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AHMEDABAD

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EXPORT PERFORMANCE OF INDIAN INDUSTRIES IN TERMS OF NET FOREIGN EXCHANGE EARNINGS AND IMPLICATIONS FOR EXPORT POLICY

by

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Charan D. Wadhva*

An important objective of export policy of a developing economy facing foreign exchange constraints in the pace of its economic growth is to maximize the net foreign exchange earnings from its export activities rather than their gross earnings. The idea is to take into account the foreign exchange costs of export production. Thus net foreign exchange earnings for any exported product are computed from the gross foreign exchange earnings (or sales revenue from exports of that product) by deducting both the direct foreign exchange costs of imported inputs for that product and the indirect foreign exchange costs of the import contents of all other inputs which are procured indigenously by the exporting unit. A policy of export promotion aiming at maximization of exports (i.e., gross foreign exchange earnings) regardless of the contribution of the export industries in terms of net foreign exchange earnings for the country would not be a rational economic policy from a long term point of view.

The purpose of this note is to evaluate the export policy and performance of Indian export industries in terms of the criterion of net foreign exchange earnings and to analyse its implications for the formulation of a long-term export strategy for the country.

For this purpose, we have carried out an exercise for determining the estimated net foreign exchange earnings of Indian Industries during the period of the Fifth Five Year Plan as envisaged by the Planning Commission. The basis of this exercise has been the 66-sector input-output table used by the Planning Commission in its 'Technical Note on Approach to the Fifth Five Year Plan of India'.

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*I would like to express my grateful thanks to Professor S. Chakravarty for the discussions I had with him on this paper. However, I am alone responsible for the approach and the conclusions of this paper.

The net foreign exchange earnings** of the jth sector (NE_j^t) are determined by the total export earnings (estimated) for the jth sector (E_j^t) less the total import requirements (M_j^t) by this sector. The total import requirements of the jth sector are computed from gross output level (X_j) of the year multiplied by the total import input co-efficient (a_{ij}^m), where the latter includes direct plus indirect import requirements for the support of the jth product under the 66 sectors.

The base year of the exercise is 1973-74 and the terminal year, 1978-79 thereby covering the Fifth Plan period. The value of exports, imports and gross output for both the periods as envisaged by the Planning Commission have been estimated at 1971-72 prices. These are reproduced in Table 1.

The following observations may be made with respect to Table 1:

The value of import coefficient as shown in column (2) relates to the total (including both the direct and the indirect) import requirements per unit of gross output for each sector.

A comparison of column (6) and column (11) of Table 1 reveals the planned improvement in the export performance of each sector relative to its gross output during the period of the Fifth Plan as projected by the planners.

It is very instructive to study column (12) to infer the degree of import substitution envisaged by the planners in pursuit of the objective of self-reliance. A reduction in the value of import coefficient in 1978-79 over that of 1973-74 as shown in column (12) implies improvement in the direction of self-reliance. It may be seen that a significant improvement is envisaged in this direction in most of the exporting sectors of the economy. In this respect the following sectors are of particular significance; paper and paper products (sector No. 20); man-made fibres (sector No. 28); non-ferrous metals (sector No. 35); cosmetics and drugs (sector No. 27); miscellaneous scientific instruments (sector No. 59); plastics (sector No. 26); selected electrical items (sector Nos. 45, 49 and 51); chemicals (sector numbers 24 and 25); and printing (sector No. 61).

** $NE_j^t = E_j^t - M_j^t$ (t = 1(1973-74) and 2 = (1978-79)

Where NE_j^t denotes that net export earnings from the j th sector net of import requirements

E_j^t denotes the export earnings (estimated) from the jth sector.

M_j denotes the import requirements (estimated) for the jth sector given by;

$M_j^t = \sum_{i=1}^{66} a_{ij}^m \; X_j^t$

Where X_j^t = output level of sector j; and

a_{ij}^m = import (input-output) coefficients

Among the exporting sectors where no (or eligible) improvement is envisioned in terms of import substitution, we may note the following: coal and lignite (sector No. 6); iron ore (sector No.8); crude oil and gas (sector No. 9); and other minerals (sector No.10). Petroleum (sector No.30) and foodgrains (sector No.1) figure heavily among those exporting sectors where greater import dependence has in fact been envisaged by the Planning Commission during the period of the Fifth Five Year Plan.

