

# Export Policy in Pakistan

by

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One of the main objectives of Pakistan's export policy has been the promotion of exports of manufactured goods. This is an objective which many underdeveloped, predominately primary-exporting countries have in common because of their interest in export diversification.

The general arguments used to justify such a policy, *e.g.*, improvement in the terms of trade and increased stability of export proceeds—will not, however, be discussed in this paper<sup>1</sup>. Attention will instead be focussed on the economic consequences of the specific measures adopted by Pakistan, namely, a combination of export duties and subsidies which discriminate in favour of processed goods and against raw materials.

The fact that in Pakistan the chief beneficiaries of discrimination have been manufactures of jute and cotton, products which also constitute most of the country's raw material exports, facilitates the economic evaluation of this policy. It can thus be assumed that if jute and cotton were not exported as manufactures they could be exported in raw form, or in other words, that the problem consists in selecting that combination of exports in raw and manufactured form which maximizes net foreign exchange earnings. Furthermore, the textile industry is not a very good case for applying the external economy argument (*i.e.*, subsidies to industries which provide training to the labour force in new skills, *etc.*) because the industry would exist in any case to supply the internal market, economies of scale are limited and the skills employed are fairly rudimentary. In the following, all our discussion will be concentrated on the jute and cotton situation, the special problems of other manufacturing fall outside the scope of our analysis.

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<sup>1</sup> The literature on this subject is already voluminous, particularly on the terms of trade argument (*i.e.*, that the terms of trade tend to be more favourable for manufactured goods than for raw materials). A new and interesting contribution has also recently been made concerning the export diversification argument. *See* [8].

In general, then, the justifications for price discrimination in favour of jute and cotton manufactures are the following:

a) The price elasticity of export demand for the manufactured good is significantly higher than for the raw material. This is the traditional rationale for price discrimination, namely that a producer can maximize his revenue by selling at a higher price in the less elastic market and a lower price in the more elastic market.

b) Because of the overvaluation of the rupee, the foreign exchange benefit of exporting value added in manufacture is higher than that indicated by market prices. In this case a subsidy for export of manufactures would be justified up to the point where the opportunity cost of the additional foreign exchange earned was just equal to the opportunity cost of the resources used in the process of manufacture.

c) These justifications for price discrimination are in turn based on two main assumptions: *i*) justification a) requires that export demand for the manufactured goods and the raw material be independent, that is, that expansion in exports of manufactures does not occur at the expense of a reduction in the demand for exports of the raw material. *ii*) The discriminatory policy does not affect supply, or in other words, that the only issue is the optimum selection of the form in which a given supply of jute and cotton is to be exported.

Recent trends in exports of jute and cotton fibres and manufactures (see Table I) clearly indicate not only the increase in the relative importance of manufactured exports, but also an absolute decline in exports of raw materials. It would thus appear *prima facie* that the above assumptions are not valid in practice. As will be seen below, however, this is true mainly with respect to the second assumption, because the policies followed by Pakistan have encouraged the reallocation of resources to the production of competing crops, particularly in the case of cotton.

*The Structure of the Jute Market:* Since one of the main arguments for differential prices on exports of raw and manufactured jute is related to the difference in the price elasticity of demand for these products, it is first necessary to analyze the structure of the jute market and Pakistan's role therein.

In the advanced industrial countries demand for jute has tended to decline over the long run (since the 1920's in the United States). In recent years, however, imports into Western Europe and the United States have remained more or less stable<sup>2</sup>. This trend is explained chiefly by technological change and the

<sup>2</sup> Most of the statistics on world demand and trade in jute are taken from [5; 6; 13, Appendix D].

TABLE I  
EXPORTS OF JUTE AND COTTON  
(in million dollars)

Year	Raw	Manufactured	Total	Per cent manufactured
<i>Jute</i>				
1949	173.5	—	173.5	—
1950	261.2	—	261.2	—
1951	377.7	—	377.7	—
1952	210.4	0.2	210.6	0.1
1953	172.7	1.1	173.8	0.6
1954	164.9	5.2	170.1	3.1
1956	157.1	19.6	176.7	11.1
1957	163.5	19.4	182.9	10.6
1958	174.8	22.7	197.5	11.5
1959	142.2	44.5	186.7	23.8
1960	168.6	51.3	219.9	23.3
1961	187.8	72.6	260.4	27.9
1962	162.7	65.7	228.4	28.8
1963	154.7	64.2	218.9	29.3
1964	158.0	56.6	214.6	26.4
<i>Cotton</i>				
1949	140.4	—	104.4	—
1950	199.3	—	199.3	—
1951	290.7	—	290.7	—
1952	261.1	—	261.1	—
1953	190.7	—	190.7	—
1954	105.4	—	105.4	—
1956	76.1	12.7	88.8	14.3
1957	69.4	18.0	87.4	20.6
1958	50.3	3.2	53.5	6.0
1959	25.2	31.0	56.2	55.1
1960	44.2	39.8	84.0	47.4
1961	21.7	14.2	35.9	39.5
1962	39.3	10.8	50.1	21.6
1963	68.9	18.5	87.4	21.2
1964	62.0	48.0	110.0	43.6

*Sources:* [11; 14]. Figures for 1964 are from [10].

*Notes:* Figures for raw jute up to mid 1951 and for raw cotton through 1950 have been adjusted to include export duties, which were not included in official statistics.

Figures are not given for 1955 because of the difficulty of estimating dollar values due to devaluation of the rupee in August of that year.

development of substitutes. The substitution of kraft paper and bulk handling for jute in packaging, by far the most important end-use for jute before World War II, is at least partly attributable to the sharp increase in the post-War price of jute<sup>3</sup>. There is a clear correlation between the jute/paper bag price ratio and consumption in the United States up to 1951, but restoration of approximate parity in jute and paper costs subsequently did not lead to restoration of previous jute consumption levels, indicating that technical adjustments have made substitution irreversible, at least in the range around cost parity [5, pp. 13-14].

