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Export of Jute Manufactures : An Analysis of the Global Restraints

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World exports of jute manufactures have not shown any marked increase over the last two decades. This seems to be mainly the result of the substitution of synthetics for jute in its main end-uses. World exports of jute manufactures increased from 930 thousand tonnes in the period 1951–55 to 1422 thousand tonnes in 1964. Since then, exports have been increasing slowly.[1]

The reasons for the slow growth in world exports of jute manufactures over the past two decades will now be examined.

Declining Consumption of Jute Goods in the Developed Countries

One of the most important reasons for the slow growth in the world exports of jute manufactures appears to be the stagnant consumption in developed countries. Consumption of jute cloth and new jute bags in the U.K. has been falling steadily since the period 1954-56. This downward trend has, however, accelerated since 1968. One also notices a declining trend in the consumption of jute yarn in the U.K. In the E.E.C. (Six) countries, consumption of jute cloth and new jute bags was more or less stagnant since 1954-56. There was also a steady fall in the consumption of jute yarn in the E.E.C. countries during the period 1954–56 to 1970. Since 1970, consumption has declined much more sharply. Consumption of hessian cloth in U.S.A. increased from 658 million metres in the period 1950–52 to 785 million metres in the period 1956–59. Between 1960 and 1972 consumption remained more or less constant. Since 1972, it has been declining[2].

In short, our analysis of consumption trends of jute goods in some major developed countries shows that it is either stationary or declining.

End-Uses of Jutes

The end-uses of jute can be divided into three groups: (A) Packaging, (B) Floor Coverings, and (C) Other Minor Uses.

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Packaging: This is the major end-use of jute. Jute containers are used to pack bulky agricultural produce, chemical fertilizer and animal feeds. In the absence of substitution of synthetic materials for jute and other new developments in handling the transport of agricultural produce, one could have expected the consumption of jute for packaging to increase in line with the increase in the output of major packageable commodities. In an effort to determine whether or not the consumption of jute for packaging has increased in proportion to the increase in the output of major packageable commodities, a table portraying the indices of actual and potential (hypothetical) consumption of jute in packaging for the U. K., the E.E.C. and U.S.A. has been constructed. It shows that in all these countries, the actual jute consumption has been below the potential consumption in all the years shown in table A. By 1978–80, the potential jute consumption index was 6.1 times that for actual jute consumption in the U.K., 4.1 times in the E E.C. and 3.9 times in the U.S.A. Had there been no substitution against jute, the index for actual and potential jute consumption would have been the same. It must be stressed that the effect of the change in the production of major packageable commodities on the consumption of jute for packaging cannot be measured with precise accuracy because of the difficulties in measuring some 'incalculables' such as the re-use value of bags. But these statistics do show clearly that a considerable substitution against jute in packaging uses has taken place in the developed countries. In the U. K., the substitution process continud to be an important factor since the late 1950s, whereas the substitution process in U.S.A. (especially the development of bulk handling facilities) appeared to have already occured by the early post-war period.

Stagnant or declining consumption of jute for packaging in the developed countries appears to be the result of these factors: (a) Bulk Handling Facilities, (b) Consumer Packaging Techniques, (c) Containerization, (d) Competition from Paper and Synthetic Bags.

Bulk Handling Facilities

Development of mechanical handling methods for the movement of bulky commodities- e.g. cereals, sugar, fertilizers, animal feeds – has given a severe blow to the usage of jute in packaging. For bulk handling, one needs to invest in special storage and transport equipment. Although initial capital expenditure is high, bulk handling costs tend to be low if the volume shipped is sufficiently large. In general, bulk handling is quick, convenient, time and labour-saving, and comparatively inexpensive once handling facilities have been set up. Because of the high labour costs in developed countries, an increasing number of commodities are being shipped by this method. And much of the trade in grains and sugar has already been lost to bulk handling.

The method of bulk handling is increasingly being used in transporting the produce from the producing area to factory and from factory to wholesale. The use of heavy jute bags is confinned to those uses where the container will receive rough handling or where the commodity must 'breathe'.

TABLE 'A'

Indices of Actual and Potential (Hypothetical) Consumption of Jute in Packaging Uses in the U. K., the E. E. C. (Six) and the U. S. A.

