CHAPTER I
PAPER INDUSTRY - A PROFILE
INTRODUCTION

Paper Industry is one of the industries of basic importance to the Indian economy. It encompasses pulp, paper, paperboard and newsprint. The Industry has been carrying forward the march of civilisation through the medium of paper. It has also been providing the most potent weapon in the Nation’s relentless battle against illiteracy. Equally meaningful and laudable is the Industry’s endeavour towards conservation of foreign exchange through import-substitution and earning of foreign exchange through exports. Besides, its potential of generating employment opportunities for unemployed youths and helping to resolve the mammoth national problem of unemployment is noteworthy. The fact that the Industry has to operate in an environment of constraints, controls and recessionary pressures and has yet come out with success indicates the strength of the Industry today. The fortunes of the Industry have undergone a remarkable change following the removal of Government controls in the last decade. Higher capacity utilisation, better price realisation and a sustained growth in demand have contributed to increasing profits earned and reported by various units in the Industry. Today, everyone, both inside and outside the Industry, agrees that the Industry is heading for a bright future.
HISTORY OF PAPER INDUSTRY IN INDIA

As observed in the growth of human civilisation elsewhere in the World, in India too, the origin of paper-making can be traced back to the inability of human being to keep in memory mass of information arising out of widening of knowledge and the consequent need, that was felt for a media for written communication.

The above factor led the Aryans settled in North India to use the ‘tamra pathra’ (copper plate), ‘tada pathra’, ‘lohapathra’, etc. However, as the time passed by, the need for a better writing surface increased. This need eventually gave way to the thought of having an alternative source for writing surface which was convenient and easily available.

The art of making paper reached India through Arabs who initially learnt it from Chinese prisoners when they raided parts of China. It is also believed that some Indian Muslims must have learnt it directly when they visited Mangolia. However, a few families who learnt this art had kept it as a closely-guarded secret. These paper-making families were also known as ‘khagzis’. They were mostly settled in Punjab and Kashmir and flourished under the patronage of Moghul Empire. However, the art did not find acceptance and dispersal for sometime as the source of raw-material was rags. Because, Hindus did not like handling this material.
The records indicate that before the advent of machine-made paper, there was a flourishing hand-made Paper Industry in India. Paper was found to be in common use almost all over India at the close of Akbar's regime. The hand-made paper at that time was considered to be of a very high quality and moth-resistant.

Mechanisation & Automation: Efforts for mechanisation of Indian Paper Industry were first made by Dr. William Carey in the beginning of 19th Century. He established a paper mill in 1812 at Serampore in West Bengal with the help of local khagzis. Unfortunately, it was a failure and closed down within a few years. In 1820, a steam engine was introduced for operating beaters. By 1832, the first fourdrinier-type machine was introduced. But inspite of all-out efforts made, the venture did not succeed due to lack of demand for paper and also due to Government's apathy at that time.

In 1867, the Royal Paper Mill was set up at Bally, near Calcutta, using machinery transferred from the old Serampore Mill. This Mill increased the number of paper machines to four and the annual capacity to 5,000 tonnes. The raw-materials used were rags, jute cuttings, waste-paper, munj and sabai-grass.
A decade later, the Upper India Couper Mill, the third in the series of paper mills, was started in Lucknow in 1879 and it started production in 1882. This Mill is considered to be the oldest of the existing mills. In 1880, the Government promised preferential treatment to indigenous production. Consequently, the Titagarh Paper Mill was floated at Calcutta in 1882 and its production with three machines started in 1884. This was followed by the opening of the Deccan Paper Mill at Poona in 1887 and the Bengal Paper Mill at Ramganj in 1889. Between 1892 and 1894, another unit viz, Imperial Paper Mill was also set up. This unit went into liquidation soon and was taken over by the Titagarh Mill. In 1905, The Titagarh Mill also acquired some of the machines of Royal Paper Mill, when the latter went into liquidation.

**Process Modification**: Gradually, the growth of Paper Industry started experiencing an acute shortage of raw-material and this indeed proved to be a severe handicap for the growing Industry. Consequently, the Forest Research Institute at Dehradun came up with a solution of using bamboo as raw-material for pulping. Titagarh Paper Mill was the first mill to modify its manufacturing processes to adopt this new bamboo technology in 1912. Later, a new paper mill (viz, India Paper Pulp Company) designed to work entirely on bamboo was started in 1918 at Naihati, West Bengal. Its process was based on cooking the raw-material with a solution of magnesium-bisulphate.
**Effects of I World War**: The First World War (1914-1919) proved helpful to the Paper Industry as paper was in great demand. But later, market recession coupled with the onslaught of cheap foreign paper hurt the Industry considerably. It was only after the intervention of the Government in the form of enactment of **Bamboo Paper Industry Act, 1925** (enabling the levy of a protection duty on imported paper) did the Industry start picking up again. This policy of protection to the Paper Industry continued upto 1939 and as a result, the Industry was able to step up the production level. This is evident from the fact that the production rose to nearly 60,000 tonnes in 1938-39 from only 33,000 tonnes in 1924.

