demand in 1976-77.

The major consumers for medical x-ray are radiologists associated with government hospitals (GH) or private clinics (PC) and hospitals (PH). Nearly two-third of total demand is obtained from four metropolitan cities - Calcutta, Bombay, Delhi and Madras, and other class 'A' cities, as these places are having large numbers of GH, PC and PH, when compared to the small cities and towns.

The study reveals that PC and PH have used all brands of medical x-ray films as compared to only one brand by GH in Madras and Trivandrum. This is because of the restrictions
posed by the government on consuming other brands of medical x-ray films than Indu medical x-ray as this is cheap and easily available in abundance which will keep a balance between supply and consumption.

Out of the brands of medical x-ray films used by GH and PH, nearly two-thirds of the total considered Kodak was best, followed by Orwo. This was revealed on the basis of its clarity, durability and fog resistance. These properties led radiologists to accept Kodak medical x-ray film with respect to Indu. The factors for non-acceptance of Indu medical x-ray film by PC and PH in Madras and Trivandrum are—

1. Tendency of consumers for accepting foreign film on consideration of good quality
2. Involvement of risk which may reduce their profit margins
3. Availability of foreign medical x-ray film in abundance in home market diffusing further the chances of circulation of Indu medical x-ray film
4. No impact was made by Indu medical x-ray in the home market to draw out the consumers of the zone of non-acceptance.
5. Poor quality of Indu medical x-ray film due to certain physical defects, partially or fully exposed x-ray film; white dots on the film; uneven spread of emulsion leading to distortion and less clarity of film; less durability and poor fog resistance posed intricate problems.

Table 6.2 indicates the opinion of GH and PC on the image of Indu medical x-ray film. It reveals that 67.88 percent of radiologists of both GH and PC were not satisfied with fog
resistance, 54.55 percent of GH and 45.0 of PC with clarity, whereas 81.82 percent of GH and 62.5 percent of PC were satisfied with availability of more varieties of Indu medical x-ray film. Nearly 85.8 percent of the GH and 45.0 percent of PC were satisfied with speed of Indu medical x-ray film.

According to the attitudes of the consumers of medical x-ray film, it can be analysed that the GH considered speed and varieties as the most potent factors, clarity and fog resistance the least. PC and PH felt that the quality and variety of Indu x-ray film as best whereas fog resistance and speed least potent factors as is shown in table 6.3. In general, consumers are still not satisfied with speed and fog resistance of Indu medical x-ray film.

With the improvement in the quality and of the other factors, 63.6 percent of PC and PH considered that Indu medical x-ray films can be compared to those manufactured by Kodak, Sakura, Agfa and Orwo. With the inclination of PC and PH towards Indu medical x-ray, it is easy to calculate the ratio of consumption of HPF's product in GH, PC and PH. In 1970-71, the ratio of consumption of Indu medical x-ray film was 2:1 for GH and PC/PH, decreased in 1973-74 to 1.5:1. In 1980-81, the consumption rate of PC has a slight edge over GH. The consumption rate per x-ray machine per day in GH and PC/PH has increased from 30 and 8 Indu medical x-ray sheets in 1975 to 48 and 18 in 1982 respectively. This connotes an increase of 60.0 percent
in the consumption rate per machine per day in GH, whereas it is 122.2 percent in PC/PH. This is the reason why consumption is 48.6 percent in GH and 51.4 percent in PC/PH, of the total. The overall consumption calculated in GH and PC/PH is on the basis of daily consumption rate. The number of GH and PC/PH centres in Madras and Trivandrum are 30 and 160. Each of the GH has five to ten x-ray machines in working order, whereas PC/PH only one x-ray machine. Now if the total consumption rate is calculated in both GH and PC/PH, the number of x-ray sheets are same.

The factors that inclined PC and PH towards Indu medical x-ray films are as follows: (1) Partial ban on imports of films and thus causing delays in procurement. (2) Cheaper prices than other brands of films as shown in table 6.4. (3) Regular supply to balance the market demand. (4) Initiative taken to carry out the modifications in the physical nature of the medical x-ray film.

