# Chapter 6

# Summary and Conclusion

## 6.1 Introduction

This chapter has two parts:the first part contains the summary of the study,and the second part deals with the policy implications along with a discussion of an appropriate government policy.

## 6.2 A Summary

The aim of the present study is to examine stagnation in the Indian jute industry.To begin with, the explanations offered by different researchers have been examined.They may be classified, for analytical convenience, into demand-side and supply-side hypotheses.Among the demand-side hypotheses, major emphasis is on identifying the causes of the decline in the demand for the traditional jute products of India, particularly in the export market (Singh,1964; Nayyar, 1975; Dhindsa, 1981). This in no way indicates that there is no possibility for further growth of the jute industry . This is especially so, when different jute research institutions have already developed new products for commercial use (Economic and Scientific Research Association,Jute Industry In India, 1982; Government of India: Annual Report, 1994-'95, National Institute Of

Research On Jute And Allied Fibre Technology). Some of the new products of these institutions are wall-cover, bed cover, sofa-cover, home furnishings, jute reinforced plastics (used in boats and furnitures), table mat, jute blanket, door curtain, particle board from jute stick and jute waste, paper, newsprint, etc. Hence, the jute industry may not confront stagnation, if the jute industrialists could make use of these results. These possibilities have, so far, not been exploited to a large extent by the jute industrialists in India, and there is not much discussion on their inability to respond to such opportunities in the existing literature.

Therefore, the stagnation in the jute industry, so far as it is related to the absence of product diversification, should be studied by taking into account of the supply-side bottlenecks which include the structure of the jute industry organisation and absence of investment motivations,the absence of suitable machines (specially in the small scale sector) for producing mixed fabrics and many diversified products and of the demand-side factors as well.

In analysing the supply-side issues of the jute industry, our major concern is with its organisational aspects. Most of the jute firms are family-managed (Rai, 1978). They invest when they find that their market is assured. They never invest for creating market for their products. Consequently, when the industry declines, they leave the present one, and switch to relatively expanding industries for quick return. More importantly, their switching is determined, given the family-based system of ownership and management, by their family-nexus. Therefore, there is no compulsion for them to develop their jute firms.

This tendency is strengthened among the jute millowners because of the opportunities made available to them through the government policy to industries other than jute textiles. Thanks to the import-substituting industrialisation strategy pursued by the government in the post-independence period, they were assured protected domestic market for their products, and ensured import of risk-free new technology through technical collaboration, export of non-traditional commodities with subsidies and availability of institutional finance at easy terms for producing the new import-competing domestic products.

This is not true for the jute industry, for, the developed industrialised countries do not have any stake on its development and had long ceased to develop modern textile technology for jute processing or processing mixed jute fibres. Hence, there is no scope for importing proven technology for jute manufacturing or for foreign financial collaboration in Indian jute industry. Its revival requires the development. of an indigeneous technology, thereby necessitating research and investment by them on R and D for which the product market is not protected. This involves risk.

Confronted with it, these domestic jute industrialists switched their interests from their own jute industry to other non-jute industries like cement, chemicals, engineering, etc. (Hazari, 1986). Consequently, in the jute industry no new investment has taken place as a long-term strategy for overcoming its demand limitations. This leads to stagnation in the industry.

The present study considers a relatively long period of 40 years (1950-'90), and is based on secondary data from different sources: offices of Indian Jute Mills' Association, Jute Manufactures Development Council, Jute Commissioner, Jute Corporation Of India, Indian Jute Industries' Research Association, etc.

Chapter 2 surveyed the changes in the demand for traditional jute goods during 1948-'90, The major findings are: (i) during 1948-'64, world consumption of jute goods rose significantly ; (ii) since 1965, world exports of jute products have continued to fall, except for 1976 to '80-'81, During 1976 to 1980-'81, it increased by about 20 percent. But during 1966-'68 to 1973-'75, world exports declined by roughly 10 percent, and during 1981/82 - 1983/84 to 1987/88 - 1989/90 by over 9 percent ; (iii) the decline in the demand for these jute goods has been the greatest in the developed countries. This tendency has also been marked, though less severe, in many developing countries.