The shift away from jute in packaging seems to be due at least as much to non-price factors, particularly to the shortage of shipping, which encouraged substitution during World War II, and to technological breakthroughs and changes in marketing practices, such as the replacement of burlap bags by bulk handling equipment between farm and market and by small individual containers at the retail level. In non-bag use, especially for upholstery interiors and backing for floor coverings, the prices of jute has so little weight in the cost of the final product that competition with other fibres depends mainly on technical considerations [6]. In fact, econometric analyses of jute demand have invariably found the price elasticity of demand for jute very small or not significantly different from zero [2; 7].

On the supply side, the main competitor of Pakistan is of course India, where jute and mesta output has expanded  $2\frac{1}{2}$  times since Partition, largely replacing imports from Pakistan. Output in other countries rose almost 4 times between 1949-50 and 1952-53 [4, Table III, p. 135] but much of this was in Brazil to replace imports behind protective barriers. The most serious challenge to Pakistan in export markets, aside from the latent threat of China (a major world producer but a non-exporter) is Thailand, where output of kenaf rose from 30,000 tons in 1958 to 2,00,000 tons in 1961. Thus, production in Pakistan has represented a declining share of world output of jute and allied fibres.

But in raw jute alone Pakistan still accounts for over 90 per cent of world exports, so that one would expect the short term (year to year) elasticity of export demand to be less than unity, given the structure of final demand described above. This expectation is confirmed in Figure 1, in which a statistical demand function is plotted from value and price data for the period 1949-61. Prices represent the unit value of exports of jute deflated by the price of kraft paper,

<sup>3</sup> Between 1947 and 1951 the prices of raw jute and hessian were 4 to 5 times higher than pre-War, whereas the world indices of agricultural and manufactured goods prices were only 2 to 3 times higher [6]. The price of the jute received a specially strong boost in 1949-50 when export supplies dropped precipitously with the disruption of jute trade between India and Pakistan following sterling devaluation, and again with the beginning of the Korean War. At this time India also imposed a very heavy duty on jute goods exports, so that Pakistan's foreign trade and price policy was only one of the factors pushing up the price of jute during these years.

RELATIVE PRICE INDEX

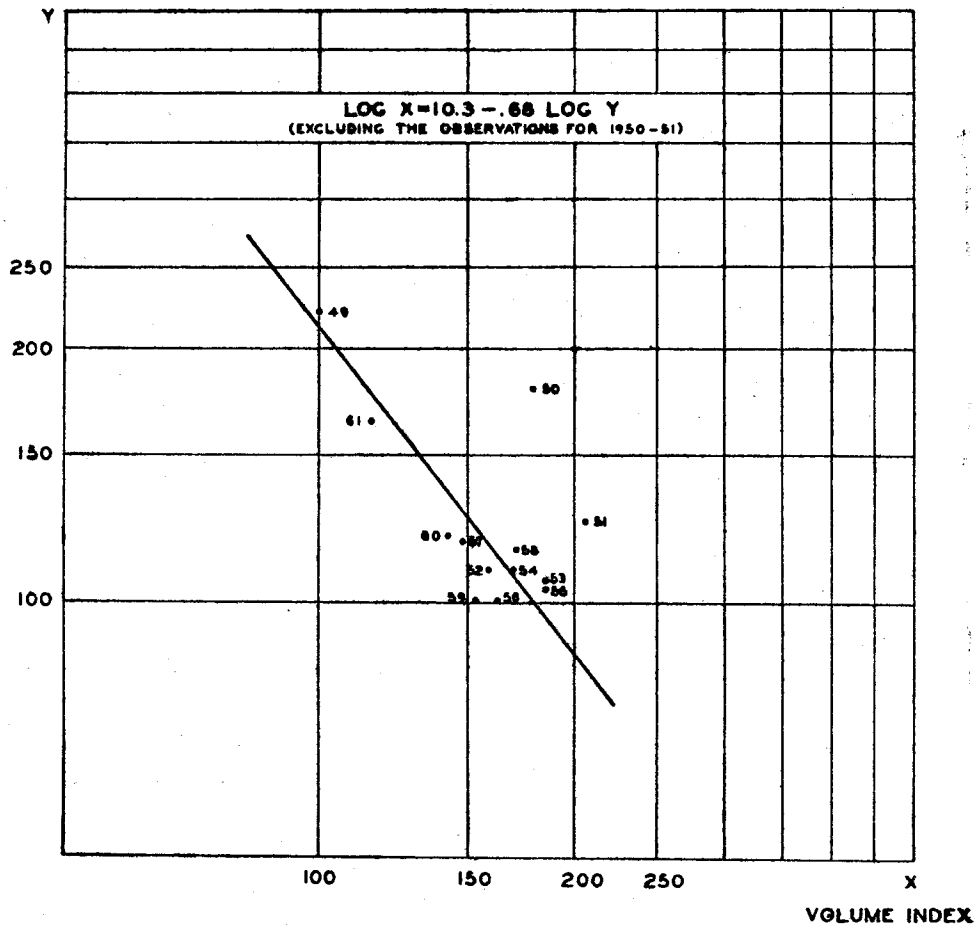


Figure 1. An Export Demand Function for Raw Jute (Logarithm Scale)

the principal substitute for jute in packaging; and it is assumed that fluctuations in the value of exports have been due primarily to shifts in the supply curve, not to autonomous changes in demand. For the period as a whole the price elasticity of export demand turns out to be only  $-0.25$ , but if the observations for 1950 and 1951 are excluded on the ground that demand in these years was greatly influenced by abnormal conditions during the Korean War, the elasticity rises to  $-0.68$ . This conclusion must be interpreted with caution however, because the regression equation is determined mainly by only two observations, those for 1949 and 1961, in view of the very limited range of variation in other years. But the findings are at least not inconsistent with the hypothesis that the elasticity of demand for raw jute exports is less than unity, or in other words, that *ceteris paribus* an increase in the volume of exports from one year to the next is likely to earn less foreign exchange because of the accompanying decline in price<sup>4</sup>.