The Indu medical x-ray film is distributed in different sizes, namely, 5/7", 6/12", 6/15", 10/8", 12/10" and 12/15". The study reveals that the most popular sizes used by both GH and PC/PH are 12/10", 10/8" and 12/15", whereas the least popular sizes are 6/15", 5/7" and 6/12". The popular sizes are used in the ratio of 5:3:2.

HPF disburses x-ray film in three varieties: Orwo x-ray in Orwo cartons sold by Orwo; Orwo x-ray and Indu x-ray film
in Indu cartons. The distribution system adopted by HPF for medical x-ray was through distributors from 1968 to 1975. Then HPF switched over to more centralised system by setting up 16 depots throughout the country, virtually one in each state. This was implemented to facilitate direct supply and effect control of inhibiting factors.

The study reveals that nearly 90.0 percent procured Indu medical x-ray through HPF marketing agency. 80.2 percent favoured this pattern to be continued in future as it had raised the effectiveness of marketing network. Only 16.98 percent complained of the irregularities in the present system and recommended that sales should be through distributors. Table 6.5. is a two-way analysis of the distribution pattern in progress and to be adopted.

The study further indicates that 55.0 percent of consumers possessed high level of inventory of Indu medical x-ray film and ten percent low. This is because of the high consumption rate in GH, PC/PH; secondly to avoid supply gap caused by delay in the marketing of x-ray film. The levels of inventory held by the consumers are at an average two to three times to the daily consumption as compared to four to five times in 1973. This points to the effectiveness of the present marketing system, which was adopted in place of retail dealers.

The total supplies as indicated in table 6.1 shows that it was 1.07 million sq.ms. in 1967-68, which reduced considerably
0.59 million sq.ms. in 1968-69. The total supplies gradually increased from 1.00 million sq.ms. in 1971-72 to 2.15 million sq.ms. in 1980-81. The percentage of total supplies to total demand, when analysed shows that it was 53.6 percent in 1968-69 increased to 146.4 percent in 1972-73. From 1975-76 to 1977-78 the percentage of sales to total demand is more than 100.0 percent.

Table 6.1 further reveals that market share of HPF was negative in 1967-68, abruptly achieved 34 percent in 1968-69, increased to 57 percent in 1973-74. From 1977-78, HPF gained market share more than 80 percent, increased to 98 percent in 1980-81. This directly reveals that the improvisations in the production process led to the improvement in the quality of medical x-ray film and secondly the centralisation of distribution further helped HPF to regain the market share by uplifting the image of Indu medical x-ray film through effective counselling.

ROLL FILM

The second consumer product manufactured by HPF is roll film, which is meant for amateur and professional photographers. This study ascertains the attitude of consumers towards Indu roll film, analysed from the part 'B' of the second field-study; along with the production of roll film with respect to the total demand; trend of total supplies to the total demand and also depicts the growth of market share of Indu roll film.
Similar to the medical x-ray, the entire requirements of roll film were met by imports before 1970-71. HPF started production at a very slow pace and achieved 0.001 million sq.cms. in 1970-71, gradually increased to 0.02 million sq.ms. in 1973-74. The HPF overtook the imports in 1975-76 when it was able to produce 0.20 million sq.ms. The production of roll film in HPF gradually increased to 0.61 million sq.ms. in 1979-80. It decreased 39.3 percent in 1980-81. This signifies that the trend is changing towards colour roll films due to technology change.

The total demand of roll film in 1969 was calculated at 0.30 million sq.ms., steadily increased to 0.45 million sq.ms. in 1974-75, and further to 1.10 million sq.ms. in 1981-82. This is roughly from 55 lakh spools in 1976 to 200 lakh spools in 1981. The factors which form the basis for evolving future and current demand of roll film are as follows: (1) Number of cameras available in the country and used by the consumers; (2) Number of ceremonies conducted in the country; (3) Increase in annual per capital income; (4) Increase in educational standard from 1971 to 1982 which created an awareness of modern technology by making photography essential; (5) Use of roll film to a greater extent in mass media.