But the causes of this decline in demand for jute goods in the developed and the developing countries are different. For the developed countries, the decline is largely due to the development of alternative techniques of storage, transportation and distribution which include new bulk-handling techniques, consumer packaging and containerisation and the emergence of substitute materials like paper and plastics.

In the developing countries, namely Latin America, Africa and the Near Eastern countries (e.g., Egypt, Iran, Iraq, Sudan, Syria, Turkey, Jordan, Lebanon, Libiya, Saudi Arabia, etc.), the import demand for jute products declined, because in their attempt to industrialise their own countries, they set up fibre processing industries which use local resources and labour intensive technology

(Thigpen and others, 1987). They processed locally available less expensive (relative to raw jute) fibres (sisal in Africa and Kenaf in Latin America) with imported or locally available raw jute or alternative similar fibres to produce bags to satisfy their domestic demand. However, by 1970s, the cost of manufacturing jute and similar goods in these developing countries rose relative to that of the traditional jute producing countries, because they had to import raw jute for their industries. The maintenance of high cost of manufacturing through protection is an indication of inefficient allocation of world resources. A better alternative for these countries is to shift resources from this industry to industry using cheaper synthetic raw materials from the United States. Many of the jute mills in the Near Eastern, Latin American and African countries are now engaged, either totally or in part, in producing synthetic bags (Thigpen, Morongiu and Lasker, 1987).

As the foreign demand for jute goods in both developed and developing countries is contracting, the export prospects of the Indian jute industry was adversely affected.

In this backdrop of a declining global market for jute manufactures Chapter 3 discussed the changes in

India's relative export share in world jute trade (manufacturing).

Pakistan improved her relative export share in jute manufactures at the expense of India during 1955-'71 and India further lost her share to Bangladesh during 1971-'90. It is found that India's relative export share in the combined exports of both India and Pakistan fell from roughly 93 percent in 1957 to over 58 percent in 1970-'71 in case of hessian and from roughly 88 percent in 1957 to roughly 38 percent in 1970-'71 in case of sacking. Again, it is also observed that India's relative export share in the combined exports of both India and Bangladesh fell from roughly 60 percent in 1972-'73 to about 45 percent in 1989-'90 in case of hessian and from about 35 percent in 1972-'73 to less than 5 percent in 1989-'90 in the context of sacking.

The reason for India's poor export performance is not technological (though Pakistan and Bangladesh had relatively new machineries, and in India, more than 50 percent of the installed capacity in jute mills is more than 70 years old (Government of India: 1981)) but largely lies in higher financial incentives to produce and export jute goods received by both the Pakistan and Bangladesh jute industrialists from the government as compared to their

Indian counterparts. This is essentially due to the fact that unlike Pakistan and Bangladesh, the Indian jute industry has, since the early years of planning, never been on the priority list for the country's industrial development (Government of India: Planning Commission, 2nd Five Year Plan, 1956). Priority was, in the beginning of the planning era, placed on the development of basic and capital goods industries for industrial development. Further, cement and chemicals including fertiliser industries also ranked high in the list of Indian priorities. Hence, for Indian industrial development, the government put major emphasis on import-competing basic industries which received high rates of protection. This operated as a tax on traditional exports and diverted resources to the import-competing sectors. Thus, in the mid-fifties, while export industries like jute were denied foreign exchange for their programme of modernisation, a much too liberal approach was followed in allocating foreign exchange to many non-essential industries in the name of import-substitution (Singh, 1964). But this was not true for the Pakistani and Bangladesh jute industries. From the beginning, jute exports was on the priority list for industrial development in both these countries.

estimated mills' purchase price of raw jute, as reported in the Annual Survey of Industries data, reveals that the mills are inclined to report purchase prices which are much higher than the harvest prices.