**II World War and after**: Just before the beginning of the Second World War, the Mysore Paper Mills came into existence in the erstwhile princely State of Mysore. It was one of the most successful manifestations of the policy of industrialisation, in the pursuit of which the then Maharaja of Mysore and his wise and able advisers Sir M.Visweswaraya and Sir Mirza Ismail were pioneers. Around the same time, three more mills (viz, the Rohtas Industry Ltd, Dalmianagar; Orient Paper Mills, Brijarajnagar and Star Paper Mills, Saharanpur) came up. With the establishment of these mills and a few others later, the Paper Industry gave itself that industrial base which even today forms the nucleus for its future growth.
The Second World War, like the earlier War, provided further impetus to the growth of Paper Industry. New units were commissioned and existing ones were expanded. The production of paper increased from about 60,000 tonnes in 1938-39 to over 1,00,000 tonnes by 1945. By then, the Paper Industry had stabilised its base and could exist independently on its own. The Statutory Protection was, therefore, discontinued with effect from April 1, 1947.

Paper, however, once again became a subject of enquiry in 1948 when the Tariff Board carried out a detailed investigative study into the cost of production of Paper Industry. Immediately after the completion of the investigation, the Board’s recommendations were given effect to, as far as fixation of ex-mill price was concerned. But, this Price Control Order was withdrawn in 1950. The year also saw the Industry touching a production level of 1,10,000 tonnes.

**GROWTH OF THE PAPER INDUSTRY IN THE PLAN-ERA**

The Paper Industry has achieved a significant progress during the successive Five-Year Plans. This is evident from the table presented below (Table - 1.1).
TABLE-1.1
NUMBER OF MILLS, THEIR CAPACITY AND PRODUCTION

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of units</th>
<th>Capacity (in tonnes)</th>
<th>Production (in tonnes)</th>
<th>Capacity Utilisation(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>17</td>
<td>1,37,000</td>
<td>1,16,000</td>
<td>84.67</td>
</tr>
<tr>
<td>1955</td>
<td>21</td>
<td>1,86,000</td>
<td>1,85,000</td>
<td>99.46</td>
</tr>
<tr>
<td>1960</td>
<td>25</td>
<td>4,00,000</td>
<td>3,45,000</td>
<td>86.25</td>
</tr>
<tr>
<td>1965</td>
<td>52</td>
<td>6,44,000</td>
<td>5,39,000</td>
<td>83.70</td>
</tr>
<tr>
<td>1970</td>
<td>57</td>
<td>7,68,000</td>
<td>7,58,000</td>
<td>98.70</td>
</tr>
<tr>
<td>1975</td>
<td>74</td>
<td>10,42,000</td>
<td>8,29,000</td>
<td>79.56</td>
</tr>
<tr>
<td>1980</td>
<td>123</td>
<td>15,38,000</td>
<td>11,12,000</td>
<td>72.30</td>
</tr>
<tr>
<td>1985</td>
<td>251</td>
<td>23,60,000</td>
<td>15,00,000</td>
<td>63.56</td>
</tr>
<tr>
<td>1990</td>
<td>298</td>
<td>30,20,000</td>
<td>19,10,000</td>
<td>63.25</td>
</tr>
<tr>
<td>1993-94</td>
<td>298</td>
<td>35,00,000</td>
<td>24,00,000</td>
<td>68.57</td>
</tr>
</tbody>
</table>

SOURCE:  

The growth of Paper Industry gathered momentum during 1955-60 during which the installed capacity was increased by 115.05% and production by 86.49%. During 1960-65, the installed capacity increased by 61% and the production by 56.23%, while the number of units doubled. This period also marked the advent of small paper mills based on agricultural residue and waste-paper. During 1965-70, there was only a marginal increase in the number of mills. Further, though the capacity increased by 19.25%, production went up by 40.63%. The period 1970-75 saw the
establishment of another 17 units (mostly small paper mills) and the capacity increased by 35.68% and production by only 9.37%.

The decade 1965-75 was a period of stagnation, for there was no fresh investment in the Paper Industry. Even the increase in the capacity by about 4,00,000 tonnes during this period could not be termed as actual growth. Because, this was partly on account of a reassessment of installed capacity in terms of Government directive under which the paper mills were asked to rework their capacities based on maximum production achieved and addition of balancing equipment.