These factors affected the consumption pattern within the country and led HPF to take initiative for the production of roll film. Table 6.6 shows that the initial demand was met
by imports in 1969. HPF started partial conversion of jumbo rolls in 1970-71, imported from the collaborators and produced 0.001 million sq. ms. against 0.18 million sq. ms. of finished imported roll film. As the demand was increasing, HPF could not resolve on full capacity due to various factors, and, encouraged imports, which increased from 0.18 in 1970-71 to 0.39 million sq. ms. in 1974-75. With the modifications and improvisations, HPF was able to increase the production capacity. This directly led HPF to extend its market share. The market share was negative in the initial years but steadily increased in each year with higher production to 48 percent of the total market in 1982 as compared to imports.

Indu roll film comprises 125 ASA, 200 ASA and 400 ASA, and are packed in different cartons. The study shows that consumers used 125 ASA initially and shifted their preferences towards 400 ASA as this had more speed, clarity and fog resistance. The roll film of three speeds are being disbursed in the present market, comprises three brands namely, HPF's own product, Orwo film in HPF's carton and Orwo's original in Orwo cartons.

The consumption rate of roll can be assessed by analysing the number of roll films per camera. Table 6.7 suggests that 59.15 percent of the professional photographers consumes five rolls at an average per day, whereas only 7.04 percent uses above 16 rolls. In Madras, the consumptions between zero and ten rolls
comprise more than two-thirds of the total professionals. In Trivandrum 70.83 percent uses film roll to a maximum of five as compared to 16.67 percent between six and ten. 7.04 percent of total consumers uses more than sixteen film rolls, and are grouped as Class 'A' consumers. It also depicts that there is a shift in trend in consumption pattern of Indu roll films as compared to that of other foreign manufacturers. The consumption of Indu roll film is higher to that procured from foreign manufacturers in 1980s, than what it was in 1970s. The average consumption rate of Indu roll film to that of other manufacturer is in the ratio 3:1.

The study analyses the growth of the Indu roll film in the past. Table 6.8 depicts that 40.28 percent of the consumers used Orwo roll film first, while 27.78 percent Kodak, 23.61 percent Agfa and only 8.33 percent started with Indu respectively. Among the popular brands of roll film, more than half of the consumers favoured Orwo as best because of best results assessed on clarity of the picture, durability and fog resistance. Agfa and Kodak have been second best in Trivandrum and Madras respectively. Fuji and Perinia roll film have not so far gained the market.

The consumers who used Indu Roll film initially, started photography in 1970s, because it gained momentum and was in demand in the market. These consumers maintain that this product is the best. Those who started photography before 1970s, used
the roll films of different brands according to their availability and acclaimed market elsewhere. This is the reason that there is a disparity in the adoption of brands by the professionals.

Table 6.9 ascertains the attitude of consumers towards respective products (roll film) used and why it was considered best. It was done on the basis of its quality and other requisites. 32.08 percent of consumers considered that speed of Agfa and Indu roll films; 36.97 percent the high prices for Kodak and Orwo film as least potent factors of these brands. It also reveals that Indu roll film is still deficient in providing higher speed film with more fog resistance to withstand climatic changes.

The consumers inclined towards 400 ASA Indu roll film which showed that consumers were satisfied with the important requisite of the roll film and could be compared to that of foreign brands. The other reasons why consumers accepted Indu roll film in Madras and Trivandrum were low prices and higher frequency of availability in the market. This is evident from the analysis which has shown that 64.3 percent have changed their brands, out of which 48.86 percent opted for Indu roll film and 50.0 percent Orwo.

The study analyses the opinion of the consumers towards Indu roll film in order to ascertain the factors which inhibited HPF to make an impact on the market. It reveals that
more than three-fourth and 55.6 percent are not satisfied with fog resistance and the price charged by HFF at present. 68.06 percent were satisfied with the quality, which in their opinion has improved considerably as shown in Table 6.10. It shows disparity in opinion of professional regarding clarity. 68.75 percent are satisfied with clarity of Indu roll film whereas 54.2 percent in Trivandrum are not satisfied. Similar view is held by the professionals in Madras and Trivandrum towards durability.