This difference is substantial and cannot be explained in terms of marketing costs and margins alone. Actually, the jute mills show their minimum manufacturing profits or even losses in the industry balance sheets through over-pricing of raw jute purchases and transfer the rest to their trading divisions by virtue of their informal links with the interests controlling the jute trade. This is a sort of "transfer pricing" - so much discussed in the context of multinational companies. In this way, the jute mill-owners are able to earn large trading profits at the cost of their manufacturing profits, concealing the true profits of the jute interests.

One possible reason for showing minimum manufactuting profits in the industry balance sheets is that these trading gains escape the tax net and are easily diverted to other profitable lines for quick returns.

Finally, the jute mill-owners minimise wage costs through (a) raising the workload, (b) increasing the proportion of 'badli' workers to the total workers at the industry level from 20 percent in 1960-'61 to about 41 percent in 1983, thus, denying certain benefits - retirements, leave, etc. to them, and (c) reduction in the wage-rate and the workforce as well through fresh wage agreements when the closed mills are re-opened.

But there are alternative routes through which the jute mills can reduce raw jute costs (e.g., through improving the average per acre productivity of raw jute, etc.) and wage costs (e.g., by exploring the technological possibilities of reducing the wage costs in weaving in particular through the installation of relatively modern machines). But the jute industrialists refused to see this way, and went on maximising profits relying only on traditional methods of jute cultivation and jute manufacturing.

Chapter 5 provides arguments explaining why the industry acted primarily on such a perspective. This chapter also discussed the absence of initiative of the domestic jute industrialists to modernise their jute firms.

Its usual explanation has been in terms of the decline in the demand for the industry's traditional products, particularly in the export market. But almost all products experience, as evident from our earlier discussion on the 'Product-life cycle' (Vernon, 1966; Hirsch, 1967), cycles in exports and export of a product and ultimately confront a relatively stagnant or declining demand in their 'mature' stage. This does not necessarily imply the decline of the industry, for the industry is able to sustain itself if there is a compensating wave of product innovations in it. This is purely a long-term phenomenon, and depends essentially on the initiative of the jute millowners. Therefore, at least partly, the behavioural pattern of the jute industrialists explain the stagnation.

The existing literature attributes stagnation in this industry to their commercial origin (Government of India : Committee on Public Undertakings, 13th Report, 1977-'78). Though there has not been much discussion on this issue, it emphasises the fact that most of the Indian jute manufacturers are essentially the jute traders who later on made their way into its manufacturing. The interlocking of the trading and manufacturing interests still continues. Consequently, the jute millowners show their minimum manufacturing profits in their annual accounts through over-pricing of their raw jute purchase prices by their jute mills and transfer the gain to their trading divisions by virtue of their informal links with the interests controlling the jute trade. Therefore, a good part of the trading gains accrues to the same financial interests who control the jute mills. This dissuaded the jute manufacturers from product diversification.

But this explanation is not sufficient in the sense that these jute millowners are essentially in favour of maximising their short-run profits only by adjusting the components of variable costs. They avoid taking the risk of making long-run investment, essential for adopting innovative strategy. The result is that they fail to create opportunities for themselves and converting them into substainable competitive advantages in case of new products and new markets. Therefore, they operate only on the basis of a short-run perspective and never undertake investment with a long-run vision for overcoming the demand or supply bottlenecks of the industry. Consequently, they invest only when they find that the market for their products is expanding. That is why, during the late 1950s, to meet the demand from the overseas carpet manufacturers, the Indian jute millowners decided to produce carpet backing cloth, and the industry invested about Rupees 60 crores in plant and machineries (Gupta, 1986). Again, in recent years, some mills have taken initiative to meet the growing export demand for yarn.