Net foreign exchange earnings of the 66 sectors and their ranks are shown in Table 2 for the years 1973-74 and 1978-79. The pattern of ranks is not very different for most sectors between these two periods. The important exceptions are 'other chemicals' (sector No. 29) and 'Miscellaneous Scientific Instruments' (sector No.59). These sectors which are seen to be net foreign exchange losers in the initial year of the Fifth Plan switch their position to that net foreign exchange earners in the terminal year of the Plan. Excluding sectors numbered 9, 29 and 59, the rank correlation coefficient between the two series works out to about 0.98.

Tables 3 and 3 A presents the 66 sectors of the economy ranked in descending order of their contribution in terms of net foreign exchange earnings of or losses for the years 1973-74 and 1978-79 respectively. These tables are self-explanatory. In view of the high degree of rank correlation between the two series, we would briefly comment on the major earning sectors and major losing sectors only for the year 1973-74.

Twenty-two exporting sectors are expected to be net foreign exchange earners in 1973-74 each with a contribution of over Rs.100 million (at 1971-72 prices) as seen from Table 3:

These are:

1. Jute Textiles
2. Tea and Coffee
3. Other Agriculture (cotton, jute, pulses etc.)
4. Other services (commerce, banking, insurance, communication etc.)
5. Leather products including footwear
6. Miscellaneous industries (jewellery, musical instruments, gems, sports goods, ivory etc.)
7. Other transport (excluding railway)
8. Miscellaneous textile products (hosiery, tents, coirs, etc.)

9. Vegetable Oil
10. Cotton textiles
11. Other metal products (furniture, safes, handtools etc.)
12. Other food products
13. Iron & Steel
14. Sugar & Gur
15. Railway Equipment
16. Other Mineral Ores
17. Iron Ore
18. Animal Husbandry (including fishing)
19. Other textiles (of wodlen, silk , manmade fibre etc.)
20. Wood products
21. Forestry
22. Other Electrical (Plant, and equipment)

A close look at the value of the contribution of each of these sectors from Table 3 would point out to the fact that traditional products like jute, tea, cotton textiles and other products of agriculture are still our biggest foreign exchange earners. Their importance in planning our export strategy for the Fifth Plan should not be under-estimated. Our export policy should be formulated in such a way as to ensure at the minimum that we maintain our share of these products in the world markets. This would require that we maintain the competitiveness of our products. Bangladesh is our biggest competitor for jute and jute products and Ceylon for tea. Economic cooperation with these countries is called for in the coordination of production and marketing policy for these products taking into account the trends in demand in the world markets. As most of these products are items of mass consumption in the domestic market, an export promotion policy of these high net foreign exchange earning products would also require an appropriate policy of management of domestic demand. The policy of recycling some of these products by importing inferior varieties of the product under consideration from neighbouring countries and exporting the superior varieties of that product wherever feasible would pay rich dividends in terms of maximizing the net foreign exchange earnings of the country.

Whereas due attention has to be paid to our traditional exports in the formulation of our exports strategy for the Fifth Five Year Plan, a greater attention is necessary for the promotion of high growth potential non-traditional exports which are also our net

foreign exchange earners. A look at Table 3 in terms of the above mentioned 22 export industries which are each estimated to yield net foreign exchange earnings over Rs.100 million at the minimum would reveal the emergence of quite a few non-traditional items of exports, such as engineering goods (included under (other metal products) like furnitures, safes, handtools, and under 'Railway equipment' and under 'other electrical' plant and equipment etc.). Since excess capacity is known to exist in India in most of these engineering industries, the most important ingredient of our national export policy, particularly during the coming years, has to be the ensuring of the availability (at the desired time) of the inputs (particularly steel and non-ferrous metals) at international prices for sustained growth of exports. This in turn calls for an organisational structure capable of handling procurement management, especially of imported inputs and an efficient distribution system for making available the desired inputs to the manufacturer for meeting the export order. A policy of further import liberalisation is called for in this respect so as to generate the net foreign exchange earnings which these industries are capable of generating.

Special mention here should be made of those export industries which are large earners of (net) foreign exchange and have very high growth potential but are facing capacity constraints in stepping up their production for additional exports. Leather products and marine products come under this category. Imports of necessary capital equipment (and know-how in some cases) should be planned as part of our export strategy for the Fifth Five Year Plan for such industries to ensure the existence of adequate capacity to meet the needs of exports.