Indices 1954–57 = 100

	Average 1954–57	Avcragr 1958-60	Average 1961-63	Average 1964-66	Average 1967-69	Average 1970-72	Average 1978-80
U.K.							
Actual	100	94	82	81	72	42	34
Potential[a]	100	115	133	154	168	178	207
E.E.C. (Six)							
Actual	100	99	96	95	100	69	52
Potential[b]	100	117	128	151	167	174	212
U.S.A							
Actual	100	104	103	106	93	61	48
Potential[c]	100	122	115	123	143	152	185

Note: The potential jute consumption index has been derived as follows:

According to the statistics obtained from the Commonwealth Secretariat, jute consumption required to pack a metric ton of the major packageable commodities e,g. potatoes, wheat, coarse grains, fertilizer and sugar were 45 Kgs., 18 Kgs., 18Kgs, 12 Kgs. and 11 Kgs. respectively.

In order to obtain potential jute consumption, the output of each of these major packageble commodities have been weighted by the appropriate weights mentioned above. Then from these figures the potential jute consumption index was constructed taking 1954-57 as the base period.

[a] The potential jute consumption index is based on the output of the four major packageable commodities e.g, wheat, potatoes, sugar, fertilizer.

[b] Based on the output of three major packageable commodities e.g. wheat, sugar and fertilizer.

[c] Based on the output of five major packageable commodities e.g. potatoes, wheat barley, maize and fertilizer.

Source: For production: *F.A.O., Production Yearbook, Various years* and for Consumption: The Association of the European Jute Industries, *Statistical Yearbook of the European Jute Industries*, Various issues. Paris

In many developed countries, feedingstuffs are being handled by this method. Bulk feed is generally pumped into trucks at the main distribution centres and then transported to the farms where it is blown into feed bins. This method is also in use in the shipment of potatoes, especially if transport distances are long.

Bulk handling is also gaining importance in Latin American countries. The evidence for the increasing importance of bulk handling and synthetic substitutes can be seen from the rapid decline in the consumption of just goods in Latin America since the period 1961-65.

Consumer Packaging Teachiques

The reluctance of labourers to handle heavy containers and the consumer preference for attractive packaging, have given rise to a tendency towards smaller sized packages. The change in the techniques of marketing, and distribution have eliminated the use of heavy jute bags in the retail market. At the time of breaking bulk at the factory or wholesale stage, an increasing number of commodities are then packed into small containers suitable for direct sales no customers instead of being forwarded to the retailers in heavy jute bags. Thus, the most essential feature of the modern marketing tech niques is the disappearance of large cotainer and its substitution by a package which can be sold direct to the retail purchaser. Jute bags are not suitable for small--sized packages because it is relatively more expensive to produce jute bags below 25 lb. capacity and in many cases even below 50 lb. capacity. Therefore paper and polypropylens (PP) bags have an advantage since they can be produced economically in small sizes.

Containerization

There has been a trend towards containerization for export shipments. Containerization involves building up the containers inside the ship in which bags are placed. Although containerization is unlikely to reduce the total bag usage, this tends to have an adverse effect on the consumption of jute bags. Containerization eliminates the necessity of using strong jute bags because of the protection afforded by the containers. Thus, containerization tends to favour the use of paper and PP bags rather than jute bags.

Competition from Paper and Synthetic Bags

Paper Bags: As has been indicated, in the market for bags jute has experienced considerable competition from paper bags and more recently from polypropylene (PP) and high density polyethylene (PE). Competition from paper bags became particularly intense in the early post--war period when jute prices rose sharply. The price of a jute bag in the U.S.A. rose from 11 cents in the pre-war period to 29 cents in the period 1949 -50/1951--52, whereas the price of a paper bag of a similar size rose only from 6 cents to 10 cents in the corresponding period[3]. This sharp increase in the price of jute bag must have stimulated the use of paper bags in the main uses of packaging.