The preference for short-term profits is largely linked with the business organisation prevailing in the Indian jute industry. Most of the jute-firms in India are family-based (Rai, 1978). The family-based management of the firms prefers a steady accrual of current income to themselves so that their expensive life-styles could be maintained. They distribute a major part of the firm's profits as dividends, and this eats into the reserves and capital of the firms (Bagchi, 1981). This is why, these owner-managers are left with little funds to undertake at the opportune moment product and process innovations, and thereby maintain and improve their competitive position in the market. Moreover, in the family-based system of ownership and management, the switch-over from one industry to another is relatively easy, because it is determined not by personal ability to innovate, but by the family-nexus. Therefore, there is no compulsion for them to improve the innovative ability of their firms. With continued outflow of surpluses from the industry (Government of India: Report on the Committee on Controls and Subsidies, Ministry of Finance, May, 1979) new investment and modernisation of the capital stock in the industry has almost ceased.

Further, whatever investible funds they have are not spent either in their own jute industry or in other expanding domestic industries with the objective of creating/and capturing markets for products through technological innovation, both process and product, as a long-term strategy. In its stead, their usual motive for investment is to exploit the opportunities available to them for quick return without taking risk associated with innovation. Such opportunities in the form of importing risk-free technology through technical collaboration and producing for protected domestic market, availability of institutional finance for production at easy terms, exporting with subsidies, etc. - are abundant in new import-competiting domestic industries, thanks to the policy of import-substituting industrialisation followed immediately after independence. The domestic jute industrialists swithched from the jute industry to these industries e.g., steel, chemicals, engineering, cement, etc.; (Stock Exchange Official Directory, February 13, 1985; Government of India: Proceedings of the Seminar on Rehabilitation And Modernisation of Jute Industry, 1986; Hazari, 1986).

## 6.3 Policy Issues

### 6.3.1. Review of the Government policy(1950-'90).

Before we consider the policy options that came out of this study, it would be worthwhile to review the government policy (and it is the central government which concerned with the industrial policy) towards jute manufacturing and also raw jute production during the post-independence period.

It may be noted that since independence the focus of the government industrial policy was on import-substituting basic and intermediate goods' industries rather than the foreign-exchange earning traditional jute industry (Government of India: Second Five Year Plan, Planning Commission). So, the over-all policy regime indirectly affecting the jute industry is not favourable to this or any other export-oriented traditional industry. What we discuss below are the government policy measures having direct bearing on the jute industry during 1950-'90. For convenience, we divide the entire period 1950-'90 into five sub-periods each having different policy-orientation.

#### 6.3.1.1. Indifferent attitude of the Government during 1950-'55.

Immediately after the partition in 1947, the most important jute-growing areas went over to Pakistan. Not enough raw jute was available in India to meet the requirements of her industry. What is more, India was, because of her strained relation with Pakistan, unable to procure sufficiently large quantum of raw jute for her industry. Consequently, it was not possible for the Indian jute industry to satisfy the total foreign demand for jute products. And in this situation, the European industries with adequate supplies of raw jute from Pakistan increased their exports in the world market for jute manufactures at the expense of India in the early part of the 1950s(Singh, 1964).

Against this backdrop, the focus of the government policy during the first part of the 1950s was, as shown in Table 6.1, on expanding the domestic production of raw jute (Dasgupta, 1975). There was also no other active policy support by the government to enable the Indian jute industry to react aggressively to the West European countries' export efforts. The only important step that the government took in the early years of the 1950s was the attempt to stabilise jute goods' prices in the world market, and this was necessary to improve the competitive position of jute relative to its substitutes. Accordingly, the government imposed, as noted in Table 6.2, a price control in 1950(Singh, 1964). It has been observed that prices of Indian jute goods to the final consumers in the importing countries were not stabilised due to frequent mis-match between demand and supply, at least in the short run. Consequently, the benefits of price control imposed in India went to the foreign countries. Faced with this situation, the government gave up the idea of controlling the jute goods' prices. In its stead, the government did its best to maintain a parity between Indian prices and prices prevailing in the importing countries through an increase, as noted in Table 6.2, in the rate of excise duties on jute products.