HFF patronises two brands of roll film – indigenous and imported. The distribution of roll film is carried out by two separate distribution channels for the two categories, namely, members of photographic associations and all users others than members. Roll film imported through the State Trading Corporation is actually distributed through HFF. The members of the photographic association receive the roll film on the basis of allocation of units. The association of professional photographers comprises Southern India Photographers and Allied Traders Association Madras (SIPTA), West India Photographers and Allied Traders Association (WIPTA) etc.

The distribution of Indu roll film is carried out by HFF marketing division through distributors, dealers and professionals. The first category of the marketing network of HFF is the oldest form of distribution system and effects sales of roll film at whole sale price and serves as retailers.
The second category comprises dealers of two types viz., pure dealers and professional - cum - dealers. The pure dealers only supply Indu products as well as of different brands of roll film and allied products, without any consumption of these products. The professional - cum - dealers which are most prevalent, are the sole indicators of future market trend and also affect variation in the consumption rates. This also serves as intermediary between dealers and professionals, and also forms the core of 'A' and 'B' types of professional photographers. The third category comprises professional photographers of C, D, E, and F types, distinguished on the basis of consumptions pattern. Figure 6.4 enumerates a diagrammatic representation of the actual distribution process involved in disbursing Indu roll film.

The study reveals that the distribution process of roll film is best suited to professional - cum - dealers, as they are the actual consumption unit and also affect the growth of consumption rate and strategies of marketing functions. The other inhibiting factors caused by this group are as follows: (a) creates imbalance in the market by irregular supply of roll film (b) effects stocking of photographic goods (c) creates pockets in the photographic business within their area (d) tries to lobby any change outlined in marketing strategies by HPF, through photographic associations or directly influencing the government for withdrawing from new strategies
and implementation of new policies (e) makes variation in the prices of roll film ascertained by Part 'B' of the second field study. The prices of different brands of Indu roll film are fixed by HPF at minimum, but vary considerably at the lower category of professional photographers. The professionals of C, D, E and F categories have shown resentment towards the marked price of professionals of 'A' and 'B' categories which offers variations. The prices per roll are fixed at Rs. 12.00 and Rs. 13.50 for 125 ASA, Rs. 15.00 and Rs. 17.50 for 400 ASA in Madras and Trivandrum respectively. The difference in initial prices is due to the transportation, octroi, labour and other charges. In turn professional-cum-dealer sell these roll films to professionals of C, D, E, and F categories at Rs. 14.00 and Rs. 15.50 for 125 ASA, Rs. 19.50 and Rs. 23.00 for 400 ASA in Madras and Trivandrum respectively. There is a difference of Rs. 3.50 and Rs. 5.50 in the initial prices and that actually charged by the professionals of 'A' and 'B' and dealers for 400 ASA in Madras and Trivandrum respectively.

The change in the distribution system of Indu roll film reveals the performance of marketing division of HPF to some extent by analysing the trend of total supplies from 1967-68 to 1981-82. Table 6.6 further reveals that the total supplies were higher in 1968-69 than the total demand. This step was undertaken to create supplies in the market for the continuation of flow of roll film. The total supplies in 1968-69 were finished
products directly imported from the Orwo and distributed in the country, partially under its trade mark and rest in the Orwo cartons. The total supplies gradually decreased to 0.15 million sq.ms., which is roughly fifty percent to total demand in 1970-71. This is attributed to the fact that HPF's product did not gain the market share and caused stagnation in the outflow of Indu roll film. With the increase of total demand to 0.40 million sq.ms. in 1973-74, HPF was able to supply 0.37 million sq.ms. and was 92.5 percent to total demand. The total supplied gradually increased to 0.85 million sq.ms. in 1981-82, but was at an average 80.5 percent to total demand from 1975-75 to 1981-82.

With the increase in the HPF's production, Indu roll film gained three percent of the market share in 1973-74, gradually increased to 35 percent in 1977-78 and further to 48.0 percent in 1981-82. This indicates that Indu roll film is still being overshadowed by the imported products, but it will overtake the imported products in the near future as the consumers are seen to be more and more satisfied with the Indu roll film, which has improved in its quality and to some extent in other properties also.