The low rate of growth was due to the absence of (a) new big projects, and (b) expansion/balancing programmes. Further, small paper mills accounted for most of the additional capacity. The optimum utilisation of capacity rose to 98.70% during the middle of this period from the previous level of about 83.7%, after which there has been a continuous decline in the capacity utilisation.

The decline in capacity utilisation became more chronic in the succeeding five-year period of 1975-80. It was due to the fact that the increase in the number of units from 74 to 123 was almost entirely of small paper mills. This was reflected in the growth of capacity by 47.06%, while production increased by only 34.14%. During 1980-85, two new integrated
pulp and paper mills came on stream. The number of small paper mills doubled during this period. While the installed capacity of the Industry increased by 53.45%, the growth rate in production remained at 34.89%. This resulted in the lowering of capacity utilisation to a level of 63.56%. Though the absolute figures varied for the period 1985-90, the percentage of capacity utilisation was stagnant at 63.25% during this period. However, the available figures for the year 1993-94 indicate a slight increase in capacity utilisation - from 63.25% in 1990 to 68.57% during 1993-94. This increase may be attributed to the fact that the rate of growth in capacity during this four year period was only 15.89% as against the rate of growth in production at 25.65% during the same period.

From the table, it is also evident that the number of Paper Mills increased from a mere 17 to respectable 298 during this 44-year period (ie, between 1950 and 1994). During the same period, the capacity of the mills increased from a trivial 1,37,000 tonnes (in 1950) to a remarkable 35,00,000 tonnes (by 1993-94) accounting for an increase by 24.55 times. And most importantly, this 44-year period also witnessed the increase in the actual output of the mills from 1,16,000 tonnes to 24,00,000 tonnes which works out to an increase of 19.69 times. That means, the rate of increase of the production during this period was lower than that of installed capacity. Another note worthy point is the perennial fall in the capacity utilisation during 1970-1990. It declined from a remarkable performance of
98.7% in 1970 to a very disappointing performance of 63.25% during 1990. However, as stated earlier, a reversal of this trend has been noticed during 1993-94.

The changes in both the installed capacity and the actual output of the industry become very clear from the bar-chart presented below [figure: 1.1]
BAR GRAPH SHOWING, PRODUCTION CAPACITY AND PRODUCTION OF PAPER INDUSTRY

FIGURE: 1.1
STRUCTURE OF PAPER INDUSTRY IN INDIA

Paper Industry in India, as in the case of other industries, comprises of a large number of small paper mills and a small number of large paper mills. This classification of the Industry is based on the production capacity.

(1) Small Paper Mills

The mills which are based on secondary raw-materials (such as non-wood plant fibres and/or recycled waste paper), and whose installed capacity does not exceed 26,400 tonnes per annum and which do not possess bamboo/wood pulping plants fall into the category of small paper mills. These Mills are found to subserve the following important socio-economic and national objectives:

i) They utilise agricultural residue and other raw-materials which would otherwise go waste. Consequently, these mills relieve the pressure on scarce forest-raw-material and help to conserve the fast depleting forest reserves; and

ii) They also help to achieve the dispersal of Industry to backward areas.

Important factors which have led to the establishment, and growth, of small paper mills are:

i) availability of agricultural residue in limited quantity, precluding the setting up of large agro-based mills;
ii) inadequate infrastructural support and lack of skilled labour and managerial personnel in rural areas for large mills (where agricultural residue is generated) favour setting up of mills with lower capacity; and

iii) small mills can be set up at a comparatively lower cost and implemented in a shorter period. The low investment and lesser interest burden are the main attractions of such mills.

Despite various facilities and fiscal concessions being extended to small mills, their performance has generally fallen short of expectations. The following factors have been identified as being responsible for this situation:

i) Though the low capital cost of small mills was the main factor influencing the growth of this sector, it indirectly contributed to the installation of inferior and sub-standard equipment, inadequate pulping facility (leading to imbalance), poor quality of civil construction, and absence, or inadequacy, of effluent treatment;

ii) Low production due to imbalance of equipment coupled with inadequate availability of power;

iii) High cost of steam due to transportation of coal by road and low thermal efficiency of boilers;
iv) Problems of uncertainty about the availability of raw-material on a continual basis and also the frequent and wide fluctuation in their prices;

v) Inefficient management (particularly on the part of new entrepreneurs without adequate experience) and the lack of trained manpower;

vi) Absence of technically suitable and economically viable recovery system and which leads to wasteful consumption of chemicals and pollution;

vii) Time and cost overruns at the stage of implementation of project resulting in higher capital cost and consequent higher interest burden; and

viii) Shortage of power and coal.

These factors have resulted in low capacity utilisation which is of the order of 50% and below. This, in turn, has led to cash losses and inability to service the institutional finance. As a result, many small mills have become commercially non-viable. Hence as many as 90 units have been shut-down.