**Table 6.1 Government policy relating to raw jute production**

| Period | Steps taken by the government | Result |
|---|---|---|
| 1. (1950-'55) | Abolished acreage control and actively campaigned for 'Grow More Jute'. | The raw jute shortage became less acute in 1951-'52 (Council of Scientific and Industrial Research:The Wealth of India,1960). |

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| Period | Steps | Result |
|---|---|---|
| 2. (1955-'65) | Introduced a quality improvement scheme of raw jute by providing medium term loan and subsidy on the excavation of retting tanks. | The scheme was discontinued during the fifth plan due primarily to the non-availability of land for excavation of retting tanks (Government of India: Task Force on Jute Textiles, 1980). |
| 3. (1965-'75) | (a) Initiated the Intensive Jute District Programme(I.J.D.P.) to raise the productivity of raw jute per acre.<br>(b) Since 1970-'71, the Central government has been announcing a minimum support price for raw jute.<br>(c) In 1971,the Jute Corporation of India (J.C.I) was established with the objective of evening out inter- and intra-season disparities in supply | (a) At the all-India level, an increase of about 97 kg. per hectare was recorded (Government of India: Task Force Jute Textiles, 1980).<br>(b) Since raw jute prices are so fixed by the government that it |

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| Period | Steps | Result |
|---|---|---|
| | (and in price) and ensuring a fair return to the jute growers. | did not adversely affect the unit ex-factory cost and the export competitiveness of the industry, it led, as argued by Nayyar (1976), to stagnant yields. (C) The J.C.I did not have any significant influence on market price, since its procurement amounted to only 10 to 15 percent of total raw jute production of the country (except the years 1985-'86 and 1986-'87). |

**Table 6.2 Central Government policy measures with respect to jute manufacturing.**

| Period | Steps taken by the Central Government | Result |
|---|---|---|
| 1.(1950-'55) in which export demand for jute goods was rising. | (a). To stabilise the jute goods' prices in the importing countries, the government imposed a price control. (b). From March, 1952 onwards, | Jute goods' prices remained unstable in the importing countries. There was |

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| Period | Steps | Result |
|---|---|---|
| | there was gradual reduction in export duties on jute goods which ruled high in 1950 and 1951. However, export duty was abolished in 1955. | a wide margin between prices in India and those prevailing in the importing countries. |
| 2.(1955-'65) when export demand for jute goods was increasing. | (a) Liberalised the import policy for importing jute mill machinery and arranged loans from the National Development Corporation(NIDC) for improved plant and equipment;<br>(b) Announced 25 percent rebate on investments in new plant and machinery;<br>(c) Sanctioned licenses to three domestic firms for the manufacture of jute mill machinery;<br>(d) Provision of foreign exchange for import of machinery for modernisation. | Modernisation in the spinning section of the jute mills took place.But there was no modernisation in the weaving and finishing sections. |
| 3. (1965-'75) during which | In 1966, Indian rupee was devalu- ed ;but this was accompanied by the | India's relative export share declined.In |

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| Period | Steps | Results |
|---|---|---|
| the export demand for jute goods declined. | imposition of export duty on various types of jute goods. So, the net devaluation was less in the context of jute goods' exports. | particular.India lost her export market to both Pakistan during 1965-'70 and to Bangladesh during 1971-'75 |
| 4.(1975-'85) in which period the international demand for jute products started improving. | (a) 'Soft Loan' scheme was initiated in 1976 with a sum of Rs. 250 crores for modernisation of the industry .<br>(b) Jute manufactures Development council (J. M. D. C.) was set up which signified the government's direct involvement in the promotion of jute. | (a) The disbursements amounting to Rs. 1.84 crores were made only in repect of 4 applications upto 1980-'81 [Government Of India : Jute manufactures Development Council (Official documents)].<br>(b). India's relative export share continued to fall. |
| 5.( 1985 -'90) for which the global demand | (a) Order for 'compulsory use of jute goods as a packaging material in 1987 in certain specified products, | (a) The amount of funds sanctioned upto May, 1996 was only 97.72 crores for |