Initially, Indu roll film could not establish an impact on the market due to poor quality, uneven distribution and consumers' unwillingness to accept it. The consumers inclined towards Indu roll film in later stages because of low prices.
as indicated in table 6.11. This indicates that the low prices of Indu roll film give aid in achieving higher profit margins of professionals than that of other manufactures.

The poor quality of Indu roll film was assessed on the following factors: (a) the film layers were not properly pasted together, (b) the film was partially or fully exposed, less durable and poor fog resistance, (c) the quality of packaging material was not good, (d) the numbers printed were upside down. The other reasons that did not attract the consumers were the risk of loss, low education standards of consumers, which did not build in sight for procuring the Indu roll film. Lastly there was dominance of products of other manufacturers in the market, due to their good quality and regular supply.

HPF took the initiative to improve the quality of products - medical x-ray and roll film - by undertaking technical innovations in the production process, and also took measures to broaden the outlook of consumers through advertisement and maintain a regular supply of these two products by overcoming drawbacks. These steps helped to build product image in the market, which is evident from the analysis of HPF's share in the total market.

The sources of advertisement are magazines, newspapers and posters for both the products. 28.0 percent and 42.0 percent of consumers of medical x-ray and roll films were attracted through the advertisements, while others were directly motivated
to accept their products. The study reveals that the most
effective procedure for sales promotion was through advertise-
ments in concerned magazines. In the last five years, EPF
g geared up the sales promotion activities by introducing dealers
contest and amateur photography contest. These activities have
paid high dividends in gaining 48 percent of the market of
roll films. Table 6.12 shows the performance of the market
division from 1966 to 1982. EPF could not achieve profits upto
1974-75, and only in 1975-76 it gained Rs.0.63 crores. The
analysis of the value of production and sales reveals that it
has shown increasing trend from 1968 to 1982, but the difference
between values of production and sales was marginal upto 1974-75.
The turnover increased considerably to Rs.13.90 crores in 1974-75
with the start of the conversion of cine films.

Table 6.13 envisages the percentage rate of change in
selling expenses and also evaluates the weighted percentage
rate of change in EPF. The selling expenses increased 974.21
percent in 1966 followed by 231.50, 19.76 and 83.61 percent
in subsequent years. Initially it increased due to the abrupt
start of selling of products and the growth of distribution
network throughout the country. On the introduction of colour
films in 1975, selling expenses increased 79.35 percent. The
expenses increased marginally in subsequent years, because of
the alternation in the marketing strategies, which lowered the
expenses by 57.15 percent in 1980. This directly shows the
malpractices and inefficiency in the distributors network to
that of innovated form adopted by HPF. The share of selling expenses in real value of production was 0.0484 in 1968, increased to 0.0504 in 1969, but decreased gradually to 0.0047 in 1980. The weighted percentage rate of change of selling expenses was 23.58 percent as highest, reduced gradually to minus 0.02 percent in 1972, increased again to 1.67 percent in 1976, decreased to minus 0.01 as lowest in 1978 and further to minus 0.49 in 1980.

HTL adopted direct sales of teleprinters to the consumers on the following factors: (1) HTL acts as a unit to cater to the needs of the government departments, which are sole indicators for future consumption pattern and type of teleprinters to be produced. (2) It has developed an efficient transport system being in the centre of a metropolitan city. (3) For effective control over the market functions and easy accountability for assessment of future trend in consumption of teleprinters.

HTL started with few varieties of teleprinters in 1962, but gradually increased in following years. The main consumers of teleprinters are railways, posts and telegraphs and defence. The demand for teleprinters in the forthcoming year, is formulated by these departments on their projected growth in that year, and is consolidated and fed to HTL, which carries out production planning and scheduling to effect supply. Thus the function of sales department is limited to sales only as compared
to that of HPF marketing agency. Table 6.14 shows the performance of sales department in HTL. The sales department during the last two decades has achieved 100.0 percent mark nearly, excepting in 1978-79 and 1979-80 when it supplied only 85.8 percent and 80.8 percent respectively. The actual production of teleprinters and sales showed increasing trend from 1962 to 1982. The sales were comparatively less to actual production from 1962 to 1966, and gradually achieved more than 100 percent mark in subsequent years. HTL achieved a profit of Rs.0.20 lakhs in 1962-63, but in the next year there was a loss of Rs.3.80 lakhs which further reduced to Rs.48.06 lakhs in 1966-67. Thereafter it showed profits. The growth of profits shows variations from 1967-68.