On the negative side of net foreign exchange earnings, the following 13 sectors are estimated to be the losing sectors each with a loss of over Rs.100 million in 1973-74 as may be seen from Table 3:

1. Petroleum
2. Foodgrains
3. Cosmetics & Drugs
4. Non-ferrous metals
5. Fertilizers
6. Printing
7. Electric Wires and Cables
8. Construction
9. Motor Vehicles
10. Paper, Paper products
11. Other Non-metal Products asbestos, glassware mica etc.
12. Manmade Fibres
13. Ships and Boats

In view of the sizeable requirements of foreign exchange for the output of these sectors and the expected worsening of the terms of trade against us during the coming years particularly for the petroleum and fertilizer sectors, an intensive effort at import-substitution at a rapid rate is called for in our national policy. It is quite possible that despite the present high costs of import substitution in these products, some of these very products may emerge as our viable export items in future depending on the economies of scale and trends in world prices of inputs and outputs of these items compared to our domestic prices. The present structure of prices of steel whereby it is cheaper for exporter-manufacturers to purchase indigenously produced steel rather than to import it at international prices and whereby it has become possible for us to be competitive in the export of steel to neighbouring markets illustrates the forward linkages of import substitution for export promotion on economic criterion.

We may now turn to the role of the policy of export incentives and schemes of export assistance in maximising the net foreign exchange earnings of the country. Given the size of the bill for subsidizing exports, a rational economic policy will call for the redistribution of expenditure on subsidies in such a way as to maximize the net foreign exchange earnings. A careful analysis of the present policies of export incentives and schemes of export assistance points out to several instances of irrationalities in these schemes. Thus, for example, higher rates of cash assistances are offered to sectors which are losers in terms of net foreign exchange earnings such as machine tools (sector No. 42), motor vehicles (sector No. 53), electronics (sector no. 46), radio (sector No. 49) plastics (sector No. 16) and lower rates of cash assistance are offered to non traditional earning sectors like leather products (sector No. 5). The policy of import replenishments based on actual import content has effectively made export production more import intensive thus reducing the potential of net foreign exchange earnings from our exports. If the objective of net foreign exchange earnings is to be accepted as the most important objective of our export policy in pursuance of greater 'self-reliance' at the end of the Fifth Five Year Plan, a thorough reformulation of our policy of export incentives and other schemes of export assistance is urgently required.

On the stick side, the present policy of export obligation for export promotion laying down a general minimum obligation on every unit in specified industries (as listed in Appendix 10 of the Red Book) as well as specific unit-by-unit export obligation levied while granting licences for production is also

incongruous with the objective of maximizing net foreign exchange earnings in those cases where the estimated earnings are negative. We may illustrate this point by referring to export obligations on industries like storage batteries and dry batteries, radio receivers and certain items of cosmetics and drugs where the total import costs (including both direct and indirect costs) exceed the realizations in foreign exchange by the sale of such products (seen from Table 3). Given that a certain amount of compulsion on export industries is essential in view of the more lucrative domestic market available to manufacturer-exporters, it would be necessary to reformulate the export obligation schemes if we are to achieve the objective of maximizing net foreign exchange earnings.

CONCLUSION

We have presented the results of an exercise for estimating the net foreign exchange earnings of our export industries in the framework of inter-industrial flows of inputs and outputs. On the basis of this exercise, we have evaluated some aspects of our present export policy in terms of the criterion of net foreign exchange earnings. We have also listed the implications of the findings of this exercise in providing guidelines for the reformulation of our export strategy if the objective of our export policy is to maximise net foreign exchange earnings of the country.

It would be appropriate to provide a note of caution in relying upon the accuracy of the calculations of the above exercise in terms of mathematical preciseness. We have to keep in mind the assumptions regarding the data base. We have accepted the work of the Planning Commission with respect to the estimates of the import flow coefficient matrix and the projected value of exports and gross output for the initial and the terminal year of the Five Year Plan. Thus the limitations of this data base are applicable to our entire analysis. It would be desirable to test the sensitivity of our analysis to the changes in the basic data particularly by repeating this exercise on actual values for the last few years. This would help us to increase the degree of confidence in our findings which form the basis of the reformulation of our export policy.

We have carried out the above exercise in the framework of a standard input-output analysis assuming the exchange rate to be fixed at the official rate. A more realistic analysis of the problem would call for a study of the domestic resource cost of a unit of foreign exchange in alternative lines of exports valued at the opportunity cost (shadow price) of foreign exchange. The analysis has to be carried out in terms of social resources cost (rather than private resource cost) so as to aid decision making in planning the export sector of the country at the industry level. This task would require a specialized study which is beyond the scope of the present paper.