In view of poor performance of small units in general and their inability to service institutional finance in particular, it has been suggested that the financial institutions should go slow with their further assistance plans to
mini-paper units. Though the creation of additional capacity through new units is not considered desirable, it has become essential to enable the existing units to stabilise their operations at a reasonable level of capacity utilisation and improve their viability. This is in view of:

i) Socio-economic considerations;

ii) The need to conserve primary forest raw-material resources; and

iii) To utilise properly the substantial investment which has already been made in the small mill sector.

In the light of the above, the following remedial measures have been suggested to improve the performance of small units:

i) Fiscal concessions by way of substantial increase in excise-duty relief;

ii) Infrastructural support by exempting from power cuts and allocating sufficient coal on priority basis;

iii) Development of suitable recovery system;

iv) Grant of special subsidy to cover the cost of effluent treatment;

v) Simplification of equipment, particularly on the pulping side, and development of standard methods of pulping; and,
vi) Increased use of waste-paper and de-inking. The use of imported waste-paper, in particular, requires to be organised on a systematic and long term basis so as to secure preference in price as well as freight.

Hand-made Paper Industry: The Hand-made Paper Industry\(^1\), a traditional craft, is a recognised village industry under Khadi and Village Industries Act, 1957. It receives special assistance from the Khadi and Village Industries Commission (KVIC). The Industry normally utilises textile fibre derived from rags, gunny bags, cotton linters and other waste-material. The total production of hand-made paper in the Country is about 6,000 tonnes per annum with a sales value of about Rs.5 crore. Though it is a highly labour-oriented industry, with a wage component of 30-35%, its growth in India has been very much limited by the high cost and non-availability of raw-materials in adequate quantity besides many marketing problems.

1. Hand-made paper sheets are formed by dipping moulds in a pulp suspension and draining the water by rising the mould, leaving a deposit of pulp on the wire. The sheets are pressed and lifted by hand for drying. It is the action of lifting by hand which defines handmade paper and there is a strong ideological bias attached to this aspect. Handmade paper has a higher average strength and its performance and durability are very good due to high cellulose content and restricted chemical treatment. As a result of these distinctive properties, it is used for specialised purposes, such as artists' water colour paper, personalised greeting cards, and certain other items of stationery.
(2) Large Paper Mills

Of the total of about 300 mills, around 30 mills fall into this category with an annual production capacity of more than 30,000 tonnes each. Most of these mills are established during the last 25-30 years. They account for nearly 70% of total production of paper in the Country. It is estimated that for setting up of a new greenfield capacity, the investment required is of the order of Rs.40,000 per annual tonne.

The general financial position of these large mills is found to be far from satisfactory. This can be understood from the following findings of a study undertaken by M/s. A.F. Ferguson & Co.

i) The capacity utilisation has been declining due to several factors such as non-availability of raw-materials, power shortage, etc. Consequently, average capacity utilisation is only about 75%. Besides, the input costs have been rising on account of equipment not being appropriate and balanced. For example, pulp mills which were processing bamboo are now being used for processing hardwood, and boilers hitherto accustomed to use superior quality coal now having to use inferior quality coal. Further, though most of the paper mills have to work at 100-110% of their capacity just to achieve break-even level, their actual average capacity utilisation is only about 75%.

Besides, some of the units have been operating even below cash break-even level thereby incurring cash losses. As a result, even if the Industry had operated at 85% level, it would not have been in a position to earn even a modest post-tax return of 12% on the net worth;

ii) The profitability of the Paper Industry has been below the composite Industry average for the 5-year period from 1977-78 to 1982-83;

iii) The Paper Industry had a relatively low margin on sales at 8.4% as against 11.5% for the total sample, and a sales-to-capital employed ratio of 1.15 times as against 1.76 times for the total Industry;

iv) During the last 10 years (ending 1983), the rate of increase in input costs had exceeded that for sales realisation. This is evident from the fact that though the cost of production has increased by 186%, the sales realisation has increased by 139% during this period;

v) In the recent years, the Industry has been registering a declining trend in profits and in respect of all indices of profitability. The P/V ratio declined from 49% in 1974-75 to 28% in 1982-83. The inability to generate adequate contribution has impaired the cash-flow generation and consequently, the ability to service borrowings and meet other fixed expenses;
vi) The financial performance shows that current liabilities are increasing at a pace higher than that of the current assets and therefore, the units are experiencing a number of difficulties with respect to payments. The mills also report a lower asset-turnover and higher capital intensiveness and adverse debt-servicing ability for new units. The Industry is, therefore, finding it very difficult to attract fresh investments. This situation is aggravated by the heavy incidence of depreciation and the cost of capital for new investments. The Industry may not, therefore, be able to obtain funds for modernisation which would further worsen its plight.