The selling (transport and handling) expenses increased 150.46 percent in 1963-64 and again 183.93 percent in 1965-66. These increases were due to the establishment of sales department for taking up steps to expand the market. The increase of 118.74 percent in 1970-71 may be accounted for export promotion activities, which later fell to greater extent. The regularisation of centralised head office and three more spatially distributed have regional sales offices at Bombay, Calcutta and Delhi, have further decreased the selling expenses from 1971-72 onwards with slight increase in between. The share of selling expenses in real value of production was 0.0539 as highest in 1963, but showed decreasing pattern in subsequent years, and
reduced to 0.070 in 1968 and maintained at 0.02 in later years. The weighted percentage rate of change of this input in HLT, has shown variation accordingly. It decreased from 6.73 in 1964 to minus 0.84 in 1968, and marginally changed in subsequent years as shown in table 6.15.

PRICING POLICY

Price is of unique strategic importance in analyzing marketing effectiveness. It is stated that an ideal price policy should help in promoting a rational allocation of resources and thus accelerate balanced growth of the economy. The nature of PUs varies greatly and much depends upon the environment it operates. There are three kinds of environments - monopolistic, semi-monopolistic and competitive. The public sector undertakings function basically in one or some times in combination of two environments, while the private sector undertakings generally operate in competitive environment. Under competitive conditions, market mechanism is expected to provide a price level which fulfills the objective of balanced growth. However, the enterprises functioning under monopoly conditions of varying degrees, there is a similarity on the broad principles. The Five-Year Plans do refer to price policy, but only in broad terms. The Second


Five Year Plan, pointed out the limitations of taxation for raising revenue and opted for appropriate pricing policies.\textsuperscript{11} The Third Five-Year Plan emphasized that PUs should follow a rational and economically sound price policy, to produce efficiently and to accumulate surpluses which should be earmarked for further development. It aimed at running of PUs efficiently by following a proper price policy that would reflect larger earnings and surplus.\textsuperscript{12} The price policy for public sector undertakings in India signifies that the price fixed should enable it to raise adequate resources for reinvestment, to operate at the lowest cost possible and maximum efficiency, to a level of maximum consumers' satisfaction to highlight decisions for benefits and growth of economic standards.\textsuperscript{13} Thus the major objective for adoption of price policy is indirect social returns and to lower the inflationary impact on the whole economy.\textsuperscript{14}

Initially, HPF and HTL, performed their production in monopolistic environment. Subsequently, HPF faced competition from similar products of foreign manufacturers - Kodak, Orwo, Agfa, Fuji, Ferrania and Sakura, within the country brought HPF

\textsuperscript{11} Pricing and Investment in Public Enterprise (Hyderabad: Institute of Public Enterprise), p.91.

\textsuperscript{12} Ibid., pp. 264-273.

\textsuperscript{13} Rudder Dutt and K.P.M. Sundharam, Indian Economy (New Delhi: S. Chand & Co. Ltd., 1981), pp. 159-158.

to acquire semi-monopolistic conditions. HPF later acquired competitive traits with the establishment of the New India Industries, Bombay producing bromide paper with a licenced capacity of 2700 million sq.ms. to the HPF's 2500 million sq.ms. The, enjoyed the monopoly in production as well as in marketing of teleprinters throughout the country. As there is difference in their operational environments there ought to be differences in the price policy formulated and implemented.