In the world market for jute manufacturers Pakistan accounts for a much smaller share of total exports. For this reason one should expect that demand for Pakistan jute goods would be much more price elastic than demand for its raw jute. In the absence of retaliation, the elasticity of demand for Pakistan's jute goods exports,  $N_p$ , would be equal to the difference between the elasticity of world demand,  $N_w$ , and the elasticity of supply of other exporters,  $E_o$ , appropriately weighted by market shares. The relationship can be expressed in the formula

$$N_p = \frac{N_w}{1-k} - \frac{k E_o}{1-k}$$

where  $k$  is the rest of the world's share of the market and  $1-k$  is Pakistan's share. Since  $N_w$  is presumably negative in sign,  $N_p$  is equal to the sum of the two terms and is therefore likely to be greater than unity even if the other elasticities are very small. For example, if  $1-k$  is 0.2,  $N_p$  is greater than unity as long as  $E_o$  is greater than 0.25, even if  $N_w$  is zero.

The policy followed by India, the chief world exporter of jute manufactures, has in fact had the effect of assuring a fairly high elasticity of supply  $E_o$ . The Indian Jute Mill Association (I.J.M.A.) which controls about 98 per cent of the industry, has regulated mill working hours since 1886 and put an embargo on the installation of new capacity since 1938. The purpose of the regulations is to maintain a minimum spread between the price of the raw material and the price of the final product which will prevent even marginal firms from going broke. When the spread narrows, looms are sealed; when the spread widens, looms are

<sup>4</sup> It should be observed, however, that a specific duty is levied on raw jute exports, and that a specific export duty is like an ad valorem export subsidy in that it makes the demand curve facing exporters less elastic.

unsealed<sup>5</sup>. The volume of Indian production and sales is therefore quite sensitive to fluctuations in price.

Pakistan has thus been able to expand its exports of jute goods rapidly over the last few years, accounting for virtually all of the increase in exports of jute products from the sub-continent since 1949-50, while Indian shipments have stagnated (*see* Table II). The success of Pakistan in winning a larger share of the market was facilitated by the embargo placed by India on exports to South Africa, which in 1959-60 purchased 25 per cent of Pakistan's total jute goods exports. But the rest of Pakistan's sales were in markets where it was in direct competition with India (United States 14 per cent, Australia 8 per cent, United Kingdom 7 per cent, Cuba 6 per cent, *etc.*, all figures relating to 1959/60). The expansion of Pakistan's exports of jute manufactures was spurred by the devaluation of the rupee in 1955 and by the introduction of the Export Bonus Scheme in 1959, both of which measures permitted exporters to compete more effectively by cutting prices.

*The Opportunity Cost of Producing Jute:* Before continuing to analyze the effects of the Export Bonus Scheme, it is first necessary to form an idea of the condition under which jute is produced in order to appreciate the effect of Pakistan's policies on supply. The Ganges-Bramaputra delta is the major world source of raw jute. Cultivation is favoured by the unique monsoon climate and rich aluvial soils replenished by periodic flooding, the abundance of retting water, and plentiful manpower familiar with the labour-intensive methods of production. The area sown to jute has ranged between one and 2.5 million acres in East Bengal (now East Pakistan), and an even greater area is suitable for jute cultivation. Since World War II, however, in only one year did acreage reach 2 million, and in recent years it has tended to fluctuate around 1.5 million.

Jute is produced in close competition with rice, which is the the main staple of the local diet and can be grown interchangeably with jute on much of the same land. Both crops together account for almost 95 per cent of the total sown area in East Pakistan. A high statistical correlation has been established between jute acreage and the jute/rice price ratio of the previous season<sup>6</sup>. It appears that the farmer is sufficiently market-oriented to compare the price at which he thinks he can sell jute with the price at which he must purchase his residual rice needs before he decides to plant. The close correlation between annual fluctuations in jute acreage and the previous year's jute/rice price ratio shows up very clearly in

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<sup>5</sup> The vote of 75 per cent of the membership of the I.J.M.A. is necessary to reduce output, 50 per cent to increase it. But because of the system of weighting votes, these percentages are equivalent to the largest 12 and 5 firms respectively. *See* [18].

<sup>6</sup> In addition to the source cited in the previous footnote [18], *see also* [3; 5; 19].

TABLE II  
OVERSEAS JUTE EXPORTS

(in thousand long tons)

	1948- 1949	1949- 1950	1951- 1953	1954- 1956	1957- 1958	1958- 1959	1959- 1960
<i>Pakistan</i>							
Raw Jute	1080	605	1007	949	798	732	862
Manufactured (raw equivalent)	—	—	—	28	75	144	203
<i>Minus</i> raw export to India	709	301	349	236	112	31	110
Overseas exports	371	304	658	741	761	845	955
<i>India</i>							
Raw jute	160	110	—	—	—	—	35
Manufactured (raw equivalent)	962	800	730	846	813	810	812
<i>Minus</i> exports & manufactures to Pakistan	35	17	11	—	—	—	—
Overseas exports	1087	893	719	846	813	810	847
Total overseas exports: Pakistan and India	1458	1197	1377	1587	1574	1655	1802
Total apparent overseas absorption <sup>a</sup>	1440	1323	1420	1607	1642	—	—

Sources: Apparent overseas consumption from [5, Appendix A; 6, Table 3].

a. Outside of Asia and Communist bloc countries the difference between Pakistan and India overseas exports and apparent overseas consumption is partly due to discrepancies between calendar and trade year figures, and between the date of shipment from exporting countries and date of receipt in importing countries.

Note: 1948-49, 1949-50 and 1959-60 refer to trade years; other years are averages of 2 or more trade years.

In converting manufactured jute to its raw equivalent it was assumed that there is a 5 per cent loss in weight.



Table III for most years, even though the prices used are average annual urban market prices, not farm prices during the sowing season.