The unsatisfactory working results of large integrated paper mills are attributed to following factors:

i) Inadequate availability of raw-materials;

ii) Impact of controls on the Paper Industry which have adversely affected their profitability;

iii) Demand recession;

iv) High cost of inputs;

v) Lack of infrastructural support;

vi) High incidence of taxation;
vii) Burden of interest and depreciation for additional investment; and,

viii) Lack of managerial skills.

It is evident from the above that, there is a need for corrective measures to be taken by both the Government and the Industry. The measures should enable the Industry to return to a viable financial position and to attract fresh investments for the creation of additional capacity which is very essential to meet the increased demand in future. This is necessary as paper is an essential commodity and would necessarily be required for the development of the Country. Modernisation and technology upgradation in the existing units and expansion of the units to economic levels (wherever necessary) and formulation of appropriate plans (to ensure adequate and continued raw-material supply) would mitigate the problems of large scale paper mills.

**PAPER INDUSTRY TODAY**

After a protracted period of adversity which blighted Indian Paper Industry, the period beginning from 1989 onwards has been witnessing the onset of a considerably improved state of affairs. This period of comparative well-being and the much improved performances that have been posted by the most progressive paper units, perse, could lead to a conclusion that the ‘worst is over’. Nothing could be further from the truth. The Paper Industry is full of sick paper mills located all over the Country. The Board for
Industrial and Financial Reconstruction (BIFR) has more than a dozen paper units in its portfolio. The number of small paper units which are sick could be much more. A very capital-intensive nature of operations, the acute paucity, and rising prices, of most of the raw-materials, inadequate supplies of coal and power, the rising dependence on imports, the pronounced foreign exchange crisis, and appallingly rampant technological backwardness are the important problems that continue to trouble the Industry. Still, on the face of it, the Paper Industry appears to display all the health and growing cheer of an Industry, which from early 1989 onwards, seems to have got a new lease of life.

Thanks to a pronounced narrowing down of the demand-supply chasm, much enhanced sales realisations and diversification into value-added varieties, there has been a dramatic transformation in the working of paper units countrywide. While the Industry leaders have jumped from being 'good' performers to 'superlative' performers, even the average or below average units have produced much improved financial results and quite a few have even returned to the dividend list. The Stock Exchanges, always quick to over-react to what appear to be 'turn around' sectors have quickly once again taken paper scrips into their affectionate bearhug and, countrywide, paper scrips have been much sought after. Paper scrips have recorded very high capital appreciation and even the dividend pay-outs, perse, have been encouraging.
This positive trend appears to show no signs of a slowdown in its momentum. When compared to the past, performance of paper units during 1990-91 is definitely much improved and in fact, it could be the best ever in the turbulent history of this sector. Does that mean that the Industry, having weathered all the tremendous travails of the past with resilience, is now all set for a renewed renaissance, a smooth and long period of buoyant bliss ahead in the nineties? Probably no.

It is necessary that any review of the Paper Industry's future outlook should probe deeper into the manifold and myriad problems confronting the Industry, and which, sadly, appear to show no signs of being even contained, let alone be solved. On the contrary, without intending to indicate too pessimistic, it appears most likely that these problems will get only further exacerbated in the near future.

What are these problems, any way? In the words of Dr. M.K. Raina, Chairman of the Joint Committee of the Paper Industry, Senior Vice-President of M/s. Ballarpur Industries Ltd, and amongst the most respected authorities on the Indian paper scenario, "the most severe problems facing the Indian Paper Sector today are those of raw-materials, or rather, the lack of them! The total demand for paper board and newsprint, which is presently around 2.5 million tonnes is envisaged to rise to around 4.1 million tonnes per annum by the turn of the Century and double to 8.1 million tonnes per annum by 2015 A.D. As against this, forest raw-material requirements
would increase from 6.4 million tonnes per annum to 10.8 million tonnes per annum by 2000 A.D. and to 20.2 million tonnes per annum by 2015 A.D. A survey, however, of the raw-material inputs available to the Paper Industry reveals that bamboo and wood are being utilised to the extent of around 3.2 million tonnes per annum, yielding in turn, around 1.2 million tonnes per annum of paper and newsprint.”

Consequently, bagasse appears to be the raw-material of the future. Given the large scale cultivation of sugarcane in the Country and the increasing availability of bagasse from sugar extraction, it appears that bagasse usage as a prime raw-material, a trend which is already gathering growing acceptance, should acquire even greater prominence in the near future.