The ready availability of paper in North America and some European countries led to competition, first in the fertilizer bag market where bag re-use value is negligible, but later in the shipment of almost all commodities for which jute bags had previously been used. Since paper bags are moisture proof and are ressistant to micro--organisms and wet-rot, they are automatically better suited for outdoor storage. In some European countries, farmers receive a discount for off-season purchases of fertilizers. The paper or synthetic bags offer an advantage to the farmers who, faced by shortage of space, prefer to leave the bags in exposed conditions. The fertilizers are observed to be increasingly acidic and obviously jute bags are a poor substitute to their synthetic substitutes which are hardly affected by the fertilizer. Paper bags have

good fractional qualities prevent slip. They also afford a clean discharge of the contents and readily carry printed advertising. They can be tailored to specific sizes in general, they are attractive to the consumers.

Apart from these technical advantages, paper bags have been at an advantage in terms of price. The price of a paper bag has been lower than that of a similar jute bag. Another reason for the increasing use of paper bags is the ready availability of raw materials from indigenous sources in the developed countries. The main disadvantage of paper bags is their low tear strength. Efforts are being made to improve this by using compressed paper which has great stretch qualities. Nevertheless, because of the above-mentioned advantages of paper bags they have been used for an increasing number of commodities.

Synthetic bags: Since the mid-sixties polypropylene (PP) and high density polyethlene (PE) bags have been competing with jute bags. In spite of the cheapness and other technical advantages of paper bags, they are not threatening to replace jute bags completely. This is because their (paper bags) use cannot be extended to packaging those commodities which require bags of goods strength and woven construction. On the other hand, synthetic bags are suitable for packing those commodities which must 'breathe'. As regards their physical strength, PP bags are as good as jute bags. Synthetic bags are also resistant to flame and weather. PP bags are lighter in weight than jute bags. The main advantage of the lighter weight is the reduced amount of raw materials required, hence the lower raw materials costs. Another advantage of lighter weight of synthetic bags is that it entails easier handling as well as reduced freight costs.

The technical qualities of synthetic bags being similar to those of the jute bags, the deciding factor for the choice of their use obviously rests in the comparative prices. Synthetic woven fabrics are relatively cheap because of their light weight and low cost of raw material. Propylene is the basic raw material which is produced from crude oil by a number of complicated processes. Its price is relatively low chiefly because of the fact that it is a by-product. In the production of polypropylene, fixed costs (e.g. overhead costs, maintenance and depreciation etc.) represent a larger proportion of the total cost of production. Due to the economies of scale, the larger the output from a given plant, the lower will be the unit cost of production, because overhead costs are spread over large output. In short, synthetic fabric prices are low because of the low cost of raw material (polypene) and low processing costs resulting from economies of large scale production.

Apart from comparative prices, the end users' choice is also influenced by the stability in the prices. The relatively unstable prices of jute and jute manufactures must have an adverse effect on their use in the developed countries.

In addition, the continual threat of short-term interruptions in jute and jute manufactures supplies always exists in the mind of jute users in the importing countries. Short term interruptions in jute and jute manufactures supplies may be the result of several factors including crop failures, political disturbances and transport strikes. These stoppages occurred during

the Indo-Pakistan conflict in 1964–65 and the civil war in Pakistan which led to the emergence of Bangaladesh in 1971. Moreover, in view of the severe competition for land between jute and paddy and the lack of any upward trend in yields, the users of jute and jute products fear a long term shortage of jute. This is particularly true in the case of carpet backing manufactures who expect the demand for tufted carpets to grow rapidly in the developed countries.

To sum up, relatively high and unstable prices of jute manufactures, discontinuity in their supply, and uncertainty about the long term future availability of jute and jute manufactures in sufficient quantity, have been encouraging the manufactures to use synthetic materials in many end-uses of jute.

Floor Coverings: Another major outlet of jute is for floor coverings. In contrast to the jute bag market, the consumption of jute in carpet-backing has grown rapidly in the developed countries over the past decade. Stagnation in the consumption of carpet backing cloth in U.S.A. reflects the growing importance of synthetic backing. Thus, if the U.S.A. situation is typical, the stagnant or declining trend in the consumption of jute for packaging in the developed countries has been offset, to some extent, by the increasing consumption of jute backing in the carpet backing industry of these countries.