TABLE 1

India : Gross Output, Exports & Import Requirements - Sectorwise, 1973-74 and 1978-79
(Coefficients in terms of Per rupee of output at factor cost at 1971-72 prices)

(Values in Rs. million at 1971-72 prices)

Sector No	Sectors	1973-74					1978-79				
		Total Import coefficient (Direct&Indirect)	Values of gross output level	Values of import requirements	Value of exports estimated	Exports per unit of gross output	Total import Coefficient	Value of gross output level	Value of import requirements	Value of exports	Exports per unit of gross output	Improvement in column (7) over column (2)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Food grains	0.01301063	107104.4	1393.5	224.6	0.002097	0.01064090	139265.0	1386.1	340.3	0.002612	0.00236973
2.	Other Agriculture	0.00327063	106333.0	347.8	1721.4	0.016188	0.00268815	135103.1	363.2	2064.4	0.015280	0.00058248
3.	Animal Husbandry	0.00009315	40650.0	3.8	137.6	0.003385	0.00009035	54001.8	4.9	134.2	0.002485	0.00000280
4.	Plantation	0.03986811	1875.0	74.8	0.0	0.000000	0.03302887	2386.7	78.8	0.0	0.000000	0.00683924
5.	Forestry	0.00000000	6863.0	0.0	108.0	0.015737	0.00000000	9369.8	0.0	113.2	0.012081	0.000000
6.	Coal	0.0000199	2960.5	0.1	45.0	0.015200	0.0000199	5225.3	0.1	110.3	0.021109	0.000000
7.	Misc. coal, Misc pptr. prdcts	0.00005602	1002.0	0.1	20.5	0.020459	0.00003697	1802.5	0.1	19.5	0.010818	0.00001905
8.	Iron ore	0.00004996	480.0	0.02	221.4	0.461250	0.00004996	759.7	0.03	332.3	0.437410	0.00000
9.	Crude Oil	0.00001998	770.0	0.01	0.0	0.0	0.00001998	777.4	0.01	0.0	0.000000	0.00000
10.	Other minerals	0.00001998	1270.0	0.02	224.4	0.176693	0.00001998	2199.7	0.04	258.0	0.117516	0.00000
11.	Sugar and gur	0.00005467	7621.4	7.3	300.8	0.039468	0.0007372	9698.3	7.1	398.2	0.040028	0.00021795
12.	Vegetable Oil	0.0342785	5339.8	183.0	747.2	0.139930	0.0332107	6895.4	229.0	917.6	0.133074	0.00106780
13.	Tea and Coffee	0.00000000	3915.4	0.0	1648.4	0.421004	0.00000000	4686.5	0.0	1802.8	0.401750	0.00000
14.	Other food products	0.00088033	24517.4	21.6	405.1	0.016523	0.0007770	31329.7	24.3	584.1	0.018644	0.00010332
15.	Cotton textiles	0.05782057	23500.0	1358.8	1810.4	0.077038	0.05480185	30139.3	1651.7	2145.1	0.071170	0.00301872
16.	Jute textiles	0.00349002	4136.0	14.4	2000.4	0.483656	0.00331652	5204.5	17.3	2060.5	0.395853	0.00017350
17.	Other textiles	0.02783048	5886.0	163.8	284.8	0.048386	0.02701935	7592.8	205.2	340.6	0.044858	0.00081113
18.	Misc. textile products	0.0014321	6884.8	9.9	609.2	0.088485	0.0013343	9112.2	12.2	778.1	0.085391	0.00009780
19.	Wood products	0.00151815	3812.0	5.8	118.9	0.031191	0.00146693	4844.9	7.1	185.1	0.038205	0.00005122
20.	Paper, Paper products	0.13625769	2392.0	325.9	88.6	0.037040	0.0692691C	3826.9	265.1	114.4	0.029894	0.06698859
21.	Leather products	0.00427950	1918.9	8.2	1034.3	0.539067	0.0040701J	2563.3	10.4	1381.0	0.538759	0.00020931
22.	Rubber products	0.01820165	3540.0	64.4	89.4	0.025254	0.01778050	5522.1	98.2	129.8	0.023506	0.00042115
23.	Fertilizer	0.10883102	4200.4	457.1	0.0	0.000000	0.08878188	10333.8	917.5	0.0	0.000000	0.02004914
24.	Inor. heavy chemicals	0.0496654	1943.8	96.5	0.0	0.000000	0.0350533	3589.8	125.8	0.0	0.000000	0.01461210
25.	Org. heavy chemicals	0.05194229	785.0	40.8	0.0	0.000000	0.03590879	1341.5	48.2	0.0	0.000000	0.01603350
26.	Plastics	0.09936261	1524.2	151.4	72.0	0.047238	0.07171385	2511.2	180.1	121.9	0.048543	0.02764876
27.	Cosmetics & Drugs	0.15503062	4925.0	763.5	0.0	0.0	0.12083644	6369.0	769.6	0.0	0.000000	0.03419418
28.	Manmade fibre	0.12579268	1130.0	142.1	0.0	0.0	0.08617724	1498.0	129.1	0.0	0.000000	0.03961544
29.	Other chemicals	0.09739602	7208.0	702.0	642.3	0.089137	0.07883011	12234.6	964.5	1349.8	0.110326	0.01856591
30.	Petroleum products	0.5643081	2979.0	1681.0	253.0	0.084928	0.6897538	5227.6	3605.8	367.4	0.070281	- 0.12544570
31.	Cement	0.00004986	2267.0	0.1	49.7	0.021923	0.00004943	3374.3	0.2	64.2	0.019026	0.00000043
32.	Refractory	0.00172452	540.0	0.9	0.0	0.000000	0.00163830	883.3	1.4	0.0	0.000000	0.00008622
33.	Other non-metallic mineral products	0.03118741	7250.0	226.1	62.3	0.008593	0.02876141	10653.8	306.4	110.5	0.010372	0.00242600
34.	Iron and Steel	0.01352185	11672.0	157.8	470.8	0.040336	0.01269236	19180.4	243.4	1002.6	0.052272	0.00082949
35.	Non-ferrous metals	0.15332138	4576.0	701.6	0.0	0.000000	0.11621186	8714.6	1012.7	0.0	0.000000	0.03710952
36.	Bolts and Nuts	0.0565474	534.0	30.2	0.0	0.000000	0.0541816	879.6	47.7	0.0	0.000000	0.00236580
37.	Metal containers	0.01093152	673.0	7.4	0.0	0.000000	0.0097894Z	935.1	9.2	0.0	0.000000	0.00114210