In the light of glaring paucity of forest - based rawmaterials, bagasse acts as an important raw-material alternative, and it is available nation-wide. But the high transportation costs and the problems associated with the collection and storage have made it difficult to depend on this. Though there appears to be little alternative to resorting to increasing usage of bagasse, there is a dire lack of an organised machinery for procurement and consistent collection of the same. There are paper units which are located in proximity to sugarcane growing areas and sugar mills. They are,

therefore, able to tie-up with either bagasse contractors or farmers directly so as to ensure adequate supply of bagasse. But quite a few units which are not so conveniently located find it difficult to obtain required quantity of bagasse⁴.

"Yet another problem is the crying need for a composite and comprehensive conservation of bagasse. While the Paper Industry is reeling from severe shortage of raw-materials and needs every tonne of bagasse that it can get, thousands of tonnes of bagasse are burnt as fuel, even when other fuels are available. This is a deplorable thing. The Government must, therefore, ensure that bagasse is not burnt as fuel, but is instead made available increasingly, if not exclusively, for the manufacture of paper"⁵.

Even if the use of bagasse were to rise to as high as 50%, from the present level of around 15-20% (of the total raw-material input), output of paper from the same would rise to 6 lakh tonnes per annum by 2000 A.D and to 8.5 lakh tonnes per annum by 2015 A.D from the present (bagasse-based paper) output of about 2 lakh tonnes per annum. The same applies.

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even in the case of straw. Its dispersal over a wide area and its need as cattle fodder cannot be denied. Besides with improvements in rice and wheat cultivation, the recent 'dwarf' varieties of rice and wheat have reduced the quantity of straw available.

Mr. Yogesh Mehta suggests that "recycled paper is another important raw-material source that is acquiring growing importance the World over. In nations like USA, Canada, Australia and all over Europe, there is increasing Governmental support and industrial inclination to increasingly use waste or recycled paper as a raw-material. It is freely available, it causes no ecological degradation and it can be used to make good quality paper. Our Government would do well to be increasingly more supportive to the proposition of using greater quantities of Indian waste-paper in paper production"6. However, Sri H.S. Sanwal7 argues that waste-paper alone cannot be used for making good quality paper. Because, quality of Indian newsprint has generally been regarded as 'not-too-good' due to lack of 'de-inking' facilities in most of the mills. Further, use of waste-paper to make packets in India limits the quantity of waste paper available for the manufacture of paper. Therefore,

indigenous waste-paper may not offer any great source of relief as raw-
material of any great significance. Against this backdrop, the Hobson's
choice facing the Industry is either to import newsprint, waste-paper and
pulp which would be a tremendous drain on the country's already precarious
forex situation or alternatively, the Industry could be allowed to resort to
industrial plantations. Indeed, as on date, the aggregate foreign exchange
outgo on this account is around Rs.774 crore per annum and would soar
to almost Rs.2,000 crore by 2000 A.D and to an awesome Rs.6,400 crore
by 2015 A.D, if the present levels of imports are continued. This is a
massive level of forex outgo which the Country can ill-afford in any case.

The Government, facing a veritable nightmare on the forex front, has
been quick to come down with a series of measures aiming at checking forex
outgo. Amongst the more controversial steps announced, imposition of a
severe 133% margin\(^8\) on all imports occupies an important place.
Sri.Ashok Mahansaria, Director of M/s. Balkrishna Industries, strongly feels
this imposition as deplorable as it adversely affects the entire industrial
sector in India. The impact is more so on the industries which are depending
heavily on imports as India produces virtually no pulp at all. And the Central
Pulp and Paper Mills, the sole large Public Sector Undertaking set up in this
regard, is sick for the last few years. Without pulp, it is impossible to

\(^8\) Cash-margin required by RBI from importers for opening letters of
credit.
make good quality and value-added specialty papers. India, so far, has been importing almost its entire requirements of pulp and bulk of waste-paper. The levy of this high margin on imports is going to be a crushing blow for the Paper Industry. While larger, well-doing and cash-rich units may withstand this crisis, (inspite of their liquidity being greatly besieged and their interest costs shooting up), this will deal a death blow to a lot of smaller and not so financially secure paper manufacturers, especially those largely dependent on pulp and waste-paper imports. Just as the Paper Industry was finding its bearings, after a prolonged stretch of very rough weather, this move by the Government appears all set to deliver a body blow and aggravate widespread industrial sickness in the Paper Industry.

Considering the huge amount of investment required in setting up of a greenfield paper unit, it is not very surprising that not too many new units have come up in the recent past. A paper mill with an annual capacity of 1,00,000 tonnes would require an initial capital outlay of around Rs.400 crore to set up and the cost works out to Rs.40,000 per tonne. Even if we assume a 3:1 debt-equity ratio, it would mean an equity component of Rs.100 crore. Further, there would be Rs.300 crore of debt to be procured. Even if today's industrial and capital market scenario does permit such a venture to take off, the costs of servicing both equity and debt would be

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very high. Against this background, if the existing paper mills have been doing well, it is largely due to being older units, their plant and machineries have been almost (if not totally) depreciated by now and their project costs are much lower. The cost per tonne is, therefore, around Rs.10,000 - Rs.12,000. Even if we reckon the recent expansions, it would come to around Rs.15,000 per tonne.