In developed countries, a tendency to use more expensive floor coverings is observed as incomes rise. Thus, instead of the traditional and homely rugs or inexpensive linoleum, people often tend to buy woven and tufted carpets to enhance the appearance of their homes. The demand for jute in carpet backing depends upon three factors: (a) the final demand for the floor coverings, (b) the proportion of the different types of floor coverings in the total (since the amount of jute per unit of area to be covered varies from one type to another), (c) the degree to which substitution actually occurs between jute and other materials.

The overall demand for total floor coverings has been rising in the developed countries due to a rise in their standard of living. The share of tufted carpets in total carpets has been rising in the developed countries. In the U.S.A. the proportion of tufted in the total carpet market expanded rapidly.

Growth in jute backing is largely due to increasing demand from the tufted carpet industry. This is because the jute consumed per square metre is considerably higher in tufted carpets than that in woven carpets. This is particularly true of those tufted carpets in which double backing is used. In addition to the primary backing, a second backing is added to give more strength by increasing dimensional stability and creep resistance. Secondary backings are becoming increasingly common in tufted carpets.

Unfortunately, as in the case of the bag market, jute has experienced increasing competition from synthetics for use in carpet backing. Polypropylene (PP) is commonly used in carpet backing. Although jute has experienced increasing competition from synthetics in the market for primary carpet backing, synthetics have not yet been able to penetrate successfully into the market for secondary backing. This is because jute as a secondary backing has the

advantages of good appearance and weight, and is more easily handled. In addition, there are some technical difficulties in applying a synthetic secondary backing to a primary backing due to the tendency for most synthetics to shrink when they enter the heat process used to obtain adhesion. However, synthetic backing manufacturers are making continued efforts to develop a suitable PP secondary backing with long shrinkage characteristics. Also, the consumers' acceptance of light weight and light bulk carpets resulting from the use of both primary and secondary synthetic backings remain to be seen.This in turn will be influenced by the comparative prices of jute and synthetic backing.

There being little scope for reducing processing costs,the reduction in production cost is to be met from raw material price, if jute is to remain competitive. So, jute prices will have to fall considerably,if jute backings are to remain competitive with synthetic backings. Even in the case of secondary backing, the deciding factor for the use of synthetics or jute backing will be their comparative prices.This is because technical disadvantages of secondary synthetic backing can be treated with special treatment.Relatively high prices of jute backing will also encourage the synthetic backing manufacturers to intensify their research and development efforts in overcoming the technical disadvantages of using secondary synthetic backing. Therefore, if the further penetration of synthetics into the secondary carpet backing is to be prevented, the price of jute backing must be held below that PP backing.

Minor Uses: In addition to these major uses of jute in packaging and floor coverings, jute is also used, though in small quantities, in a large number of other outlets. Among these minor uses of jute are included rope and twine, electrocal cable cores, upholstery and soft furnishings, paper and tape re-inforcement, protective coverings and as binders on irrigation channels, making nets for fisheries and military uses such as camouflags nets and sand bags. None of these uses however constitutes a major end-use for jute at present and is probably unlikely to do so in the future.

To conclude, one can say that stagnant or even declining consumption of jute for packaging can be attributed to the introduction and/or acceleration of bulk hadling facilities, consumer packaging techniques and substitution of paper and synthetic bags for jute bags. In the case of the carpet backing market, the growth in the use of jute backings has been slowed down by the successful penetration of synthetic backing in the primary backing carpet market.

Tariff and Non-Tariff Barriers

Another important reason which appears to have been responsible for the slow growth of world exports of jute manufacturers is the imposition of tariff and non-tariff barriers on the import of jute manufactures in the developed countries. Japan, EEC and U. K. have their own jute-processing industries. In order to protect the interests of these industries, high tariff rates are imposed on imported jute manufactures. An interesting fact worth mentioning is that in the E.E.C. countries and Japan, the tariff rates increase with the increase in the degree of processing. For example, the tariff rates on jute yarn (semi-processed) are considera-

bly lower than those on jute fabrics (processed). This shows that the developed countries are trying to discourage the processing of labour intensive products such as jute in the developing countries. As there is little spinning and weaving activities of jute in the U S.A. there are very low tariff rates on jute yarn and jute fabrics. Raw jute enters duty free in almost all the developed countries.