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| Period | Steps | Result |
|---|---|---|
| for jute goods deteriorated still further. | foodgrains, fertiliser, etc.<br>(b) 'Jute Modernisation Fund' scheme was started in 1986 with a sum of Rs.150 crores with concessional interest rate.<br><br>(c) Launching of Internal and External market Assistance schemes to provide subsidy on diversified jute products;<br>(d) Allowed duty-free import of certain machinery of improved technology for a limited period upto 31st December, 1990.<br>(e) A 'Special Jute Development Fund' with a sum of Rs.100 crores was created for the improvement in the productivity and quality of raw jute, assistance to Jute Co-operative Procurement Agencies for construction of godowns, product diversification and Research Development support, and launching of schemes for benefitting the jute workers. | a number of 25 jute mills,but the amount actually disbursed amounted to Rs. 51.71 crores received by 11 mills out of the 25 mills for which funds were sanctioned.<br><br>(b) Most of these funds went to produce jute yarn to meet its growing export demand. |

**6.3.1.2. Active policy support by the Government during 1955-'65**

The government put emphasis on the modernisation of the jute mills in India during the second half of the 1950s and first half of the 1960s. This was induced partly by the growth of an export-oriented jute industry in Pakistan since 1955 and the growing competition from the modern jute mills in the West European countries and Japan as well (Government of India: Programmes of Industrial Development, Planning Commission, 1951-'56, pp.219), and partly by growing export demand for jute goods in the early part of the 1960s.

During 1955-'65, the government encouraged and supported actively modernisation in various ways. As seen from Table 6.2, the government took measures to encourage domestic production of jute mill machinery and abolish export duty on various types of jute goods to promote export market of Indian jute products.

**6.3.1.3. Adverse policies in the form of export duty during 1966-'75**

In 1966, the rupee was devalued; as a result, the unit value of jute goods in terms of foreign exchange was lowered. In view of the low elasticity of demand for jute goods, there was pessimism about the increase in foreign exchange earnings from jute goods as such. Therefore, the government imposed export duties on jute manufactures to safeguard the foreign exchange earnings from jute trade. But the policy had adversely affected the export of jute goods from India, particularly in the long run. Because this gave Pakistan an opportunity to develop an export market through subsidisation of her jute exports. India's relative share in world jute exports dropped to about 53 percent in the early 1970's from more than 70 percent in the early 1960's (Indian Jute Mills Association: Annual Summary of Jute and Gunny Statistics, 1992-'93).

#### 6.3.1.4. A Regime of unstable policy(1975-'85)

Continuous decline of India's relative share in world jute market forced the government to withdraw after June, 1975, export duty on two important items of jute products, namely hessian and carpet backing cloth; and also introduced subsidy scheme, namely, cash compensatory scheme for carpet backing cloth (from October, 1975) and hessian (from June, 1976) [Government of India: Jute Manufactures Development Council (Official Documents)]. When the carpet backing cloth enjoyed compensatory facilities on a regular basis, the subsidies given to hessian were for a brief period [Government of India: Jute Manufactures Development Council (Official Documents)]. Surprisingly, sacking, the most important jute manufactures' item, received hardly any help from the cash compensatory scheme [Government of India: Jute Manufactures Development Council (Official Documents)]. Besides, during 1979-'80, the export duty (which was abolished in 1975) was reimposed to the tune of Rs.100 per tonne on hessian (Economic and Scientific Research Association: Jute in India, 1982).

This instability in the government policies regarding jute export had undoubtedly gone against the long-term export interests of Indian jute products; damped the efforts to expand export market of jute; and may be held responsible for the sharp fall in India's relative export share in the early 1980's to the low level of about 30 percent of world jute exports (Indian Jute Mills Association: Annual Summary of Jute and Gunny Statistics, 1992-'93).