As at the end of 1990, the total installed capacity of Indian Paper Industry was around 30.20 lakh tonnes per annum. Out of this, as much as 6.50 lakh tonnes per annum accounting for 21.52% was lying idle and unused due to sickness and/or closure of units. Therefore, realistically speaking, while our absolute capacity utilisation is 63.25% with a production of 19.10 lakh tonnes per annum, it would actually be around 80.59%, when one considers that actual `operating' capacity is around 23.70 lakh tonnes per annum. Coupled with the tremendous problems of raw-material paucity, the new RBI directive on import of raw-material was believed to have led to a fall in the production by as much as around 3 lakh tonnes per annum since 1991-92 and put a lot of small and medium sized units in a life-and-death situation.

As if things were not already bad enough, the Government has also hiked, in the recent past, the import duty on waste-paper from 20% to 40%. "This is appalling. India generates, indigenously, hardly enough waste-paper to sustain paper manufacture, thus leaving the Industry with no alternative
but to import. And, to add insult to injury, over and above a 133% margin on imports, the Industry has been burdened with a 40% import duty. It must be appreciated that the Industry resorts to waste-paper imports, only because they constitute a vital raw-material ingredient, which is hardly available in India. It is, therefore, unjust to further compound woes of the Industry as it has to pay high import tariffs\textsuperscript{10}.

In other words, the chasm between demand and projected availability of different raw-materials, which is currently around 6 lakh tonnes per annum, is expected to rise to as much as 15 lakh tonnes per annum by 2000 A.D and to 47 lakh tonnes per annum by 2015 A.D. These figures appear absolutely stunning if one considers the total paper demand of 81 lakh tonnes per annum by 2015 A.D.

Over four and a half decades after India attained Independence, paper consumption in India has remained at 3 kgs per-capita, probably the lowest in the World. Even nations like Pakistan and Srilanka have a higher per-capita consumption rate of around 4 kgs. And given the raw-material crisis on the horizon, the Country seems to be heading towards a paper famine in the near future. If we do not develop our own sources of raw-materials or if we do not generate the requisite resources to import them and given the run

away rise in our population (and resultant demand for paper), the job of meeting the growing needs for paper will be terribly difficult, if not impossible.

One major solution lies in the setting up of industrial plantations. The present total land area in India under forest cover which is merely 11% needs to be raised to a level of 30% by generation, conservation and preservation of forests. Because, the primary raw-materials of this core sector Industry are obtained from forest resources. Viewing the dire shortage of forest-based raw-materials, the Centre has been following a judicious policy of encouraging the use of unconventional raw-materials obtained from agricultural sector and which are, therefore, renewable at a much faster pace than forest based raw-materials. This is also being further supplemented by the import of fibrous raw materials, waste-paper and wood pulp under OGL, with a view to conserve national forests. But, only these measures will not suffice as the problem appears to be very important. The long term solution lies in rising industrial plantations backed up by the application of modern scientific agricultural techniques and technology so as to ensure speedy and optimum output from land, otherwise lying unused. This is the only course through which the Government and the Industry can co-operate to ensure self-reliance for the Paper Industry as far as the raw-materials are concerned.
The Paper Industry in this Country is little over a Century old but still, it continues to be plagued by a massive and widespread technological obsolescence. Except a few progressive and technology-conscious units, the Paper Industry, by and large, continues to operate with an appalingly obsolete level of technology. A major portion of all the machinery used in the Industry is over five decades old which has resulted in dismally low level of capacity utilisation. The operations are capital, energy and raw-material-intensive and the quality levels are very poor when compared with the international quality norms. Of the installed capacity of around 24-25 lakh tonnes per annum by the large mills, a capacity of nearly 12 lakh tonnes per annum (ie, about 50%), is machinery-wise estimated to be over 30 years old. Naturally, this calls for widespread replacement, renovation and modernisation. The plight of the smaller mills is equally bad. A capacity of almost 6-7 lakh tonnes per annum, therefore, requires immediate renovation/modernisation.