High tariff rates adversely affect the world exports of jute manufactures in two ways. Firstly, they make the access of these goods difficult to the markets of the importing countries. Secondly, if these export commodities are able to overcome formidable tariff rates, their landed prices (after paying duty) rise so high as to encourage the users of these good to look for substitutes. This seems to be happening in many European countries where the relatively high prices of jute manufactures resulting either from high import duties or high labour and raw materials costs are encouraging the users of these goods to turn synthetic goods. Besides these import duties, there are high internal taxes in the E.E.C. countries which raise further the prices of jute manufactures in these countries.

Apart from import duties and other internal taxes, imports of jute manufactures into the E.E.C. countries are subject to quantative restrictions. Because of relatively low labour intensive products from developing countries, even after paying import duties, can compete favourably with good produced in the developed countries. When they (developed countries) fail to restrict the imports of these goods through high import duties, they impose a series of quantitative quotas in order to limit the import of these goods. Thus, quota restrictions are proving to be more damaging to the interests of developing countries than tariff rates. In addition, some developed countries have also import licensing systems which impose an extra burden (in the form of additional paperwork) on the importers thereby discouraging the imports of these goods. Thus, the imposition of tariff rates and quantitative restrictions has partly contributed to the slow growth of world exports of jute goods.

The Tendency towards Processing of Jute

In many developing countries, there has been a tendency towards processing of raw jute. This seems to be the result of a change in import policy of these countries. Instead of importing jute goods, they have started importing raw jute to be processed in their own countries. Despite the unsuitable conditions for growing jute, some developing countries are making continued efforts to grow a large proportion of their raw jute requirements locally. Similary, although it is not economical to process jute in many of these countries, yet they are doing this in order to reduce dependence on other countries. The occurrence of import substitution in developing countries is confirmed by the fact that their relative share of imports of jute manufactures in the world imports of jute manufactures has been declining since 1953-57. Even in absolute terms, their imports of jute manufactures declined.[4] In the absence of import substitution, one could have expected an increase in the imports of jute manufactures with the increase in the agricultural production in these countries.

The tendency towards jute processing is more marked in African countries. This can

be seen from the fact that consumption of jute manufactures in Africa has remained more or less constant, whereas the imports of jute manufactures has been declining since the period 1961-65. This shows the increasing importance of jute processing in African countries. Thus the tendency towards processing of jute in many developing countries appears to be partly responsible for the slow growth in the world exports of jute goods.

In addition, consumption of jute manufactures in developing importing countries has been either stagnant or declining since the period 1961–65.[5] This seems to be chiefly the result of increasing penetration of synthetic substitutes into the main-uses of jute in packaging. According to the F.A.O. study, production of synthetic (PP) bags is going on in some developing countries such as Peru, Chile and Niger. Thus the reduced demand for jute bags as a result of competition from synthetic substitutes, must have limited the import of jute manufactures into some developing countries.

Export Prospects

The outlook for world trade in jute manufactures seems to be gloomy. This is because the trend towards bulk handling, consumer packaging and synthetic substitutes is likely to accelerate in the future whch in turn will cause a further decline in the censumption of jute manufactures in the devloped countries. The gradual introduction of synthetic substitutes and the tendency towards jute processing in many devloping countries is also likely to assume importance in the coming years. This in turn will slow down the import of jute manufactures into these countries.

However, some observers are expecting a bright future for the world exports of jute goods. Their expectation is based on the fact that a substantial increase in oil prices and the high inflationary rates will give a setback to the synthetic products in the devloped countries. It is important to note that polymer costs represent a small proportion of the total production cost of polypropylene. Therefore, even a substantial increase in the oil price would have a small effect on the price of polypropyline. Moreover, there is ample scope for cost reduction in the production on PP at successive stages due to the potential technological improvements in weaving and in other operations. The unit cost of PP production is also likely to fail because of the increased production capacity in the firms producing polypropylene.

On the other hand, there is no sign of any reduction in the price of jute and jute manufactures. Furthermore, a substantial increase in the freight costs caused by soaring oil prices will raise the prices of jute manfactures in the distant import markets of Western Europe and North America. In view of these factors, it seems unrealistic to suppose that the competition from synthetics will not represent a serious threat in the years ahead.