The long-run decline in jute acreage is also associated with a long-term fall in the jute/rice price ratio, which in recent years has been 20-25 per cent below the post World War II decade average and over 40 per cent below the pre-War level. The fall in the relative price of jute has been due to a sharp increase in the price of rice, which rose rapidly during World War II and again by  $2\frac{1}{2}$  times between 1954-55 and 1956-57, as rice production lagged behind population in East Pakistan. Over the last few years, however, the price of rice has been kept from rising much further, first by rice imports and then by exceptionally good harvests both in 1959-60 and 1960-61. But the production and price of rice is likely to continue to be one of the main limiting factors in the long-run supply of jute<sup>7</sup>.

Given the competition between jute and rice for productive resources, the opportunity cost of jute is clearly the amount of rice which must be given up to produce an additional amount of jute. At the present average yield of about 10 maunds of cleaned rice per acre, it would take about 2.7 acres to grow a ton of rice; this same area could also produce over 50 maunds of jute. Even at the relatively low 1959 export price, 50 maunds of jute would earn about Rs. 1,500 in foreign exchange, or between  $2\frac{1}{2}$  and 3 times the c.i.f. import cost of a ton of rice<sup>8</sup>.

The import price of between Rs. 19 and Rs. 22 per maund compares with the government retail ration price in Dacca and Chittagong of Rs. 22.50 in 1958-59 and Rs. 23.75 in 1960. The ration price is subsidized, however, and has in fact been considerably below the free wholesale market price in these cities during most of the period<sup>9</sup>. It would therefore be safe to assume that even after a markup to cover the cost of transport and distribution, imported rice could be sold at or below the price of domestic rice in Dacca, Chittagong, and Khulna, the major ports in East Pakistan, and perhaps in a considerable part of the nearby rural areas.

It, therefore, appears reasonably certain that, assuming that real costs of production per acre of jute and rice are similar, with present yields and relative

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<sup>7</sup> In 1960-61 the price of jute shot up to record levels and the jute/rice price index rose with it, but the subsequent decline in the price of jute has brought the index back down close to the previous level.

<sup>8</sup> According to *Foreign Trade Statistics of Pakistan* [9] the c.i.f. unit value of rice imports from Southeast Asian countries has ranged between Rs. 520 and Rs. 600 per ton during 1958-60. Although United States P.L. 480 rice has been procured somewhat more cheaply, it is limited in supply and cannot be relied upon.

<sup>9</sup> The free wholesale price has ranged roughly between Rs. 24 and Rs. 35 per maund in Dacca and between Rs. 21 and Rs. 33 per maund in Chittagong during 1958-1960.

TABLE III

RAW JUTE<sup>a</sup>

	Area (000 acres)	Yield (md/acre)	Output (000 tons)	Index of jute/rice price ratio (average 1945-46 49/50=100)
<i>Five-Year Averages</i>				
1935/36—1939/40	2070	15.7	1190	135
1945/46—1949/50	1750	14.6	935	100
1950/51—1954/55	1521	17.5	980	100
1955/56—1959/60	1466	19.2	1030	82
1960/61—1964/65	1732	16.2	1037	
1950-51	1711	17.1	1073	128
1951-52	1779	17.3	1131	103
1952-53	1907	17.4	1218	49
1953-54	965	18.2	645	92
1954-55	1246	18.2	833	128
1955-56	1634	16.6	993	100
1956-57	1230	21.8	985	81
1957-58	1563	19.3	1107	81
1958-59	1528	19.1	1071	69
1959-60	1375	19.6	958	78
1960-61	1518	14.3	1005	175
1961-62	2061	16.4	1244	161
1962-63	1723	14.5	919	n.a.
1963-64	1700	16.7	1049	n.a.
1964-65	1660	15.6	951	n.a.

Sources: [14; 10]. The figures for 1964-65 are estimates contained in [10, September 1965].

a. Private estimates made by jute industry, referred to as trade estimates, differ from and are usually higher than official production figures given in this table.

world market prices it would be economic to expand production and export of jute even if it were thereby necessary to continue to import rice. This conclusion appears to be at variance with the declared policy of the Second Five Year Plan of achieving foodgrain self-sufficiency by the end of the Plan period as an over-riding objective. But in official policy it is implicitly assumed that the marginal terms of trade between jute and rice are very substantially below the average terms of trade mentioned above. Thus, both jute-rice production and price policy as well as raw and manufactured jute export policy depend fundamentally on expectations with respect to the price elasticity of export demand for jute and the price elasticity of import supply of rice.

*Production and Export of Cotton* : West Pakistan is one of the world's major cotton-producing areas, although its relative importance has declined in recent times<sup>10</sup>. Before World War II, undivided India was the second largest producer and exporter, accounting for over 17 per cent of world output and over 21 per cent of exports. After the War its share of output dropped by one-third and of exports by one-half. It is not possible to trace trends in West Pakistan separately before independence, but because of the absence of cotton mills in the area, exports represented a larger share of production than for the rest of India. At Partition, West Pakistan accounted for about 40 per cent of combined output but over 50 per cent of cotton exports.

Cotton acreage and output touched bottom in 1948-49 as a result of the disruption due to Partition, but thereafter recovery was fairly rapid until 1952-53. In that year production and per acre yields reached peak levels which have not been exceeded since. The further expansion of acreage in 1955-58 was offset by lower yields so that output has remained virtually stagnant. At the same time the rapid expansion of the Pakistan textile industry has led to a sharp increase in domestic mill consumption of raw cotton, which by 1958 absorbed two-thirds of total production. The combined effect of stagnant output and increased domestic use was a precipitous decline in exports (*see* Table IV). Between 1953 and 1959, Pakistan's share of world exports (excluding those of the United States) declined from over 10 per cent to less than 3 per cent. During the same period, other countries (notably Mexico, Turkey, Syria and Africa other than Egypt) were expanding sales very swiftly at the expense of Pakistan (and also of Brazil).