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Table 1 contd.

(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
38.	Other metal products	0.02098377	9160.0	192.2	586.3	0.064007	0.01704407	14492.7	247.0	1414.1	0.097573	0.00393970
39.	Ball bearings	0.00435614	434.0	1.9	0.0	0.000000	0.00422298	998.7	4.2	0.0	0.000000	0.00013316
40.	Office, Domestic Equip.	0.00311706	567.0	1.8	19.8	0.034921	0.00280550	970.8	2.7	38.4	0.039555	0.00031156
41.	Agri. Implements	0.00290270	1600.0	4.6	0.0	0.000000	0.00275602	2427.7	6.7	0.0	0.000000	0.00014668
42.	Machine tools	0.0663453	1020.4	61.6	0.0	0.000000	0.0576987	2162.5	124.8	0.0	0.000000	0.00264660
43.	Other Machinery	0.10952113	5330.0	583.7	608.0	0.114071	0.10525382	11352.9	1194.9	1313.0	0.115653	0.00426731
44.	Electric Motors	0.00690357	861.0	5.9	0.0	0.000000	0.00643257	1421.2	9.1	0.0	0.000000	0.00047100
45.	Electric wires	0.14479802	2321.5	336.1	0.0	0.000000	0.10878643	3483.1	378.9	0.0	0.000000	0.03600159
46.	Electronics	0.00551488	805.0	4.4	0.0	0.000000	0.00497649	1423.8	7.1	0.0	0.000000	0.00053839
47.	Batteries	0.03906181	596.0	23.3	0.0	0.000000	0.02946311	837.8	24.7	0.0	0.000000	0.00959870
48.	Elec.Household goods	0.0054817	986.1	5.4	0.0	0.000000	0.0050288	1400.5	7.0	0.0	0.000000	0.00004529
49.	Radio (&TV)	0.09288077	968.6	90.0	0.0	0.000000	0.07121026	1148.4	81.8	0.0	0.000000	0.02167051
50.	Teleph. Telegr.Eqp.	0.03154227	536.0	16.9	0.0	0.000000	0.02565287	856.0	22.0	0.0	0.000000	0.00588940
51.	Other Electricals	0.06512903	2607.0	169.8	273.4	0.1104871	0.05102659	4655.5	237.6	523.6	0.112469	0.01410244
52.	Motor cycles	0.00415117	1206.0	5.0	38.2	0.031675	0.00388765	1771.5	6.9	92.5	0.052216	0.00026352
53.	Motor vehicles	0.07233879	4770.0	345.1	99.5	0.020860	0.06795342	6701.7	455.4	141.0	0.021039	0.00438537
54.	Ships and Boats	0.0641613	437.3	28.1	0.9	0.002058	0.0613271	690.5	42.3	4.4	0.006372	0.00028342
55.	Aircraft	0.00117579	465.0	0.5	0.7	0.001728	0.00111255	730.6	0.8	1.0	0.001369	0.00006324
56.	Rail Equipment	0.01863288	3525.0	65.7	340.4	0.096567	0.01475976	6475.0	95.6	576.3	0.089004	0.00387312
57.	Other Transport Eqip.	0.00244325	534.0	1.3	0.0	0.000000	0.00234112	748.5	1.8	0.0	0.000000	0.00010213
58.	Watches and clocks	0.00189662	118.3	0.2	9.2	0.077768	0.00174039	173.9	0.3	26.9	0.154697	0.00015623
59.	Misc.Scientific Instrut.	0.17496859	373.0	65.3	60.0	0.160858	0.14152817	603.5	85.4	104.5	0.173157	0.03344042
60.	Other industries	0.0174939	4338.1	75.9	906.3	0.208916	0.0132648	7010.3	93.0	1326.0	0.189150	0.00042291
61.	Printing	0.25584363	1761.1	450.6	17.2	0.009767	0.13068128	2394.1	312.9	33.3	0.013909	0.12516235
62.	Electricity	0.00011435	10253.0	1.2	0.0	0.000000	0.00010849	16988.3	1.8	0.0	0.000000	0.00000586
63.	Construction	0.00551879	48567.0	268.0	0.0	0.000000	0.00526988	71781.8	378.3	0.0	0.000000	0.00000024891
64.	Railways	0.00000152	12030.0	0.01	0.0	0.0000000	0.00000077	16616.0	0.01	0.0	0.000000	0.00000075
65.	Other transport	0.02756052	14769.0	407.0	1200.0	0.081251	0.01518044	19779.3	300.3	1763.0	0.089134	0.01238008
66.	Other services	0.0001729	124543.0	21.5	1107.0	0.008888	0.0001541	169314.6	26.1	1626.5	0.009606	0.00000188
	Total	0.01845860	670405.7	12374.8	18657.8	0.027831	0.01833000	920444.6	16871.8	26286.0	0.028550	0.0001200