However, the following measures could improve the future prospects of world trade in jute and jute manufactures.

As already noted, relatively high prices of jute and jute manufactures have been encouraging the end--users to turn to synthetic goods. Therefore efforts should be made to make these

goods competitive with synthetic goods. Since the raw material costs account for about 50 per cent of jute manufactures, there is an urgent need for reducing the price of raw jute. This can be effected by increasing the yield per hectare which in turn requires the application of more fertilizer, improved seeds and irrigation of land. There is also some scope for reducing the manufactring costs by modernising the machinery. Apart from the reduction in the production cost of jute manufactures, devaluation of the currencies of major jute-goods exporting countries will improve the competitive position of jute manufactures as it will reduce the price differentials between jute and synthetic goods in the importing countries.

Large fluctuations in the prices of jute and jute manufactures are also a deterrent to the end-users of jute. In the past ten years, the jute trade has seen many price peaks. If allowed to be repeated again, this will inevitably result in further competitive losses to synthetic producers, who have the advantage of providing ample and regular supplies to end-users at stable prices Therefore, there is an urgent need for major jute producing countries to stabilise the prices of jute and jute manufactures on an international level. There is an immediate need for the establishment of national buffer-stocks in jute in the main producing countries co-ordinated by the inter-governmental body. This could help to reduce the violent fluctuations in the prices of jute manufactures and thereby promote their use in the developed countries. The tendency towards cooperation on the trade of jute and jute manufactures between India and Bangladesh mig't favour the possible establisment of such buffer stocks. Moreover, it is also important to ensure the regular supplies of all types of jute manufactures to importing countries. This could be possible provided there is sufficient cooperation in the fields of production, stocks and marketing among the major producing countries.

Since the Common External Tariffs (CET) on imports of jute manufactures result in raising the price of jute manufactures vis-a-vis competing synthetics in the E.E.C. coutries, efforts should be made to persuade the European Economic Community to lower the tariff rates which in turn will favour the consumption of jute manufactures in these countries. The level of E E.C. quotas on jute mnufactures is also a formidable barrier to increased exports from the developing countries Thus, it would be in the interest of the producing countries to make an attempt to negotiate expanded quotas in the enlarged E E.C. India and Bangladesh have concluded agreements with the E.E.C. under which they have won cuts in tariffs and increases in quotas on jute manufactures going to the Community. But the E.E.C. 's offers will not be of much use to the exporting countries, because these concessions do not apply to items (e.g. jute cloth for carpet backing and hessian fabrics for lighter bags) which have a relatively high demand in the Community.

In the Centrally planned countries, consumption of jute manufacturers has been increasing since the period 1961–65. There is a great potential for the promotion of jute manufactures, especially of jute backings, in U.S.S.R. and Eastern Europe. This is because the demand for carpets is expected to grow rapidly in the coming years as a result of improved living standards and the charge in the government's policy towards consumer goods. Therefore, it

is desirable on the part of the major exporting countries to launch an effective joint promotional and research programme to promote the use of jute backings in the carpet backing industries of these countries. It is also vital to prevent the gradual penetration of synthetic substitutes against jute in the developing countries. This can be done by providing jute goods at prices lower than those of competing synthetics.

To conclude, one can stay that if the jute industry is to retain its markets, its price must be made to fall considerably from the present uncompetitive level. In view of the severe competition in both of its main markets (e.g. packaging and floor coverings) it is no longer sufficient that jute be cheap; it must now be cheaper than its synthetic substitutes.

Foot Notes

1. See Association of the European Jute Industries, *Statistical Yearbook of the European Jute Industries*, 1965, 1975 and 1984.
2. See Association of the European Jute Industries, *Statistical Yearbook of the European Jute Industries*, Various Issues.
3. Calculated from statistics obtained from the *Annual Summary of Jute and Gunny Statistics* published by Indian Jute Mills Association.
4. See F. A. O., *Monthly Bulletin of Agricultural Economics and Statistics*, Volume 23, July and August 1974, Page 9.
5. See F.A.O., *Commodity Review and Outlook*, Various issues.

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