**6.2.1.5 Support in the domestic market during 1985-'90**

As India gradually became a residual supplier in the global market, the government took measures to protect the share of jute in the domestic packaging market. The measures included: (a) legislative measure(namely, the compulsory Jute Packaging Act, 1987) demarcating the areas where the entry of synthetic packaging material was either totally or partially banned; and (b) government purchase of jute bags directly from the producers at remunerative prices.

As a result of these steps, home market for jute goods expanded and the industry increasingly relied on this growing home market.

Further, for technological upgradation, in 1986, the government initiated a scheme named, 'Jute Modernisation Fund' with an initial sum of Rs.150 crores (Table 6.2). This scheme has hardly taken off, since upto May, 1996 only Rs.97.12 crores were sanctioned for 25 mills, while the amount actually disbursed amounted to Rs. 51.71 crores received by 11 mills out of the 25 mills for which funds were sanctioned [Indian Jute Mills Association(Official Documents)].

It appears that the government, thus, followed a two-pronged strategy: (a) to encourage modernisation and diversification by arrangement of loans at concessional interest rates in new product developments, and (b) to ensure for the traditional product items a share of the growing domestic market. However, the prospect of an assured domestic market in the short run defeated the long-term strategy of technological innovation and diversification to create a larger market at home an abroad.

### 6.3.2 Policy implications

The areas where the government policy should be directed, are: (1) ensuring domestic demand in traditional items, (2) increasing the export competitiveness, (3) product diversification - research in new products and development of market for new products, and (4) encouraging changes in business organisation that will be suited to these developments.

(1) Ensuring domestic demand in traditional items

As earlier noted, protection of domestic market in traditional items has been provided by the government for a short period. The domestic jute millowners exploited this opportunity for furthering their short run profits. Such type of support to the industry is of no help for the long run development. Protection in domestic market in the form of compulsory use and/or government purchase of traditional jute products should be linked with long term investment efforts of the jute mills.

(2) Increasing the export competitiveness

For the promotion of jute goods' exports. subsidies were earlier provided intermittantly for a short period. There is no long run vision of the government to promote exports of jute products. Therefore, all these efforts helped little in improving the export competitiveness of the industry. It appears that subsidies should be provided by the government not to the industry as such but to individual jute mills who modernise their units.

(3) Product diversification

Supported by technolodgical developments, jute has already offered several consumer products like carpets, floor and wall coverings, window curtain, etc. and also jute re-inforce plastic for packaging tea, apple and ready-made garments, and geo-jute for controlling soil-erosion and promoting vegetation. Use of jute for some of these purposes has environmental merits that it preserves forest resources.

As yet the market for these items are limited; there is a need for consistent effort to develop such a market. But this calls for a long-term vision on the part of the jute industrialists. They have not made, so far, any serious attempt for promoting market for new products.

(4) Modification of business organisation

Absence of this dynamism demands that policy considerations should be directed to bring suitable changes in business organisation. The jute industry comprises family-based firms with an oligopolistic control by the Indian Jute Mills Association. Both these features are not really favourable to long-run dynamism of an industry. Family-based firms fail to make critical investment at crucial junctures of the evolution of the industry, as these family firms tend to put priority on steady flow of consumption-expenditure over saving and investment. The oligopolistic structure of the Indian Jute Mills Association helps maintain the system. However, this is nothing specific about the jute industrialists. Most of Indian big business houses have similar characteristics. Few entrepreneurs have sought to promote Research and Development (Nayyar, 1994). Therefore, the policy experiments may be done with (a) joint venture - with participation from both the government and private enterprises; (b) bringing competition among the jute firms; and (c) extending the production to small-scale units.

As appeared from the review of the government policy during 1950-'90, the central government policies aim at some of these areas but not in a consistent manner.

What is needed is a coherent policy formulation which will be followed actively and consistently for a longer period of time, say, for ten to twenty years.