Notes: 1. Rows 24, 25 and 27 are included in row 29 for column 5 and 10

2. Rows 36 and 37 " " row 38 " " "

3. Row 42 is included in row 43 " " "

Source: Computed from the basic data provided in : A Technical Note on the Approach to the Fifth Plan of India (1974-79), New Delhi, Government of India, Planning Commission (Perspective Planning Division), April 1973

TABLE 2

INDIA: SECTOR-WISE NET FOREIGN EXCHANGE EARNINGS AND LOSSES(-).

(in Rs. millions at 1971-72 prices)

S.No.	Name of the Sector	1973-74	1978-79
(1)	(2)	(3)	(4)
1.	Food Grains	(-) 1168.9	(-) 1045.8
2.	Other Agriculture	1373.6	1701.2
3.	Animal Husbandry	133.8	129.3
4.	Plantation	(-) 74.8	(-) 78.8
5.	Forestry	108.0	113.2
6.	Coal	44.9	110.2
7.	Misc. Coal, Petrol, Products	20.4	19.4
8.	Iron Ore	221.4	332.3
9.	Crude Oil	(-) 0.01	0.0
10.	Other Minerals	224.4	258.5
11.	Sugar and Gur	93.5	381.1
12.	Vegetable Oil	564.2	688.6
13.	Tea and Coffee	1648.4	1882.8
14.	Other Food products	383.5	559.8
15.	Cotton Textiles	451.6	493.4
16.	Jute Textiles	1986.0	2048.2
17.	Other Textiles	121.0	135.4
18.	Misc. Textile Products	599.3	765.9
19.	Wood Products	113.1	178.0
20.	Paper, Paper Products	(-) 237.3	(-) 150.7
21.	Leather Products	1026.1	1370.6
22.	Rubber Products	25.0	31.0
23.	Fertiliser	(-) 457.1	(-) 917.5
24.	Inorg. Heavy Chemicals	(-) 96.5	(-) 125.8
25.	Org. Heavy Chemicals	(-) 40.8	(-) 48.4
26.	Plastics	(-) 79.4	(-) 58.4