Not that the Industry is unaware of the peculiar situation that it is in. Improvements in this regard would naturally be welcome. But, the point is that there are understandable reasons for this impasse. The Industry, embittered by decades of Governmental apathy and battered by what appeared to be virtually unending adversity, did not have, or was not willing to commit any more funds for technological upgradation. After all, for an Industry that was deep in the red until recently, survival was accorded the highest priority and certainly not further capital investment.
During 70's and 80's, the Paper Industry was subject to rigid controls by the Government. In 1974, the amount of white printing paper that each paper mill could make and sell came under Government control. Since paper was undoubtedly the staple material for education, the idea was approved. Barring the small-scale units, each paper mill was expected to devote 30% of its production capacity to this variety and to sell it to the Government at a pre-determined price. As usual, the Industry blamed for its low profitability on this control. In 1983, the proportion of production earmarked for white printing paper was, therefore, reduced to 20%. The Industry was still unhappy. Its claim was simple. Since a part of the production was sold at a controlled price, the Mills were obliged to charge correspondingly higher prices to the open-market customers. If they did not follow this, their profitability would have suffered discouraging new investment. After four years of waiting and several rounds of high-power lobbying, the price and category controls on the Industry were removed during 1987-88. Today, when prices are spiralling, no one in the Industry is concerned about checking them. Yet, one must not hastily rush to the conclusion that this calls for reimposition of Government controls. Because, if controls are reimposed, the customer may have to pay even higher prices than before. If the huge unutilised capacity starts humming with the help of the BIFR, prices will soon come down to more sober levels. In the meantime, the Industry is set for a few more years of high profits.
CONCLUSION

With the Industry beginning to get back into the black, it is imperative that a higher and intensive pace of remedial/supportive measures are initiated. But, the Government and the concerned financial institutions appear to have learnt nothing from the past. The accent appears more on granting licences to new units and capacity expansions, rather than on improving technological practices, improving raw-material availability, boosting capacity utilisation and paper consumption in the Country. Unless suitable and timely steps are taken, the Paper Industry would continue to be plagued by the Indian industrial nightmares of obsolete machinery, low productivity, high costs, consumer resistance, recession, sickness, an utterly miserable export presence, etc.

India would do well here to learn from the example of Japan. Without growing even a tonne of raw-material, it has emerged as the second largest pulp manufacturer and the fourth largest paper manufacturer in the World. Indonesia and Malaysia also present similar examples of nations. They were till recently virtual non-entities on the ‘world paper map’, but now thanks to strong Governmental support and entrepreneurship, are making a marked dent in the world markets.

If we are to ensure that our growing population’s needs for paper are to be met, and that our low per-capita consumption is to be increased to a respectable height, then it is imperative that the right conditions are created,
ensuring a supportive environment for the Paper Industry. It is very sad to note that India still does not have a comprehensive and composite 'paper policy', even a 110-years after the Industry made its debut. Paper is rightly acknowledged as the reflection of the well-being of any developed society and thus, a healthier Paper Industry is imperative for the well-being of an industrially well-developed and increasingly self-reliant economy.

MAJOR FINDINGS

The major findings of this chapter are presented below:

i) The Industry had registered remarkable growth during the Plan era, in respect of all such parameters as number of units, installed capacity, output, etc;

ii) The Industry has been faced with a host of problems, the most important one being that of lack of adequate raw- materials, which have hindered optimum capacity utilisation and profitability of the units. Except a few progressive and technology-conscious units, the Paper industry, by and large, continues to operate with an appallingly obsolete level of technology. A major portion of all the machinery used in the Industry is over five decades old which has resulted in dismally low level of capacity utilisation. The operations are capital, energy and raw material-intensive and the quality levels are very poor when compared with the international quality norms;
iii) The small paper mills, as compared to large scale units, are in a very bad shape due to inadequate, imbalanced and substandard plant and machineries, shortage of supplies, lack of technical and managerial expertise, etc;

iv) Rigid controls exerted by the Government on price and category of output, particularly during 1970's and 80's, had adversely affected the profitability of the Industry.
SUMMARY OF THE CHAPTER

The Indian Paper Industry presents a classic example of contradictions. On the one hand, the Industry is beset with a plethora of problems like rising input costs, alarming shortage of raw-materials, severe forex paucity (at least until recently) leading to a strain on our raw-material importing capabilities, a marked lack of large-scale pulp-making units as also a woefully low per-capita consumption rate. On the other hand, a few paper units have been steadily producing ever-improving results with higher sales and profits. The answer to this situation lies in the blunt reality that despite the severe competition, the paper units are poised on the brink of being in a virtual sellers' market. All through the period of the late seventies to the beginning of 1990, the Paper Industry faced the spectre of not being able to pass its realistic operational price increases on to the consumers. Facing increasingly daunting price-resistance, the Industry, in turn, was forced to go in for making paper of lower quality. But today, the situation is changed. Now onwards, while the demand for paper will rise concurrently with quality standards, consumers will have to pay for quality which will mean higher costs. As paper being an absolutely indispensable basic need of our society, prices will inevitably rise, as paper supply shortages loom larger ahead. Therefore, in a market which will growingly see the demand for paper far outstripping the supply, the progressive paper units are bound to demonstrate that, for them, the best is yet to come.