The period of stagnation in cotton output after 1952-53 coincided with a decline in the relative price of cotton. While total area under crops in West Pakistan increased by almost 20 per cent between 1952-53 and 1959-60, cotton acreage declined. Sizable increases were on the other hand recorded in the acreage of

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<sup>10</sup> Cotton production in East Pakistan is only about 1 per cent of Pakistan's total and is entirely composed of a special short staple, coarse variety called Comilla Cotton.

TABLE IV  
COTTON: EXPORTS AND DOMESTIC MILL USE  
(in thousand long tons)

Year	Productions <sup>a</sup>	Domestic mill use	Export		
			Raw	Manufactured <sup>b</sup> (raw equivalent)	Total
1949	172	13	166	—	166
1950	220	18	212	—	212
1951	249	26	208	—	208
1952	248	33	242	—	242
1953	315	57	278	—	278
1954	252	107	140	—	140
1955	280	154	166	2	168
1956	296	168	130	19	149
1957	302	178	113	25	138
1958	302	189	96	4	100
1959	286	217	53	54	107
1960	290	227	87	59	146
1961	299	230	38	19	57
1962	322	234	76	15	91
1963	346 <sup>c</sup>	252	140	26 <sup>d</sup>	166
1964	415	271	141	84 <sup>d</sup>	225

Source: Production: [11 and 14 of 1963-64].

Mill use: [10 of December 1961 and September 1965].

Export: [14 of 1960-1961] ; [11 of 1957]; [14 of 1962-63] and [10].

a. Crop years July-June ending in the middle of the calendar year indicated.

b. Assuming that 3 yards of piecegoods=1 lb. of yarn, and 1 lb. of yarn=1.25 lbs. of raw cotton.

c. Excluding 3 thousand tons produced in East Pakistan.

d. Figures have been calculated from [10].

sugarcane, rice and maize, which along with cotton are the chief *kharif* or summer crops cultivated on irrigated land. Together they occupy about 87 per cent of the canal and well-irrigated land in sub-montane West Pakistan in 1958-59<sup>11</sup>.

The decline in the price and acreage of cotton relative to competing crops (*see*, Table V) was partly the result of the fall in the world market price of cotton, but government policy was also a major if not the principal factor. The export duty levied on raw cotton during these years represented between 20 per cent and 30 per cent of the unit value of exports, whereas the official price fixed for sugarcane delivered at domestic mills was higher than the c.i.f. import price of refined sugar<sup>12</sup>, and the prices of other competing crops were freely determined by the market.

TABLE V

## RELATION BETWEEN COTTON AREA AND RELATIVE PRICES

	Average 1947/48 1948/49	Average 1951/52 1952/53	1953-54	Average 1956/57 1957/58	1958-59
Area index cotton	100	109	81	96	78
Area, index other crops					
Price index cotton	100	107	64	77	63
Price index other crops					

*Source:* [10; 11].

*Notes:* Other crops are sugarcane, maize, and rice. Price index weights are current shares of total acreage. Prices used were 289 F Punjab R.G. for cotton, average of desi and gur in Lahore for sugarcane, fair average equality maize in Lyallpur, and average of basmati in Gujranwala and Kangani in Karachi for rice.

It is thus quite clear that the export duty on raw cotton has contributed to the deterioration in its relative domestic price and thus encouraged the allocation of land to competing crops. It is also apparent from the foregoing analysis that both raw and manufactured cotton exports represent such a small share of the world market that no significant difference is likely to exist between their price elasticities of demand<sup>13</sup>. The justification for price discrimination between

<sup>11</sup> [12, Table 6.3(a), p. 572]. The competition between these crops for productive resources, however, is more limited than in the case of jute and rice, since there is a certain amount of geographical specialization. Over half the maize, for example, is grown in Peshawar and D.I. Khan Divisions, where cotton cultivation is insignificant. But on the other hand, over 40 per cent of maize comes from Rawalpindi, Lahore, and Multan Divisions, which are also important cotton-producing areas.

<sup>12</sup> The unit value of Cuban sugar imports in 1958 was Rs. 585 per ton. In the same year, the price of cane received by domestic mills was fixed at Rs. 22.69 per maund, or about Rs. 600 per ton of sugar content. *See* [15].

<sup>13</sup> The existence of quotas and voluntary restrictions on import of cotton textiles in a number of countries suggests on the contrary that the price elasticity of export demand may be even lower for manufactures than for raw cotton.

raw and manufactured exports, therefore, rests exclusively on the rupee over-valuation argument.

*The Export Bonus Scheme:* In January 1959 a bonus scheme was introduced which permitted exporters of minor goods (excluding raw jute other than cuttings, raw cotton, hides, skins, wool, tea, and certain varieties of rice) to use a portion of their foreign exchange earnings to purchase imports from a list of 219 items, imports of which were otherwise forbidden. Under the scheme a free market was created for the auction of bonus vouchers, and import licences issued against them were freely transferable. During 1959 the premium on bonus vouchers quoted on the Karachi Stock Exchange fluctuated between 150 per cent and 175 per cent, signifying that an exporter who received a 20 per cent bonus could earn an additional 30 per cent to 35 per cent on his foreign sales<sup>14</sup>. The tightening of import controls at this time also lent additional support to the market for bonus vouchers. This scheme was in effect equivalent to selective devaluation of the currency through a system of multiple exchange rates.

Under the scheme jute goods exporters receive vouchers equal to 20 per cent of the value of foreign sales, which at a premium of 150 per cent represents a subsidy of approximately 30 per cent ( $.2 \times 1.5 \times 100$ ). This subsidy has in some years been greater than the value added in production. The net foreign exchange benefit of exporting jute goods seemed to be quite substantial in 1959-60, however, before the sharp increase in the price of raw jute. In that year the net foreign exchange benefit of exporting jute goods instead of raw jute amounted to something like Rs. 245 per ton (see Table VI).