As HPF operates in competitive market, the prices are dictated by the market forces of demand and supply. In 1966, the selling prices of cine films were fixed on the basis of the prices for competitive imported products and maximum margin permitted by the Chief controller of imports and exports. The selling prices of other photographic materials were also fixed by the controller of imports and exports. The selling prices of HPF products, at the time of commencement of production in 1967-68, were fixed on par with the selling price of imported finished rolls in the market, having no relation with the cost of production. Later, in 1974, the pricing policy was slightly modified and calculated with regard to variations in cost of jumbos. This formula envisaged an increase in selling prices, which was based on the requirement of standard raw materials.


per unit of the finished product and also in the variation in capital employed per unit of production. 17

Table 6. 16 shows increase in prices promulgated by HPF from 1974-75 to 1981-82. The price increase was more in bromide paper than the other products. The increase in prices is the outcome of modified pricing policy adopted in 1974. The prices of medical x-ray film were Rs.53.18, Rs.78.23 and 111.59 for 25 sheets and Rs.150.45, 222.86 and 322.86 for 75 sheets in 1973, which increased gradually to Rs.73.20, 108.00 and 163.80 for 25 sheets and Rs.207.60, 307.80 and 469.20 for 75 sheets of 8/10", 10/12" and 12/15" sizes in 1975. 18 The distribution was carried out by distributors denoted as (D) in table 6.17. The strategies were changed and the package of Indu medical x-ray film in 8/10", 10/12" and 12/15" sizes were limited to 50 sheets. The increase in prices of medical x-ray film was twice promulgated in 1978, 1979 and 1982. 19

Table 6.18 shows the trend of prices of roll film for 125 and 400 ASA. The prices of 125 ASA first decreased from Rs.4.00 to Rs.3.60 per roll in 1978, and in subsequent years increased marginally. In 1980, the prices were increased twice in the months of February and July respectively, resulting an increased from Rs.3.85 in 1979 to Rs.3.89 per roll in 1980, which is virtually double the previous. In 1982 again the prices

17 Ibid., p. 209.


19 Ibid., p. 24.
of 125 ASA were increased from Rs.4.65 in 1976 to Rs.12.12 in July 1980. This may be due to increase in their demand, and increase in the cost of raw materials.

The increase in the prices of Indu photographic goods affected a change in HPF and in 1975-76 it obtained a marginal profit of Rs.0.67 crores, which increased gradually to Rs.3.86 crores in 1981-82.

HTL, on the other hand, operates in monopolistic environment and has limited market segmentation due to involvement of one product only. The varieties of teleprinters were increased with the expansion of market. The prices of teleprinters are fixed by negotiations with the main consumers. The price of teleprinter and ancillary equipment in 1962 was fixed at Rs.3000, increased 66.67 percent in 1965 due to rupee devaluation and also to repay the deferred credits and loans. The prices increased to Rs.7,000 in 1968 as the all time high, reduced considerably by 24.29 percent in 1970, maintained the same in subsequent years. It gradually increased from 1975 to 1982 as shown in table 5.19. The price in 1970 was reduced for gaining maximum consumer satisfaction, and increased on the consideration of raw materials, labour and other expenses.

The trend of price policy in HPF and HTL shows that in the past it was basically guided by the following: (1)
To compensate the enterprise where increase in the cost of

20 Ibid., p. 27.
inputs was substantiated, unavoidable and attributable to factors outside the control of the respective managements.

(2) While ensuring a fair post-tax return on net worth, attention was paid to ensure that prices recover only such costs of production as would be incurred in the event of the enterprise attaining a satisfactory level of capacity utilisation. (3) Prices were fixed in a manner not only to allocate resources in an efficient manner but also ensure that the prices are equal to the marginal social costs on one hand, and the marginal social benefits on the other.

The prices policies adopted in 1974 by both PUs, shifted towards enlarging profit growth rate for more efficiency. It is concluded that the price policy is very significant in charging the growth pattern of the two PUs, and a study of profits alone cannot assess the efficiency of the PUs.

FUTURE TREND

The growth rate of demand of HPF products and sale of teleprinters in HTL reveals that each of the products has attained different stages in product life cycle (PLC). PLC is a curve representing the sales volume of a product from its first launching until its termination.21 The curve actually shows the effective demand for the product. The stages of PLC are initiation, development, market plans and