(1)	(2)	(3)	(4)
27.	Cosmetics and Drugs	(-) 763.5	(-) 769.6
28.	Manmade Fibre	(-) 142.1	(-) 129.1
29.	Other Chemicals	(-) 59.5	385.3
30.	Petroleum Products	(-) 1428.1	(-) 3238.4
31.	Cement	49.6	64.0
32.	Refractories	(-) 0.9	(-) 1.4
33.	Other Non-met. Mineral Products	(-) 163.8	(-) 195.9
34.	Iron & Steel	313.0	759.2
35.	Nonferrous Metals	(-) 701.6	(-) 1012.7
36.	Bolts and Nuts	(-) 30.2	(-) 47.7
37.	Metal Containers	(-) 7.4	(-) 9.2
38.	Ball Bearings	(-) 1.9	(-) 4.2
39.	Other Metal Products	394.1	1167.1
40.	Office, Domestic equipment	18.0	35.7
41.	Agri. Implements	(-) 4.6	(-) 6.7
42.	Machine Tools	(-) 61.6	(-) 124.8
43.	Other Machinery	24.3	118.1
44.	Electric Motors	(-) 5.9	(-) 9.1
45.	Electric Wires	(-) 336.1	(-) 378.9
46.	Electronics	(-) 4.4	(-) 7.1
47.	Batteries	(-) 23.3	(-) 24.7
48.	Electric Household goods	(-) 5.4	(-) 7.0
49.	Radio (& TV)	(-) 90.0	(-) 81.8
50.	Telephone, Telegraph Equipment	(-) 16.9	(-) 22.0
51.	Other Electricals	103.6	286.0
52.	Motor Cycles	33.2	85.6
53.	Motor Vehicles	(-) 245.6	(-) 314.4
54.	Ships and Boats	(-) 27.2	(-) 37.9
55.	Aircraft	0.2	0.2

(1)	(2)	(3)	(4)
56.	Rail Equipment	274.7	480.7
57.	Other Transport Equipment	1.3	(-) 1.8
58.	Watches and Clocks	9.0	26.6
59.	Misc.Scientific Instruments	5.3	19.1
60.	Other Industries	830.4	1233.0
61.	Printing	(-) 433.4	(-) 279.6
62.	Electricity	(-) 1.2	(-) 1.8
63.	Construction	(-) 268.0	(-) 378.3
64.	Railways	(-) 0.01	0.0
65.	Other Transport	793.0	1462.7
66.	Other Services	1085.5	1600.4

Source : Computed from data provided in Table 1

TABLE 3

RANKING OF SECTORS BY NET FOREIGN EXCHANGE EARNINGS

1973-74

Earning Sectors			Loosing Sectors		
Rank	Sector (and Sector No.)	Net Earnings (in Rs. million at 1971-72 prices)	Rank	Sector (and sector No.)	Net Losses (in Rs. million at 1971-72 prices)
1.	Jute Textiles (16)	1986.0	1.	Petroleum (30)	1428.1
2.	Tea and Coffee (13)	1648.4	2.	Foodgrains (1)	1168.9
3.	Other Agriculture (2)	1373.6	3.	Cosmetics & Drugs (27)	736.5
4.	Other Services (66)	1085.5	4.	Non-ferrous Metals (35)	701.6
5.	Leather Products (21)	1026.1	5.	Fertilizer (23)	457.1
6.	Other Industries (60)	830.4	6.	Printing (61)	433.4
7.	Other transport (65)	793.0	7.	Electric Wires (45)	336.1
8.	Misc. Textile Products (18)	599.3	8.	Construction (63)	268.0
9.	Vegetable Oil (12)	564.2	9.	Motor Vehicles (53)	245.0
10.	Cotton Textiles (15)	451.6	10.	Paper, Paper Products (20)	237.3
11.	Other Metal Products (38)	394.1	11.	Other Non-metal products (33)	163.8
12.	Other Food Products (14)	386.5	12.	Manmade Fibre (28)	142.1
13.	Iron & Steel (34)	313.0	13.	Ships & boats (54)	127.2
14.	Sugar & Gur (11)	293.5	14.	Inorganic Heavy chemicals (24)	96.5
15.	Railway Equipment (56)	274.5	15.	Radio (&TV) (49)	90.0
16.	Other Minerals (10)	224.4	16.	Plastics (26)	79.4
17.	Iron Ore (8)	221.4	17.	Plantation (4)	74.8
18.	Animal Husbandry (3)	133.8	18.	Machine tools (41)	61.6