But when the price of raw jute soared at the end of 1960, the net advantage of exporting jute goods declined. The same method which estimated a net foreign exchange benefit of Rs. 245 per ton in 1959-60 showed a net loss of Rs. 110 per ton in 1960-61 (see again Table VI). The explanation of how it is possible to lose foreign exchange by exporting jute goods is quite simple. The Export Bonus Scheme is in effect an ad valorem export subsidy, so that the absolute amount of the subsidy varies with the price of the product, which is greatly influenced by the price of raw jute. The net foreign exchange benefit of exporting manufactured instead of raw jute, on the other hand, is determined by the value added in domestic currency. Thus, the amount of the subsidy is unrelated to the size of the foreign exchange benefit.

The total value added in the production of jute goods in Pakistan is of the order of Rs. 600 per ton, of which Rs. 130 can be taken as the foreign exchange

<sup>14</sup> The actual value of the bonus to an exporter is equal to  $P(vr)$ , where  $P$  = price in rupees paid by the foreign importer,  $v$  = per cent of  $P$  earned as a voucher (20 per cent in the case of jute and cotton goods), and  $r$  = premium on the voucher above the cost of foreign exchange. See [1].

TABLE VI  
NET FOREIGN EXCHANGE BENEFIT OF JUTE GOODS EXPORTS

	Weights <sup>a</sup>	1959-60		1960-61	
		Average price (Rs./maund)	Weighted average	Average price (Rs./maund)	Weighted average
<b>Foreign Exchange Cost</b>					
<i>1) Raw Jute:</i>					
B bottoms	22.4	29.3	657	58.9	1320
C bottoms	30.4	24.4	742	56.0	1700
X bottoms	14.4	20.3	292	52.6	757
Other (habizabi)	32.8	15.8	517	46.0	1510
	100.0		Rs. 22.08/md.		Rs. 52.87/md.
Cost of jute per ton of manufactures <sup>b</sup>			Rs. 628		Rs. 1513
Export duty (Rs. 20 per bale)			117		117
		Total:	Rs. 745		Rs. 1630
<i>2) Depreciation and other costs<sup>c</sup></i>					
			130		130
		Total:	Rs. 875/ton		Rs. 1760/ton
<b>Foreign Exchange Earnings</b>			1120/ton	1650/ton <sup>d</sup>	
<b>Net Foreign Exchange Benefit</b>			Rs. 245/ton	(—) Rs. 110/ton	

a. The weights for different grades of jute purchased by mills is taken from [13, p. 149] Average prices are for Narayanganj as given [11 of 1962].

b. Assuming a 5 per cent loss of weight in manufacturing, one ton of jute goods requires approximately 28.6 maunds of raw jute.

c. Depreciation on plant and equipment has been estimated in different studies at between Rs. 90 and Rs. 150 per ton. (See [13, pp. 146-147] for estimates made by the International Bank and the P.I.D.C.). If the foreign exchange cost of power and other inputs are included, Rs. 130 can be taken as a reasonable estimate.

d. Represents the unit value of exports for the calendar year 1961 as estimated by Bruton and Bose [1].

*Note:* These figures are obviously approximations only, since the cost of production and the quality of jute employed by mills vary considerably as between bags and hessian, and the output mix changes from year to year.