tests; introduction, growth, maturity and decline. Figure
6.5 indicates that the period between 1968 to 1982 can be
classified into sub-periods indicating different stages of
product life cycle in HPF. The period from 1968 to 1974 is
considered to be introductory stage when the two products were
in circulation and acclaimed their share in the total market.
From 1974 to 1978 both the products are in the phase of growth,
and the remaining years clearly show the attainment of differ-
ent stages in maturity phase. In the case of roll film the
demand grew from 0.3 million sq.ms. in 1969 to 0.4 million sq.
ms. in 1974, and further increased to 0.65 million sq.ms. in
1978. The demand of roll film (Indu) has reached to 1.10
million sq.ms. in 1982, which will show an increase to a maximum
of 1.50 million sq.ms. in 1986-87 and will start declining, due
to the inclimating of consumers towards 35 mm roll films (b/w)
for economy. This product will be taken over by the colour
roll film as the indications are that the consumers are showing
affinity towards colour films due to spread of modern technology
in the country.

The market for Indu medical x-ray film is intact for next
decade also. The PLC shows that it is still increasing from 1.8
million sq.ms. in 1979 to 2.30 million sq.ms. in 1982. It will
attain 3.0 million sq.ms. by 1990 as the projections reveal
that the health services are now being organized within the

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22 Ibid., p. 264.
country in each of the Five-Year Plans.

The Figure 6.6 postulates a similar trend in the growth of teleprinters from 1962 to 1982 as ascertained with the growth of HPF products. This period can be classified into four sub-periods indicating phases of introduction, growth, maturity and decline. The PLC curve shown in figure 6.5 is based on the sales of teleprinters from 1962 to 1982. From 1962 to 1965 was the introductory phase as the sales progressed from 270 to 1,100 units respectively. From 1965 to 1971, the sales showed a steep rise from 1,100 to 5,065 units respectively. This period is considered to be the phase of growth. Later is the phase of maturity. The sales from 1972 to 1982 show variation which signifies that the present product of HTL is attaining a saturation point. It is estimated that the sales of present line of teleprinters will decline after attaining a mark above 9,500 units upto 1985-86. The change is due to the inclination of the consumers towards the new type of teleprinters which earmarks the acceptance of more automation than that is associated with the present form of teleprinters.

The introduction of product diversification in both PU's is a threat which may lead them into true competitive market which may cause instability and less viability. These threats pose further problems of high investments, indulging both PU's to train the employees to acquaint them with the requirements of changing technology and to establish marketing division on the
modern techniques and strategies for controlling competitive forces to gain more market share. The study indicates that the following factors affect both PUs in introducing product diversifications: (1) Restrictions posed by the government regulations. (2) Restriction posed by private manufacturers for taking up new projects. (3) Low generation of finance through internal resources, affected by adopting pricing policies for maximum consumer service and minimum profits. (4) Low insight for consumers to accept any innovation, first carried out by both PUs, eg. HTL produced electric typewriter in view of decline of the present product line. It was affected by market forces to a larger extent. The consumers gave less recognition to their efforts and this led to its failure.

The analysis of the marketing strategies adopted by both PUs shows that the environmental factor, geographical distance and consumers negative attitude for accepting their products led to adopt changes in the organization structures of marketing divisions; modified the distribution system for effective estimation of future demand, channelising regular supply of the products, increasing the after-sales services.

HPF adopted decentralisation principle for incorporating the important functions of checking quality of products, marketing of products and for effective sales co-ordination in 1975, which was lacking in the earlier organization structure. The distribution of various products was initially entrusted to
distributors. HPF faced serious problems with non-establishment of market and its products. This did not pose a threat to other products on a competition basis. This was partially due to the negligence shown by the distributors, who did not take an interest in uplifting the image and the market of HPF products. The other reasons were higher rejections levels low production, low quality of their products, no motivation for consumers which led to non-acceptance of products.

The efforts made by HPF to centralise the marketing function has resulted in curtailing the expenses incurred on transport and handling. The indigenisation has also resulted in efficient scheduling of production process.

HTL, restricted its functions to sales as the government departments on their projections technique fed the market indents. Thus HTL made no efforts in exploring the market and its future trend.

The product life cycle reveals that the products of HPF mainly medical x-ray and roll film (b/w) and of HTL mainly teleprinters are attaining the saturation point and will show declination and will be replaced by other products. This poses threats to the stability and viability of both PUs, but it is certain both PUs will be able to counter the competitive forces by showing more efficiency in producing products of proven quality.