Earning Sectors			Loosing Sectors		
Rank	Sector (and Sector No.)	Net Earnings (in Rs.million at 1971-72 prices)	Rank	Sector (and Sector No.	Net Losses (in Rs.million at 1971-72 prices
19.	Other Textiles (17)	121.0	19.	Other Chemicals (29)	59.5
20.	Wood Products (19)	113.1	20.	Organic Heavy Chemicals (25)	40.8
21.	Forestry (5)	108.0	21.	Bolts & Nuts (36)	30.2
22.	Other Electricals (51)	103.6	22.	Batteries (47)	23.3
23.	Cement (31)	49.6	23.	Telephone, Telegram Equipment (50)	16.9
24.	Coal (6)	44.9	24.	Metal Containers (37)	7.4
25.	Motor Cycles (52)	33.2	25.	Electric Motors (44)	5.9
26.	Rubber Products (22)	25.0	26.	Electric, Household Goods (48	5.4
27.	Other Machinery (43)	24.3	27.	Misc. Scientific Instruments (5)	5.3
28.	Misc. Coal, Petroleum Products (7)	20.4	28.	Agrl. Implements (41)	4.6
29.	Office, Domestic Equipments	18.0	29.	Electronics (46)	4.4
30.	Watches & Clocks (58)	9.0	30.	Ball Bearings (39)	1.9
31.	Aircraft (55)	0.2	31.	Other transport equipment	1.3
			32.	Electricity (62)	1.2
			33.	Refractories (32)	0.9
			34.	Crude Oil (9)	0.01
			35.	Railways (64)	0.01

Source : Based on Table 2

TABLE 3A

RANKING OF SECTORS BY NET FOREIGN EXCHANGE EARNINGS (1978-79)

Earning Sectors			Loosing Sectors		
Rank	Sector (and Sector No.)	Net earnings (in Rs. million at 1971-72 prices)	Rank	Sector (and Sector No.	Net Losses (in Rs. million at 1971-72 prices)
1.	Jute Textiles (16)	2048.0	1.	Petroleum Products (30)	3238.4
2.	Tea and Coffee (13)	1882.8	2.	Food Grains (1)	1045.8
3.	Other Agriculture (2)	1701.2	3.	Non-ferrous metals (35)	1012.7
4.	Other Services (66)	1600.4	4.	Fertilisers (23)	917.5
5.	Other Transport (65)	1462.7	5.	Cosmetics & Drugs (27)	759.5
6.	Leather Products (21)	1370.6	6.	Electric Wires (45)	378.9
7.	Other industries (60)	1233.0	7.	Construction (63)	378.2
8.	Other Metalproducts (38)	1167.1	8.	Motor Vehicles (53)	314.4
9.	Misc. Textile Products (18)	765.9	9.	Printing (61)	279.6
10.	Iron and Steel (34)	759.2	10.	Other Non-metal Min. Products (33)	195.9
11.	Vegetable Oil (12)	688.6	11.	Paper, Paper Products (20)	150.7
12.	Other Food Products (14)	559.8	12.	Manmade Fibre (28)	129.1
13.	Cotton Textiles (15)	493.4	13.	Inorganic Heavy Chemicals (24)	125.8
14.	Rail Equipment (56)	480.7	14.	Machine Tools (42)	124.8
15.	Other Chemicals (29)	385.3	15.	Radio (&TV) (49)	81.8
16.	Sugar & Gur (11)	381.1	16.	Plantation (4)	78.8
17.	Iron Ore (8)	332.2	17.	Plastics (26)	58.2
18.	Other Electricals (51)	286.0	18.	Organic Heavy Chemicals (25)	48.2

Earning Sectors			Loosing Sectors		
Rank	Sector (and Sector No.)	Net Earnings (in Rs.million at 1971-71 prices)	Rank	Sector (and sector No.)	Net Losses (in Rs.million at 1971-72 prices)
19.	Other minerals (10)	258.5	19.	Bolts & Nuts (36)	47.7
20.	Wood Products (19)	178.0	20.	Ships & Boats (54)	37.9
21.	Other Textiles (17)	135.4	21.	Batteries (47)	24.7
22.	Animal Husbandry (3)	129.3	22.	Telephone, Telegraph Equipment (50)	22.0
23.	Other Machinery (43)	118.1	23.	Metal Containers (37)	9.2
24.	Forestry (5)	113.2	24.	Electric Motors (44)	9.1
25.	Coal (6)	110.2	25.	Electronics (45)	7.1
26.	Motor Cycles (52)	35.6	26.	Electric Household Goods (48)	7.0
27.	Cement (31)	64.0	27.	Agricultural Implements (41)	6.7
28.	Office, Domestic Equipments (40)	35.7	28.	Ball Bearings (39)	4.2
29.	Rubber Products (22)	31.6	29.	Other transport equipment (57)	1.8
30.	Watches & Clocks (58)	26.6	30.	Electricity (62)	1.8
31.	Misc. Coal, Petrol Products (7)	19.4	31.	Refractories (32)	1.4
32.	Misc. Scientific Instruments (59)	19.4	32.	Railways (64)	0.0
33.	Aircrafts (55)	0.2			
34.	Crude Oil (9)	0.0			

Source: Based on Table 2