PRICE

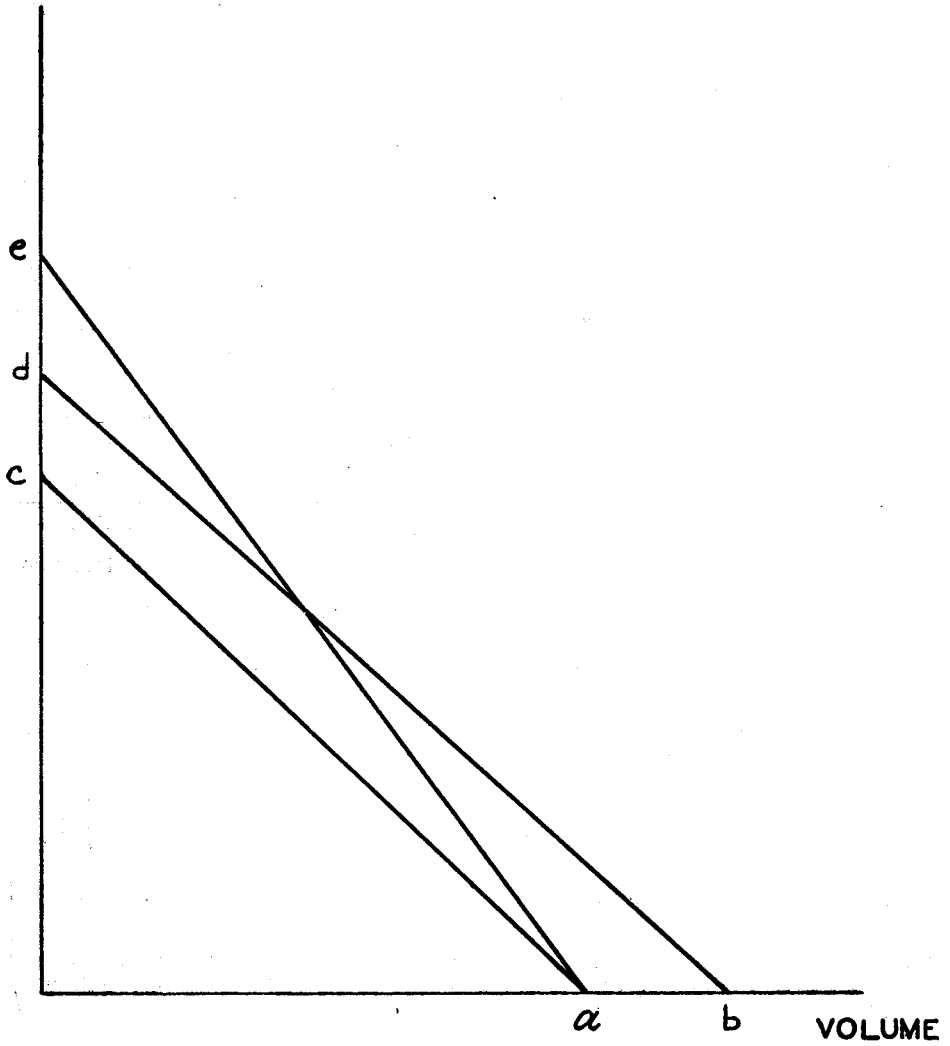


Figure 2. Effect of the Export Bonus Scheme



cost of depreciation on imported equipment and of other inputs. From value added must also be deducted the export duty on raw jute, which the manufacturer does not have to pay but which the country receives in foreign exchange if the jute is exported raw. Thus, net value added in domestic currency is about Rs. 350 per ton (600 — 130 — 117). In 1959-60 the subsidy to jute goods exporters amounted to about Rs. 336 per ton ( $.3 \times 1120$ ), still below net domestic value added. In 1960-61, however, the subsidy rose to about Rs. 495 per ton ( $.3 \times 1650$ ) which would have enabled exporters to sell at a price which lost foreign exchange for the country while still covering their own cost of production<sup>15</sup>.

The fact that it was possible to export raw jute in 1960-61 at a price which was almost equal to the price of jute goods exports is confirmation of the validity of assumption *i*) mentioned on p. 58. The growing specialization of manufacturers in Europe and the United States in the production of speciality products, and the increasing reliance on imports for the supply of jute bags and common hessian cloth, has resulted in greater market differentiation. It, therefore, appears valid to assume that the demand for raw and manufactured jute exports from Pakistan is sufficiently independent to justify a price discrimination policy.

Another effect of the Export Bonus Scheme is to make the demand curve facing jute goods exporters less elastic. Assuming a linear demand curve (ac in Figure 2) the Bonus Scheme in effect rotates the demand curve on its axis at (a) so as to increase its slope (ae). The vertical distance between the curve measures the amount of the bonus, which begins at zero at a negligible price at (a) and increases in absolute amount as the price rises. An ad valorem subsidy thus makes it less attractive for the jute goods manufacturers to expand exports as price declines, even though the foreign exchange benefit per ton remains unchanged.

A specific subsidy would appear to be much more suitable for inducing producers to expand exports at lower prices in competition with India. With the specific subsidy, the new demand curve (bd) would be parallel to the original one (ac) and would have the same slope, the vertical distance between them being equal to the uniform subsidy. The amount of the subsidy should be based on the value added in domestic currency so that the incentive to export would be related to the net foreign exchange benefit and not to the price of the raw material. Manufacturers would have less incentive to bid away scarce raw jute

<sup>15</sup> Assuming that the value added in production is Rs. 600 per ton and the cost of raw jute to the mills was Rs. 1513 per ton of manufactured jute in 1960-61, the total cost of production was Rs. 2113 per ton. Exporters received Rs. 2145 per ton (1650 + 495) assuming an average premium of 150 per cent on bonus vouchers. Manufacturers of course also sell at higher prices in the domestic market, and the out-of-pocket cost of production is considerably less than indicated above. Large mills can also buy jute at a discount and manipulate stocks, so the difference between the domestic cost and the export price of raw jute may be significantly larger than the export duty.

in a tight market and profits would not decline when jute was more abundant at lower prices. A specific duty would thus be superior to an ad valorem one by improving the competitive power of jute goods exporters in a declining market, by helping to stabilize the price of raw jute rather than reinforcing its fluctuations, and by preventing the export of jute goods at a net loss of foreign exchange when raw material prices were high.

The mechanics of converting the present system of subsidies from an ad valorem to a specific basis pose certain difficulties, but they are not insurmountable. Instead of granting bonus vouchers up to a given percentage of the value of exports, a fixed quantity of vouchers per ton of exports could be allocated to exporters. The quantity would be determined, as has already been indicated, on the basis of the value added in domestic currency. The premium on vouchers, although it could continue to fluctuate and be quoted freely on the stock exchange, could be kept within rather narrow limits by increasing or decreasing the number of goods which can be imported with vouchers. The government has in fact been following such a policy. Free quotation of vouchers should definitely be preserved as a barometer of the changing relative scarcity of foreign exchange.

The same problem has existed with respect to exports of cotton manufactures, particularly of yarn which has a relatively low value added in production. During 1959-60, it appears that the country actually lost foreign exchange by exporting yarn rather than raw cotton (*see* Table VII). This conclusion is based on the assumption that the average count of yarn exported was between 21 and 28 (since the quality and price of raw cotton inputs and value added vary according to the count); but even if exports averaged only between 16 and 20 count, the country would still not have been able to break even. And this conclusion is based on an export duty of Rs. 75 per bale, rather than the rate of Rs. 115 per bale prevailing during the first half of 1959, when the net loss of foreign exchange would have been even larger.

The explanation of how producers could export at a loss to the country but at a profit to themselves is particularly clear in the case of cotton yarn, since raw cotton represents about 60 per cent of the value of the product and the foreign exchange cost of depreciation on imported equipment and other inputs account for 20 to 25 per cent of the remainder. The export bonus on yarn permitted exporters to reduce their prices by more than 20 per cent below the pre-bonus level<sup>16</sup>, which already removed about two-thirds of the net value added

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<sup>16</sup> According to C.S.O. trade statistics, the average unit value of yarn exports was Rs. 1.42 per lb. in 1959-60 as against Rs. 1.83 per lb. in 1958. With a 30 per cent subsidy, exporters were still able to earn the same return at the lower price ( $1.3 \times 1.42 = 1.85$ )

**TABLE VII**  
**NET FOREIGN EXCHANGE BENEFIT OF EXPORTING COTTON YARN**  
**1959-60**

	Grades	Weights	Price (Rs. 1.25/lb) <sup>b</sup>	Cost /lb. <sup>b</sup>
<b>I. Foreign Exchange Cost of Production<sup>a</sup></b>				
(a) Raw cotton:				
	289F (R)	0.10	1.21	0.12
	NT (R/S)	0.45	1.20	0.54
	LSS (R/S)	0.45	1.17	0.53
	Cost per lb. of yarn:			1.19
	Export duty (Rs. 75/bale)			0.23
	Sub-total			1.42
	(b) Depreciation and other costs			0.16
	Total:			1.58
<b>II. Foreign Exchange Receipts</b> (Average 1959-60 unit value of exports)				1.42
<b>III. Net Foreign Exchange Benefit</b>				-0.16

*Sources:* [17]. The unit value of exports was computed from C.S.O. trade statistics.

a. Per pound of 21 to 28 count yarn, an intermediate quality.

b. It has been assumed that loss of weight in manufacture amounts to 25 per cent. This estimate is based on mill absorption and output statistics as published by the C.S.O. In the questionnaires submitted by manufacturers to the Cotton Textile Enquiry Commission, waste was listed at between 18 and 40 per cent but in the Ford-Bacon study of the cotton textile industry a figure of 50 per cent was used. This, however, seems excessive.

in domestic currency even before adjusting for the 19 per cent duty on raw cotton exports. Even after the bonus on yarn was reduced to 10 per cent in January 1960, it is still doubtful that there was any net foreign exchange benefit, particularly since the prices of raw cotton was rising in this year.

The conclusion which was drawn for jute goods is thus equally applicable to cotton manufacture. The bonus should also be converted from an ad valorem to a specific subsidy and should be based on the net value added in domestic currency, adjusted for duties on the export of the raw material. With such a policy, the incentives provided to the exporters of manufactures can be fully protected by making the appropriate adjustment in the level of the subsidy if the export duty on raw cotton is removed.

*Summary and Conclusions:* As was indicated at the beginning of this paper, there are two main possible justifications for price discrimination in exports of jute and cotton from Pakistan: a) The existence of a significant difference between the price elasticity of demand for raw and manufactured products, and b) undervaluation of the foreign exchange benefit of exporting value added in manufacture because of overvaluation of the rupee.

With regard to a), it was found that a substantial difference in the price elasticity of demand for raw and manufactured jute does exist because of Pakistan's semi-monopoly position as an exporter of raw jute and the structure of demand in foreign markets on the one hand, and due to the policy of the Indian Jute Mill Association which tends to make the price elasticity of supply of Indian exports of jute goods artificially high on the other<sup>17</sup>. With regard to cotton, however, no significant difference between the price elasticities of demand seems plausible because Pakistan's exports represent a very small share of the world market for both raw and manufactured cotton.

Regarding justification b) it would be possible to make a better argument for subsidizing manufactured exports if the subsidy were specifically related to the value added in manufacture instead of being ad valorem, as in the case with the Export Bonus Scheme. It was shown that when the price of raw jute increased sharply in 1960-61, the subsidy system permitted jute goods to be sold at a price which earned less foreign exchange than if the jute content of these goods had instead been exported in raw form. The value added in the manufacture of cotton yarn

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<sup>17</sup> The finding that the price elasticity of demand was low for Pakistan's raw jute export was, however, based on the statistical analysis of year-to-year changes in volume and relative prices. If Pakistan were to attempt to exploit fully its "monopoly" position, it would of course encourage substitution of jute by allied fibres (such as kenaf from Thailand) on the supply side and further substitution on the demand side which might again prove irreversible. Definite limits therefore exist with respect to the level at which it is wise to fix the export duty.

is so small, on the other hand, that very little if any subsidy can be justified with the existing duties on raw cotton exports.

The theoretical justifications for price discrimination are in turn based on two main assumptions: *i*) export demand for the raw and the manufactured products is independent, and *ii*) the policy of discrimination does not affect domestic supply.

Assumption *i*) is probably valid for both jute and cotton. Foreign jute goods manufactures have become increasingly specialized in products which Pakistan does not export, whereas the country's share of both raw and manufactured cotton markets is so small that world import demand and prices can be assumed independent of Pakistan's exports.

Assumption *ii*) does not appear to be valid, however, for either commodity. The price elasticity of supply of raw jute and cotton is substantial, so that duties have encouraged the allocation of resources to other competing crops and overall availabilities for export have been reduced below optimum levels.

In summary, then, the argument for differential pricing of raw and manufactured exports has been found to be more justified for jute than for cotton, particularly if a policy can be designed to determine the level of duty-cum-subsidy which equates the net marginal foreign exchange benefit of additional jute exports with the marginal foreign exchange cost of an equivalent quantity of rice imports. As the main importer and distributor of rice the government is in a position to administer such a policy, although it would require a complete change in past jute-rice price policy.

The Jute Enquiry Commission, for example, made two recommendations on price policy: *a*) price fluctuations should be kept within a range of 10 per cent through buffer stock operations, and *b*) policy should be designed to assure a fair and equitable price of Rs. 25 per maund to the grower [13, chapter VI]. No reference at all was made to relative prices or to the optimum allocation of resources between jute and rice. A similar situation exists with respect to rice distribution policy. Although the government has been importing large quantities of rice into East Pakistan for several years, no general policy seems to exist with regard to the price at which rice is released to the public. In certain urban centres rice has been rationed at prices fixed well below the free market level, and elsewhere "it is entirely at the discretion of the district authorities to release whenever they choose" [16, p. 75].

Since most of the variation in jute output is due to changes in sown area rather than in yields, and sown area is responsive to changes in the jute/rice price ratio, a coordinated price policy would probably be quite effective. The

policy objectives would be to stabilize the price ratio around a level which would balance production in such a way as to equate as nearly as possible marginal foreign exchange earnings from exporting jute with marginal foreign exchange savings from producing rice. Since the elasticity of demand for raw and manufactured jute and of supply of imported rice are not known with any accuracy, and since they will even change over time, the relative price would, however, have to be determined by trial and error.

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